

2011 MVP2 Award Recipients



Volunteers of the Year

Gary Hunt, North Carolina Department of Environment and Natural Resources, Retired

Gary Hunt has served as the NPPR board's vice-chair and Board Liaison to NESS Planning Committee. He was also P2Rx Center Director for the Environmental Sustainability Resource Center (ESRC) that served Regions 3 and 4. Gary was also a charter member of NPPR. Over the past 25 years Gary has provided hundreds of clients with direct technical and management assistance on pollution prevention. He has worked with international corporations, family businesses, local governments, federal facilities and state agencies. This has been in a wide range of industrial sectors including electroplating, textile, food processing, furniture and metal fabrication. Through presentations at conferences, training sessions, workshops, and classrooms he has also shown thousands of people the concepts, benefits and implementation of pollution prevention approaches.



P2 Volunteer
Gary Hunt

P2 Champions

Cam Metcalf, Kentucky Pollution Prevention Center (KPPC)

Cam has been responsible for the continued growth of the Kentucky Pollution Prevention Center (KPPC) since 1995 and is involved in the following activities: developing, delivering and evaluating training programs for industries, businesses, government agencies and other organizations; directing on-site P2 and E2 assessments performed by staff engineers, engineering students and retired engineers; and directing applied research performed by staff, faculty and students on problem waste streams. He is a national leader in P2 and E2 technical assistance, training and applied research with a career that spans 30 years. Currently serves on the Board of Directors for the Conn Center for Renewable Energy Research and Environmental Stewardship, Drought Mitigation and Response Advisory Council, and the University of Louisville Sustainability Council.



P2 Champion
Cam Metcalf

Warren Weaver, PennTAP

Warren has worked for The Pennsylvania Technical Assistance Program of Penn State University (PennTAP) in the pollution prevention and environmental sustainability arena for over 17 years. He has been an NPPR member and PennTAP's representative to its functions for nearly 15 years. Over the last 4 years, Warren has been co-chair of the Research, Technology and Energy Workgroup. Warren has championed P2, E2, waste minimization, resource utilization, ISO 14001 conformant environmental management systems, Clean Manufacturing, materials balance/ utilization / efficiency and now environmental sustainability and ISO 50001 conformant energy management systems. He has worked with more than 1200 clients with a track record of clients reporting more than \$80 million dollars of economic benefits as a result of his services.



P2 Champion
Warren Weaver

Projects/Programs

Cintas Inc - *NPE-free Detergent Project & Washing Efficiencies Results*

- Implemented a program to eliminate 25,000 gallons of detergent that contained nonylphenol ethoxylates (NPEs) in the laundry process
- NPEs, though less toxic than NP, are also highly toxic to aquatic organisms. In the environment NPEs degrade to NP - NP has been detected in human breast milk, blood, and urine and is associated with reproductive and developmental effects in rodents.
- Saved over 19 million gallons of water
- Water use reduction savings of \$171,000 per year
- The three facilities together reduced energy use by 50% resulting in \$60,000 in savings
- Water reuse technologies resulted in the reuse of 240,000 gallons of water – a 30% increase in wastewater reuse.



Cintas Inc
James Wagoner

IBM Vermont - *Chemical Emissions Reductions & Energy Savings from IBM's New Innovative Air Abatement Technology*

- The IBM Vermont designed and installed U Tube scrubber technology
- New air abatement technology resulted in reduction of Hydrogen Chloride air emissions by 1308 lbs of and Chlorine air emissions by 1065
- Provides annual energy reductions of 1,110,518 kWh – saving \$94,378 annually
- Potential water savings of over 7 million gals per year - saving \$7,000 annually
- Total cost savings are \$220,000/year in energy, maintenance and spare parts costs
- Energy savings from this project equates to approximately 35 metric tons of carbon dioxide reductions annually.



IBM Vermont

IBM Vermont - *Performance Optimization and Increased Treatment of Nitrates in IBM Vermont's Industrial Waste Water Treatment Plant*

- Implemented key improvements to the industrial wastewater process which have resulted in improved effluent water quality
- Structured problem solving through Lean Manufacturing and Green Sigma TM techniques coupled with Statistical Process Controls provides the foundation for IBM Vermont's Advanced Water Management program.
- Annual average 43,000 pound reduction in nitrate discharges from 2007 to 2010
- Energy savings from this process change amount to 77,000 kilowatt hrs - \$ 6,400/year.



IBM East Fishkill

IBM East Fishkill - *Catalytic Hydrogen Peroxide Treatment System*

- Investigation of alternative technologies for reduction of hydrogen peroxide ("peroxide") in its site waste streams
- A catalytic enzyme process was qualified to replace the existing sodium bisulfate reduction process to remove peroxide from the wastewater – reducing total dissolved solids in effluent waste water
- Reduces hazardous chemical use by 645,000 gallons/yr – yielding \$675,000 in savings
- Reduces energy use by 1076 MBtu/yr – \$9,000 savings
- Reduces greenhouse gases air emissions by 540,000 lbs/yr
- Reduces Total Dissolved Solids by 3,198,031 lbs/yr
- Reduces wastewater flow by 644,800 gallons/yr



KPPC
Cam Metcalf with Senator
McConnell

Kentucky Pollution Prevention Center (KPPC) - *KPPC Technical Assistance Services*

- State-mandated, free, confidential and non-regulatory environmental technical assistance resource center designed to help Kentucky's businesses, industries, school districts and other organizations stay environmentally sustainable in a competitive global market
- Offers on-site assessments, training, technology demonstrations, assistance with identifying project implementation resources, recognition of achievements and web-based online resources to help participants develop a systems approach to Pollution Prevention (P2) efforts
- Reduced water use for businesses and organizations by 166,225 gallons/yr
- Reduced energy use for businesses and organizations by 20,601,000 MMBtu – savings \$5,180,000
- Reduced solid waste for businesses and organizations by 918,000 lbs/yr
- Reduced air emissions by 61,715 tons and greenhouse gas emissions by 88,786 tons/yr



SAIBIC Innovative Plastics

SAIBIC Innovative Plastics - *Utilization of a Formerly Incinerated Sodium Nitrite-Bearing Process Stream*

- Thermoplastic manufacturing site produces approximately 2.5 million gallons per year of a sodium nitrite-containing non-hazardous wastewater stream that has been converted to a product
- The new system produces in excess of 6 million pounds per year (dry weight) sodium nitrite for customers, and eliminates waste and the need to incinerate that waste
- Water use reduced by 19,000,000 gallons/yr – savings \$200,000
- Decrease in raw material use by 340,000 lbs/yr – savings \$600,000
- Reduction in solid waste by 25,000,000 lbs/yr – savings \$3,750,000
- Reduction of carbon dioxide emissions by 10,000,000 lbs/yr



Pollution Prevention
Regional Information Center
& the Missouri
Environmental Assistance
Center

Multimedia

Pollution Prevention Regional Information Center (P2RIC)

Easy Energy and Material Savings (Booklet)

Wyoming Department of Environmental Quality

P2 Interactive Toolbox (Electronic Outreach Material)

Wyoming Department of Environmental Quality

P2 Public Service Announcement (Video)



Wyoming Department of
Environmental Quality