

# Grobbel Environmental & Planning Associates

PO Box 58 Lake Leelanau

Michigan

49653

June 7, 2017

Wexford Joint Planning Commission c/o Cherry Grove Township 4830 E. M-55 Highway Cadillac, MI 49601

RE: Request for Qualifications/Request for Proposal, Wexford Joint Planning Commission, Wexford County, Michigan.

Dear Wexford Joint Planning Commission,

Per your request Grobbel Environmental & Planning Associates is pleased to provide this request for qualifications (RFQ)/request for proposal (RFP) for community planning services for the Wexford Joint Planning Commission.

# **Bibliography - Christopher Grobbel**

Christopher Grobbel, PhD will serve as the professional planner to the Wexford Joint Planning Commission, and will provide all contracted professional planning services. Dr. Grobbel serves as the planner of record for several rural northern Michigan communities. Dr. Grobbel's past and present community clients include, but are not limited to, Torch Lake Township and Milton Township, Antrim County; Edwards Township, Ogemaw County; Norman Township, Manistee County; Leelanau Township, Leelanau County; Elmwood Township, Leelanau County; Sharon Township, Washtenaw County; Bay Township, Marion Township and Norwood Township, Charlevoix County; Readmond and Bliss Townships, Emmet County; Village of Bellaire, Antrim County; City of White Cloud, Newaygo County; Acme Township, Grand Traverse County; and Antrim and Ogemaw Counties; *et al.* Dr. Grobbel has completed master and comprehensive community plans; plan updates; zoning ordinance development, amendments and audits; site plan reviews and planned unit development reviews. We assist planning commissions and elected officials by utilizing proper zoning language format, providing decisionmakers with up to date content/choices, and bring up to date information to assist, but not lead decision-makers to predetermined community planning and zoning outcomes.

#### Rural Planning Project/Placemaking/New Economy

Dr. Grobbel lead the county-wide planning project to develop the Ogemaw County Comprehensive Plan. That project involved engaging and working closely with fourteen (14) Townships, three (3) incorporated Cities and Villages, businesses, community organizations, and the Ogemaw County Planning Commission. We welcome and embrace open and transparent working environment with all of our community planning projects. We took the county-wide planning effort to the community, holding visioning sessions in every Township, City and Village on different days of the week and different times of the day. Our community planning projects also always include community-wide surveys, facilitate public visioning sessions, and web-based community outreach and dashboards/websites. Dr. Grobbel strongly promotes and closely follows policies of professional ethics, state law/procedures, honesty, meaningful community input, and good communications and community planning processes.

# **Technical Proficiencies**

Grobbel Environmental & Planning Associates utilizes and is proficient in both Microsoft Word Office Suite and Word Perfect. Dr. Grobbel has worked with Word Perfect products since developing MSU Extension's award winning Citizen Planner Program in 2000, along with Mr. Kurt Schindler and others. Ms. Yarrow Brown, M.S., is Environmental and Planning Consultants

our GIS technician and mapper, with more than 15 years experience with ESRI's ArcView and ArcGIS Desktop. Ms. Brown is also experienced and proficient in aerial photograph interpretation for planning projects including land use/land cover analysis for Torch Lake Township, Antrim County during June 2017. Ms. Evangeline Grobbel serves as our administrative assistant, completing all aspects of event planning and administrative support. Grobbel Environmental & Planning Services possesses and utilizes color printing up to 11 by 17 inch documents, and color mapping/plotting up to "D" size, i.e., 22 by 34 inches. We would be very pleased to work closely with Wexford County for GIS, GIS data, mapping/plotting and other planning support assistance as needed.

We are experienced in, possess and are pleased to utilize Skype, GoToMeeting and similar video meeting and conferencing technologies. There is a trend among our community clients to utilize these technologies whenever it well-suited to tasks at hand, to economize, and to be also present at meetings as needed and when appropriate. We would expect to balance both in working with the Wexford Joint Planning Commission and as directed by the Planning Commission and the Planning and Zoning Administrator.

