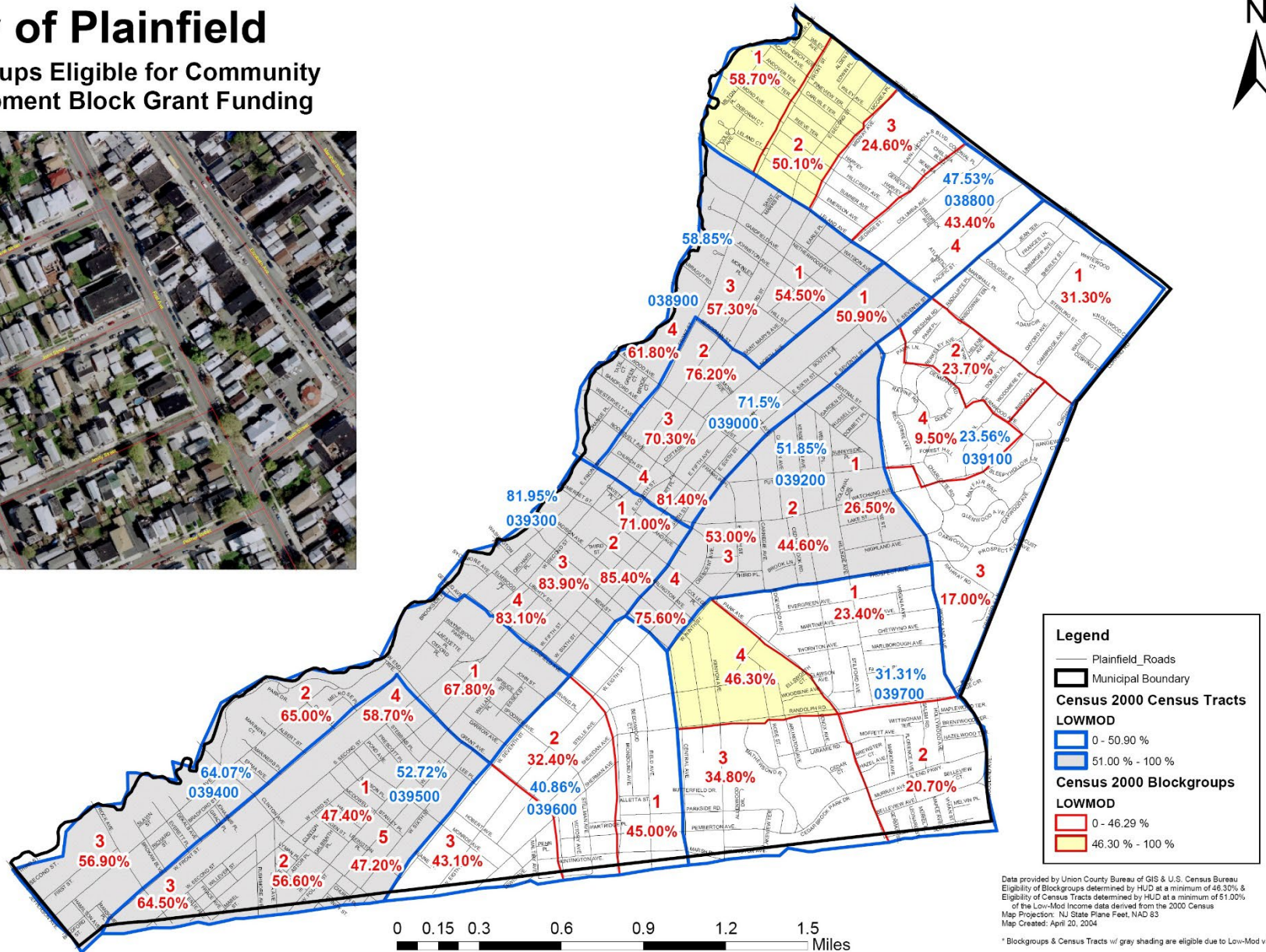


# **21<sup>st</sup> Annual Mapping Contest Maps**

# **Analytical Presentation**

