Robert E. Hughes

394 E. Washington St. Nanticoke, PA 18634 570-239-3909

Education:

B. S. in Environmental Resource Management Technical Area: Water Pollution Control <u>The Pennsylvania State University</u> - May 1995 Diploma with Honors-E.L. Meyers HS –June 1991

Current Employment: Executive Director (6-09 to present)

Eastern PA Coalition for Abandoned Mine Reclamation (EPCAMR); www.epcamr.org

101 S. Main Street, Ashley, PA 18706

 Coordinates and manages AMD, AML, reclamation and watershed restoration projects throughout a 16 county service area of Northeastern and Northcentral PA

- Developing the first innovative 3D Modeling of the entire Anthracite Coal Region's underground abandoned mine pools in partnership with the SRBC
- Provides non-traditional outdoor environmental education programs and experiences to underserved coalfield school
 districts and has developed a sustainable funding opportunity for those programs through the recovery of iron oxides
 from AMD treatment systems and AMD discharges

Vice-President & Chief Operating Officer-Management Team (2-13 to present) **GenX Sustainable Solutions, Inc.**-start up renewable energy company
PO Box 828, Allentown, PA 18105

- Becoming an innovator, developer and manufacturer of a unique renewable energy system design that will revolutionize the way customers receive energy needed to power their homes and businesses in the future while lowering the need and waste of traditional power generation facilities and the use of pollution creating carbon fuels they use
- Serving as a recently appointed equity share member to assist with starting up the company; Working with my high school friend
 and successful businessman Michael Tucker to free our friends, residents, and businesses from the grips of very large corporations
 in the utility sector to create our own energy independence and to provide alternative green energy technology to those businesses
 interested in diversifying their energy portfolios with clean energy that is going to initially be disruptive to the large monopolizing
 corporations domestically and internationally

Previous Employment:

Abandoned Mine Reclamation Program Mgr. & Regional Coordinator (1-01 to 6-09)

Luzerne Conservation District (Office Transfer from Schuylkill County CD)

Eastern PA Coalition for Abandoned Mine Reclamation

325 Smith Pond Road, Shavertown, PA 18708

Regional Coordinator (5-97 to 12-00)

Schuylkill County Conservation District-sponsor of PA DEP Section 319 Grant

Eastern PA Coalition for Abandoned Mine Reclamation

Project Manager prior to promotion to **Assistant Director** (8-95 to 5-97)

Pennsylvania Environmental Council, NE Regional Office

Early Career Business Accomplishments:

Eastern Pennsylvania Coalition for Abandoned Mine Reclamation - Recording Secretary-PEC NE Office (1996-1997)
Brownfields Forum: Re-use of Industrial Sites - Co-organizer- Publicist- Project Manager-PEC NE Office (1996)
Islands and Issues Teacher Training Project - Guest Speaker- Assistant Project Manager-PEC NE Office (1996)
Greater Wyoming Valley Greenways Coalition - Assistant Project Manager-PEC NE Office (1995)

Acid Mine Drainage & Abandoned Mine Lands Conferences; Co-organizer-Presenter-Conference Coordinator

- 1st Anthracite Regional AMD/AML Conference at Wilkes University-1996
- 15 State-wide AMD/AML Watershed Conferences (<u>www.treatminewater.com</u>)
- 7th Annual Mine Water Treatment Conference, Pittsburgh, PA-2005
- Schuylkill River AMD Watershed Congress-Penn-State Schuylkill Haven Campus-1997
- Schuylkill County 2-Day Teacher Training Workshop/Field Tour on AMD/AML-1997

- Council for Research and Reclamation of Disturbed Land in PA Annual Meeting-2001, 2002
- 2001 PA Watershed Conference-Presenter on AMD (OLD) Passive Treatment System on the Oneida #1 Mine Tunnel
- Luzerne County 2-Day Teacher Training Workshop/Field Tour on AMD/AML-2002
- 24th Annual National Association of Abandoned Mine Lands Program- Presenter-Park City, UT-September 2002