A central value of Grobbel Environmental & Planning Associates community planning projects is reaching "people where they are," and creating safe places and numerous opportunities for meaningful public participation in community planning projects. Dr. Grobbel has also trained hundreds and hundreds of Michigan planning commissioners and elected officials through co-founding, co-authoring and teaching MSU Extensions's Citizen Planner Program statewide, and in numerous presentations at Michigan Planning conferences and as a certified instructor for the Michigan Association of Planners.

## **Special Considerations**

Dr. Grobbel has worked very closely with Mr. Kurt Schindler, AICP since 2001 as co-founders, co-authors, co-designers and instructors of MSU's award-winning Citizen Planner Program. Dr. Grobbel and Mr. Schindler have presented and taught together numerous times at community-events, conferences, and MSU Extension courses. Mr. Schindler, Dr. Grobbel and others just completed a two-year study of the Herring Lakes Watershed in Benzie County, working very closely together on all aspects of community planing and zoning and implications for water quality within the watershed. We look forward to the opportunity of working directly, and subcontracting with Mr. Schindler in this project.

Dr. Grobbel is a certified instructor for the Michigan Association of Planning and MSU Extension's Citizen Planner Program, former MSU Extension land use agent for Northwest Michigan, and has taught land use and natural resources planning and law at Michigan State University main campus since 1992. Dr. Grobbel has presented and Michigan Township Association and Michigan Association of Planning statewide planning conferences.

#### **Summaries of Select Community Planning Projects**

- Torch Lake Township, Antrim County, Michigan During 2004-2017 working for the Torch Lake Township board and planning commission, undertook master planning (2017 master plan update and webbased survey of Township residents), placemaking, general provisions, economic development, private road, yards, home occupations, waterfront overlay, economic development (Village and Commercial Residential Districts), medical marijuana, commercial and small-scale wind energy conversion systems (WECS), zoning ordinance re-write, agricultural retail enterprises/farm stands, site plan review and planned unit development/open space preservation ordinance development and adoption. Represent the Township in numerous site plan reviews and PUD reviews, with comprehensive findings of fact and legal notices of publications.
- Edwards Township, Ogemaw County, Michigan During 2003-2017 working for the Edwards Township board and planning commission, undertook master planning (including the survey of Township residents). placemaking, general provisions, economic development, private road, junk yard, manufactured homes, communications towers, home occupations, waterfront overlay, concentrated annual feeding operations (CAFOs), medical marijuana, commercial and small-scale wind energy conversion systems (WECS), and planned unit development/open space preservation ordinance development and

adoption. Represented township in junk yard compliance activities. Provided comprehensive findings of fact and legal notices of publications

- Norman Township, Manistee County, Michigan During 2010-2017 working for the Norman Township board and planning commission, undertook site plan review/nuisance assessment, master plan update, general provisions, economic development, home occupations/medical marijuana, signs, commercial and small-scale wind energy conversion systems (WECS), administration, special land use, site plan review, and planned unit development ordinance development and adoption. Represented township in numerous site plan reviews. Provided comprehensive findings of fact and legal notices of publications
- Norwood Township, Charlevoix County, Michigan During 2012-2014 working for the Norwood Township board and planning commission, undertook mineral resource extraction district; cultural and natural resources inventory/mapping; home occupations, home-based businesses and cottage industries; master plan update; and site plan reviews. Represented Township in land use review/negotiations with expansion of large, regional cement plant and quarry operations. Provided comprehensive findings of fact and legal notices of publications
- Acme Township, Grand Traverse County, Michigan Working for the Acme Township planner during 2005 2016 assisted local officials in site plan review and environmental impact analysis in the consideration of a special land use permit for a new town center, a proposed Meijer Super Store, gas and convenience store and seven (7) out-lot retail stores, and a large commercial shopping center, i.e., Bates Crossings. Formulated comments and presented findings regarding soils, hydrology, septic disposal, and wetland impact/mitigation plans at public hearings, and township planning commission and board meetings. Provided comprehensive findings of fact and legal notices of publications.
- ➤ Village of Bellaire, Antrim County, Michigan During 2006 working for the Antrim Conservation District/Village of Bellaire developed model groundwater/drinking water protection, stormwater, steep slopes, greenbelt/buffers, and waterfront protection ordinances. Developed and taught six (6) public outreach and community training sessions in Antrim County Townships.
- ➤ 40 acre Conservation Design/Low Impact Development, Bear Creek Township, Emmet County, Michigan Working for the developer/landowner designed a 34-home low impact/conservation design with 80% open space protection. Delineated wetlands, inventoried natural and cultural resources (i.e., seeps, steep slopes, forest, wildlife habitat, farmhouse/barn). Formulated site plan, assisted in engineering design/drawings, and presented findings at public hearings, and township planning commission and board meetings.
- Acme Township, Grand Traverse County, Michigan During 2004 2016 working for the Acme Township planning commission, reviewed beach alteration, dock, and shoreline recreational development special use and site plans at the Grand Traverse Resort.
- Marion Township, Charlevoix County, Michigan During 2004 working for the Marion Township planning commission, providing environmental planning and review of a rezoning request and site plan for a proposed 80-unit housing development.
- Department, undertook zoning ordinance audit and reporting. During 2004 -2005 working for the Ogemaw County commission, undertaking comprehensive county planning through community visioning sessions, two mail-in resident opinion surveys, and recommended community actions through 2025.
- ➤ **Bay Township, Charlevoix County, Michigan** During 2004 -2005 working for the Bay Township board and planning commission, undertaking master planning. Developed and processed a mail-in survey of property owner opinions about growth and preferred actions through the year 2025.

