

Lake Champlain Basin Flood Resilience Conference Agenda

Monday, June 04, 2012 Day Session

(English-French Translation available in Livak Ballroom sessions)

8:00 am - 3:00 pm	Registration Davis Center 4 th Floor
8:00 am - 9:00 am	Continental Breakfast Davis Center 4 th Floor
9:00 am - 9:10 am	Welcome Deb Markowitz, Secretary, VT ANR <i>Livak Ballroom</i>
9:10 am - 9:20 am	Conference Overview Bill Howland, Manager, LCBP Livak Ballroom
9:20 am - 10:00 am	<u>Keynote: 2011 Floods: Response, Recovery and Resilience</u> Sue Minter, Vermont Irene Recovery Officer, VT Agency of Administration Livak Ballroom
10:00 am - 10:30 am	Keynote: U.S. Army Corps of Engineers Flood Mitigation Programs Jason Shea, New York State District Chief, Watershed and Navigation Section Planning Division of U.S. Army Corps of Engineers Livak Ballroom
10:30 am - 11:00 am	Break

11:00 am - 12:00 pm	Concurrent Sessions A		
Session A1 Flood Response 1: Rivers (State/Federal)	Session A2 Agriculture & Flooding: Potential Use of Agricultural Lands for Flood Mitigation	Session A3 Emergency Response Lessons Learned from 2011 Flood Events	
Livak Ballroom	Jost Foundation Room	Chittenden Bank Room	
Moderator: Mike Kline Rivers Program Manager, VT DEC	Moderator: Kip Potter Resource Conservationist, USDA-NRCS	Moderator: Bill Howland Manager, LCBP	
Elizabeth Reichheld Stream Management Program Manager NYC DEP <u>Managing Streams & Floodplains in th</u> NYC Watershed: Progress, Lessons, an <u>Future Directions</u>	Impacts of Tropical Storm Irene on Vermont Farms	Peter Coffey Deputy Director, VT Emergency Management 2011 Lake Champlain Flooding	
Kim Greenwood Water Program Director, VNRC <u>Moving Towards Healthy Rivers</u>	Shannon Pytlik River Scientist, VT DEC Reducing Flood Hazards Through River Corridor Protection	Kelly Donoghue Assistant Director, Clinton County Office of Emergency Services, NY Emergency response experiences from the 2011 flood events in Clinton Co, NY	
Mike Kline Rivers Program Manager, VT DEC New River Management Policies and Programs for a Flood Resilient Vermont	Kip Potter Resource Conservationist, USDA-NRCS-VT Hydrologic Modifications on Agricultural Lands: Impacts and Management Opportunities	Jean-Thomas Bilodeau Fortin Ministère de la Sécurité publique (Ministry of Public Secuirty) Flood Alarm System in Québec	
12:00 pm - 1:00 pm	Lunch		













1:00 pm - 3:00 pm	Concurrent Sessions B
Session B1 Flood Response 2: Municipal Flood Response Panel on The View from the Front Line	Session B2 Building Human & Natural Resilience to Flooding in a Changing Climate
Livak Ballroom	Jost Foundation Room
Moderator: Karen Horn Director of Public Policy, VT League of Cities & Towns	Moderator: Lesley-Ann Dupigny-Giroux State Climatologist, University of Vermont
Caitrin Noel Executive Director, Friends of the Mad River A Grassroots Response in the Mad River Valley	Lesley-Ann Dupigny-Giroux State Climatologist, University of Vermont Overview of the Climate-Flooding Relationship in Vermont
Christine Savard Ministère de la Sécurité publique (Ministry of Public Security) Emergency Response With the Municipalities	Mathias Collins Hydrologist, NOAA, Boston, MA Hydroclimatic Flood Trends in the Northeastern United States and Implications for Planning & Design
Luc Castonguay Directeur, Service de l'Urbanisme (Director of Urban Planning), St-Jean-Sur-Richelieu, QC <u>The City's Role in Managing the Flood-Prone Area</u> <u>Gestion de la zone inondable: le rôle de la Ville</u>	Bill Saunders Senior Hydrologist, NWS NE River Forecast Center, MA NWS River and Flood Forecasting in the Lake Champlain Basin
Michelle Braun Zoning Administrator, Town of Northfield, VT	Paul Sisson Science & Operations Officer, NWS/BTV Tropical Cyclone Irene's Devastating Flash Flooding in Vermont on 28 August 2011
Bill Shepeluk Town Manager, Town of Waterbury, VT	Johnathan Croft GIS Database Administrator, VTrans Mapping Storm Damage to Infrastructure in the Wake of Tropical Storm Irene - The Vermont Experience
Chris Campany Executive Director, Windham Regional Planning Commission Regional Planning Commission Response to Irene	Nan Johnson Community Planner, FEMA, VT FEMA's lessons learned in VT Flooding (Spring 2011 & Tropical Storm Irene)
	Greg Hanson Service Hydrologist, NWS/BTV National Weather Service Awareness Efforts and the Watch/Warning Process
3:00 pm - 3:30 pm	Break













Monday, June 04, 2012 Day Session continued

(English-French Translation available in Livak Ballroom sessions)

