PHRC News PHRC

# **Getting in touch**

Contact us to find out more about the PHRC or to obtain assistance.

#### www.engr.psu.edu/phrc

#### PHRC

Pennsvlvania Housing Research/ **Resource Center Penn State University** 219 Sackett Building University Park, PA 16802

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**Director: Mark Fortney Director of Research: Eric Burnett Training and Education Development Specialist: Ken Sagan** Land Use and Development Specialist: Scott Brown Admin. Assistant: Michelle McMullen Staff Assistant: Tracy DeSoto

#### **PHRC** at Penn College

**Pennsylvania Housing Resource** Center at the Pennsylvania College of Technology **Technology Transfer Center One College Avenue** Williamsport, PA 17701 Tel: (570) 327-4768 Fax: (570) 320-5239 E-mail: phrc@pct.edu

Director: Bill Van der Meer



# **Stormwater Management in Pennsylvania:** A New Approach (a NEW 1-day workshop) For Registration and For Registration, visit Information, visit MWW. engr. psu. edu/ phrc

#### Summer 2003 Location and Dates:

Philadelphia Area ~ June 11 (Inn at Chester Springs in Exton)

Allentown  $\sim$  June 17 (Holiday Inn Conference Center)

Pittsburgh Area ~ July 10 (Chadwick in Wexford)

Harrisburg  $\sim$  July 15 (Wildwood Conference Center at HACC)

> State College  $\sim$  July 16 (Ramada Inn)

The program is set-up so you can register for either the morning session or both sessions. MORNING PROGRAM AFTERNOON PROGRAM

#### Pennsylvania's New Approach to Post Construction Stormwater Management:

A non-technical overview of Pennsylvania's revised stormwater management policy as implemented through DEP's NPDES II Permitting and Stormwater Management programs.

- Impacts of Land Development Activities on the Runoff Process
  - Pennsylvania's New Stormwater
  - Policy: History, Goals, and Implementation
  - Management Practices for Controlling Runoff Volume
  - Infiltration Processes, Practices,
  - and Cautions

#### Understanding Site Level Stormwater Management and Infiltration Processes:

A technical session covering hydrologic and infiltration processes and analysis techniques.

- Watershed versus Site Level Hydrologic Processes and Analysis
- Application and Accuracy of NRCS Curve Number and Rational Hydrograph Methods
- Infiltration Processes
- Assessing Pre- and Post-Development Infiltration Quantities

# Building Code Training—3,500 and Counting

Pennsylvania is in the last stages of putting into practice a new statewide building code. This will have major impacts on the way buildings are built, and its effects will ripple through all aspects of the construction industry. A short list of those who will be impacted by the new code ranges across local governments, design professionals, builders, remodelers, trade contractors, material manufacturers, lending institutions, and building code officials.

The mission of the PHRC is to improve the overall quality and affordability of housing in Pennsylvania. Facilitating the implementation of the new building code is consistent with our mission. It is also part of our responsibility to the home building industry and the citizens of the Commonwealth.

Since 1999, the PHRC has developed 11 new training programs to help the construction industry and building code officials prepare for the new building code. To date, we have offered 96 formal training programs around Pennsylvania and have trained over 3,500 builders, contractors, design professionals and building code officials. Additionally, through the PHRC's annual conference and speaking engagements, we have discussed the implementation of the new code with at least 12,000 individuals.

Building Officials (PACO) and the Commonwealth Building Officials (CBO).

Many of the programs are being attended by a diverse audience such as builders, contractors, and design professionals as well as code officials. The majority of these programs have been offered through the Pennsylvania Builders Association's network of 40 local home builders association. These programs are typically offered to their members as well as to the general public. The PHRC has also been working with the Pennsylvania Concrete Masonry Association (PCMA) to offer programs on the masonry requirements of the code to builders, masons and building code officials.

To help the Commonwealth prepare to implement the state-wide building code, the PHRC receives support from a variety of public and private sector sources. This includes support from the following: Industry members of the PHRC including trade and professional associations, the Pennsylvania Builders Association, the Pennsylvania Department of Community and Economic Development, the Pennsylvania Department of Labor and Industry, the U.S. Department of Energy and the Pennsylvania State University.

