

STRATEGIC PLAN
UNIVERSITY OF DELAWARE - WATER RESOURCES AGENCY
Institute for Public Administration
College of Human Services, Education & Public Policy
November 26, 2008

Mission Statement

The mission of the University of Delaware - Water Resources Agency in IPA is to provide water resources planning and policy assistance to governments in Delaware, the Delaware Valley, and along the Eastern Seaboard through the University's land grant public service, education, and research role.

Goal

Be recognized as the best university water resources planning/policy institute east of the Mississippi River.

UD Strategic Milestones

We aspire to contribute to the six strategic milestones outlined in the Strategic Plan for the University of Delaware as part of the University's *PATH TO PROMINENCE*:

I. A Diverse and Stimulating Undergraduate Academic Environment

- Continue funding (\$300,000) to over 60 water resources undergraduate research students from the UD civil engineering, geology, geography, environmental science, and natural resources programs.
- Advise water resources undergraduate research students through the Delaware Water Resources Center internship program.
- Teach undergraduate courses in CIEG 440 Water Resources Engineering and CIEG 452 Watershed Engineering and provide service based learning opportunities along the White Clay Creek.

II. A Premier Research and Graduate University

- Pursue water resources research in the UD Experimental Watershed in the White Clay Creek National and Wild Scenic River Watershed.
- Fund graduate research assistantships in water resources through the Institute for Public Administration and the MPA/MA programs in the School of Urban Affairs and Public Policy.
- Collaborate with Cornell, Penn State, and Rutgers Universities on the State of the Delaware River Basin research project.
- Teach graduate courses in UAPP 611 Regional Watershed Management, UAPP 652 GIS in Public Policy and UAPP 655 GIS in Public Policy.

III. Excellence in Professional Education

- Sponsor the 8th annual Delaware Water Policy Forum.
- Partner with the Delaware and UD Student sections of the American Water Resources Association.

IV. The Initiative for the Planet (The Green University)

- Join the UD Environmental Institute.
- Integrate UAPP 611 Regional Watershed Management into the environmental curriculum.
- Partner with the DE Water Resources Center in the College of Agriculture & Natural Resources on UD-WATER – *The University of Delaware Watershed Action Team for Ecological Restoration*.
- Educate students about the UD's first rain garden

V. The Global Initiative

- Winter session abroad program in water resources planning, policy, and management (future).

VI. The Engaged University

- Partner with the State of Delaware, New Castle County, City of Newark, and City of Wilmington in regional water resources planning and management.
- Serve as Delaware’s first State Water Coordinator and staff the Delaware Water Supply Coordinating Council as required by State law.
- Watershed coordinator of the Christina Basin Clean Water Partnership between DE and PA, the Delaware River Basin Commission, and the USEPA.
- Coordinator of the National Park Service White Clay Creek Wild and Scenic River Committee.
- Continue the partnership made with the College of Agriculture and the College of Marine and Earth Studies through the Coastal Community Enhancement Initiative (CCEI).

Faculty/Staff/Students

The Water Resources Agency funds the following faculty, staff, and students at the University of Delaware to carry out our public service, education, and research mission:

Faculty/Staff

Martha B. Corrozi	Assistant Policy Scientist
Bernard L. Dworsky	Senior Advisor/Policy Scientist
Andrew R. Homsey	GIS Services Manager
Dr. Jerome Lewis	Director, Institute for Public Administration
Gerald J. Kauffman	Director, Water Resources Agency
Nicole M. Minni	GIS and Graphic Specialist
Martin W. Wollaston	Policy Scientist

Student Research Assistants:

Erin Dilworth	Undergraduate Research Assistant
Erik Eggleston	Undergraduate Research Assistant
Kiersten Joesten	Undergraduate Research Assistant
Erika Farris	Graduate Research Assistant
Kelly Wolfe	Graduate Research Assistant
Maureen Seymour	Graduate Research Assistant

Funding

The IPA-WRA receives funding from a partnership of Federal, state, and local governments including:

Annual Operating Funds

State of Delaware	City of Newark
New Castle County	City of Wilmington

Grants

Delaware River Basin Commission	U.S. Environmental Protection Agency
National Science Foundation	National Fish and Wildlife Federation
U.S. National Park Service	William Penn Foundation
City of Lewes	UD Coastal Communities Enhancement Initiative

GOAL # 1 - SHARPEN THE FOCUS OF PUBLIC SERVICE

Sharpen the focus of public service and provide water policy assistance to governments in Delaware, New Castle County, Wilmington, and Newark.

Significance

The UD Water Resources Agency receives funding from governments to provide water resources assistance to the public. This public service role is significant to the mission of CHEP and the School of Urban Affairs and Public Policy (SUAPP), the public policy school at the land grant institution of the UD.

Challenges

Expand and diversify revenue sources to continue funding water resources service to Delaware, New Castle County, Newark, and Wilmington and other governments in the Delaware Valley and along the East Coast.