3:30 pm - 5:00 pm		Concurrent Sessions C
Session C1 Flood Response 3: Lakeshores		Session C2 Flood Vulnerability Mapping
Livak Ballroom		Jost Foundation Room
Moderator: Susan Warren Lakes & Ponds Section Manager, VT DEC		Moderator: Keith Robinson Director, USGS NH/VT Water Science Center
Local Administration of L	sistance Specialist, VT DEC ake Floodplain Regulations: Opportunities for Improvement	David Bjerklie Hydrologist, USGS Connecticut Water Science Center Assessment of Lake Champlain Flood Extent During the May 2011 Flood Using Publically Available Remote Sensing Information
Jurij Homziak Director of Outreach & E Outreach & Education: H Understand Their Vulner	elping Floodplain Residents	Ned Swanberg Flood Hazard Mapping Coordinator, VT DEC Flood Hazards by the Lake: What Do We Know and What Do We Need To Know?
Shaun Lalonde Engineer, Adirondack Par Adirondack Park Agency		Marvin Boyd Meteorologist, NWS/BTV GIS-Based Inundation Flood Mapping
Pascal Sarrazin Analyst, Québec MDDEP Québec Policy on Floodplain Management		Panel Discussion Covering Sessions B2 & C2
	5:00 pm Adjo	urn Day Session













Monday, June 04, 2012 Evening Session

6:00 pm - 6:40 pm	Reception and Poster Session Local Watershed Organizations & River Flume Demonstration Davis Center 4 th Floor
6:40 pm - 9:00 pm	Public Education Sessions Livak Ballroom

Welcome

Lori Fisher, Executive Director, Lake Champlain Committee *Livak Ballroom*

Kari Dolan

Vermont Ecosystem Restoration Program Manager, VT DEC

Managing Floodplains and River Corridors to Achieve Greater Flood Resilience: A Local & State Partnership

Tim Mihuc

Professor & Director, Lake Champlain Research Institute, SUNY Plattsburgh

River and Floodplain Issues as Applied to What Happened in the Ausable and How These Communities are Moving Forward

Susan Warren

Lakes & Ponds Section Manager, VT DEC

Flooding Impacts on Lakeshores and Means of Protecting Lakeshores

Anne Chick

Senior Advisor, IJC

Who the IJC is and What They Hope to Accomplish Under Their Newest Charge on Lake Champlain

Rose Paul & Jessica Levine

The Nature Conservancy

<u>Creating a Coherent, Integrated Effort to Safeguard Human and Natural Communities From the Impacts of Flooding in a Climate Changing World</u>

Moderator: Mike Winslow

Staff Scientist, Lake Champlain Committee

Q&A Facilitated Discussion: What Needs to be Fixed? Voices from Conference Participants

9:00 pm Adjourn Evening Session













Tuesday, June 05, 2012

(English-French Translation will NOT be available on this day)

	<u> </u>
8:00 am - 11:00 am	Registration/Continental Breakfast Davis Center 4 th Floor
8:45 am - 9:00 am	Welcome Flood Management Policies in Vermont David Mears, Commissioner, VT DEC Livak Ballroom
9:00 am - 9:20 am	New York Policy John Connell, Senior Project Manager, U.S. Army Corps of Engineers Livak Ballroom
9:20 am - 9:40 am	Rivers & Floodplain Management in Québec Martin Mimeault, Lake Champlain Coordinator, Québec MDDEP Livak Ballroom
9:40 am - 10:20 am	National Flood Risk Management Policy: Opportunities and Challenges to Safeguarding Communities and the Environment Shana Udvardy, American Rivers/Udvardy Consulting Livak Ballroom
10:20 am - 10:30 am	Recap and Highlights From Monday's Technical Sessions Bill Howland, Manager, LCBP Livak Ballroom
10:30 am - 11:00 am	Break

11:00 am - 12:00 pm	Flood Mitigation Policy Panel Discussion: Lake Champlain Shoreline Livak Ballroom
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Moderator: Ben Rose

Vermont Irene Recovery Office Coordinator, Vermont Emergency Management

Catherine Dimitruk

Executive Director, Northwest Regional Planning Commission Shoreline Protection in Northwest Vermont

Amy Picotte

Lay Monitoring and Shoreline Management Program Manager, VT DEC From the Lake Scorecard to the LakeWise Pilot Program

Martin Mimeault

Lake Champlain Coordinator, Québec MDDEP

A Shoreline Restoration Approach in St. Armand, Québec Stabilization des berges aux abords du lac Champlain

Mike Winslow

Staff Scientist, Lake Champlain Committee <u>Lake Flooding: We've Been Here Before</u>

12:00 pm - 1:00 pm Lunch













Tuesday, June 05, 2012 continued

(English-French Translation will NOT be available on this day)

ruesday, June 05, 20	12 continued (English-French Translation will NOT be available on this day,	
1:00 pm - 2:45 pm	Flood Mitigation Policy Panel Discussion: Rivers & Floodplains Livak Ballroom	
Moderator: Kari Dolan Director, Vermont Ecosys	tem Restoration Program	
Transportation Perspective	Gina Campoli Environmental Policy Manager, VTrans Where the River Meets the Road: Creating a Resilient Transportation System	
Floodplain Perspective	Rob Evans River Corridor & Floodplain Manager, VT DEC Flood Resiliency - How Do We Get There?	
Wetland Perspective	Jon Kusler Associate Director, New York Association of State Wetland Managers Floodplain Natural & Beneficial Functions	
Advocacy Perspective	Brian Shupe Executive Director, VNRC Flood Resiliency to Sustain Vermont's Working Landscape	
2:45 pm - 3:30 pm	Conference Wrap-up Discussion Mary Watzin, Dean of Rubenstein School of Environment & Natural Resources, UVM Livak Ballroom	
3:30 pm Conference Adjourn		

The Lake Champlain Basin Program would like to thank the University of Vermont, Rubenstein School of Environment and Natural Resources, Lake Champlain Sea Grant, and the VT Water Resources and Lake Studies Center for supporting this conference.













