

**UD Institute for Public Administration – Water Resources Agency
Current and Future Projects (as of Feb 15, 2007)**

Project	Staff Involved	% Complete	Comments
IPA-WRA Lewes Field Office			
Water Resource Protection Area Maps New Castle County	NM	95%	Revised 3 - map set of New Castle County WRPA maps on GIS as 2006 version. To be sent out to printer Feb 2007. Last map revision 2001.
IPA Local Government	NM	ongoing	Towns of Frankford and Georgetown, New ArcExplorer web to host local government data, maintaining status of municipal comp plan map.
Three Panel UD Rain Garden Signage	NM	99%	Sign completed by vendor and shipped to IPA-WRA for installation
Mid-Atlantic AWRA conference Sep 2007	NM		Designing brochure for AWRA conference
Web Site Design and Maintenance	NM		<ul style="list-style-type: none"> • Water Resources Agency • Redesign of the Source Water Assessment and Protection Program web site • Christina Basin Tributary Action Team • Broadkill River Tributary Action Team • Assisting in Delaware Chapter of the AWRA website
Materials for Outreach Table Displays	NM		Newark Day, Ag Day, Coast Day, etc.
IPA-WRA Water Matters Newsletter	MC, NM, MZ		Third in series of IPA-WRA newsletters being written featuring Wetlands GIS , Christina Basin Trib Team, DRBC State of the Basin project, and research students.
GIS in Education Working Group	NM		<ul style="list-style-type: none"> • Completed an aerial mapping project using the Delaware DataMIL for the Delaware Geographic Alliance and the Department of Education, funded by DOE \$885.00. The aerial maps in this project will be laminated and placed in a portfolio and will be part of the social studies curriculum that teachers throughout the state can sign out and utilize. • Preparing workshop materials for a GIS workshop at the Delaware Institutional Technology Conference, April 18th and 19th. • Assisting Ryan Revel and Michael League from Sussex Central Middle School (Indian River School District) in using GIS in their 8th grade classrooms. Between the two classes that is approximately 264 students that are being exposed to GIS. • Preparing a GIS presentation for Cape Henlopen School District that will be held on January 31st, introducing the teachers to GIS. Cape Henlopen School District is purchasing building site license for GIS in the two middle schools and the two high schools. • Preparing a presentation on GIS K-12 efforts for the Towson 2007 GIS Conference

UD Sea Grant NEMO Program	NM		<ul style="list-style-type: none"> • Development of NEMO web site • Three hour workshop to launch NEMO program to Local Government Officials / End of May • Assisting the Town of Lewes in collecting storm drain locations for placement of storm drain decals for public awareness in where the water goes that enters them. • Completed impervious cover and source water protection chapters with GIS mapping for NEMO education of municipal officials manual.
Delaware GIS 2007 Conference	NM		<ul style="list-style-type: none"> • Logo development • Sponsor and Exhibitor sheet • All signage • Post card preparation and printing • Name Badges
Three College Initiative	NM		<ul style="list-style-type: none"> • Serving on the search committee with Bernie Dworsky, Jim Faulk, Bill McGowan, Susan White, and Wendy Carey for the Coastal Community Development Specialist position. • Gathering of data for Chuck Donley for use within Community Viz. Chuck Donley has been contracted through the Three College Initiative to develop a Community Viz project of the Coastal Community for use with future projects and initiatives. • Developed a build-out growth animation of Sussex County, displaying land use from 1984, 1992, 1997, and 2002. Looking to develop model to show future projections
Office of the GIS Coordinator			
Economic Development Tool and GIS Database	AH	100	NC County Chamber of Commerce Develop mapping, demographic and projection tools for the Chamber.
Delaware River Basin Commission State of the Basin Report	AH	90	DRBC Comprehensive assessment of the 13,000 square mile basin, though a collaborative with 3 other land-grant universities
Georgetown Economic Development Plan	AH, NM	1	Georgetown Chamber of Commerce Provide services for the GIS components of the plan
Update of Statewide Wetlands Coverage with Hydro-geomorphic modifiers	AH	2	DNREC awarded \$50,000 grant to update wetlands coverahge in the Delaware Estuary subwatersheds in Delaware.
Sussex County Heritage Atlas and GIS Database	AH	0	3 College Initiative Provide GIS support to this project through CHAD
Schools in State Districts	AH	0	Rodel/Vision2015Phase I of a project to identify schools, by location, and feeder patterns, based on which Senate/Representative districts they fall within
Municipal Mapping for Comprehensive Plans	NM, AH	--	Various Towns in Delaware Provide mapping and data services in support of IPA's comprehensive plan mapping projects.