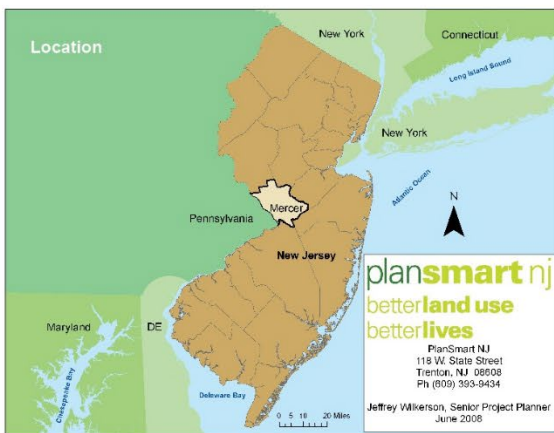
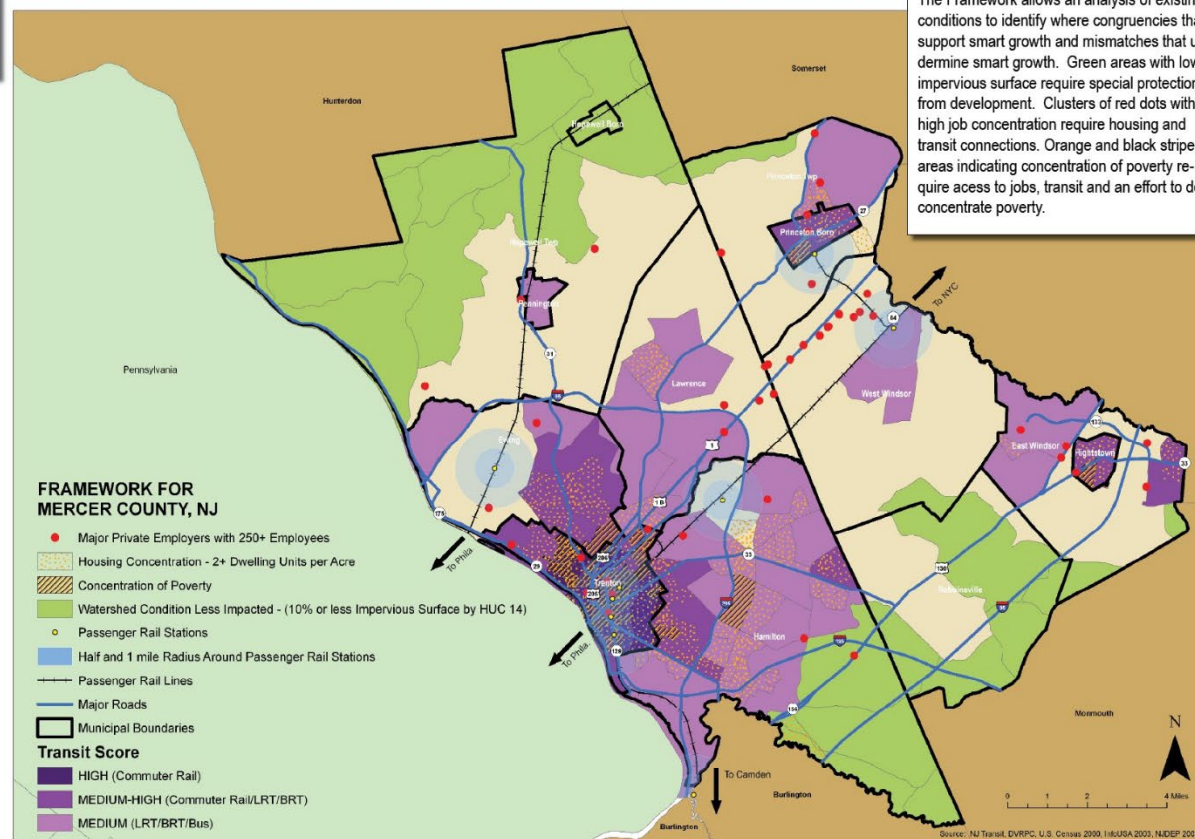
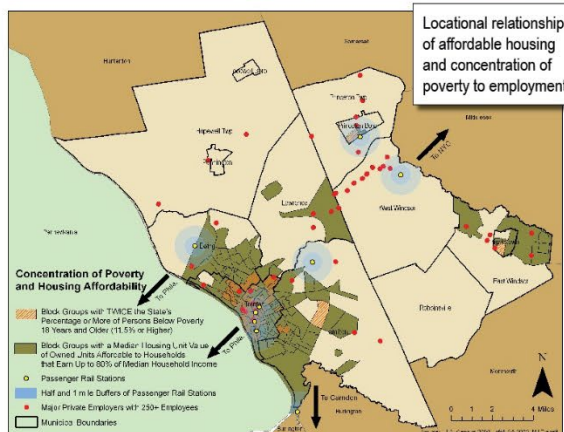