International Training Program on Waste Minimization - Honorary Guest Speaker (1997)

- Informed 21 Ukrainian ambassadors from the Donetsk region of the former Soviet Union of how a grassroot coalition groups gets started, in particular, the Eastern PA Coalition for Abandoned Mine Reclamation
- Provided a resource list, current research material, and synopses of the June 1997 AML-AMD Conference, in order for them to combat their coal mining and related coke, metallurgical, and chemical industries
- Educated the Ukrainian ambassadors on how to find and network with technical experts, funding operators, resource personnel, and government officials, at all levels from the bottom up

Related Work Experience:

PA DEP, Hawk Run District Mining Office, - Hydrogeological Intern (5-94 to 4-95)

- Assisted in determining violations of environmental safety laws and rules based on data compiled through site inspections, investigations, lab analyses, and other observations
- Collected and monitored water samples from surface and groundwater sources related to mining activities, identified sampling points from topographic maps, and recorded water quality data in to spreadsheets and other graphic displays
- Prepared and composed hydrogeologic investigations relative to selected complaints of diminution and/or degradation of water quality filed by private citizens or the DEP against current and past mining operations

Pennsylvania Environmental Council, NE Regional Office- Activities & Volunteer Program Assistant- (3-93 to 6-93)

- Assisted in overseeing all children's events, including electroshocking of fish, field trips through the riverfront parks, folk singers, a fun run, and canoe trips up and down the Susquehanna River
- Coordinated the Annual Susquehanna River Sojourn's Canoe Trip that promoted environmental awareness, education, and protection along the riverfront parks, in partnership with the EDCNP, Procter & Gamble Paper Products Company, Inc., the Luzerne County Conservation District, and other grassroot environmental organizations

PA DEP, Bureau of Abandoned Mine Reclamation, - Science/Tech Intern (5-93 to 8-93)

- Collected water samples of acid mine discharges and small water treatment facilities utilizing pH meters, conductivity meters, weirs, and other flow devices for lab analyses
- Prepared project development documents such as eligibility determinations, environmental assessments, and PA Natural Diversity Inventory (PANDI) reports
- Installed, updated, and recorded over 4000 inquiry investigations (Jan. 73 to Aug. 93) into the Bureau's new computer abandoned mine land inventory system database created by myself in Microsoft Windows 6.1 that was a pre-cursor to the EPCAMR Reclaimed Abandoned Mine Land Inventory System (RAMLIS) Geographic Information System Tool

Community Service/Involvement/Professional Memberships:

PA Association of Environmental Educators (PAEE) Advisory Board-Member (2009-2013)

Non-Profit Community Assistance Center (NCAC)-Member (2009-2013)

PA Anthracite Section—Society for Mining, Metallurgy, & Exploration-Member (2011-2013)

PA Department of Environmental Protection's Mining & Reclamation Advisory Board- Member (1997-2013)

PA Council of Professional Geologists-Member (2012)

Luzerne County Lightning AAU Basketball Program-Boys Director, 5 & 6th grade Head Coach (2011-2012)

PA Department of Conservation and Natural Resources-Conservation Volunteer (2010-2013)

PA Fish & Boat Commission-Volunteer and Fishing Skills Instructor-Volunteer (2005-2013)

Nanticoke Jr. Trojans Football Program-Coach, Head Coach (C, B, & A Levels) (2006-2013)

Anthracite Living History Group-Vice Chair (2005); Chair (2006-2010); Volunteer Member (2011)

The Pennsylvania State University College of Agricultural Alumni Society-Associate Director & Board Member (2006) Leadership Wilkes-Barre-Member & Graduate of the Class of 2006

PA Association of Resource Conservation & Development Councils-At Large Member & Parliamentarian (2005-2008)

The Pennsylvania State University College of Agriculture (ERM) Alumni Interest Group-Member (2003); Vice President (2004-2006); President (May 2007)