Presenter Biographies

Jill Arace, Executive Director, VACD

Jill has nearly thirty years of non-profit management and sustainable development experience, mostly overseas. She lived and worked in Thailand and Cambodia for eleven years, managing relief and development programs for several organizations, including the American Friends Service Committee and Oxfam. She returned to the US to attend graduate school, where she earned two masters degrees - one in Public Administration from the Harvard Kennedy School, and the other in Economics from Boston University. After graduate school, Jill moved to one of her favorite places - Vermont - where she worked for eleven years at the Institute for Sustainable Communities managing civic participation and sustainable development programs in Central and Eastern Europe and Russia, including community-based environmental action planning, school-based conservation education, environmental management training, watershed planning, solid waste management, energy efficiency, sustainable forestry, agricultural production, food security, and grassroots citizen initiatives. After she stopped traveling around the world, Jill began learning more about conservation and community development in Vermont and in the beautiful Mad River Valley, where she lives and facilitates sustainable agriculture initiatives. Jill is particularly interested in supporting local food production and building bridges between different segments of the community. When she's not busy organizing something, you may find Jill digging in her garden, walking the back roads of Vermont, practicing energy healing, or singing in a chorus. jill.arace@vacd.org

David Bjerklie, USGS Connecticut Water Science Center

Mr. Bjerklie currently works for the U.S. Geological Survey at the Connecticut Water Science Center. His recent work has included watershed modeling with Precipitation-Runoff Modeling Systems at the local scale (Pomperaug River Watershed of Connecticut) and at the regional scale (Thames and Housatonic River Watersheds of New England). Additionally, he has worked and continues to develop methods for the application of remote sensing to the estimation of discharge in rivers and areas of tidal inundation in estuaries. He has also been involved with various aspects of high-flow and low-flow discharge measurements, floodplain mapping, and the completion of various aspects of Flood Insurance Studies including cross-section and bridge surveys, HEC-RAS modeling of water-surface-profiles and floodways, stream temperature modeling, estimation of evapotranspiration, and groundwater monitoring and analysis related to sea-level rise in coastal aquifers. David has a PhD in Hydrology from the University of New Hampshire. dmbjerkl@usgs.gov

Marvin Boyd, National Weather Service, Burlington, VT

Marvin Boyd, a Meteorologist with the National Weather Service in Burlington, Vermont since February 2011, started his career in 2004 as an Air Force weather forecaster for the southeastern United States. In 2008, Marvin joined the USAF Reserves as a forecaster for the Middle East and Southwest Asia while finishing a Bachelor of Science in Meteorology with a Master's Certification in GIS at NC State. Since becoming a part of the National Weather Service, Marvin has been relied upon as a local expert in GIS, and is on the Lake Champlain Area Committee's incident management team's GIS unit. Much of Marvin's work and research in GIS is directly related to flood inundation and flood mitigation with an emphasis on the meteorological and hydrological perspective. marvin.boyd@noaa.gov.

Michelle Witten Braun, Planning Department, Town & Village of Northfield

Michelle is head of the Planning Department for the Town & Village of Northfield, VT. She has fifteen years of experience as an environmental policy analyst, conducting applied research and analysis, group process design and facilitation, project and budget management, and organizational development. From 2001-2005, her time was primarily dedicated to caring for her children. Prior to that hiatus, Ms. Braun was engaged in extensive research and evaluation activities on environmental, natural resource, and human health issues. She was responsible for managing projects, designing and facilitating meetings, and presenting workshops for diverse clients, including city and state governments, United States Environmental Protection Agency, watershed organizations, environmental health associations, and multi-partner collaboratives. mbraun@northfield.vt.us

Chris Campany, AICP, Windham Regional Commission

Chris is the Executive Director of the Windham Regional Commission in Brattleboro, Vermont, which includes 27 towns. Prior to arriving in Vermont, Chris was Assistant Professor of Landscape Architecture and Graduate Student Coordinator at Mississippi State University. He served as Deputy Director of Planning and Zoning and Zoning Officer for Calvert County, Maryland, and as Deputy Commissioner of Planning for Orange County, New York. As Deputy Commissioner, he served as Staff Director of the Orange County Transportation Council, and as Director of Agricultural Economic Development for the Orange County Agricultural and Farmland Protection Board. Chris was Federal Policy Coordinator for the National Campaign for Sustainable Agriculture in its work on the 2002 Farm Bill. He founded and served as Executive Director of the Baton Rouge Economic and Agricultural













Development Alliance in Louisiana, and was a Program Analyst and Presidential Management Intern with the U.S. Environmental Protection Agency in Washington, DC. Chris holds a Bachelor of Arts in Political Science and a Master of Public Policy and Administration from Mississippi State University, and a Master of Landscape Architecture from Louisiana State University. He is a Certified Planner through the American Institute of Certified Planners. ccampany@sover.net

Gina Campoli, Environmental Policy Manager, VTrans

Since 2003, Gina has held the position of Environmental Policy Manager for the VT Agency of Transportation and is responsible for agency policy and planning initiatives related to climate change, energy planning and air and water quality. Gina began her professional career in Vermont state government in 1982 as an architectural historian in the VT Division for Historic Preservation. In 1989 she was asked to join the Vermont Agency of Natural Resources Planning Division. Her work at ANR spanned 14 years and involved key issues facing the state at the time including scenery preservation, land use and smart growth policy, permit reform, dispute resolution and consensus building in the regulatory arena. She has served her community of Craftsbury, VT on numerous committees and boards, including a stint as a school board member and chair. She holds national and international titles in masters cross country skiing and has three young adult sons. Gina earned an MS in Historic Preservation from the University of Vermont in 1982 and a BA in American and Environmental Studies from Williams College in 1977. gina.campoli@state.vt.us