- Readmond Township, Emmet County, Michigan During 2003-2005 working for the Readmond Township board and planning commission, undertaking master planning. Developed and processed a mail-in survey of property owner opinions about growth and preferred actions through the year 2025.
- ➤ **Milton Township, Antrim County, Michigan** During 2003-2005 working for the Milton Township board and planning commission, undertaking master plan update and zoning ordinance development. Developed and processed a mail-in random sample survey of property owner opinions about growth and preferred actions through the year 2025.
- Antrim County, Michigan During 2002 and 2003 working for Antrim County's Conservation District, Board of Commissioners and Office of the Coordinator/Planner to map, delineate, assess wildlife habitat, and perform rapid functional assessment of wetland functions. Updated County ARCView geographic information system maps of wetlands. Developed and facilitated public meetings, and assisted in planning commission and board in drafting and adoption of a county-wide wetland ordinance. Funded through an USEPA grant.
- Centerville Township, Leelanau County, Michigan During 2001 working for the Centerville Township board and planning commission, undertook septage disposal site evaluations (i.e., soils, slope, and hydrology), septage ordinance development, and facilitated public participation workshops and public hearing. Submitted reports, developed and presented a draft septage ordinance to the community within a public hearing. Assisted in planning commission and board adoption of the ordinance.
- Leelanau Township, Leelanau County, Michigan During 2001 and 2002 working for the Leelanau Township planning commission, undertook sensitive land ordinance development, inventoried sensitive land resource areas (i.e., critical dunes, wetlands, shorelands, high risk erosion areas, federally designated endangered species critical habitat), and designed and facilitated public participation workshops. Submitted report and presented a sensitive land ordinance to the community within a public hearing. Assisted in planning commission adoption of the ordinance.
- Elmwood Township, Leelanau County, Michigan From 2006 to 2010 working for the Elmwood Township planning commission and elected officals, undertook zoning ordinance re-write. Drafted and assisted Township in adoption of new waterfront overlay, ag-retail enterprises, wineries and winery-related activities, commercial and small-scale wind energy conversion systems (WECS), and planned unit development ordinance development and adoption.
- Sharon Township, Washtenaw County, Michigan. During 2016-2017 worked with planning commission and elected officials to research secondary impacts and adopt a Township ordinance regulating oil and gas development in residential areas in conjunction with Michigan's Part 615: Supervisor of Wells Act. Provided comprehensive findings of fact and legal notices of publications.
- West Bloomfield Township, Oakland County, Michigan. During 2015-2016 worked with planning commission and elected officials to research secondary impacts and adopt a Township ordinance regulating oil and gas development in residential areas in conjunction with Michigan's Part 615: Supervisor of Wells Act. Provided comprehensive findings of fact and legal notices of publications.
- Shelby Township, Macomb County, Michigan During 2015-2016 worked with planning commission and elected officials to research secondary impacts and adopt a Township ordinance regulating oil and gas development in residential areas in conjunction with Michigan's Part 615: Supervisor of Wells Act. Provided comprehensive findings of fact and legal notices of publications.
- Scio Township, Washtenaw County, Michigan. During 2013-2015 worked with planning commission and elected officials to research secondary impacts and adopt a Township ordinance regulating oil and gas development in residential areas in conjunction with Michigan's Part 615: Supervisor of Wells Act.