The Pennsylvania State University's Commonwealth Council of Student Government's Alumni Interest Group-Member (2004-2006): Treasurer and Executive Committee (2006)

Pocono NE RC & D-Member (1997-2005); Board of Directors (2003-2009);

Susquehanna River Cleanup-Volunteer Community Coordinator- during National River Cleanup Week (May 2004)
Boston Creek Stream Cleanup with Wilkes University Freshman Class & Luzerne Conservation District-Volunteer
Coordinator (2003)

Mid-Atlantic Biosolids Association-Associate Member (2002-2013)

Gr. Nanticoke Youth Soccer League Association-Volunteer Assistant Soccer Coach (U-8)-2003 (U-9)-2004

Newport Township Biddy Basketball PG-Volunteer Head Coach (C Team, 1-3 Grade Girls)-2002-2005;

(B Team, 4-6 Grade Girls)-2005-2008; (B Team, 4-6 Grade Boys [2008-2009]); (A Team, 5-6 Grade Boys [2011])

Plymouth Township Planning Commission-Member- 2002-2003; Vice Chair-2004; Chair-2005-2009

Avondale Hill Abandoned Mine Lands Cleanup with Wilkes University Freshman Class & Luzerne Conservation District-Volunteer Coordinator (2002-2003-2004)

Avondale Hill Abandoned Mine Lands Cleanup with LCCC Science Club- Volunteer Coordinator (2004)

Luzerne County Streamside Cleanup-Volunteer Coordinator (2002)

PA Farm Bureau-Member (2001-2007)

Annual Make A Difference Day Community Project: Avondale Hill Roadside Clean Up in Plymouth Twp. (2001-2002)

Community Service/Involvement/Professional Memberships:

Wilkes University Streamside Cleanup-Volunteer Coordinator (2001)

Luzerne County Streamside Cleanup-Volunteer Coordinator (2001)

Eastern Coal Region Roundtable-Member (2001-2010)

10,000 Friends of PA-*Member* (2001-2010)

Valley Santa-Fundraiser (2013)

Tom Murphy Annual Golf Tournament Fundraiser for Cancer Recipients-*Committee Member* (2012-2011-2010)

The Pennsylvania State University College of Agriculture (ERM) Alumni Society-Member (2001-2007)

Huber Breaker Preservation Society-Member; CleanUp Project Participant (2001-2006); Board Member (2007-2010); Volunteer (2011-2013)

Tioga River Watershed Reclamation Projects, Inc.-Honorary Member (2001-2003)

PA Organization of Watersheds and Rivers, American Rivers - Member (1999-2012)

National Watershed Coalition, National Coalition for Abandoned Mine Reclamation - Member (1998-2003)

River Network-Member (1998-2005)

Council for the Research and Reclamation of Disturbed Land in PA- Member (1998-2000); Secretary/Treasurer (2000-2005); General Member (2006-2012)

PA DEP Citizens Volunteer Monitoring Program Panel- Member (1998-2000)

Delaware RiverKeeper Network-Member (1998-2003); Schuylkill RiverKeeper-Advisory Board Member (1998-2002) Citizens Coal Council-Member (1998-2004)

PA Environmental Council-Member (1995-2003): Reciprocal Member through EPCAMR (2004-2013)

Annual Make A Difference Day Community Project: Parks Clean Up in St. Clair Borough Volunteer Coordinator (1999)

PA DEP Non-Point Source Workgroup; Resource Extraction SubCommittee- Member (1997-2005); Chair-(2002-2008)

PA DEP Water-based Trading Simulation Workgroup- Member (1999)

Wyoming Valley Reach Task Force for the Delaware & Lehigh National Heritage Corridor- Volunteer (1996)

W-B Area School District, Coughlin High School-Jr. High Head Coach, Varsity Asst. Coach (Nov. –Mar of 2010-2011)

• Coached and directed the entire 7 & 8th Grade Plains-Solomon Boys Program and the Freshmen Team