College of Natural Resources and Agriculture Assistance	AH		Develop GIS mapping for the UD farm and College of Agriculture and Natural Resources campus
Center for Historic Architecture and Design (CHAD) Assistance	AH		CHAD is supporting an RA at ½ time level, for GIS and related assistance. Projects include Underground Railroad mapping, Western Sussex Scenic Byway delineation, and the Philadelphia Pike Scenic Byway project.
Watershed Boundary Project	AH, NM		Final review and delineation of official watershed boundaries to conform with national standards promulgated by the USGS and the DNREC. We will further divide the watersheds into management units based on WRA's internal criteria.
Inland Bays Watershed Assessment	AH, NM		Watershed assessment of the Inland Bays, using methodologies developed in previous projects to study the effects on water quality of potential build-out scenarios. The outcome will be an evaluation of existing conditions and an assessment of the degree to which watersheds are threatened.
DNREC/US Army Corps of Engineers Red Clay Creek Flood Project	AH, JK		GIS Support for Flood Mitigation efforts in the Red Clay Valley, in cooperation with NC County and the DNREC, Water Resources Division.
Water Resources			
Appoquinimink River Association	KO	ongoing	Assisting ARA with implementation of the Appoquinimink Watershed Plan. Completed a survey of non-point source educational programs in the State of Delaware; completed and received a grant for a pet waste collection program; made presentations to school classrooms and other groups on water pollution; aided in the process of preparing a riparian buffer ordinance for the Town of Middletown; working towards prioritizing riparian buffer planting projects for Spring 2007; assisting with education and outreach projects for a large stormwater modeling project of the watershed; overall, helped the Appoquinimink River Association meet its mission to preserve, protect and enhance the rivers and related natural resources of the Appoquinimink Watershed.
White Clay Creek Wild and Scenic River Committee			
Watershed road signs, kiosks, and interstate trail map	MC, MZ	95%	Assisting DNREC Division of Parks and Recreation, National Park Service and WCC W & S committee in preparing Wild and Scenic road signs, kiosks, and trail map. Watershed road signs have been erected. Trail map has been sent to the printer.
White Clay Creek State of the Watershed and Implementation Report	JK, MC, MZ	50%	IPA-WRA to receive \$ 10,000 grant from WCC W & S committee to publish a White Clay Creek State of the Watershed and Implementation Report
DE Water Supply Coordinating Council			
US Army Corps of Engineers Groundwater Study	JK, MW		Reviewing findings of groundwater study on water supply in NCC
DE Source Water Assessment Program			
Source Water Ordinances Local Gov'ts.	MW, JK	20%	Working with DNREC, State Planning Office and IPA Planning Group to write source water protection ordinances for local governments to meet 2001 DE source water protection law.