- ➤ Herring Lakes Watershed Protection Plan working during 2015–2017 with the Benzie County Conservation District undertook comprehensive watershed planning in accordance with Section 319 of the the federal Clean Water Act. Completed comprehensive surface and groundwater sampling/analysis, lakeshore parcel survey, macrophyte survey, dams/impoundments survey, road crossing survey/ evaluations, local plans and ordinance audits, potential contamination source identification, nutrient loading calculations, community surveys, etc. Findings and recommendations and public outreach for local units of government, residents/landowners and businesses. Plan is currently under MDEQ and US EPA review/approval.
- ➤ Boardman Lake Watershed Management Plan working during 2002 2005 with local governments, conservation groups and citizen undertaking watershed planning including historic wetland loss, stormwater assessment, land use/contaminated site identification and assessment, wildlife habitat assessment, surface water sampling, macrophyte study. Recommendations and public outreach for local units of government, residents/landowners and businesses. Lake cleanup project completed for June 2005.
- ➤ Herring Lakes Watershed Management Plan working during 2002 2003 with the Benzie County Conservation District undertook groundwater contamination site identification, sampling and analysis for nutrients along lakeshore parcels. Findings and recommendations and public outreach for local units of government, residents/landowners and businesses.

If you have any questions regarding this RFQ/RFP, please do not hesitate contact me at 231-499-7165 or cgrobbel@grobbelenvironmental.com. I look very much forward to interviewing with the selection committee at their convenience.

Sincerely,

**Grobbel Environmental & Planning Associates** 

Christopher P. Grobbel, Ph.D.

Sr. Community Planner/Project Manager

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# **EDUCATION**

**Ph. D.** Environmental Policy and Law, Michigan State University, Resource Development Department, College of Agriculture and Natural Resources, 1998, GPA 3.96.

**M.S.** Environmental Policy and Law / Hydrogeology - Michigan State University, Resource Development Department, College of Agriculture and Natural Resources, 1986, GPA 3.93.

**B.S.** Environmental Science / Forestry with High Honor - Michigan State University, Resource Development Department, College of Agriculture and Natural Resources, 1983, GPA 3.82. Phi Beta Kappa.

# PROFESSIONAL EXPERIENCE

Principal/Senior Associate - Grobbel Environmental & Planning Associates, Traverse City, Michigan.

1998 to Present

Founder and president of the environmental consulting and land use planning firm, Grobbel Environmental & Planning Associates. Project experience includes watershed management and protection planning; community master planning, police power and zoning ordinance development; land use and environmental planning; ecological assessment; wetland determination, restoration and delineation; soil/groundwater investigation and remediation; risk assessment, management and communication; brownfield redevelopment; innovative stormwater treatment system design and construction; litigation support and expert witness; and all aspects of business development, media relations, financial management, marketing and administration.

**Assistant/Adjunct Professor** – Department of Community Sustainability/CARRS/Resource Development Department, College of Agriculture & Natural Resources, Michigan State University, Traverse City and East Lansing, Michigan.

1992 to 2017

Design and teaching of college undergraduate courses entitled: CSUS 425 Environmental Impact Assessment; CSUS 465 Environmental and Natural Resources Law; CSUS 200 Introduction to Sustainability; CSUS 320 Environmental Planning and Management; ESA 225 Land and Environmental Issues in Law; RD 336 State Environmental Law; RD 491 Environmental Ethics; and RD 430 Natural Resources Law. Former director of MSU undergraduate environmental studies program at the University Center in Traverse City, Michigan

Land Use Programs Consultant – Tip of the Mitt Watershed Council, Petoskey/Traverse City, Michigan.