W-B Area School District, E.L. Meyers High School - Jr. High Head Coach (Nov. - Mar. of 95-96)

W-B Area School District, E.L. Meyers High School - Volunteer Jr. High Assistant Coach (Nov. - Mar. 1991, 1992)

- Coached and taught 58 kids how to play and learn the game of basketball
- Emphasized that the game is played as a team sport
- Coached and advised players on keeping athletics and academics hand in hand

E.L. Meyers High School, PA- Career Day- Guest Speaker (Nov. of 95-96-97)

- Presented an overhead series on "How To Get An Environmental Job In The 90's" to the junior and senior class
- Published and handed out a career packet to over 30 students on how to get a job in the environmental field, what approaches to take to get one, where the jobs are, environmental ethics, and the pros and cons to different types of jobs in the field

Wyoming Valley Drug and Alcohol Association- Volunteer Peer Counselor Assistant (6-91 to 9-91)

- · Counseled and talked to over 30 inner-city, low-income housed kids daily on the adverse effects of drugs and alcohol
- Tutored and helped kids with homework at the John B. McGlynn Learning Center in the Boulevard Townhomes, W-B
- Listened to the kids and talked about their everyday hopes and fears and served as a positive role model for the kids in my surrounding community; Alcohol on College Campuses Program- Guest Speaker at Lake-Lehman High School

Achievements, Committees, and Awards

- SRBC Water Quality Advisory Committee-Member (1999-2013)
- SRBC Appreciation Award for Contributions towards the SRBC Comprehensive Basin Report-October 2010
- Selected as a PA iCon by the PA Department of Conservation and Natural Resources-March 2010
- 40 Under 40 Professional Recognition Award by the Times Leader-March 2010
- Happenings Magazine Green Team-Selected as Leaders of Northeast PA's Environmental Movement-July 2009
- William Jeanes Environmental Excellence Award Recipient- Susquehanna River Basin Commission (March 2009)
- NEPA Alliance & NCAC Ted G Daniels Community Development Award-2007
- Luzerne County Historical Society-Historic Preservation Award-2007
- Winner of the PA Association for Environmental Professionals' Karl Mason Award-2005
- Jefferson Award Winner-1st Place-Sponsored by the Times Leader and the American Institute for Public Service-2005
- Acid Drainage Technology Initiative Resource Committee-Member (2001-2006)
- Certificate of Appreciation-from the Anthracite Living History Group & the Avondale Mine Disaster Site Preservation Committee-for the Coordination of the 136th Commemoration and Memorial Service of the Avondale Mine Disaster Program, Plymouth Township (September, 2005)
- Advanced Integration of GeoSpatial Technologies in Mining and Reclamation Conference, <u>Atlanta, GA</u> -Office of Surface Mining Travel Scholarship Recipient-December 2004
- Certificate of Recognition from State Representative John T. Yudichak-119th Legislative District-for Volunteer
 Environmental Cleanup Coordination Work during the Great PA Cleanup on Avondale Hill, Plymouth Township-2004
- PSU Local Governments and GIS Conference 2004, <u>State College, PA</u> League of Women Voters Citizen Education Fund Water Resources Education Fund Scholarship Recipient-2004
- PA Association of Environmental Professionals-2004-2005
- Certificate of Appreciation-from the PA DCNR, Bureau of State Parks & NEIU 18/19 Curriculum Alliance-for Program Support to the Community Connections to Our Watershed: Student Environmental Forum (2003)
- Pocono Northeast Development Fund & PO-NE PA Alliance 2002 PO-NE Environmental Action Award-1st Place
- American Water Resources Association 2002 Conference, <u>Philadelphia, PA</u> League of Women Voters Citizen Education Fund Water Resources Education Fund Scholarship Recipient-2002
- Susquehanna River Basin Commission Teamwork Award for the Upper Tioga Watershed AMD Assessment & Remediation Project-July 2002
- 2002 Governor's Award for Watershed Stewardship-April 2002
- Pennsylvania Association of Conservation Districts, Inc. Conservation Organization of the Year Award-March 2002
- Lackawanna River Corridor Association's River Stewardship Award Winner-Plaque Received-January 2002
- Department of Environmental Protection-Greenworks for PA Watershed Hero Nomination-Winner for December 2001
- Mid-Atlantic Regional Watershed Roundtable, <u>Doylestown, PA</u> Scholarship Recipient-2001
- Pocono Northeast Development Fund, EDCNP & PO-NE PA Alliance 2001 PO-NE Environmental Action Award-1st Place
- National Watershed Forum, Crystal City, VA Meridian Institute Scholarship Recipient-2001
- 2001-2002 Luzerne County Stream-side CleanUp Planning Committee-(2000-2002)
- 2001 Luzerne County Stream-side CleanUp Dirtiest Volunteer Award-May 2001
- Schuylkill County Leadership 2000 Program-Member of the Graduating Class of 2000
- Make A Difference Day 1999 Outstanding Appreciation Community Volunteer Service Award- 1999
- Pennsylvania Environmental Council's Northeastern PA Environmental Partnership Award- Recipient- 1999
- National Mine Land Reclamation Center, Roanoke, VA AMD Conference Scholarship Recipient- 1999
- Schuylkill County Drought Emergency Task Force –Appointed by Schuylkill County Board of Commissioners –1999
- PA GIS Consortium Partner-1999-2006
- Northeast PA ARCVIEW Users Group Member-1999-2006
- Schuylkill River Watershed Rivers Conservation Plan Technical Advisory Committee Member-1998-2003
- Shamokin Creek Watershed Rivers Conservation Plan Advisory Committee Member-1999-2000
- Upper-Susq.-Lackawanna Watershed: American Heritage Rivers Initiative Steering Committee Member –1998-2003
- PA Environmental Council's NE Environmental Partnership Awards- Honorary Reception Committee Member- 1998
- National Mine Land Reclamation Center, Knoxville, TN AMD Conference Scholarship Recipient- 1998
- The Upper Delaware Heritage Alliance Certificate of Recognition- Delaware River Sojourn Steering Committee Member- 1996
- The Delaware River Greenway Partnership Award- Delaware River Sojourn Steering Committee Member- 1995
- The Upper Delaware Council's Recreation Achievement Award- Delaware River Sojourn Steering Committee Member-1995