			IPA working with Middletown to draft WRPA ordinance.
Christina Basin Clean Water Partnership			
USEPA Watershed Initiative Grant	EGC, JK,	95%	Administering grant as DE watershed coordinator & rain garden on UD campus. Installed observation deck in Sep 2005. Sign kiosk to follow and WRA building downspout connection to be completed this spring.
Christina Basin Tributary Action Team	MC, MZ, AM	80%	As per Dec 9, 2005 CB Policy Committee meeting formed CB Tributary Action Team and prepare Pollution Control Strategy to implement TMDLs. Draft Christina Basin Pollution Control Strategy under preparation.
New Castle County			
New Castle County Comprehensive Plan	JK		Authored water supply and water quality provisions of comp plan for adoption in 2007.
Water Resource Protection Area Recharge Facility Database	JK		Mapping database of recharge facilities as requested by NCC resource protection area technical advisory committee.
City of Wilmington			
Hoopes Reservoir Operating Plan	MC, JK		City commencing plans to raise Hoopes reservoir by 2 to 5 feet. Consultant published plan.
Quiet Rivers Initiative along the Brandywine Creek	MC		Working with partnership of National Park Service, Brandywine Conservancy, and City of Wilmington to identify Brandywine Creek as a river of State and/or National significance.
City of Newark			
Newark Reservoir	MW, JK		Planning to collaborate with J. Dombrowski to write book on the history of the Newark Reservoir construction.
Upper Christina River Floodplain Mgmt Plan	JK	25%	Cooperating with USDA Natural Resources Conservation Service to update the floodplain plan first prepared with the WRA in 1993.
CYBERNET Water Distribution Model	KC, CD, KC	90%	Preparing computer water supply distribution model for Newark at request of City water director Roy Simonson. All pipes, nodes input, two water tanks and about 10 pump stations remain to be input with various scenario model runs to be conducted during fall 2006.
Newark Pomeroy Trail	JK, KC		Delivered conceptual drawings prepared by engineering students for Pomeroy Trail to Newark Park and Recreation Dept for consultant design bid package.
DRBC State of the Basin Report Card	AH, MZ, KO, AM, PC, MC, JK.	90%	In collaboration with DRBC, Delaware Estuary Program, Cornell, Penn State, and Rutgers. About 15 of 30 indicators collected and analyzed. Draft report to be written with DRBC in early 2007.
Research			
Blue Hen Creek: Stream Restoration at the University of Delaware Experimental Watershed	MC, JK	20%	Received funding approval from National Fish and Wildlife Foundation and Delaware Estuary grants program for stream restoration along Blue Hen Creek in the UD Experimental Watershed near Clayton Hall.
Estimates of Impervious Cover Statewide by the Delaware Method	KV, LS, AH	50%	Research for article underway. Literature review and GIS analysis complete.

Relationship between Impervious Cover and Stream Base flow in watersheds of the White Clay Creek	KV, AH, JK	35%	Three field surveys complete at 20 subwatersheds measuring base flow in streams for watersheds ranging from 2% to 50% impervious.
Severity of 2002 Drought Based on Tree Ring Records dating to 350 AD.	KV, JK	50%	Research for article complete using tree ring data to 350 AD and stream flow from the Brandywine Creek dating to 1911. 2002 drought 25 th worst drought since 350 AD.
Education			
American Water Resources Association	MC		Serve as co-chair of the Sep 2007 Mid-Atlantic Sections of the American Water Resources Association conference in Newark, DE.
Fall 2006 IPA Water Policy Forum	MC MZ,	90%	Publishing proceedings of the 6 th annual water policy forum in Nov 2006, regarding the Delaware River. Co-sponsors Water Resources Association of Delaware River Basin, DRBC, and DWRC.
UAPP 611: Regional Watershed Management	JK, BD, MC		Spring semester 2007, 3 credits
UAPP 652-010: GIS in Public Policy	NM, AH		One credit UAPP652-010 class in the Fall. Troy guest speaker for Census Presentation.
UAPP 655-010: GIS in Public Policy	AH, TM		Three-credit UAPP655-010 class in the Spring. Nicole guest speaker for hands-on GIS lesson in cartography.
CIEG 440: Water Resources Engineering	JK		Fall Semester 2006, 3 credits
CIEG 467: Watershed Engineering, Planning and Design	JK		Spring Semester 2007, 3 credits
LEAD 201: Introduction to Consumer Policy	JK		Spring Semester 2006, 3 credits