

recreating a metadata clearinghouse for Delaware but has held off while members explore the potential of using the federal government's Geospatial One Stop site instead.

Kim reported that the first version of the Exchange is now being built and a prototype should be ready for review in July, with a possible release of phase one later that month.

Kim reviewed several of the issues that the subcommittee has been wrestling with, including deal with the large file sizes of some of the raster data and whether or not to build-in full disaster recovery in phase one. She noted that it was decided to hold off on full disaster recovery potential for later phases, when the Exchange will become more of an operational necessity for 911 centers and others.

She also reviewed discussions about how to manage access control. Some data sets will have to be restricted for contractual or security reasons, though most will be fully public. The Exchange will use the Identity Access Management solution now commonly used by DTI to allow full access to most data sets while restricting those that have to be restricted.

There was a question about whether or not Identity Access Management can be linked to similar access controls in other states in order to allow for cross border access to sensitive data sets. Kim noted that that should be looked into. It was discussed that perhaps NSGIC and NASCIO, two national organizations, might have some thoughts on that.

Data Standards Subcommittee

Pat Susi gave an update on the activities of the subcommittee, which has held several meetings since the last DGDC meeting. He reported that the group has agreed on a mission statement and has drafted standards, for review, for basic metadata and for parcels. The group is now starting on standards for data classification and on a series of thesauruses needed to guide parts of the metadata standard. He also noted that the group had identified a need for a transportation working group. Creation of such a working group was added to the agenda in the "New Business" section.

There was a question as to whether the parcels would be provided on a county-by-county basis or statewide. Pat reported that the standard was drafted to allow for a statewide version of the parcels. It was asked how many attributes would there be in this parcel dataset. Pat reported that the statewide standard would have a minimal number but would include a parcel ID that can be used to link to more detailed data that the counties can make available at their discretion.

County Boundaries Working Group

Danielle Lamborn gave a report (attached) on the activities of a county boundaries working group that developed out of the parcels discussion in the standards subcommittee. The working group is tasked with trying to improve the accuracy of the

two county boundary lines in Delaware. Danielle showed scans of several historic surveys that the working group is reviewing, as well as photographs of some of the county boundary monument stones that have been found. There was discussion about using survey information (either existing or new) as a basis for the data update.

Updates and Reports

Strategic Planning Project

Mike Mahaffie gave a report (attached) on the project to create a GIS Strategic Plan for Delaware. The project is funded by a grant from the Federal Geographic Data Committee. Mike reported that the Strategic Planning Steering Committee is finalizing a scope of work and a contract with Applied Geographics to assist in the project. There will be a series of workshops and interviews, as well as a survey, to collect information from the community. The contractor will meet with the DGDC Executive Council to discuss the findings of that work and will draft a strategic plan for consideration before the 2010 GIS Conference.

2009 NAIP Imagery Collection

Mike Mahaffie gave an update (attached) on the USDA National Agriculture Imagery Program (NAIP) which will collect imagery of Delaware this summer. He noted that while the window for buy-up with USDA has passed, there are still potential buy-up options through the contractor, Sanborn. He noted, though, that he does not have any funding for this project.

DEMA Resource Management and Asset Tracking (RMAT) Project

Brianne Jordan gave a brief update on the RMAT project that her company, GeoDecisions, has been contracted to run for DEMA. This will be a database system to track and manage resources used by first-responders and public safety officials. The RMAT system is expected to be ready for use in January or February of 2010.

There was a question as to which agencies will be included. Brianne explained that the system will work with state, county and local agencies.

There was a question regarding National Incident Management System (NIMS) standards. Brianne noted that the system will be designed to assist managers in coding their assets to the NIMS standards so that the system will work well with other systems.

There was a discussion of how the spatial component will be managed. Brianne noted that the system will use several approaches and will be able to show "home" and "deployed" locations. The system will use the states transportation data, now TeleAtlas data, for geocoding. There will be a data-dump of framework data at the start of the project.

Project Report: Digital Map Atlas for Sussex County

Nicole Minni, of the UD Water Resources Agency, gave a presentation (attached) on a project to create a series of maps to present information to land use planners and local

officials in an effort to improve land use planning and development. The project is part of Delaware's NEMO (Nonpoint Education for Municipal Officials) approach which offers education on natural resources issues to local officials.

The map atlas is used to help local officials create a community-resource inventory to help guide their planning. It presents information at a watershed level. Nicole hopes to eventually get funding to create maps at a community/municipal level.

Maps are presented in graphic form and as PDFs on the Delaware NEMO web site at http://nemo.udel.edu/mapping_watershedinventory.html. They present data in three areas: Natural, Cultural and Economic.

Nicole explained several of the tools she uses to create and update the maps. This includes a map-book utility that she found particularly helpful.

There was a general discussion of several data sources and alternatives that might be used.

Old Business

Electing DGDC Representatives to the Executive Council

Mike Mahaffie gave a brief explanation (attached) of the need to annual elect three representatives to the DGDC Executive Council. Nominations were open for several weeks and persons were nominated for each position.

A motion was made by Mike Ward, seconded by Jim Galvin, to close nominations. The motion passed unanimously.

The slate of nominations was as follows:

- Representing the Academic Community – Dick Sacher, UD RDMS
- Representing Municipalities – Mark Nowak, City of Dover
- Representing DGDC At-Large – Lillian Wang, DGS

A motion was made by Jim Galvin, seconded by Carl Yetter, to approve the slate of representatives as presented. The motion passed unanimously.

New Business

Training Opportunities

Mike Mahaffie noted that the GIS Training for Coastal Resource and Emergency Management offered by Delaware Coastal programs is now full, but that names are being taken for a waiting list.

Anthony Puzzo, of ESRI, announced several training opportunities. He invited the group to sit in on a webinar on spatial analysis on June 12. He also asked the group to attend a training session on ArcServer on June 18, at the Kent County Administration Building.

He added that this is part of a larger effort to increase training for Delaware's users of the Enterprise License Agreement that DTI Manages for state agencies and higher education. He handed out a survey (attached) with a listing of possible training classes that may be offered and asked the group to help prioritize.

Proposal: Establish a Transportation Working Group

Mike Mahaffie explained that a working group is needed to define what a statewide transportation data set might look like and how it might be maintained. Darin Dell, of DelDOT, agreed to lead the group and asked those interested in being part of the group to contact him directly (Darin.Dell@state.de.us).