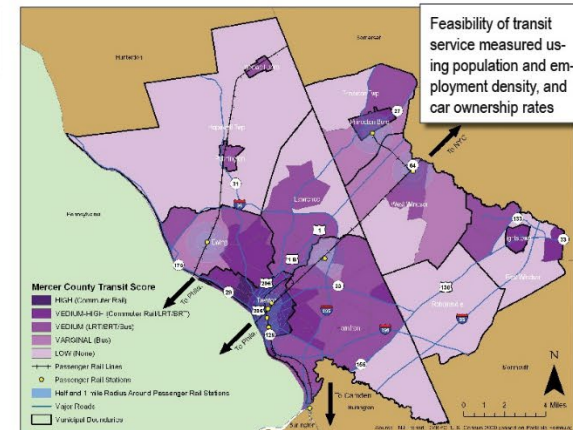
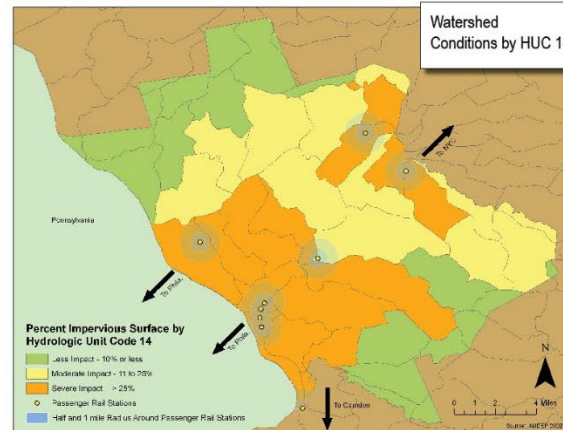
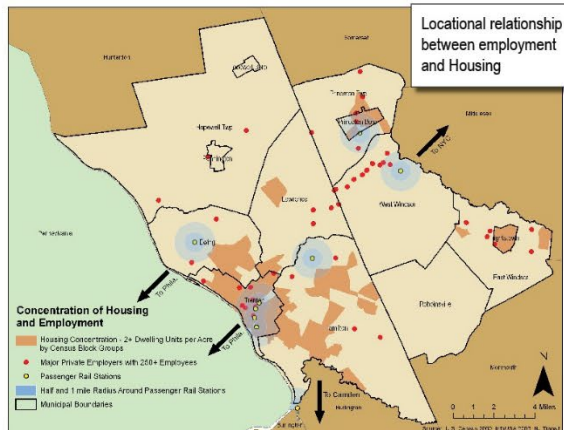
# City of Plainfield