Luc Castonguay, Urban Planning Department, Saint-Jean-sur-Richelieu, QC

Mssr. Castonguay is the director of the Urban Planning Department, including the Environment and Sustainable Development Division for the City of Saint-Jean-sure-Richelieu. Before taking the directorship, he served as the Urban Planning Chief for the City from 2007-2011. From 2004-2007, Mssr. Castonguay was the director of Urban Planning and Environmental Development at Canton d'Orford. Mssr. Castonguay holds a bachelor's degree in urban planning from the Université du Québec à Montreal (UQAM) in 1998. And he is currently working towards a higher degree in Municipal Management at Ecole Nationale d'Administration Publique (National School of Public Administration). L.Castonguay@ville.saint-jean-sur-richelieu.qc.ca

Anne Chick, Senior Analyst, International Joint Commission

Anne Chick has been a U.S. Foreign Service Officer for 25 years working on economic and environmental issues in Europe, Canada, the Caribbean, and at the United Nations in Geneva. She is currently detailed to the International Joint Commission as Senior Advisor for the U.S. Section working in the St. Croix, Lake Champlain, and Red River of the North basins. She has a Masters in International Affairs from Columbia University.

Peter Coffey, Deputy Director of Operations & Logistics, Vermont Emergency Management

Pete Coffey, previously worked at the Vermont Department of Health as its Emergency Preparedness Chief. Pete was an educator for more than 30 years before entering state government, most recently serving as Principal of Vergennes Union High School. He is the Assistant Chief of the Bristol Fire Department, where he has served since 1976. He is chair of the State Emergency Response Commission and coordinates the staffing for the State Emergency Operations Center. peter.coffey@state.vt.us

Mathias Collins, NOAA, Boston, MA

Matt Collins is the Monitoring and Evaluation Coordinator for the NOAA Restoration Center's Northeast Region. He designed and oversees a restoration monitoring program that evaluates the short- and long-term outcomes of stream, estuarine, and coastal restoration projects. Matt is a Professional Hydrologist and earth scientist who specializes in fluvial sediment dynamics and flood hydroclimatology. In addition, he provides technical support for fish passage and wetland restoration projects throughout the Northeast United States and elsewhere. Matt has master's degrees in Geography and Water Resource Management from the University of Wisconsin, Madison. mathias.collins@noaa.gov

John Connell, U.S. Army Corps of Engineers

A native of New Hartford, NY, John now resides in Bennington, VT with his wife and 3 daughters. After high school he served in the Army, and has a degree in Environmental and Forest Biology from SUNY College of Environmental Science and Forestry, Syracuse. John is a Senior Project Manager in the New York District of the U.S. Army Corps of Engineers, working in the Permits Team at the Upstate Regulatory Field Office in Watervliet, NY. His duties include determining the extent of federal waters and wetlands on private and public lands, reviewing permits for work in these waters, and evaluating compensatory mitigation plans for proposed impacts. John currently serves on two programmatic teams at the District, including one that reviews District jurisdictional determinations and another tasked with ensuring consistent standards for the successful implementation of compensatory mitigation plans. He is also the District subject matter expert for Endangered Species issues in Upstate NY. John.R.Connell@usace.army.mil













Johnathan Croft, VTrans

Johnathan Croft has been working in the field of GIS since 1989, after receiving a degree in geography from the University of Vermont. He has been overseeing the Mapping Unit at the Agency of Transportation since 1998. Johnathan.croft@state.vt.us

Kari Dolan, Ecosystem Restoration Program Manager, VT DEC

Kari Dolan is the Manager of the Vermont Department of Environmental Conservation's Ecosystem Restoration Program which is focused on nonpoint source water pollution remediation and water quality protection. The program administers approximately \$3 million in water quality grants to municipalities and local, regional, and statewide partners. Ms. Dolan also works on state policy pertaining to flood resiliency, hazard mitigation planning, and climate change adaptation. Ms. Dolan had been the River Corridor and Floodplain Manager with the State's Rivers Program. Prior to joining the Department, Ms. Dolan worked as the Water Resources Project Manager for the National Wildlife Federation's New England office for 12 years, where she managed stream restoration projects, worked on regional and national water policy issues, and authored numerous water quality reports. Ms. Dolan holds two Masters Degrees in Environmental Science and Public Policy from the University of California at Berkeley and a biology degree from Princeton University. kari.dolan@state.vt.us

Lesley-Ann Dupigny-Giroux, Assoc. Professor Geography (UVM) & VT State Climatologist

Dr. Lesley-Ann Dupigny-Giroux is an Associate Professor in the Geography Department at the University of Vermont, and Vermont State Climatologist since 1997. She obtained her M.Sc. and Ph.D. degrees in Climatology from McGill University. Her research involves quantifying the land-surface interactions of hazards such as droughts and flooding across the northeast, especially Vermont. She founded the Vermont Weather and Climate Research Group made up of state and federal agencies around Vermont and New Hampshire, to facilitate statewide dialogue and research about weather, climate and climate change issues on varying time scales. Idupigny@uvm.edu

Rob Evans, VT Agency of Natural Resources

Rob Evans is the River Corridor and Floodplain Manager in the Vermont Department of Environmental Conservation's Rivers Program. He provides coordination and supervision of the River Corridor and Floodplain Management section including geomorphic assessments, river corridor mapping and planning, and the FEMA National Flood Insurance Program. Rob has served previously as a Floodplain Managements Specialist with FEMA, a Project Manager and Hydrologist for the State of Wyoming restoring and reclaiming abandoned mine sites, and as a staff scientist for a FEMA flood study contractor. Rob holds degrees in Environmental Science and Watershed Science from Mary Washington College and Colorado State University, respectively. rob.evans@state.vt.us