Discussion: Opening Communications Between Surveyors and GIS

Mike Mahaffie explained that a planned presentation on this topic will have to be postponed until the next DGDC meeting. He noted that there is some interest in finding a way to bring the two disciplines together and bridge cultural gaps.

Open Comment Period

There was a brief open discussion, during which the following topics arose:

- Nicole Minni noted the need for a standard citation for data used. It was noted that this should be a part of the metadata discussion.
- Jim Galvin thanked Nicole Minni for her presentation.
- There was a request for an update on the Enterprise License Agreement at the next DGDC meeting.
- Roger Barlow noted that New Jersey has just successfully integrated a local update into the National Hydrography Dataset (NHD). That, he said, is the first time that that system has worked. Delaware also plans to submit updates.
- Brianne Jordan noted that the CHRIS system developed for the Division of Historic and Cultural Affairs is now live. She added that there are plans for a module that would allow citizens to submit reports about the status of the boundary monuments. She added that there might be a way to add the county boundary monuments as well.
- Lillian Wang thanked the group for allowing her to continue as at-large representative to the Executive Council. She asked the group to contact her (lillian@UDel.Edu) with any questions or concerns that she should take to the Executive Council.
- Bill Stephens asked about any efforts to rectify additional historical orthos, to fill in some gaps between the earliest and most recent. There was a general discussion of sources of imagery and approaches to scan and rectify them.

A motion was made by Roger Barlow, seconded by Nicole Minni, to adjourn the meeting. The motion passed unanimously.

Details

- Main Conference Day: February 10, 2010
- Pre-conference Workshops: Feb. 9
- Post Conference Activities?: Feb. 11

- We're looking at several possible speakers
- Keep an eye out for a "Save the Date" card (soon) and a call for content (before too long)

June 11, 2009



To the Honorable the Senate and House of Representatives of the State of Delaware in General Assembly met:
We, the undersigned, John C. Hopkins and Alfred S. Hoist, two surveyors named in and appointed by a Joint Resolution of the Senate and House of Representatives of the State of Delaware in General Assembly met entitled a Joint Resolution to run and mark the division line between the Counties of Kent and Sussex, adopted at Dover, March 9, 1893, to run and mark the division line between the Counties of Kent and Sussex, from a fern in in the attribution creek at the junction of Tantrough Branch and Beaverdam Branch to the mill dam on the States of Maryland and Delaware, do hereby certify that we have received from the said joint resolution as follows: They did in the months of November and December A.D. 1893, assisted by John C. Hopkins and Alfred S. Hoist, two surveyors named in the Act entitled "An Act to run and mark the division line between the Counties of Kent and Sussex, Chapter 835, Volume 19, Laws of Delaware," passed at Dover, February 13, 1893, view and examine the division line between the Counties of Kent and Sussex, and did run and survey the same from a point in the fern in attribution Creek at the junction of the Tantrough Branch and Beaverdam Branch to the line dividing the States of Maryland and Delaware, the courses and distances of which said dividing line are as follows, to wit:
Beginning at a large Stone buried in the west side of a mill dam at the junction of Tantrough branch with Beaverdam branch (a small maple marked with six chips bears S 76° W 2 1/2 of a perch from said beginning stone, and a sweet gum on the east side of said mill dam marked with six chips bears S 44° E 2 1/2 perches from said Beg. Stone) and running thence up and with the meanders of the run of said Tantrough Branch the several meanderings thereof, the general trend of which branch is in a Southwesterly direction, about 8747 perches to a stone monument (No. 1) set at the head of said Tantrough branch, thence running South

proper on said division line between the said Counties of Kent and Sussex, the location of said Stone monument and fern on the above and foregoing plot. That the said monument and fern are set three feet square and are set three feet in the ground leaving ten feet above surface and have the letter "K" cut into them on one side near the top and the letter "S" on the opposite side near the top. That the above and foregoing is a true and correct plot showing the courses and distances of the said division line between the said Counties of Kent and Sussex, and also showing the location of Stone monuments, by their respective numbers from No. 1 to No. 14 in the said division line. That the said division line is a true and correct line. That the said division line is a true and correct line. Such great uncertainty has always existed relative to the location of the true and correct dividing line between the said Counties of Kent and Sussex, that it has created grave doubts and uncertainties as to which of the said Counties they are residents, thereby subjecting them to many annoyances and inconveniences. The Commissioners have taken considerable pains to ascertain the feeling of the public in regard to the said dividing line as shown and marked on the above and foregoing plot, and they feel fully justified and warranted in saying that the people generally are not only well satisfied but very much pleased at the prospect of an early and definite establishment of the said dividing line between the Counties of Kent and Sussex, and are sincerely desirous that the return of the Commissioners shall be approved by the General Assembly of the State of Delaware at its present session, as thereby all future doubts and uncertainties as to the location of the said dividing line between the said Counties will be forever dispelled. All of which is respectfully submitted for approval.
A. S. Hoist





Technical Infrastructure Sub-Committee Update

DGDC June 11, 2009



Committee Update

- Focused on the Data Exchange
- Conversations about Metadata 'Clearinghouse'
 - New things happening with GOS, keeping an open mind to utilizing tools (widgets, API's) that take advantage of existing applications.



Geospatial Data Exchange

- Build phase is underway
 - GeoDecisions has set up the database and has sample data to load;
 - Working with us on the design of the functionality;
 - Hardware is on order at DTI.
- Prototype ETA early July
- Final implementation in July



Data Exchange Challenges

- Handling of Raster Images
 - Conversion of rasters from SDE can be very time consuming
 - Selected several file portable formats to use for now
 - MrSID, Jpeg, Geotiff
 - Working on the most efficient way to organize the tiles



Data Exchange Challenges

- Disaster Recovery
 - The group agreed that the application is not intended for Public Safety use in this first phase. Meaning, that we are establishing it as a Data Exchange for now, and not as the go-to application in the event of a Homeland Security incident.
 - We expect that it WILL be used for Public Safety purposes in the future.
 - Therefore, for now, a redundant system, and full blown disaster recovery solution is not going to be set up for the first phase. We anticipate this will change with future phases with the implementation of web services, etc.