2002 - 2004

Land use programs consultant undertaking master planning, zoning ordinance audit and development, site conservation design/development, site plan review, and land use training and education programs. Duties also include environmental planning; ecological assessment; soil and groundwater investigation; wetland determination, assessment, delineation and restoration; risk assessment, management and communication; brownfield redevelopment; litigation support and expert witness; and all aspects of technical services development, marketing and administration.

Northwest Michigan Land Use Agent – MSU Extension, Grand Traverse County, Michigan.

1999 - 2003

Developer, co-author and coordinator of MSUE's award winning Citizen Planner statewide land use training program in Michigan. Design and teaching of college credit and adult learner non-credit courses in land use planning and law, environmental law and policy, community development, wetlands and watershed management, *etc*. Member of Leelanau County Agricultural Alliance, Antrim-Grand Traverse County farmland preservation task force involved in undertaking surveys and geographic information system mapping toward county administered farmland preservation programs.

Director of Education and Land Stewardship – Leelanau Conservancy, Leland, Michigan.

1998 - 1999

Design and delivery of land use, conservation and environmental education programs for school children, landowners, professionals and local and regional units of government. Implementation of the Leelanau Geography Project, including the training of middle school teachers from ten (10) area public and private schools. Communication and outreach to visual, print, audio and electronic media. Design and implementation of web pages for Leelanau Conservancy and regional environmental education consortium. Writing and administration of numerous grants.

**Co-owner/Senior Project Manager** - Compliance, Inc. Environmental Engineering, Traverse City and Detroit, Michigan.

1996 - 1998

Founder of Southwest Detroit office for Compliance, Inc. Regulatory specialist and senior project manager for the investigation and remediation of sites of environmental contamination, brownfield redevelopment, air permitting, emergency response, expert witness and leaking underground storage tank programs. Recipient of Kresge Foundation brownfield redevelopment project grant, and board member for Cluster 5 (Southwest Detroit) of Detroit's Community Reinvestment Strategy initiative.

Regulatory Specialist/Project Manager - Environmental Solutions, Inc., Traverse City, Michigan.

1992 - 1996

Regulatory specialist and project manager for the investigation and remediation of sites of environmental contamination.

**Environmental Enforcement Specialist** - Michigan Department of Environmental Quality, Environmental Response Division, Lansing, Michigan.

1991 - 1992

Liaison to the Department of the Attorney General in the enforcement and litigation of state environmental regulations.

**Environmental Quality Analyst** - Michigan Department of Environmental Quality, Environmental Response Division, Gaylord, Michigan.

1989 - 1991

Compliance and enforcement of state hazardous waste, solid waste and leaking underground storage tank (LUST) regulations for eight county region.

Responsible for coordination of Part 201 and LUST programs for the eight (8) county Gaylord District.

Water Quality Specialist - Michigan Department of Natural Resources, Land and Water Management Division, Lansing, Michigan.

1988 - 1989 Production supervisor and design assistant for the Michigan Statewide Groundwater Data Base geographic information system.

U.S. Peace Corps – Returned Peace Corps Volunteer.

1987 - 1988 Worked in the development of agro-forestry systems, soil conservation and environmental education projects in Guayas Province, Ecuador.

**Consultant** - Michigan Department of Natural Resources, Groundwater Quality and Land and Water Management Divisions, Lansing, Michigan.

1986 - 1987 Staff planner and development specialist for the prototype computerized Michigan Statewide Groundwater Data Base.

#### SELECT PROFESSIONAL PUBLICATIONS & PRESENTATIONS

<u>Local Governmental Role in Oil and Gas Regulation</u>, WMEAC Conference, Fracking in Michigan, December 3, 2014, Kellogg Center, E. Lansing, Michigan.

<u>Environmental Issues in Natural Gas Production</u>, Harrison, W.B. III, Peters, J., Poll, J., Grobbel, C., VanDyke, A., and Sadler, S., Foxmoor Continuing Education, a Division of Half Moon Education, Inc., publication, 2014.

What is a Taking? Exploring the Boundary between Public Interest and Private Property, Kohler, Ellen, Esq. and Grobbel, Christopher, Ph.D., Tip of the Mitt Watershed Council publication, 2004.