Kim Greenwood, Vermont Natural Resources Council

Kim Greenwood is the Water Program Director and Staff Scientist for VNRC. Kim is the resident water scientist and expert witness at VNRC and has worked on water issues in Vermont for almost 20 years. Her work at VNRC focuses on promoting science-based policy positions to ensure that scientific information is brought to statewide environmental policy making processes. Kim worked in both the private sector and the Agency of Natural Resources before joining VNRC. She is a graduate of the Changing Faces Women's Environmental Leadership Program at the East-West Center in Hawaii. Kim is active in many community forums and boards such as the Vermont Beekeepers Association and holds degrees in Aquatic Resources from University of Vermont and Mechanical Engineering from Vermont Technical College. kgreenwood@vnrc.org

Greg Hanson, NOAA

Greg Hanson is the Service Hydrologist at the National Weather Service Forecast Office in Burlington, Vermont. Greg.hanson@noaa.gov

Jurij Homziak, Director for Education & Outreach, Lake Champlain Sea Grant

Dr. Jurij Homziak is the Director for Outreach and Education for Lake Champlain Sea Grant (LCSG) at the University of Vermont. He has been with the program since 2000. LCSG supports a key national Sea Grant objective: to assist communities to prepare for and respond to hazardous events associated with climate change, changes in land-use, and increased economic activity. Sea Grant is a nationwide network of 32 university-based programs that work with coastal communities, in partnership with the National Oceanic and Atmospheric Administration, the nation's leading agency on weather and climate. jhomziak@uvm.edu

Karen Horn, Director, Vermont League of Cities and Towns

Director of VLCT Public Policy & Advocacy, (BA McGill University, MA UVM) worked at the VT Department of Housing and Community Affairs (DHCA) and MA Executive Office of Communities and Development (EOCD)













before joining VLCT in 1987. She served 7 years on Moretown and Washington West school boards, currently serves as Moretown Energy Coordinator and chair of that town's energy committee. khorn@vlct.org

Bill Howland, Program Manager, LCBP

Dr. Howland has been the manager of the Lake Champlain Basin Program (LCBP) based in Grand Isle, Vermont, US, since 1999. Bill has B.A. and M.A. degrees from the University of Vermont and a Ph.D. from McGill University specializing in biophysical remote sensing and terrain analysis in arctic and subarctic regions. His research, teaching experience and publications include biophysical remote sensing and terrain modeling, ecological biogeography, physical geography and arctic field studies. He was Director of the Northern Studies Program on the faculty of Middlebury College (VT) for a decade, followed by five years as Executive Director of Green Mountain Audubon Society. He lives in Isle La Motte, Vermont. whowland@lcbp.org

Nan Johnson, FEMA Region 1, Boston, MA

Nan has worked for the last 7 years as a Community Planner for the Federal Emergency Management Agency (FEMA) coming in just before Hurricane Katrina left its mark. In this role, she implements the Disaster Mitigation Act by managing the plan reviews for VT, MA, and RI while providing technical assistance to New

England states in the development of multi-hazard mitigation plans. She strongly believes that reducing the need and costs for preparedness, response, and recovery in the first place lies in community planning. This includes having a community engaged with its public, stakeholders, and strong partnerships in the process of addressing risk, developing mitigation strategies, and implementing its plan of action.

Nan is Chair of the New England Federal Partners and participates on behalf of FEMA with the New England Sustainable Communities Partnership. Previously, she provided planning and coordination support for the Long Term Community Recovery for Hurricanes Katrina, Rita, and Ike. Prior to FEMA, Nan worked for the State of Colorado on wildfire issues and as a land use planner-GIS specialist for over 15 years in local government in Colorado, Arizona, and New Mexico. She has a Masters of Applied Geography from New Mexico State University. nan.johnson@fema.dhs.gov

Mike Kline, Vermont River Program Manager, VT DEC

Mike has been with DEC for 23 years and now manages the Rivers Program which is responsible for protecting stream flows, regulating stream alterations, and restoring, managing, and protecting river corridors and floodplains. Mike is a River Ecologist (M.A., University of Colorado) and a trained fluvial geomorphologist. He has authored numerous field protocols for assessing stream stability, floodplain function, and river habitats. The primary focus of his career has been the innovation of river corridor and riparian protections for the reduction of flood and fluvial erosion hazards, water quality improvement, and restoring the ecological integrity of Vermont Rivers. mike.kline@state.vt.us

Jon Kusler, Institute for Wetland Science & Public Policy, Association of State Wetland Managers, Inc.

Jon Kusler is the Director of the Institute for Wetland Science and Public Policy and the Associate Director of the Association of State Wetland Managers, Inc. Jon is a lawyer, writer, educator and administrator with over 30 years of experience working with issues in water resources management and the management of water related lands. He holds a J.D., a Ph.D. in Land and Water Use Management, an M.S. in Water Resources Management, as well as Bachelor degrees in English and Geology from the University of Wisconsin, Madison. jon.kusler@aswm.org

Shaun Lalonde, Engineer, Adirondack Park Agency (APA)

Shaun has worked for New York State the past 24 years, the first 14 at the Department of Environmental Conservation and the last 10 years at the Adirondack Park Agency (APA). He is a New York State licensed professional engineer and his official title with the APA is Soil & Water Engineering Specialist. He has a BA with a Major in Geology from SUNY Potsdam and a BS in Civil/Environmental Engineering from Clarkson University. slalonde@gw.dec.state.ny.us