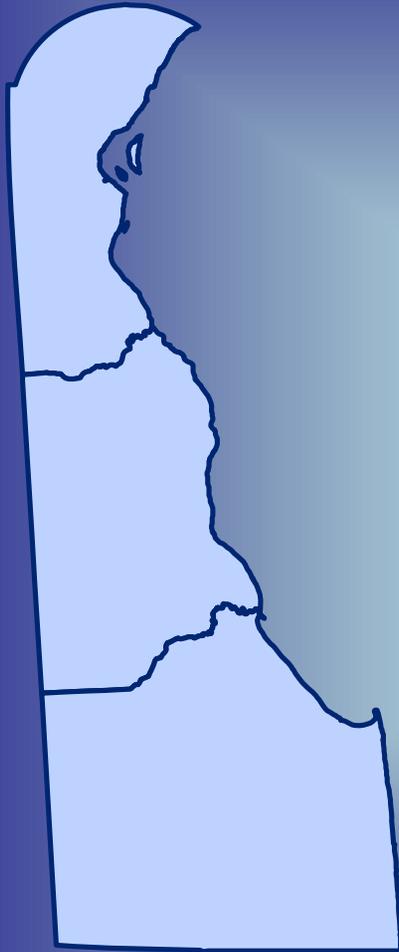
Data Exchange Challenges

- Public Access
 - Much discussion around general public usage.
 - Requirement is that the general public will be able to view what is available, and if they wish to download, they will be set up as users with appropriate permissions to download data that is defined as public.
 - Using Identity Access Management to allow for single sign-on, a tool being used in several applications with multiple organizations throughout the State.
 - Business process for user administration has to be defined.



Next Steps

- Continue to work with GeoDecisions on the functionality (i.e., the ‘how’).
- Clarify the picture for future phases.



COUNTY MONUMENTS

Danielle Lamborn

GIS Specialist

302-744-2410

danielle.lamborn@co.kent.de.us

OBJECTIVES

The overall objective is to determine the County Boundaries for the State of Delaware.

Procedures for determining Boundaries

1. To Reference the New Castle and Sussex Boundary surveys.
2. To either survey or GPS the monuments
3. Reference the earliest to most recent aerials to determine where the waterways are located
4. Meet with each county to agree on the revised County Boundaries

county boundary monument



on the borderline



Strategic Planning Project

- We have a \$46,000 CAP Grant for the project
- We are completing a contract now with Applied Geographics
- There will be two community workshops, many interviews, a survey, and a workshop with the Executive Council
- A strategic plan and one business plan by February

June 11, 2009



Very Rough Timeline

Activity	June	July	Aug	Sept	Oct	Nov	Dec	Jan
Contract awarded/signed								
Project Team Conference Call								
Project Planning Meeting								
Workshop/interview preparation								
Workshop/Interviews #1								
Workshop/Interviews #2								
Strategic Plan Outline								
Strategic Plan Authoring								
Business Plan Authoring								
Final presentations								

June 11, 2009



Richard A. Lind

Some Buy-Up Options

- 2-foot resolution imagery -- \$26,184 statewide
 - \$12 per square mile and a \$2,400 fee per order

- 1" = 400' planimetric (available for rural areas only) -- \$277,534 statewide

- \$137 per square mile and a \$6,000 fee per order

- 10' contour and 10' Digital Terrain Model (DTM) -- \$113,992 statewide

- \$56 per square mile and a \$3,000 fee per order

June 11, 2009



More Things to Buy

- Update of the 2007 Impervious Surface Data -- \$24,428

- Update of the 2007 Land Use/Land Cover - \$30,550

- Creation of a new statewide canopy height dataset -- \$49,956

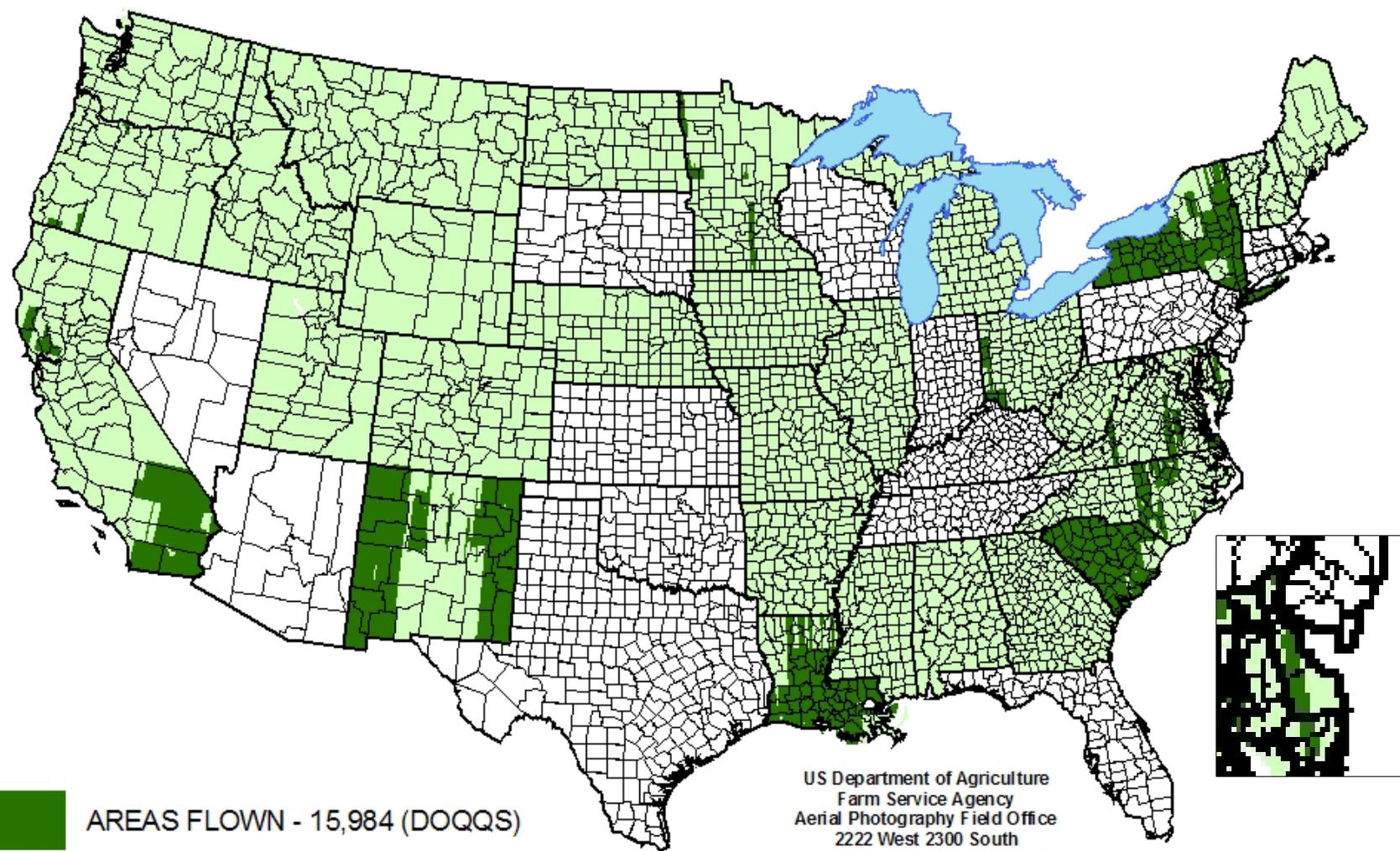
- This assumes the use of the 2009 NAIP and the 2007 and 2005 LiDAR.