<u>Summary of Property Takings Case Law.</u> Michigan State University Land Use Series, East Lansing, Michigan, December 16, 2002, http://www.msue.msu.edu/aoe/lab\nduse/landindex.html.

<u>Citizen Planner Program Curriculum</u>, training course series for non-professionals involved in local land use decision-making, Michigan State University Extension, 175 pp., copyright 2000. Principal author and instructor of Legal Foundations of Planning and Zoning; Private Property Rights and the Takings Issue; Zoning for Water Quality; Farmland Preservation Tools and Techniques; Principles of the New Urbanism; Brownfield Redevelopment; Wetland Science and Regulation; and Riparian Rights.

An Examination Of Indicators Of Social Equity In Michigan Environmental Policy: The Case Of The Michigan Environmental Response Program, Ph.D. dissertation for the College of Agriculture and Natural Resources, Resource Development Department, Michigan State University, 200 pp., 1998.

**Environmental Justice Bibliography**, **1975-1994**, D. Doberneck, C. Grobbel, T. Link, and G. Guluma, Office of Diversity and Pluralism, College of Agriculture and Natural Resources, and the Resource Development Department, Michigan State University, 79 pp., 1995.

<u>Environmental Equity and U.S. Policy</u>, Community News & Views, Vol. 6, No. 4, Urban Affairs Programs, Michigan State University, Winter 1994.

Wellkey: User Documentation, Christopher P. Grobbel and Bruce Morrison, 69 pp., 1989.

<u>Water Well Record Location Verification and Automation: A Pilot Project for Isabella County, Michigan</u>, M.N. Beaulac and Christopher P. Grobbel, 50 pp., 1987.

<u>State v.s. Federal Rights in the Regulation of Natural Resources: Legal Issues Surrounding Great Lakes</u>
<u>Water Diversion</u>, A Master's Thesis for the College of Agricultural and Natural Resources, Michigan State
University, Christopher P. Grobbel, 120 pp., 1986.

<u>Water Management in Michigan: Legal Issues in Michigan Water Planning</u>, Dan Bronstein, Leighton Leighty, John Vincent and Christopher Grobbel, 214 pp., 1985.

Presenter of "Environmental Issues with Hydraulic Fracturing: Unconventional Natural Gas Development of Collingwood Shale" numerous conferences and presentations through-out Michigan, 2010 – 2014.

Panelist: "Risks of Hydraulic Fracturing: Unconventional Natural Gas Development of Collingwood Shale," Michigan State University Extension, Traverse City, Michigan, June 24, 2010.

Instructor of "Planning and Zoning Essentials" Michigan Association of Planning, February 25, 2010, Perry Davis Hotel, Petoskey, Michigan.

Presenter of "Role of Local Government in Protecting Wetlands" at the Planning Michigan Conference, Michigan Association of Planning's 2009 Planning Conference, October 2, 2009, Mt. Pleasant, Michigan.

Presenter of "Role of Local Government in Michigan Wetland Regulation" at the Michigan Wetlands: Celebrating the 25<sup>th</sup> Anniversary of the Wetland Protection Act Conference, Michigan Department of Environmental Quality, Michigan Department of Natural Resources, Northwestern Michigan College, Water Studies Institute, and U.S. Environmental Protection Agency, May 20-22, Traverse City Michigan.

Presenter of "Groundwater Disputes: Case Studies and Solutions" at the 10<sup>th</sup> Annual Michigan Environmental Health Professionals Conference, October 12-15, 2003, Shanty Creek, Bellaire, Michigan.

Presenter of "Water Quality Protection Tools for Local Government," Kellogg Foundation/People and Land Project, September 30, 2003, Inland Lakes Education Center, Indian River, Michigan.

Presenter of "Water Quality Protection Tools for Local Government," Kellogg Foundation/People and Land Project, August 22, 2003, Grand Traverse Bay Watershed Conference, Holiday Inn, Traverse City, Michigan.

Presenter of "Farmland Preservation Tools and Techniques and Landowner Options" at the 52<sup>nd</sup> Annual Benzie-Manistee Horticultural Show, March 18-20, 2003, Crystal Mountain, Thompsonville, Michigan.