Jessica Levine, TNC

Through a Switzer Leadership grant, Jessica Levine is working with The Nature Conservancy, Adirondack Chapter, on a project focused on aquatic connectivity, climate change adaptation and transportation planning. Prior to this, she worked as a Research Professional for the Quebec Centre for Biodiversity Science, fostering collaborative research and aiding in the transfer of science-based biodiversity knowledge into the policy and planning domains. Jessica worked for many years as an independent environmental policy and science consultant for organizations ranging from community-based NGOs to international environmental organizations including the Commission for Environmental Cooperation of North America. Her consulting work included research, planning, facilitation, and communication and spanned a range of environmental topics, including













sustainable development, watershed management, biodiversity, land use, environmental justice, monitoring, and renewable energy. Prior to initiating her consulting practice, Jessica spent three years directing rural community development and cross-cultural education programs in Latin America, and five years as a teacher and manager of experiential environmental education programs. She holds an M.S. in Energy and Resources and an M.C.P. in City and Regional Planning, both from the University of California, Berkeley, as well as a B.A. in Human Biology from Stanford University. jlevine@tnc.org

Deborah Markowitz, Secretary, Vermont Agency of Natural Resources

Deborah Markowitz is the Secretary of the Vermont Agency of Natural Resources, the state agency with primary responsibility for protecting Vermont's environment, natural resources and wildlife and for maintaining Vermont's forests and state parks. Markowitz was named to that position by Governor Peter Shumlin in January 2011. Secretary Markowitz previously served as Vermont's Secretary of State from 1999 until 2011. A graduate of the University of Vermont (B.A., 1983), Markowitz received her Juris Doctorate degree from the Georgetown University Law Center (magna cum laude, 1987). Markowitz served as a law clerk with Justice Louis Peck of the Vermont Supreme Court (1987 - 1988) and practiced law with Langrock, Sperry, Parker and Wool (1988 - 1990). She served as the founding director of the Vermont League of Cities and Towns Municipal Law Center (1990 -1997), where she published numerous handbooks and academic papers on local government law and lectured locally and nationally on issues related to municipal law and on ethics in government. Markowitz is the author of the Vermont Municipal Guide to Land Use Regulation (1997) and Vermont Municipal Environmental Handbook (1995). Markowitz has served on numerous state and national boards and commissions including the Vermont Girl Scout Council, the Central Vermont Community Action Agency, and the Vermont Women's Business Center Advisory Board. She has also been recognized nationally for her leadership by being awarded an Aspen-Rodel fellowship. Secretary Markowitz and her husband Paul live in Montpelier with their three children where they spend their free time hiking, paddling, gardening and cross-country skiing. deb.markowitz@state.vt.us

David K. Mears, VT DEC Commissioner

David K. Mears was appointed Commissioner of the Vermont Department of Environmental Conservation by Governor Shumlin in January 2011. Commissioner Mears has held a number of positions in state and federal government including positions in Texas as an Enforcement Coordinator in the Texas Water Commission, Assistant Attorney General in the Texas Office of the Attorney General, and Senior Attorney for Water Quality with the Texas Natural Resource Conservation Commission. He left Texas to serve as the Energy and Environmental Policy Director with the Texas Office for State-Federal Relations in Washington, DC, then served both as a Trial Attorney and Counselor for State and Local Affairs with the U.S. Department of Justice, Environment and Natural Resources Division. Following his time at the Department of Justice, he was appointed Senior Assistant Attorney General and Chief of the Ecology Division in the Washington Office of the Attorney General.

Immediately prior to his appointment as Commissioner, Mears was a Professor of Law at Vermont Law School, a U.S. Fulbright Scholar in China, and Director of the law school's environmental and land use law clinics. Commissioner Mears has a degree in environmental engineering technology from Cornell University, and Juris Doctor and Masters of Environmental Law and Policy degrees from Vermont Law School. He lives in Montpelier with his wife Nancy Mears and their three children. david.mears@state.vt.us

Timothy Mihuc, Coordinator, Lake Champlain Research Institute at SUNY-Plattsburgh, NY

Timothy (Tim) Mihuc has served as the coordinator of the Lake Champlain Research Institute at SUNY-Plattsburgh since 1999. He holds a Ph.D. in Biology from Idaho State University (1994) and a M.S. degree in Zoology from Oklahoma State University (1989) and B.S. in Biology from Oral Roberts University. Tim began his career with an undergraduate independent research project on nutrient limitation of algae in a small eutrophic lake in Oklahoma. He continued his education as an aquatic ecologist through studies on invertebrate lifehistory ecology in a Colorado alpine wetland (M.S.) and post-fire food web dynamics in Yellowstone National Park streams (Ph.D.). He spent several years at Louisiana State University as a post-doctoral researcher (1994-96) conducting invasive species research in the Atchafalaya River Basin, the largest contiguous hardwood swamp ecosystem in the U.S. From 1996-1999 Tim served as director of the Great Rivers Field Station (Illinois Natural History Survey) where he led a multidisciplinary research team working on the Upper Mississippi River. He has published over 35 research articles including journals such as Ecology, Freshwater Biology, Aquatic Sciences, Hydrobiologia, Journal of Great Lakes Research and American Midland Naturalist and has co-edited the book volume titled "Lake Champlain: Partnership and research in the new millennium" published by Kluwer Academic publishers. Tim's professional areas of interest include aquatic food webs, fish population dynamics, ecological integrity and aquatic biodiversity. He enjoys outdoor activities, particularly fly-fishing, skiing, hiking and mountain climbing (preferably combined). mihuctb@plattsburgh.edu