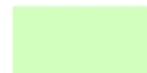
June 11, 2009



June 10, 2009

2009 NAIP Imagery Status



-  AREAS FLOWN - 15,984 (DOQQS)
-  AREAS CONTRACTED - 148,146 (DOQQS)

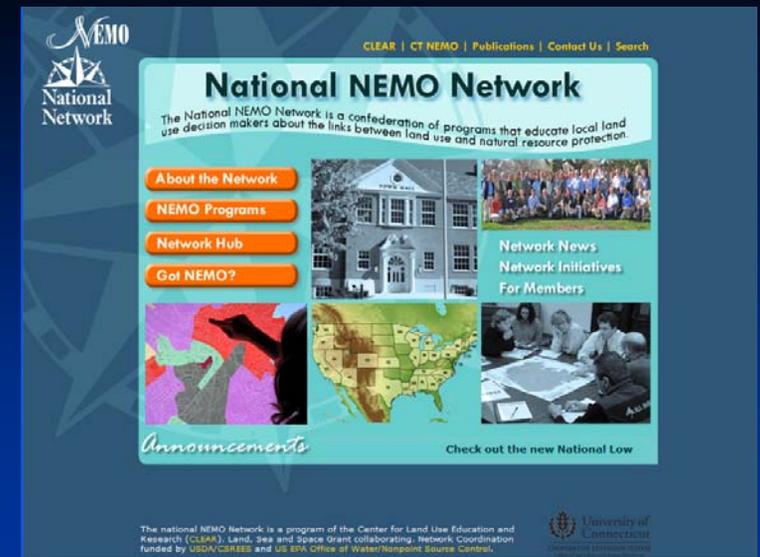
US Department of Agriculture
Farm Service Agency
Aerial Photography Field Office
2222 West 2300 South
Salt Lake City, UT 84119-2020
Bridget Barlow
Tel: 801-844-2911 Fax: 801-956-3640
Email: bridget.barlow@slc.usda.gov
Website: www.apfo.usda.gov

Digital Watershed Atlas for Sussex County

Presented by: Nicole M. Minni
University of Delaware, Water Resources Agency

NEMO Program

- Nonpoint Education for Municipal Officials (NEMO)
- National NEMO network
 - 32 educational programs in 31 states
 - **Mission - help communities better protect natural resources while accommodating growth**
 - non-regulatory, research-based educational outreach programs that emphasize natural resource-based land use planning and better site design
 - **<http://nemonet.uconn.edu/>**



Delaware
NEMO

Nonpoint Education
for
Municipal Officials

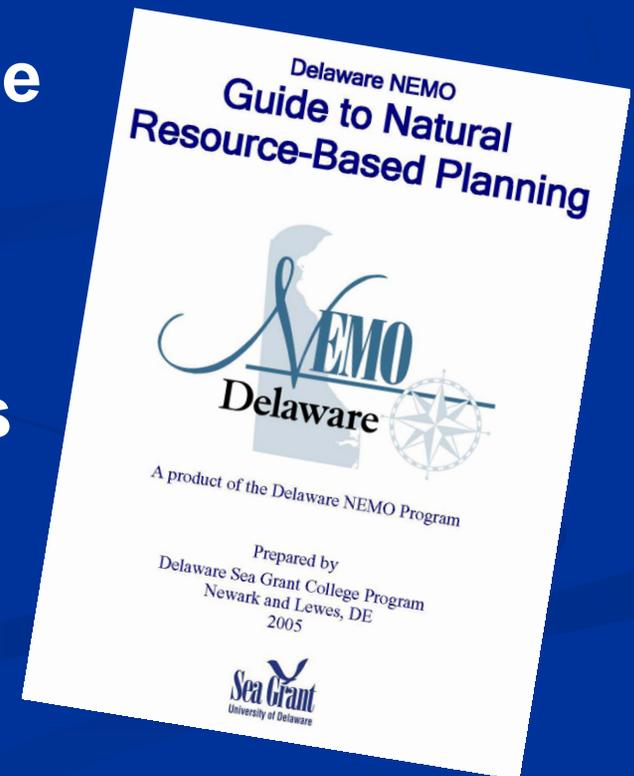
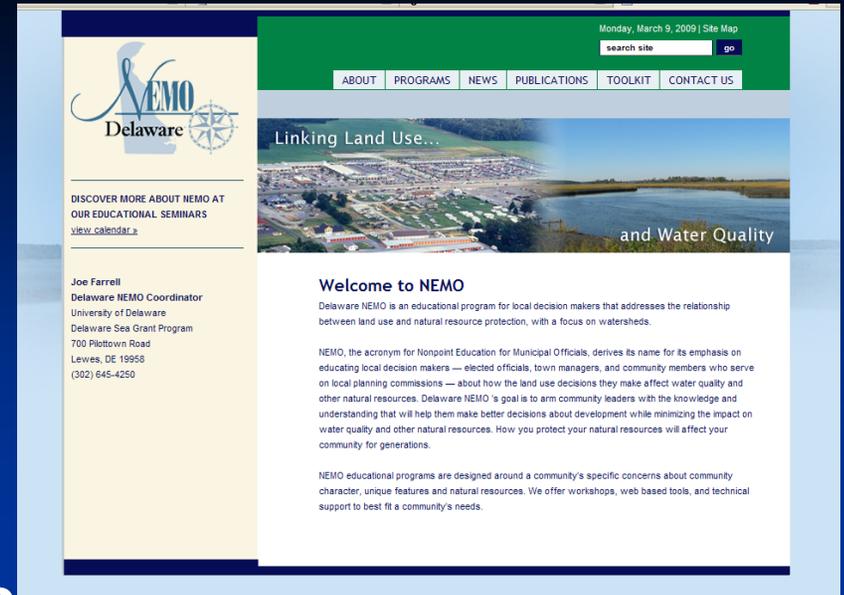
**Coalition of university,
state agency, local
government and
nonprofit organizations**