## Blockgroups Eligible for Community Development Block Grant Funding





# Data Framework for Growth Management - Mercer County, NJ

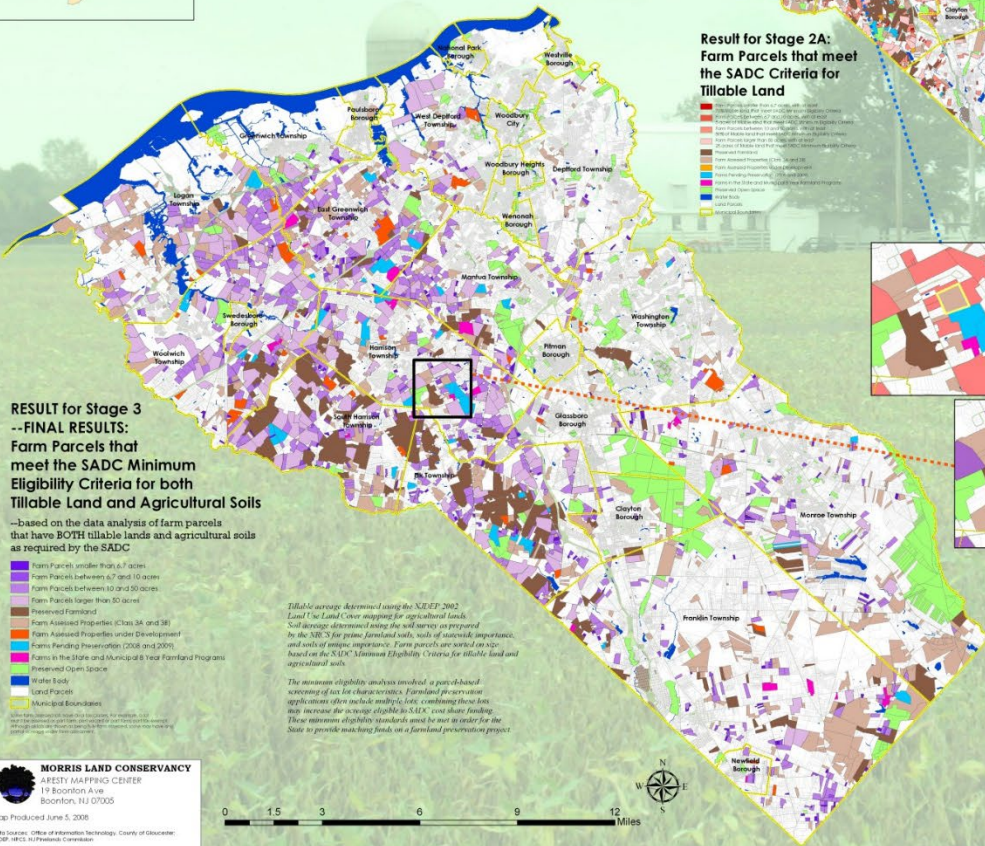
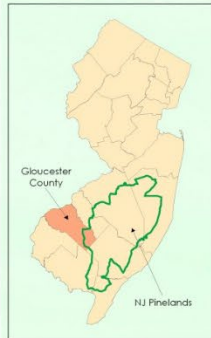




*Based on the data integration and analysis of County Land Parcels,  
NJDEP 2002 Land Use/Land Cover, NRCS Soil Survey using ArcGIS Model Builder*

NJDEP 2002 Land Use/Land Cover, NRCS Soil Survey using ArcGIS Model Builder

58,987 acres, or 27% of total land area of the Gloucester County are under farmland assessment. The County currently, and historically, supports a strong and active program of farmland preservation, as 10,559 acres of farmland has been permanently preserved since 1989. They have recently established an ambitious goal of preserving 1,000 acres of farmland per year for each of the next ten years for a total of 20,559 acres of preserved farmland by the end of 2017.