Presenter "Development Rights" for HARBOR, Inc. at the Little Traverse Township Hall, Emmet County, Michigan, April 22, 2003.

Presenter "Riparian Rights" for HARBOR, Inc. at the Little Traverse Township Hall, Emmet County, Michigan, March 25, 2003.

Panelist "The Legalities of Land Use" for MSU Extension/HARBOR, Inc. at the Little Traverse Township Hall, Emmet County, Michigan, December 10, 2002.

Presenter "Planning and Zoning - How to Stay Out of Court" at the Annual Michigan Society of Planning Conference, Community, Culture, Change: Planning Michigan, Kalamazoo, October 2 through 5, 2002.

Presenter of "Michigan's Environmental Regulatory Legacy" at the 2001 Kickoff: Michigan Groundwater Stewardship Program, Michigan Department of Agriculture, Michigania, Boyne City, Michigan, October 25, 2000.

Presenter of "Hydrogeology, Contaminant Monitoring, Fate and Transport, and Contaminant Remediation" at the Chemical Applications: Pesticide/Fertilizer Application Workshop, Michigan State University, East Lansing, Michigan, March 30 - 31, 2000.

Presenter at the 2000 Envirothon, "Renewable Energy: Taking Another Look", Northwest Michigan Horticulture Research Station, Michigan State University Extension, February 18, 2000.

Co-presenter "Land Use Conflict: When City and Country Clash", A project of the National Public Policy Education Committee in Cooperation with the Farm Foundation, Northwest Michigan Orchard Show, Grand Traverse Resort, Acme, Michigan, January 25, 2000.

Panelist "Building Consensus in Land Use and Growth", Council of Michigan Foundations annual conference, Grand Traverse Resort, Acme, Michigan, October 4, 2000.

Panelist at "A Community Forum of Brownfield Redevelopment along Boardman Lake", Traverse City, Michigan, October 13 and 27, 1998.

Panelist on "Impact of the Michigan Environmental Response Act" at the Michigan Department of Treasury's 8th Annual Directions in Public Finance Conference at the Grand Traverse Resort, Acme Michigan on June 2, 1995.

Presented an Environmental Regulatory Update: Issues Related to Commercial Lender Liability for Old Kent Bank, March 11, 1994 and June 7, 1995.

Presented Guidelines for the **Purchasing, Handling and Disposal of Hazardous Materials** with Benson, McCurdy & Wotila, P.C. for Northern Michigan Purchasing Agents in Kalkaska, Michigan on March 9, 1994.

Presenter - An Overview of Michigan Environmental Response Act and Other Environmental Regulations for Grand Traverse Area Certified Public Accounts and Attorneys at the Grand Traverse Resort, Traverse City, December 10, 1991.

Guest Lecturer in **Wetland Law** – Detroit College of Law, Michigan State University, East Lansing, Michigan, Spring 2002.

Guest Lecturer in **Environmental Justice Studies** – University of Michigan, School of Natural Resources, Ann Arbor, Michigan, Spring 1998.

Guest Lecturer in Environmental Justice and the Law – Cooley Law School, Lansing, Michigan, Fall 1997.

Guest Lecturer in **Environmental Studies** – Western Michigan University, Kalamazoo, Michigan, 1994 through 1999.

#### **FURTHER EDUCATION**

Training – Understanding the Depth of Deep Well Injection, North Central Michigan College, Petoskey, Michigan, May 20, 2010.

Training – **Design for Rain Gardens: Stormwater and Runoff Control**, North Carolina State University and Tetra Tech, April 16, 2009.

Training – **Wetland Plant Identification**, Wetland Training Institute, Dr. Mollenberg, Lansing, Michigan, May 21-24, 2002.

Training - **Planning Hydrology for Constructed Wetlands**, Wetland Training Institute, Dr. Gary Pierce, Pierce Cedar Creek Institute, Hastings, Michigan, July 9 - 13, 2001.

Training - U.S. Army Corps of Engineers Wetland Delineation and Management Training, Richard Chinn Environmental Training, Inc., Chicago, Illinois, October 9 - 13, 2000.

Training – **Special Wetland Area Management Project,** Geographic Information System Wetland Data Northwest Michigan Council of Governments, Traverse City, Michigan, August 31, 2000.