The table (right) provides a summary of all of the training programs we have conducted since 1999.

These programs have been developed for and held by, a variety of groups. For the benefit of building code officials we have been working with the new Pennsylvania Construction Code Academy (PCCA). PCCA was recently initiated by the Pennsylvania Department of Community and Economic Development's (DCED) Governor's Center for Local Government Services. The programs that the PHRC is offering through this organization are designed not only to train code officials on how to enforce the new code but also to assist them in preparing for the state required certification exams. Additionally, the PHRC has provided training services aimed at code officials to various code organization such as the Pennsylvania Building Officials Council (PennBOC), the Pennsylvania Association of

Program		Programs Held	Attendees
General	Comprehensive International Residential Code	63	2,271
	BOCA/CABO Transition Program	9	363
	Overview of the IRC's <b>Plumbing</b> Requirements	3	80
	Overview of the IRC's Mechanical Requirements	3	83
	Pennsylvania's New Energy Code	7	290
	Other (PCMA, NDS, etc.)	10	237
<b>Code Official</b>	Comprehensive International Residential Code	2	68
	Overview of the IRC's <b>Plumbing</b> Requirements	Being Developed	
	Overview of the IRC's Mechanical Requirements	Being Developed	
	Pennsylvania's New Energy Code	2	42

# Factory Built Housing Programs at Penn College



# Modular Housing Training Institute (MHTI)

The purpose of the MHTI is to provide the knowledge, information and special skills needed during the on-site completion process to advance the overall quality of a modular home to the customer. Since July 2002, the total number of successful completers of the MHTI course stands at 136. Of the

courses held, 4 have been sponsored by out-of-state manufacturers. A much greater ratio of out-of-state vs. in-state participation continues to be the pattern at roughly 75 percent. Since November 1999, a total of 454 participants have completed the course.



# Manufactured Housing Resource Center (MHRC)

MHRC serves to elevate the status of the manufactured housing industry through the development of a sustainable educational program and a resource center for those involved in the on-site completion of manufactured homes. Since July 2002, the total number of successful completers of the MHRC course stands at 117. The ratio of in-state vs. out-of state participation is nearly 100 percent. Although the MHRC course is marketed regionally, heavy participation from within Pennsylvania may be attributed to a focus within the course on a "Pennsylvania Approach" for compliance with the HUD Code. Since January 2001, a total of 375 participants have completed the course.

### Search for a Factory-Built Housing Director

The Director will work closely with the Factory-Built Housing clients of the Pennsylvania Housing Research/ Resource Center. This person will be responsible for all the factory-built housing initiatives involving the PHRC at Penn State and at Penn College. The responsibilities are to provide assistance in industry research and development, publish reports and data, and address industry-related problems. Minimum qualifications include a Bachelor Degree in Construction and Design Technologies or a related discipline, or an equivalent combination of education and experience in management and education; five or more years of production, technical, or operations management experience within the factory-built housing industry; and experience in the management of federal programs and with residential construction principles and building methods. Nationwide and statewide travel will be required.

Applicants are invited to submit a completed College application and a letter of interest, resume, and names, addresses, and telephone numbers of three professional references to: Human Resources (47), Pennsylvania College of Technology, One College Avenue, Williamsport, PA 17701.

## **Moving on**

Mike Moglia, Instructional Specialist, has taken a position in the private sector. However, he will continue to serve as an instructor at the MHRC programs and we wish him the best of luck in his new endeavors.

# 11th PA Housing Conference

The PHRC held its 11<sup>th</sup> Annual Pennsylvania Housing Conference in Harrisburg, PA in March. The program registration was limited to 125 participants and was filled to capacity. The program consisted of four primary sections: The implementation of the UCC; The Liability Storm: Changes in Residential Liability and Reduced Insurance Coverage; Flashing Details that Work; and PA's New Stormwater Management Policy.