**Assist communities
facing growth on ways
to protect natural
resources while they
grow or change**



Delaware NEMO

- **Guide to Natural Resource-Based Planning**
 - Impervious Cover
 - Riparian areas and wetlands
 - Planning and managing open space
 - Managing stormwater
 - Source water protection
 - Guide to writing ordinances
 - Conducting resource assessments
 - <http://nemo.udel.edu/manual.aspx>
- **Community Resource Inventory**



Strategy for Reducing Impacts from Development

1. Natural Resource Based Planning

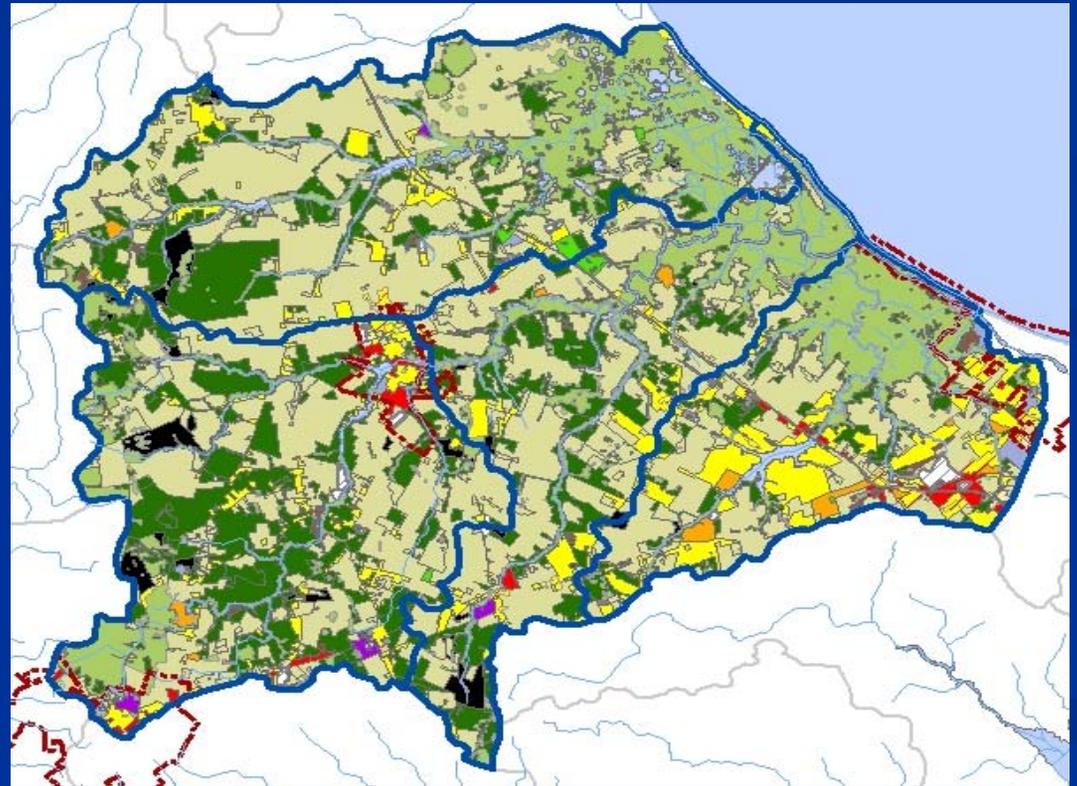
2. Site Design

3. Best Management Practices



Thinking in Terms of Watersheds: It takes communication!

- inter-governmental communication
- inter-town communication
- inter-department cooperation



Conduct a Natural Resource Inventory

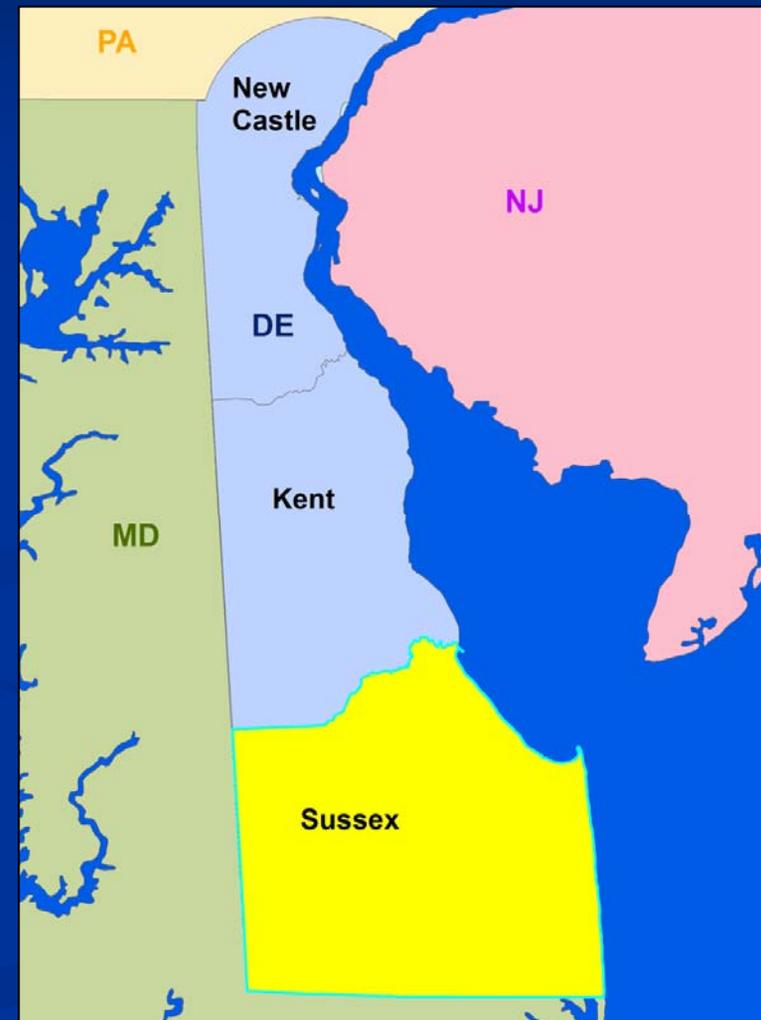
- See what environmental data is in your study area through the Environmental Navigator
 - <http://www.dnrec.state.de.us/DNRECeis/>
- Obtain Your Base Map Through DataMIL
 - <http://datamil.delaware.gov>
- ArcExplorer – Java Edition
 - www.esri.com/software/arcexplorer/index.html