Training Workshops Completed and Certifications

- Natural Teacher Participant in the Children & Nature Network; Certified in October 2010 as a member-2011-2012
- PA Council of Professional Geologists Certification of Applied Geology/Professional Practice of Geology (16 hrs)
- 3-D and 2-D Modeler Certification in EarthVision from the Office of Surface Mining through TIPS (24 hrs)
- Project Learning Tree Certification (6hrs); Project WET Certification (6 hrs);
- Trout Stream Habitat Restoration: Principles and Processes
- Natural Channel Design and Geo-Fluvial Morphology Training: Principles and Processes (8 hrs)
- Dirt and Gravel Road Maintenance Training Certification
- Citizen Volunteer Water Quality Monitoring Training Certification-dealing with Abandoned Mine Drainage (AMD)
- "Local Motion" National Association of Conservation Districts (NACD) Leadership Training
- NRCS Hydraulics, Weir Installation and Flow Measurements Training
- Army Corps of Engineers Basic Wetlands Identification and Atypical Soils & Problem Areas Field Training (40 hrs)
- EPA Watershed Academy: Web-based Watershed Management Training Certification
- Alliance for Justice: Lobbying Rules Workshop for 501 (c)(3) Non-Profit Organizations (8 hrs)
- Natural Resources Conservation Service-Cultural Resources Training (12 hrs)
- US Army Corps of Engineers Regulatory IV Inter-Agency Wetland Delineation and Identification Course (40 hrs)
- Introductory Overview of Stream Classification and Natural Stream Design as described by Dave Rosgen (2 days)
- PA DEP-Freshwater Fish Identification in PA Workshop (3 hrs)
- Center for Local Government Services, PA Historical & Museum Commission, PA State Association of Township Supervisors sponsored Preserving Your Community's Historic Resources Training (8 hrs)
- Fishing Skills Instructor Workshop with the PA Fish & Boat Commission (8 hrs)
- Introduction to ArcGIS I (v8.2) Training (16 hours); Advance Use of ArcGIS II (v8.3) Training (16 hours); ArcView GIS 3.2 Training (16 hrs)
- Volunteer for the PA Fish & Boat Commission-Certified Fishing Skills Instructor (10 hours); SMART Angler Program
- Certificate of Achievement for Completing a 3-Day Workshop on Non-Profit Management for RC & D Councils (24 hrs)
- Primary and Secondary Education Teacher Training Workshop on AMD, St. Vincent College (16 hrs)
- Out of the Rock Mineral Resources Education Training Workshop, St. Vincent College (8hrs)
- Information MAPPING Seminar on Developing Usable Content & Documentation (24hrs)
- Level 1 Rosgen Stream Classification Field Training Course (5 days-75 hours)- Blackwater Falls, WV
- Pennsylvania Easements: Rights of Way and Other Encumbrances Certificate from PESI (8 hrs)-Allentown, PA