# **R & D Activities**

Over the past year, a number of changes have been made. The PHRC at Penn State has six full time members (seen below) with our offices being consolidated on the second floor of the Sackett Building. Our main research facility, i.e., the Building Enclosure Test Laboratory (BeTL) has been expended and relocated at the Cato Park Research Facility which PSU bought from North American Refractories about 2 years ago. In BeTL, we now have the following equipment in the lab:

- A large Climate Chamber to simulate enclosure elements (portions of a wall or roof, or windows or sections of materials) under indoor and outdoor environmental conditions.
- An airflow chamber to model ventilation in representative wall systems
- A ventilation drying chamber to model the drying or wetting capabilities of the outside air for representative wall systems.
- A general purpose enclosure test facility that enables us to test the performance of materials (such as Housewraps) under air pressure differentials, rain and temperature variations.



From the top left: Mark Fortney, Scott Brown, Ken Sagan, Tracy DeSoto, Michelle McMullen, Eric Burnett

With this unique facility, we are in a position to undertake both research and development on the materials and the products that are used in building enclosures and to test full-scale sections of the building enclosure itself.

The PHRC is currently engaged in a comprehensive program of research on the performance of wall systems. Of particular interest is the performance of the exterior sheathing membrane, the cavity behind the cladding (or rainscreen) and the contribution of convective ventilation to drying. This work is funded by ASHRAE, the NSF, and the PHRC.

At the Cato Park facility, there are offices for the full-time technician and the three research assistants/ graduate students who are working in BeTL. If you would like to visit the new BeTL facility, please do not hesitate to call and we will arrange for a tour.

## Recognition

We would like to honor Mike Graham by recognizing his contributions to the PHRC. He has been and still is a vocal and staunch supporter of the PHRC.

# Meet the PHRC crew at PSU

**Scott Brown, P.E.:** Scott is our Land Development Specialist. He is currently conducting a series of Stormwater Management workshops across the Commonwealth

**Eric Burnett, Ph.D., P. Eng.:** With the well-deserved promotion of Mark Fortney to Director, Eric has assumed the title of Director of Research.

**Tracy DeSoto:** Tracy is the initial contact person for the PHRC. Her primary responsibility is coordinating all the PHRC training programs.

**Mark Fortney:** Mark was promoted to Director of the PHRC on March 2003. He is responsible for the overall day-to-day operation of the Center.

**Michelle McMullen:** Michelle is the only person who actually knows what is going on, what it costs and what everyone else is doing.

**Ken Sagan:** Ken is our Training and Education Development Specialist. He is responsible for coordinating and conducting training programs throughout Pennsylvania.

# Calendar of Events

For details on programs below, visit **www.engr.psu.edu/ctc**.

Training Programs for General Audience:			
Comprehensive International Residential Code			
June 18 - 19, 2003	Somerset Door & Column (Closed)		
September 17-18, 2003	Bedford County		
September 23-24, 2003	Carbon County		
September 24-25, 2003	Dauphin County		
September 29-30, 2003	Allegheny County		
October 9-10, 2003	Leigh County		
October 29-30, 2003	Wayne and Pike Counties		
BOCA/CABO Transition Program			
June 25, 2003	Fine Line Homes (Closed)		
June 26, 2003	Berks County		
Overview of the IRC Plumbing Requirements			
August 20, 2003	Wayne and Pike Counties		
September 18, 2003	PHCC (Closed)		
Overview of the IR	C Mechanical Requirements		
August 20, 2003	Wayne and Pike Counties BA		
September 18, 2003	PHCC (Closed)		
Pennsylvania's New Energy Code			
July 1, 2003	Lebanon County		
July 25, 2003	Tioga County		
June 30, 2003	Department of L&I (Closed)		