Delaware Data

- Office of State Planning Coordination (OSPC)
 - http://stateplanning.delaware.gov/information/gis_data.shtml
- Delaware DataMIL
 - <http://datamil.delaware.gov/>
- DNREC Environmental Navigator
 - www.dnrec.state.de.us/DNRECeis/
- County Sites
 - New Castle County - <http://dmz-arcims02.co.new-castle.de.us/NCCPortal/index.jsp>
 - Kent County
www.co.kent.de.us/Departments/Planning/GIS/index.htm
 - Sussex County
www.sussexcountyde.gov/dept/assessment/mapping/
- Delaware Department of Agriculture
<http://66.173.241.168/dda/>

Putting it all together

- **Coastal Community Enhancement Initiative (CCEI)**
 - College of Marine and Earth Studies
 - College of Agriculture
 - College of Human Resources, Education & Public Policy
 - is an approach to address growth, land use, and environmental impacts in southern Delaware.



A Watershed Based Digital Map Atlas for Sussex County

- Web-based and hosted through the Delaware NEMO program's website

The screenshot shows the homepage of the Delaware NEMO program's website. The header is green and includes the date "Thursday, March 12, 2009 | Site Map" and a search bar with the text "search site" and a "go" button. Below the header is a navigation menu with buttons for "ABOUT", "PROGRAMS", "NEWS", "PUBLICATIONS", "TOOLKIT", and "CONTACT US". A secondary navigation bar lists "Mapping Resources | Conducting Natural Resource Assessments | Good Practices for Local Governments | Stormwater Resources | Homeowner Tips | Useful Links". The main content area features a large image of a town and a lake with the text "Linking Land Use... and Water Quality". Below the image is a white box with the text "Toolkit > Mapping Resources". On the left side, there is a logo for "NEMO Delaware" and a section titled "DISCOVER MORE ABOUT NEMO AT OUR EDUCATIONAL SEMINARS" with a link "view calendar »". At the bottom left, it says "Joe Farrell Delaware NEMO Coordinator".

Coastal Community Enhancement Initiative (CCEI)

- The University of Delaware Coastal Community Enhancement Initiative is an approach to address growth, land use, and environmental impacts in southern Delaware.
- Three Colleges within UD
 - College of Earth, Ocean and Environment
 - College of Agriculture & Natural Resources
 - College of Education and Public Policy

Digital Watershed Atlas for Sussex County

- Main focus is for Municipalities and others to be able to create a natural, cultural and economic inventory of their watershed.
 - prioritize areas for protection
 - target development to most appropriate areas
 - incorporate open space planning
 - develop a plan of action both on the local and watershed level
 - revise zoning and subdivision regulations to support plans
- http://nemo.udel.edu/mapping_watershedinventory.html

A Watershed Based Digital Map Atlas for Sussex County

- **Community Resource Inventory (CRI)**
 - Natural, Cultural, Economic
- **Natural** resources include;
 - Watersheds, wetlands, agricultural areas, groundwater recharge areas, forests, impervious cover, protected lands
- **Cultural** resources include;
 - Historical sites and districts, schools locations and districts, population, infrastructure
- **Economic** resources include;
 - Zoning, PLUS projects, Strategies for State Policies and Spending

Approaches

- Dynamic web (Dreamweaver and excel)

The screenshot shows the homepage of the Community Resource Inventory Online (CRI) website. The header includes the NEMO logo, the CRI logo, and the text "Community Resource Inventory Online" with the tagline "A mapping resource for Connecticut communities." Navigation buttons for "CRI Home", "Build Your CRI", "Use Your CRI", "Interactive Map", and "Enhance Your CRI" are visible. The main content area is titled "Getting Started" and instructs users to "Choose your Municipality. Use the pull down menu below or click on the map." A map of Connecticut is displayed with a grid overlay. Below the map is a "Choose Town" dropdown menu and a "Go" button. The left sidebar lists "Map Sets" under two categories: "Natural Resources" (Base Map, Topography, Land Cover, Soils, Water Resources, Habitats, Open Space) and "Cultural Resources" (Transportation, Utilities, Regulated Lands). A "Print Your CRI" button is at the bottom of the sidebar. The footer contains links to "Tools & Resources", "Contact Us", "CLEAR Website", and "CT NEMO Website", along with logos for the University of Connecticut and the Connecticut Department of Environmental Protection.

Approaches

- Dreamweaver CS3 Spry tabbed panels

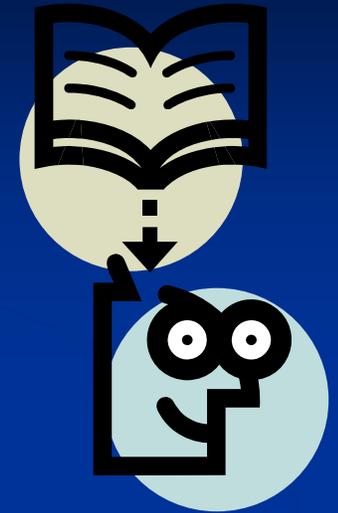
The screenshot displays a web application interface for land cover data. On the left is a vertical navigation menu with the following items: About the Project, Statewide Information, Your Town, Your Watershed, Interactive Map, Download Data, What We're Measuring, and Related Projects & Commentary. The main content area is divided into two columns. The left column is titled "Regional Basin" and shows a map of the Aspetuck region with a dropdown menu set to "Aspetuck" and a "Go" button. The right column is titled "Sub-regional Basin" and shows a map of the East Aspetuck River area with a dropdown menu set to "East Aspetuck River" and a "Go" button. Below these maps is a section titled "Aspetuck Regional Basin" which contains a row of tabs for different years: 1985 Land Cover, 1990 Land Cover, 1995 Land Cover, 2002 Land Cover, 2006 Land Cover, Change To Developed, and Change From. The 2006 Land Cover tab is selected, showing a detailed map of the region. A legend in the bottom right corner indicates "2006 Land Cover" and "LAND COVER" with a red square representing "Developed". A "Printable PDF" link is also visible.