Collegiate & High School Activities and Awards:

College of Agricultural Sciences-ERM Program Alumni Society-2002-2005; Penn-State Club of the Wyoming Valley-2004

Environmental Resource Management Club- Member- 1995-1994-1993

The Pennsylvania State University, Commonwealth Council of Student Governments, Exec. Board & Treasurer-1995-1994

<u>The Pennsylvania State University</u>, Wilkes-Barre Campus, Student Government Association Exec. Board & Treasurer-1993-1992

- Organized & sponsored a Community Easter Egg Hunt for Low-income housing projects in the Wyoming Valley
- Organizer and Fund Raising Coordinator for Project M.O.M. Campaign
- The Pennsylvania State University, College of Agricultural Sciences, Alumni Society Internship Award- 1995
- The Pennsylvania State University, Commonwealth Council of Student Governments, Treasurer's Award-1995
- The Commission of Economic Opportunity, F.W. Remington 4-year Scholarship Award- 1991-1995
- The Pennsylvania State University, Eric A. and Josephine Walker Award- Finalist 1992; Lion's Pride Award- 1992
- Intercollegiate Leadership Wilkes-Barre Award-1992
- The Pennsylvania State University, Wilkes-Barre Campus, Advisory Board Scholarship Award-1991
- Wyoming Valley Drug and Alcohol Association, Outstanding Volunteer Peer Award- 1991
- E.L. Meyers HS National Honor Society, French National Honor Society-1989-1991
- STAND TALL Drug Free Program- Founding President- 1991
- Who's Who In High School Athletics-1991
- Division II P.I.A.A. Scholar-Athlete Award-1991; Division II P.I.A.A. East's All-Star Basketball Team- Member- 1991

The Pennsylvania State University, Wilkes-Barre Campus:

- Student Activities Committee- Member- 1993-1992-1991
- Minority Ethnic and Cultural Association- 1993-1992-1991
- Student Health Club- Volunteer- 1993-1992-1991
- Campus Ecology Committee- Member- 1993-1992-1991
- Campus Appeals Board, Campus Hearing Board, Faculty Senate- Member- 1993-1992
- Orientation Leader-1993-1992; Inter-Collegiate Leadership Wilkes-Barre Partnership- 1993-1992
- Alumni Annual Fund Phon-a-thon- Volunteer- 1993-1992-1991
- Campus Environment Team- 1992-1991
- Susquehanna River Watch- Volunteer- 1992-1991; Club T.U.F.F. Program- Volunteer- 1992-1991
- Project R.E.M.A.I.N.- Volunteer-1991-1990; Project S.H.A.R.E.- Volunteer-1991