

Purdue Calumet Water Institute
Summary of activities
05/31/2006

Mission/Purposes/Objectives

The PWI's main mission is to conduct research and teaching in water resources, and assist local, regional/state agencies, and the relevant private sector in solving water-related problems. Water resources, especially in the Great Lakes region, can be viewed as a very effective and vital catalyst to developing new business and industry opportunities for coastal communities. The PWI can provide Northwest Indiana with a center for investigating how to best utilize Lake Michigan's water as well as other local water sources – in existence or new ones – in attracting and retaining new businesses that depend on the sustained availability of clean and safe water of various qualities for their success. Thus, the PWI has been established to provide an interdisciplinary environment that can address issues of cutting-edge research and teaching in the areas of water quality, water efficiency, water security and water-energy interdependencies. The PWI will be developed through close collaboration between Purdue University Calumet (PUC) and Argonne National Lab (ANL).

Summary of present and future activities

- An organizational structure has been established and the first Director of the Institute was appointed. Experts from both PUC and ANL were placed in various leadership roles of research and teaching areas. An advisory board has been formed with members from industry, government, academia, and non government agencies. The Indiana Department of Environmental Management (IDEM) has agreed to serve on the Institute's advisory board. A comprehensive website (www.pwi.anl.gov) for the PWI has been created.
- Current projects include: 1) energy efficiency in waste water treatment facility in the petrochemical industry, three PUC students, two faculty members, one ANL scientist, and an industrial advisor is involved in this project. 2) Needs and technology assessment of water reuse in Northwest Indiana region, and 3) "coal fine recovery from water streams." In addition to these projects, about three PWI Summer Faculty Grants will be awarded by the Purdue Calumet Water Institute this year to enable successful applicants to work on a water-related project that has the potential to attract external funds.
- Research proposals are being submitted for competitive grant-type funding in the following areas: 1) "Impact of Phosphate Chemicals on Cement-Based Pipes and Linings," 2) "mitigation of vanadium in aqueous industrial wastewater discharges," 3) "impact of lining material on water quality."
- A need assessment questionnaire relating to the education program was mailed out to companies and organizations throughout the region for feedback on their water-related education needs. The response is very positive. Based on the feedback, two certificate programs on "water security" and "waste water management" will be developed. The Indiana Department of Environmental Management has endorsed the creation of an education program for wastewater

- plant operators at the PWI to be developed and instructed by PUC and Argonne experts.
- PWI is in the process of initiating research projects on biochemical sensors for detection of bio and chemical contaminants, and also to form NWI Industrial Waste Water User's Group. This will serve as forum for local industries to discuss current state of waste water technologies, problems, and how the PWI can assist in mitigating these problems.

Personnel

- Vice Chancellor of Academic Affairs: Nabil Ibrahim (PUC)
- Director: Ron S. Faibish (ANL)
- Deputy Director: George Nnanna, (PUC)
- Advisory Board: TBD
- Budget and Finance: Tom Longman, (ANL), Sherry Manick, (PUC),
- Program Integration: Joseph C. Braun, (ANL), Sherry Manick, (PUC)
- Research Program: Guenter Conzelmann, Associate Director (ANL)
- Policy, Planning and Economic Development – Area leaders: John Gasper, (ANL), Gale Boyd, (ANL), Amlan Mitra, (PUC)
- Technology and Efficiency: Area leaders: Lorraine LaFreniere, (ANL), Harvey Abramowitz, (PUC)
- Quality and Security: Area leaders: Pat Wilkey, [Quality] (ANL), Leslie Dorworth, [Quality] (PUC), Don Gray, [Security] (PUC),
- Education Program: Chenn Zhou, Associate Director (PUC)
- Water Security Certificate Program: Area leader - Cristina Negri, (ANL), Ed Pierson, (PUC)
- Integrated Water Resource Management Certificate Program: Co-Area leader - Jerry Gillette, (ANL), Kay Rowberg, (PUC)

Location and contact information

The PWI is located at Purdue University Calumet in Hammond, Indiana. For additional information about PWI, contact Dr. Ron Faibish, Director, PWI, faibishr@calumet.purdue.edu, x2723, or Dr. George Nnanna, Deputy Director, nnanna@calumet.purdue.edu, x2071