Education and Outreach

- Audience – Municipal Governments, Home Owner Associations, Tributary Action Teams, etc.
 - Purpose of the project
 - Why it is important
 - What is available

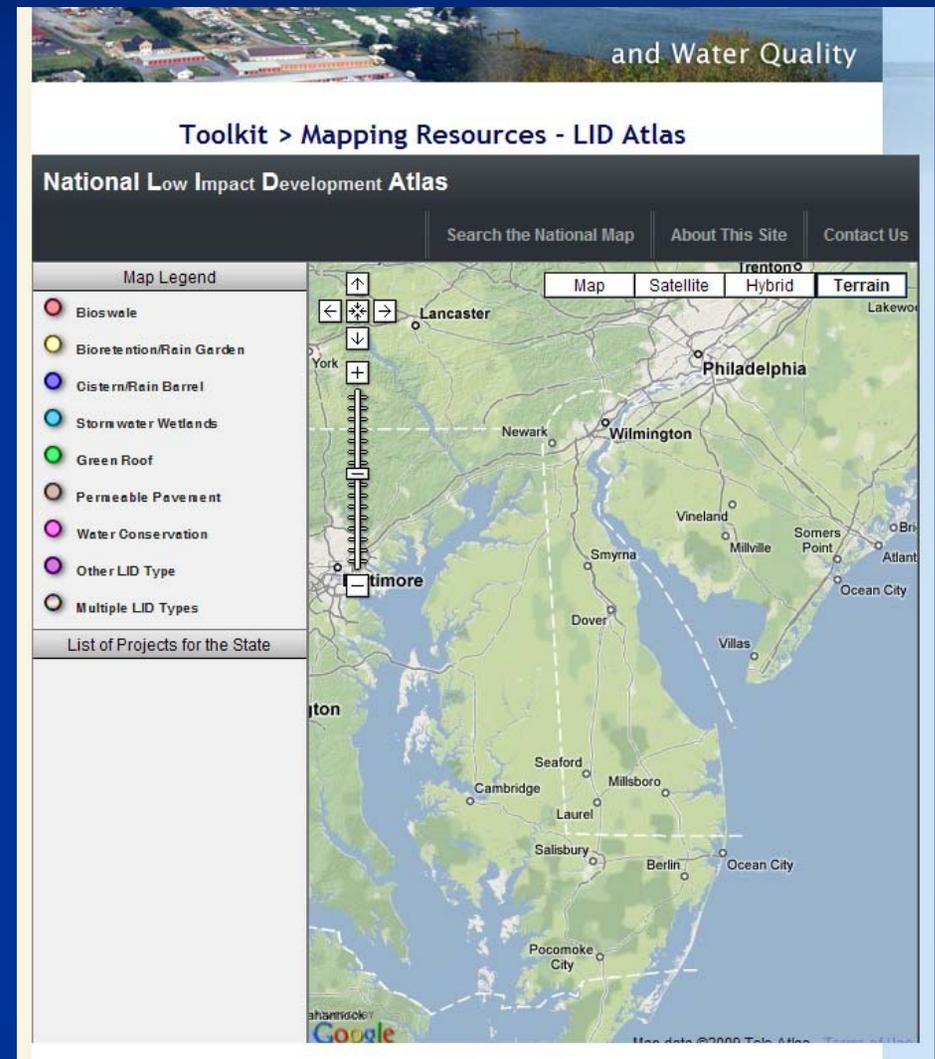
PDF Maps by watershed and by municipality

Data Stewards – who they are and where you can download there data



Future Direction for the web site

- Delaware LID Atlas – coming soon!
- Success stories – made available on the web
- ArcServer



Credits

National NEMO Network
<http://nemonet.uconn.edu/>

University of Connecticut
<http://nemo.uconn.edu/>

Delaware NEMO program
<http://nemo.udel.edu/>

Nominated

■ Academic Community – Dick Sacher, UD
RDMS

■ Municipalities – Mark Nowak, City of Dover

■ At-Large – Lillian Wang, DGS



To the Honorable the Senate and House of Representatives of the State of Delaware General Assembly met:
The undersigned Surveyors J. Lord, Thomas Curry, Nicholas P. Johnson and Charles J. Harrington, commissioners named in and appointed by a Joint Resolution of the Senate and House of Representatives of the State of Delaware in General Assembly met, entitled a "Joint Resolution appointing Surveyors to run and mark the division line between the Counties of Kent and Sussex, from a fork in the Strippittion Creek at the junction of the Tantrough Branch and Beaverdam Branch to the line dividing the States of Maryland and Delaware, beg leave to make return of their proceedings under said joint resolution as follows: They did in the months of November and December A.D. 1895, assisted by John C. Hopkins and Alfred Skoob, two Surveyors named in the Act, entitled "An Act to amend a Joint Resolution entitled 'Joint Resolution appointing Commissioners to run and mark the division line between the Counties of Kent and Sussex, Chapter 835, Volume 19, Laws of Delaware' passed at Dover, February 13, 1895; view and examine the division line between the Counties of Kent and Sussex, and did run and survey the same from a point in the fork in Strippittion Creek at the junction of the Tantrough Branch and Beaverdam Branch to the line dividing the States of Maryland and Delaware, the courses and distances of which said dividing line are as follows, to wit:
Beginning at a large Stone buried in the west side of a mill dam at the junction of Tantrough branch with Beaverdam branch (a small maple marked with six chips bears 3 7/8 1/2 of a perch from said beginning stone, and a sweet gum on the east side of said mill-dam marked with six chips bears 8 1/4 1/2 2 1/2 perches from said Beg. Stone) and running thence up and with the meanders of the run of said Tantrough Branch the several meanderings thereof, the general trend of which branch is in a Southwesterly direction, about 8747 perches to a stone monument (No. 1) set at the head of said Tantrough branch, thence running South