Martin Mimeault, Lake Champlain Technical Coordinator, Québec MDDEP

Martin Mimeault is currently serving as technical coordinator at the Montérégie Regional Office for the Agreement on Phosphorus Reduction in Missisquoi Bay between the Government of Quebec and the State of Vermont in a manner consistent with implementation plans developed by the Lake Champlain Basin Program under the Vermont, New York, and Québec Memorandum of Understanding on Environmental Cooperation on the Management of Lake Champlain. He is also serving as technical coordinator for the development and implementation of the Action Plan for the Reduction of Phosphorus in Missisquoi Bay, the Water Quality and Biological Monitoring Project and the Monitoring and Evaluation of Blue-Green Algae Project for Missisquoi Bay with Quebec and Vermont partners. Finally, he is actively representing the Government of Quebec and the MDDEP on several inter-jurisdictional management committees related to Lake Champlain Basin Program since 1996. Locally, he is working with the Missisquoi Bay Basin Organization and others agencies for established a stakeholder supported plan to improve the water quality of Missisquoi Bay. He graduated from McGill University, Bachelor of Science in Agriculture, in June, 1984. He served as an agronomist at different Regional Office the MDDEP for the implementation of statutory requirements concerning the reduction of pollution from agricultural sources and Agro-environmental Investment Assistance Program. martin.mimeault@mddep.gouv.qc.ca

Sue Minter, Vermont Irene Recovery Officer, VT Agency of Administration

Sue Minter is currently serving as Vermont's Irene Recovery Officer, a position to which she was appointed in January of 2012. In this capacity Sue is overseeing the implementation of federal disaster recovery funds and state recovery programs, as well as supporting future resiliency efforts. Previous to this appointment, Sue served as the Deputy Secretary for the Agency of Transportation, where, in the immediate aftermath of Tropical Storm Irene, she was a leader within the VTrans "Unified Command" Team, overseeing the regional incident command centers established to direct VTrans' operational response. Sue served in the Vermont legislature for six years, including two years on the House Appropriations Committee and four years on the House Transportation Committee. Sue has worked as a planner at the state, local, and international level for the past 15 years. A graduate of Harvard University (BA) and MIT (MA in City Planning), Sue lives in Waterbury Center with her husband, David Goodman, and their children, Ariel and Jasper. sue.minter@state.vt.us

Caitrin Noel, Executive Director, Friends of Mad River

Caitrin Noel is the Executive Director of Friends of the Mad River. She earned her B.S. in Environmental Science from the University of Vermont, and is currently finishing a M.S. at UVM in International Community Development. Her thesis project focuses on an innovative approach to improving rural water management in Honduras. Caitrin also co-chairs the Warren Conservation Commission. friends@madriver.com

Rose Paul, Director of Science and Stewardship, VT TNC

Rose has a range of duties at TNC that include supervising five staff, conservation planning at multiple scales, and conservation science initiatives such as helping partners assess stream culverts for aquatic organism passage, training Master Gardeners about invasive plants, and planting a strain of disease-tolerant American elms at our natural areas. Rose has an undergraduate degree in Botany from the University of Massachusetts and a Masters Degree from the Field Naturalist Program at the University of Vermont. She formerly worked for the Vermont Agency of Natural Resources and in environmental education. Rose got her start as a naturalist by unflinchingly examining dead birds, worms, and jack-in-the-pulpits when she was little. rpaul@tnc.org

Rebecca Pfeiffer, VT DEC, River Corridor & Floodplain Management Section

Rebecca Pfeiffer is the Floodplain Management Community Assistance Coordinator for the VT DEC's River Corridor and Floodplain Management section. Rebecca works with communities to administer their flood hazard area regulations and the technical review of floodplain development proposals, review comment on local zoning and flood hazard area bylaws, conducts floodplain management training workshops and presentations across Vermont, and helps communities with post-disaster floodplain development damage assessments as required for local flood hazard area regulations. Rebecca's focus with communities and other partners is on how communities can reduce flood damages by avoiding new investments in floodplain areas and enhancing the natural functions of floodplain areas while, encouraging existing development to make their buildings better able to withstand flooding. rebecca.pfeiffer@state.vt.us

Elizabeth Reichheld, New York City Department of Environmental Protection

Beth graduated from Bowdoin College in 1984 with a Bachelor's degree in Biochemistry, and after working as an environmental advocate in Washington DC for several years, she earned a Master's degree in Forest Science at Yale University in 1992. She joined NYC DEP in 1992, and since 1996 she has overseen the City's Stream Management Program which seeks to advance the conservation and stewardship of streams and floodplains in













the New York City Watershed in the Catskills region of Upstate NY. Beth lives in Woodstock with her daughter and in her free time can be found gardening or exploring wild areas by foot or canoe. ereichheld@dep.nyc.gov

Pascal Sarrazin, QC MDDEP

Mr. Sarrazin holds a Bachelor of Science specializing in urban planning from the University of Montréal and a master of science of the environment of the University of Québec in Montréal. He has worked in municipalities and municipal organizations for 10 years.

He joined the MDDEP in 2003 as an analyst in the planning and water department at the Regional Office of the National Capital and Chaudière-Appalaches. Recently, he is an analyst position in the Direction on Water Policy, in the Service of Planning and groundwater. Mr. Sarrazin is involved, among others, in land-use planning, streams restoration, protection of shoreline, stream banks and floodplains. pascal.sarrazin@mddep.gouv.qc.ca

Bill Saunders, NWS NE River Forecast Center, MA

Bill Saunders is a Senior Hydrologist with the National Weather Service's Northeast River Forecast Center in Taunton, Massachusetts and is the NERFC's focal point for development and operations of Lake Champlain basin hydrologic models. In addition to keeping the models current for the NERFC's daily forecasts of Champlain basin elevations and flows, Bill is also investigating the feasibility of implementing a hydrodynamic model for operational elevation forecasting on Lake Champlain. The main advantage of this effort would be to incorporate the effects of wind into the operational forecasts. Bill holds an MS in Civil Engineering from the University of Texas Environmental & Water Resources Engineering program. He also holds a BS in Engineering Physics from the University of Maine. william.saunders@noaa.gov