Action Steps

1. Continue to serve the State of Delaware with water resources and watershed planning and management:
 - Delaware Water Supply Coordinating Council and State Water Coordinator as per State law.
 - Christina Basin Clean Water Partnership between DE and PA to restore streams to fishable, swimmable, and potable status by 2015
 - Delaware Source Water Protection Program as per Safe Drinking Water Act Amendments of 1996.
 - Delaware Tributary Action Team GIS mapping and web site design for:
 - Christina Basin Pollution Control Strategy
 - Broadkill River Tributary Action Team
 - Appoquinimink River Association Inland
 - Bays Tributary Action Team
 - Murderkill River Tributary Action Team
2. Continue to serve New Castle County government in the following capacity:
 - Water Resource Protection Area program. Serve on the RPATAC. Maintain WRPA mapping.
 - Land Development and Planning - Review subdivision/development plans for H2O impacts.
 - White Clay Creek Wild and Scenic River - serve as local coordinator on W & S watershed committee
 - Southern New Castle County - technical assistance on water resources impacts of growth in MOT.
3. Continue to serve the City of Newark with water supply planning assistance:
 - Water supply projects - Newark Reservoir and South Wellfield Iron Treatment plant
 - Water supply and sanitary sewer system modeling
 - GIS mapping for source water protection.
4. Continue to serve the City of Wilmington with water resources technical assistance
 - Combined Sewer Overflow Abatement
 - Brandywine/Hoopers Reservoir/Red Clay Operating Plan
 - Brandywine Creek Source Water Protection Program

Future Steps

- Expand water resources assistance to governments in Kent County, Sussex County, PA, and NJ.
- Participate in funded partnerships with the Delaware River Basin and Delaware Estuary Program.
- Pursue niche areas such as migratory shad fish restoration, state of the watershed reports, water quality trend analyses, and Nonpoint Education for Municipal Officials (NEMO).

- Utilize strength as the best GIS lab in the state to expand funded watershed mapping projects.

GOAL #2 - ENHANCE THE QUALITY OF EDUCATION PROGRAMS

Enhance the quality of the educational role of IPA-WRA by offering courses, seminars, and forums with a water resources focus and mentoring undergraduate/graduate students with funded fellowships.

Significance

The goal to provide water resources education opportunities at the University is significant to the SUAPP public policy education mission. Education is a basic role of the University of Delaware. We strive to educate students who will assume future water resources positions with our government funding partners.

Challenges

The challenge is to participate in water resources education opportunities on-campus while maintaining our primary public service mission with our funding governments.

Action Steps

1. Sponsor annual on-campus Delaware water policy forums. Past forums included:
 - DROUGHT.02: Debate and Panel Discussion Concerning Water Supply Policy in Delaware, Oct 9, 2002
 - The Historic Christina Basin: Delaware's First Watershed, Oct 13, 2004.
 - Water Friendly Landscape Design: A Prescription for Healthy Watersheds, Oct 21, 2005.
 - The Delaware: Challenges, Opportunities Affecting a Working and Environmental River, Oct 16, 2006.
 - Green Opportunities for Blue Green Resource: An Economic Perspective (AWRA). Sep 19-21, 2007.
2. Teach water resources courses in School of Urban Affairs & Public Policy and College of Engineering:
 - UAPP 611 Regional Watershed Management, spring semester, 3 credits.
 - UAPP 652 (1 credit) and UAPP 655 Introduction to GIS and Public Policy, spring semester, 3 credits.
 - CIEG 440 Water Resources Engineering, fall semester, 3 credits.
 - CIEG 452 Watershed Engineering, Planning, and Design, fall semester, 3 credits.
3. Mentor students in the following roles:
 - Continue to offer funded water resources fellowships to graduate students in the MPA or MA program
 - Fund two undergraduate water resources research assistants.
 - Serve on the committees of student analytical papers, theses, and dissertations.
 - Sponsor the Delaware student section of the American Water Resources Association (AWRA).
 - Assist teachers with use of geospatial technologies throughout the k-12 curriculum and project WET.
4. Sponsor and staff water resources education and outreach exhibits at functions such as:
 - Newark Community Day, Sep 2008. University of Delaware Ag Field Day, April 2009
 - University of Delaware Coast Day, Oct 2008.

Future Steps

- Develop an Issues in Water Resources Planning course (1 credit).
- Create water resources planning concentration in the SUAPP MPA program.
- Collaborate with other colleges and form an interdisciplinary water resources major.
- Develop a Pathways water resources course in water resources offered to freshmen.
- Develop a winter session abroad program in water resources.

GOAL #3 - STRENGTHEN PROGRAMS OF RESEARCH

Strengthen programs of research by seeking new opportunities to collaborate with University faculty, staff, and students to conduct and publish funded water resources technical and policy research.

Significance

Research, the search and quest for new knowledge, is central to the mission of the University of Delaware.

Challenge

The challenge will be to plan sufficient time to search for funding grants and carry out water-related research while maintaining a focus on the primary public service role of the IPA-WRA.

Action Steps

1. Continue to collaborate with Delaware Water Resources Center and UD Facilities Department in the University of Delaware Experimental Watershed as an on-campus education and research laboratory through grants from the National Science Foundation.
2. Continue to partner with Cornell, Penn State, and Rutgers Universities on research on the state of the Delaware River Basin.
3. Continue to seek opportunities to publish and present peer-reviewed research on topics such as water policy, watershed management, water quality trends and other water resources topics.
4. Continue to maintain a central repository of GIS data for access by University of Delaware faculty, staff, and students.
5. Continue to collaborate with faculty and staff with other colleges and departments to conduct water resources research through private and publicly funded grants.
6. Continue to fund the SUAPP Excellence in Water Resources Scholarship Medal at Honors Day.

Future Steps

Pursue funded research and partnerships in the following emerging water resources areas:

- Impacts of impervious cover on watershed health.
- Water quality trend analyses.
- GIS watershed atlas for the International Joint Commission between the USA and Canada.
- Watershed GIS modeling and restoration.
- Impact of global warming on Delaware's water resources.
- Alternative energy sources at water supply and wastewater treatment facilities.
- Sustainable watershed funding and financing