proper on said division line between the said Counties of Kent and Sussex, the location of which said Stones is marked and shown on the above and foregoing plot. That the said Stones are five feet in length dressed to ten inches square and are set three feet in the ground leaving ten feet above surface and have the letter "K" cut into them on one side near the top and the letter "S" on the opposite side near the top. That the above correct plot showing the courses and distances of the said division line between the said Counties of Kent and Sussex, and also showing the location of Stone monuments, by their respective numbers from No. 1 to No. 14 inclusive, set on said line, and also showing all other notable objects on or near said line.
Such great uncertainty has always existed relative to the location of the true and correct dividing line between the Counties of Kent and Sussex as to create grave and serious doubts in the minds of those persons residing on or near the said dividing line as to which of the said Counties they are residents, thereby subjecting them to many annoyances and inconveniences. The Commissioners have taken considerable pains to ascertain the feeling of the public in regard to the said dividing line as shown and marked on the above and foregoing plot, and they feel fully justified and warranted in saying that the people generally are not only well satisfied but very much pleased at the prospect of an early and definite establishment of the said dividing line between the Counties of Kent and Sussex, and are sincerely desirous that the return of the Commissioners shall be approved by the General Assembly of the State of Delaware at its present session, as thereby all future doubts and uncertainties as to the location of the said dividing line between the said Counties will be forever dispelled.
All of which is respectfully submitted for approval.
A. S. S. A. S. S.

June 11, 2009



ESRI Instructor-Led Training

What course interests you?

NAME: _____ AGENCY: _____ PHONE: _____ E-MAIL: _____

Please Rank 1-8

_____ **ArcGIS Server: Web Administration Using the Microsoft .NET Framework (3 days)**

To set up and successfully maintain a production ArcGIS Server implementation in which GIS content is authored, published, and shared across the enterprise or on the Web, organizations need effective strategies to ensure performance, security, and reliability. This course teaches those strategies. You are introduced to the ArcGIS Server architecture and tools for administering GIS services, users, and servers. In course exercises, you learn how to configure service properties, optimize performance, set up secure servers, and apply hardware sizing. Advanced installation and configuration techniques are also covered, with a focus on distributed installations and integration into an enterprise GIS.

_____ **Developing Applications with ArcGIS Server using the Microsoft .NET Framework (3 days)**

ArcGIS Server provides a set of software components and a framework for developing centrally managed GIS Web applications. This advanced course introduces the ArcGIS Server Web Application Developer Framework (ADF) and teaches students how to develop ArcGIS Server Web applications that consume different types of GIS services. Students learn about the available developer libraries, application programming interfaces (API), and ArcGIS Server development guidelines. In course exercises, students build applications that use the ADF Web controls to integrate multiple data sources, execute queries, and leverage the new task framework to perform geoprocessing. Students also learn how to extend both the Web ADF with custom buttons and tools and the GIS server with server object extensions.

_____ **Introduction to ArcGIS Server (2 days)**

ArcGIS Server provides a complete server-based GIS system that supports the use of centrally managed spatial data for mapping and analysis. This course introduces ArcGIS Server and teaches how to install, configure, and use the product as administrators and consumers of GIS services. Students learn how to publish maps, globes, and geoprocessing models that are optimized for performance. Students also create out-of-the-box Web applications using Manager and learn how to use GIS services in both Web applications and ArcGIS Explorer.

_____ **Data Management in the Multiuser Geodatabase (3 days)**

This course prepares GIS and database administrators to implement an ArcSDE geodatabase by teaching how to load and manage ArcSDE data. The course presents concepts applicable to both workgroup and enterprise ArcSDE geodatabases but focuses primarily on the enterprise ArcSDE geodatabase. Students learn the basic architecture of a multiuser geodatabase and are introduced to ArcSDE connection types. The course focuses on loading and managing vector and raster data and emphasizes best practices for interacting with a multiuser geodatabase. Students explore multiuser geodatabase design strategies and editing options for data stored in a multiuser geodatabase, including versioning.

_____ **Building Geodatabases (3 days)**

This course provides an overview of the structure and capabilities of the geodatabase. You learn how to create a geodatabase, migrate existing GIS data to a geodatabase, and edit and maintain data stored in a geodatabase. The course covers some advanced geodatabase topics including how to build a geodatabase topology; maintain data integrity using subtypes, attribute domains, and relationship classes; and create a geodatabase schema. In course exercises, you work with the file geodatabase and learn how to migrate personal geodatabase data to a file geodatabase and create various geodatabase components.

_____ **QAQC for GIS Data (2 days)**

Data is the foundation of every successful GIS. To ensure a reliable foundation for their GIS, organizations should have a well-designed quality assurance (QA) plan and quality control (QC) procedures integrated with the production and maintenance of GIS data. This course covers errors and quality in GIS data and provides practical guidelines for creating a complete QA plan. Using both ArcGIS Desktop and GIS Data ReViewer software (an application included with PLTS for ArcGIS—Foundation), you learn techniques for evaluating and verifying data quality. The course focuses on QC tools and workflows that simplify many aspects of automated and visual data quality control tasks, with an eye toward ever-improving technology.

_____ **Advanced Analysis with ArcGIS (3 days)**

ArcGIS software provides many tools for solving complex spatial problems. This course examines modeling techniques used in spatial analysis and introduces processes and tools that can be used to perform a variety of GIS analysis tasks. The ArcGIS geoprocessing framework, which includes ArcToolbox, ModelBuilder, the command line, and scripts, is emphasized. Project-based exercises draw from a range of interesting real-world GIS applications. The course concludes with an exciting final project in which you are challenged to implement many of the tools taught throughout the course. This course is taught using an ArcInfo license of ArcGIS because some of the advanced analysis tools used in exercises require an ArcInfo license.

_____ **Introduction to Geoprocessing Scripts using Python (2 days)**

The ArcGIS geoprocessing framework includes a scripting environment, and Python[®] is the scripting language included with ArcGIS. This course introduces the Python scripting language and shows how it can be used to access and automate geoprocessing functionality. You learn Python scripting syntax, then begin writing scripts to automate geoprocessing operations. You also learn how to incorporate Python scripts as custom tools in ArcToolbox.