Training – **Web Site Design Course,** Michigan State University Extension, University Center, Traverse City, Michigan May 4, 2000.

Training - American Institute of Certified Planners (AICP) Comprehensive Exam Preparatory Course, February through April 17, 2000.

Training - Computer Technologies and Groundwater Resource Data Management, U.S. EPA, Atlanta, Georgia, August 1986.

Seminar - Hazardous Waste Management under the Resource Conservation and Recovery Act, Waste Management Division of the Michigan Department of Natural Resources, February 1989.

Training - Soil and Groundwater Sampling and Analysis - Michigan Department of Natural Resources, April 1989.

Training - Innovative Remedial Action Technologies, Environmental Response Division, Michigan Department of Natural Resources, 1989.

Seminar - Underground Storage Tank Management, Department of Engineering Professional Development, University of Wisconsin, 1989.

Training - Amendments to the Michigan Environmental Response Act, 1988 P.A. 307, Michigan Department of Natural Resources, 1990.

Seminar - Leak Detection and Corrective Action for Underground Storage Tanks, Department of Engineering Professional Development, University of Wisconsin, 1990.

Seminar - **Groundwater Flow and Well Hydraulics**, Department of Engineering Professional Development, University of Wisconsin, 1991.

Cleaning The Air in West Michigan #4: Recognizing and Dealing with Non-compliance, Varnum, Riddering, Schmidt and Howlett, and Grand Valley State University - Water Resources Institute, Grand Rapids, Michigan, September 1994.

ASTM - Environmental Site Assessment Up-date, Chicago, Illinois, August 1994.

Seminar - **IBM PC Applications in Groundwater Pollution and Hydrology,** Groundwater Modeling and Computer Technologies for Groundwater Quality Management - National Ground Water Association, Boston, Massachusetts, August 1994.

Workshop - Waste Minimization and Energy Efficiency Workshop - American Automobile Manufacturers Association, Michigan Departments of Commerce and Natural Resources and the U.S. EPA, Detroit, Michigan, December 1994.

Seminar - Clean Air Act Amendments, Sec. 112(R) - Process Safety Management and Risk Management Compliance, Michigan Association of Environmental Professionals Howell, Michigan, December 1994.

Workshop - Waste Minimization and Energy Efficiency Workshop - Michigan Departments of Commerce and Natural Resources, Traverse City, Michigan, May 1995.

Training - Risk-Based Corrective Action (RBCA) Applied at Petroleum Sites (ASTM E38-94), ASTM by Foster Wheeler Environmental Corporation, Bellevue, Washington, July 14-15, 1995.

Conference – **Restructuring Rural Society and Rural Sociology**, Environmental Justice, 58th Annual Meeting, Rural Sociological Society, Ritz-Carlton Hotel, Pentagon City, Virginia, August 17-20, 1995.

Conference – Michigan Chapter of the American Planning Association and the Michigan Society of Planning Officials, 4th Annual Joint Conference, "Planning Michigan For the People, By the People", Amway Grand Plaza, Grand Rapids, Michigan, September 22-25, 1999.

Seminar - Innovative Septic Technologies, Michigan State University Engineering Department, Michigan State University Extension and Northwest Michigan Council of Governments, Traverse City Library, Traverse City, Michigan, August 25, 2000.

#### **Academic Achievement:**

Phi Beta Kappa
Golden Key National Honor Society
Alpha Zeta Agriculture and Natural Resources Honor Society
Numerous MSU scholarships and assistantships – 3/84 through 3/86.
MSU graduate student fellowship – 9/92 through 8/98.

#### **Professional Certifications:**

OSHA 40-Hour Site Safety Training OSHA 8-Hour Site Safety Training OSHA Hazardous Waste Site Supervisory Safety Training

Qualified Underground Storage Tank Professional #190, State of Michigan, Department of Environmental Quality.

Michigan Association of Planning, certified instructor.

#### **Professional Associations:**

Michigan Association of Environmental Professionals, member.

National Association of Environmental Professionals, member.

National Ground Water Association, member.

Society of Wetland Scientists, member.

Michigan Association Planning, certified instructor and former education committee member.

American Planning Association, member.