Training Programs for Code Officals:		
Comprehensive International Residential Code		
July 7-8, 2003	Crawford County/PSATS	
Overview of the IRC Plumbing Requirements		
June 13-14, 2003	Centre County/PHRC	
July 10-11, 2003	Crawford County/PSATS	
July 10-11, 2003	Cumberland County/PSATS	
July 10-11, 2003	Lackawanna County/PSATS	
September 11-12, 2003	Clearfield County/PSATS	
September 11-12, 2003	Lycoming County/PSATS	
September 11-12, 2003	Westmoreland County/ PSATS	
Overview of the IRC Mechanical Requirements		
July 9-10, 2003	Crawford County/PSATS	
July 9-10, 2003	Lackawanna County/PSATS	
July 9-10, 2003	Cumberland County/PSATS	
September 10-11, 2003	Clearfield County/PSATS	
September 10-11, 2003	Lycoming County/PSATS	
September 10-11, 2003	Westmoreland County/PSATS	

Training Programs for Masonry Audience:		
June 21, 2003	Lycoming County/PCMA	
July 19, 2003	Snyder County/PCMA	

Stormwater Management in Pennsylvania:	
June 11, 2003	Philadelphia Area/PHRC
June 17, 2003	Allentown/PHRC
July 10, 2003	Pittsburgh/PHRC
July 15, 2003	Harrisburg/PHRC
July 16, 2003	State College/PHRC

Miscellaneous Meetings:				
Code Training Consortium Meeting				
July 16, 2003	Hampton Inn, Mechanicsburg			
PHRC Industry Advisory Council Meeting				
November 6, 2003	Nittany Lion Inn, State College, PA			

#### www.engr.psu.edu/phrc/

The Pennsylvania Housing Research/Resource Center 219 Sackett Building University Park, PA 16802 Phone: 814-865-2341 Fax: 814-863-7304

#### Membership

#### **Leadership Members**

Bradford & Burns Builders Association of Northwestern PA Cannon Custom Homes CertainTeed Corporation Dow Chemical Company DuPont Nonwovens Glunt Development Co., Inc. Granor Price Homes Hankin Group HBA of Chester and Delaware Counties Homebuilders Association of the Alleghenies Lehigh Valley Builders Association Mercer County Builders Association Newsome, Roy Office of Community Development & Housing PA Manufactured Housing Association Pennsylvania Association of Code Officials Pennsylvania Builders Association Pennsylvania College of Technology Pennsylvania Department of Community and Economic Development Pennsylvania State University Ryland Group, Inc. Superior Walls of America, Ltd.

#### **Supporting Members**

Benjamin Obdyke Incorporated Builders Association of Central Pennsylvania Cedar Knoll Builders Comfort Home Corporation Greater Dubois Builders HBA of Berks County Irwin Contracting Lackawanna HBA Lebanon County Builders Association Liberty Homes Custom Builders Pennsylvania Concrete Masonry Association Pennsylvania Housing Finance Agency Pulte Home Corporation S&A Custom Built Homes, Inc. Somerset County Builders Association Weyerhaeuser Company York County Builders Association

#### **Patron Members**

Alan Hawman Architect Blair County Builders Association Borough of Fox Chapel Center for Independent Living of S. Central PA City of Uniontown Concord Township David Sampsel Construction, Inc. Energy Services Group, Inc. Engineering Projects Incorporated Farkas Associates Fine Line Homes, Inc. Franklin County Builders Association Guardian Inspection Services Hanson Design Group, Ltd. Insealtite Insulation Company Insurance Restoration Service

Jeffrey Wyant Kline Architect JHW C/M Consultant Jones Township KBA Engineering P.C. Kearney Inspections, Inc. Kitchen & Associates L. Eric Brehm Contracting Larson Design Group, Inc. Madison Engineering Middle Department Inspection Agency Miller Construction Municipal Support Services, Inc. Nolen Companies, Inc. North Suburban Builders Association Perry L. Cisney Inc. Pittsburgh Cultural Trust Pocono Builders Association Preferred Solutions, Inc. Professional Training Associates, Inc. Pulte Homes, Inc. Queen Engineering Ray-Core, Inc. Reed E. Hoffman, RA, PC Reshetar Group, Inc. Shraga Berenfeld Architect Spectrum Properties Stanley Construction Company Steven H. Deeming Architect Stratton, Richard T.H. Properties Uniontown Redevelopment Authority Western PA Geothermal Heating and Cooling, Inc. Westmoreland Professional Builders Association Woodloch Builders Wyomissing Borough