Jason Shea, U.S. Army Corps of Engineers

Jason is the US Army Corps of Engineers New York District Chief of the Watershed and Navigation Section Planning Division, Plan Formulation Branch BSCE, and the New Jersey Institute of Technology. Jason started his career with the New York District in 1995 with Planning Division. He managed flood control, coastal storm damage protection and navigation studies. From 1999 to 2003 Jason worked for L.A. District's Planning Division where he managed dam removal (for environmental restoration purposes), flood control and watershed studies. Since 2003, Jason has been back in the NY District supervising the Watershed & Navigation Section, managing flood control, environmental restoration, navigation and watershed studies in the Hudson River and Lake Champlain Basins. jason.a.shea@usace.army.mil

William Shepeluk, Municipal Manager, Waterbury Town & Village

Bill has been Municipal Manager of Waterbury Town and Village for 24 years and continues to guide Waterbury through its response to and recovery from Tropical Storm Irene. Previously, he was Town Manager in Brighton for several years. In 2007, Bill was awarded the Vermont Town and City Management Association Outstanding Achievement Award. He has been President of the VLCT Board of Directors. He also serves as President of the VLCT Health Trust, a position he has held for many years. Bill earned his Bachelor's degree in Political Science from the University of Massachusetts and his Master of Public Administration degree from Syracuse University. WAShepeluk@aol.com

Brian Shupe Executive Director, VNRC

Most recently Brian served as Sustainable Communities Director and Deputy Director at VNRC. Brian has over twenty years of professional planning experience. He began his career in Florida, where he received an M.S, in Urban and Regional Planning from Florida State University. Since moving to Vermont in 1988, he has served as Executive Director of the Mad River Valley Planning District and Director of Planning and Zoning for the Town of Stowe. For nearly ten years he was a partner with Burnt Rock Inc., Associates in Community Planning. Burnt Rock provided an extensive range of services to local governments, state and regional agencies, non-profit organizations and citizen groups. Brian came to VNRC from Smart Growth Vermont, where he served as Director of Programs. Throughout his career, Brian's professional focus has been natural resource protection, growth management and sustainable development. Brian lives in Waitsfield with his wife, Valerie, where he is involved with several community organizations. bshupe@vnrc.org

Paul Sisson, NWS/BTV

Paul Sisson has been the Science and Operations Officer at the National Weather Service Office in Burlington, VT since 1993. He is the program manager for training, research, new technology and forecasting techniques. He previously served as Meteorologist in Charge of the National Weather Service office in Providence RI and staff meteorologist for Aberdeen Proving Ground, MD. His research interests and publications have focused on improving forecasting of heavy precipitation. Paul.sisson@noaa.gov













Ned Swanberg, VT DEC

As Flood Hazard Mapping Coordinator for the Vermont Agency of Natural Resources, Ned works with municipalities to understand flood and erosion hazard maps and avoid aggravating risk to existing infrastructure. Ned has worked with VT DEC since 2007, and is a Certified Floodplain Manager. Ned is certified as a biology teacher, and has worked in environmental and place-based education in Vermont, New Hampshire, Massachusetts, and Ohio. Ned has an MST in Environmental Studies from Antioch University New England and a BS from the University of Connecticut. Ned.Swanberg@state.vt.us

Shana Udvardy, Udvardy Consulting

Shana Udvardy served as Director of Flood Management Policy at American Rivers prior to entering the private sector in May 2012. In this role, she worked with members of Congress, relevant government agencies, and other decision-makers to advocate for 21st century solutions to flood risk management that safeguard communities and the environment. Shana focused on the Mississippi River Basin and coordinated with American Rivers' field efforts in California, the Mid-Atlantic, and the Pacific Northwest. Prior to joining American Rivers, Ms. Udvardy worked at the Georgia Conservancy as their Water Program Manager where she advocated the establishment of a comprehensive statewide water plan for Georgia, aggressive water conservation, and enough clean water for all Georgians. She also previously worked for the Monitoring and Assessment of Biodiversity program at the Smithsonian Institution and for the Peace Corps, where she trained Nicaraguan farmers in soil and water conservation practices. Ms. Udvardy earned a Master of Science in Conservation Ecology and Sustainable Development Program from the Odum School of Ecology at the University of Georgia, and a Bachelor of Arts in International Relations from the Maxwell School of Political Science at Syracuse University.

Susan Warren, VT Agency of Natural Resources, Watershed Management Division

Susan has worked in the Lakes and Ponds Section of the Vermont Agency of Natural Resources for 30 years in a variety of citizen involvement programs and nonpoint source and aquatic biology programs. Her work includes working with towns, lake associations, and lake residents on watershed and shoreland management and the *Better Backroads Program*. She has worked to increase awareness of the importance of nonpoint source controls and good shoreland management to lake health and to help local groups do the same within their town. Susan is currently the Section Chief of Lakes and Ponds and is working with others in the section to call attention to the need for improved lake shoreland management. Susan received a BA in Botany from the University of Vermont. Susan.Warren@state.vt.us

Mary C. Watzin, Dean & Professor, RSENR, University of Vermont

Mary C. Watzin is Dean and Professor in the Rubenstein School of Environment and Natural Resources, at the University of Vermont, where she has been for the last 21 years. She holds a Ph.D. in Marine Sciences from the University of North Carolina at Chapel Hill, and a B.S. in Marine Science from the University of South Carolina. She has received numerous awards and other recognitions for her teaching, research, and service, including the Kroepsch-Maurice award for teaching excellence, the Teddy Roosevelt Conservation award, and the Ibakari-Kasumigaura Prize recognizing her work with colleagues in Macedonia and Albania on transboundary water management. Watzin specializes in lake and watershed ecology and management, with a wide-ranging program of research focused on understanding how human activities influence ecosystem health and how adaptive management can be used to improve environmental outcomes. mary.watzin@uvm.edu

