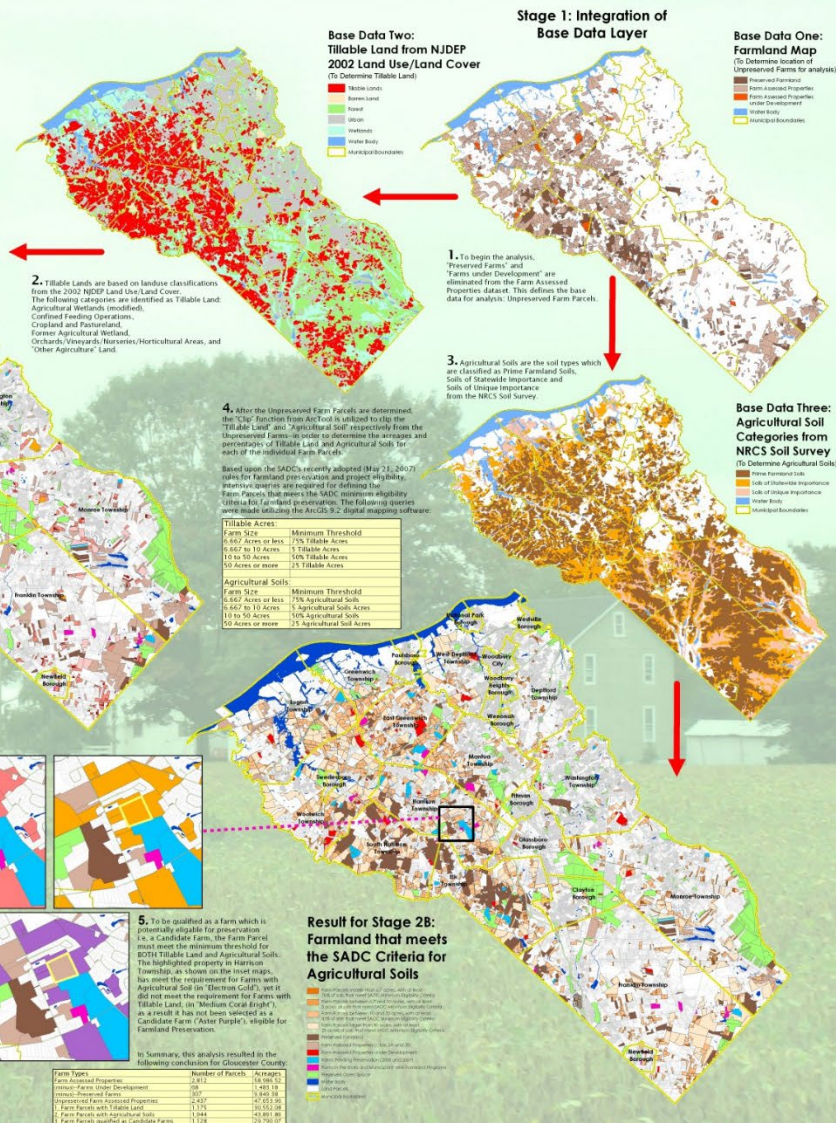


**RESULT for Stage 3**  
**--FINAL RESULTS:**  
 Farm Parcels that  
 meet the SADC Minimum  
 Eligibility Criteria for both  
 Tillable Land and Agricultural Soils

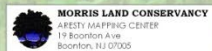
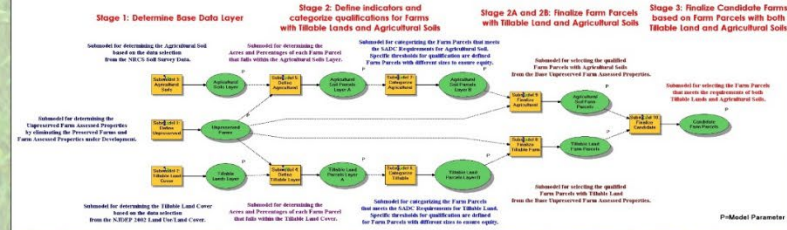
—based on the data analysis of farm parcels that have BOTH tillable lands and agricultural soils as required by the SADC

*Tileable acreage determined using the NIDEP 2002 Land Use Land Cover mapping for agricultural lands. Soil drainage determined using the soil survey as prepared by the NRCS for prime farmland soils, soils of statewide importance, and soils of unique importance. Farm parcels are sorted on size based on the SUDC Minimum Eligibility Criteria for tileable land in agricultural soils.*

**Acknowledgements:**  
This project is the result of the 2008 County of Gloucester Comprehensive Farm and Preservation Plan produced by the Morris Land Conservancy. I would like to give my thanks to David Epstein, President of Morris Land Conservancy for his generous support.  
I am especially indebted to Barbara Davis for her help in providing information, guidance, editing and clarification of ideas throughout the process. Thanks also to Shari Johnson, Andrew Swick, Katharine Otto, and Kelly O'Brien for their valuable comments and insights on data analysis, map production and technical support.



**Stage 2: Define indicators and** **Stage 2A and 2B: Finalize Farm Parcels** **Stage 3: Finalize Candidate Farm**



Map Produced June 5, 2008

Data Sources: Office of Information Technology, County of Gloucester; HUEDP, HSPCS, NJ Pinelands Commission

This map was developed using HUEDP Geographic Information System digital data. As this secondary product has not been verified by the HUEDP and is not state-authorized.

This map is to be used solely for planning purposes, and does not take the place of a survey.



# Depiction of Select Environmentally Sensitive Shellfish Classification Growing Areas And Sediment Contamination In Effort to Educate The Public Of Our Critical Coastal Resources, Barnegat Bay, Ocean County, New Jersey.



Wampum shell  
Northern Quahog  
Hard Shell Clam

## Sediment Contamination

There are no absolute chemical concentrations that correspond to sediment toxicity, but Effects Range Low (ERL) and Effects Range Medium (ERM) values are used as guidelines. The ERM is the concentration of a contaminant that resulted in adverse biological effects in 50% of literature studies evaluated. A more protective indicator of contaminant concentrations is the ERL criterion, which is the concentration of a contaminant above which ecological effects are observed about 10% of the time.

The pie graph shows the proportion of the Barnegat Estuary that is Good (green), Fair (yellow), Poor (red) or Missing data (blue) for sediment contaminants. The small symbols on the map show the rating at a particular sampling location.



## Sediment Quality Index

The pie graph shows the proportion of Barnegat Estuary that is Good (green), Fair (yellow), Poor (red) or Missing data (blue). The small symbols on the map show the rating at a particular sampling location.

Sediment quality is assessed by evaluating the results of three different factors that relate to sediment quality:

- 1) Sediment Toxicity
- 2) Sediment Contaminants
- 3) Sediment Total Organic Carbon



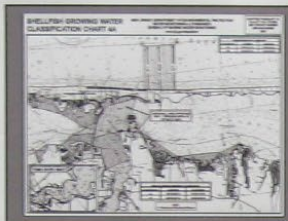
Eastern Oyster  
(*Crassostrea virginica*)



Eastern Podmussel  
(*Ligumia nasuta*)



Tidewater Mucket  
(*Leptodea ochracea*)



Blue Mussel  
(*Mytilus edulis*)



Eastern Oyster  
(*Crassostrea virginica*)



Ocean Quahog  
(*Arctica islandica*)

I don't want to drown in contaminated sediment!!!



Soft Shell Clam  
(*Mya arenaria*)



## Total Organic Carbon (TOC)

Sediments can be made toxic in areas where there is considerable deposition of organic matter. This is assessed by measuring TOC.

The pie graph shows the proportion of the Barnegat Estuary that is Good (green), Fair (yellow), Poor (red) or Missing data (blue) for sediment TOC.

The small symbols on the map show the rating at a particular sampling location.



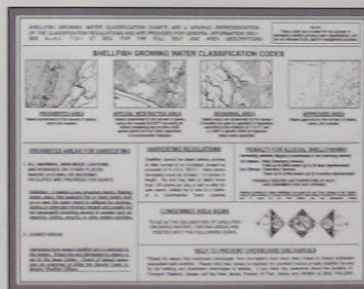
## Sediment Toxicity

Sediment toxicity is measured by a standard direct test of toxicity that has been applied at thousands of sites to measure the survival of amphipods exposed to sediments for ten days under laboratory conditions. Amphipods are commonly found shrimp-like benthic crustaceans. As in all tests of toxicity, survival is measured relative to that of amphipods exposed to reference sediment.

The pie graph shows the proportion of the New Jersey / New York Harbor Estuary that is Good (green), Fair (yellow), Poor (red) or Missing data (blue) for sediment toxicity. The small symbols on the map show the rating at a particular sampling location.



Surf Clam  
(*Spisula solidissima*)



Hard Shell Clam  
(*Mercenaria mercenaria*)



Yellow Lampmussel  
(*Lampsilis cariosa*)



Yellow Lampmussel  
(*Lampsilis cariosa*)

Prepared By  
Joseph Stefanoni III and  
Gene P. Fowler,  
New Jersey Dept. of Environmental Protection  
Trenton, NJ





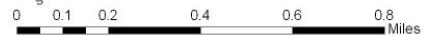


**Legend**

|                               |            |                      |
|-------------------------------|------------|----------------------|
| Elizabeth Parkway Study Zones | Local      | State Highway        |
| Restroom                      | Interstate | County Highway       |
| Parking                       | US Highway | Garden State Parkway |
| Access Point                  |            |                      |



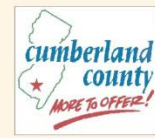
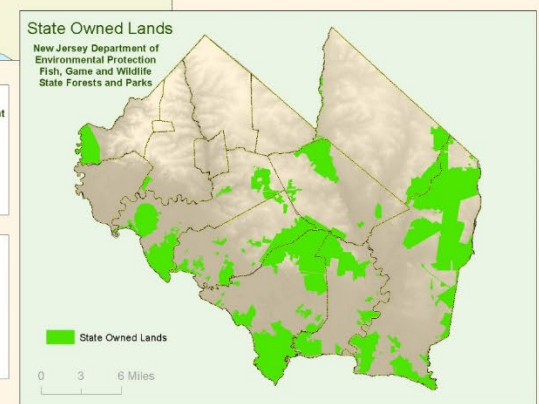
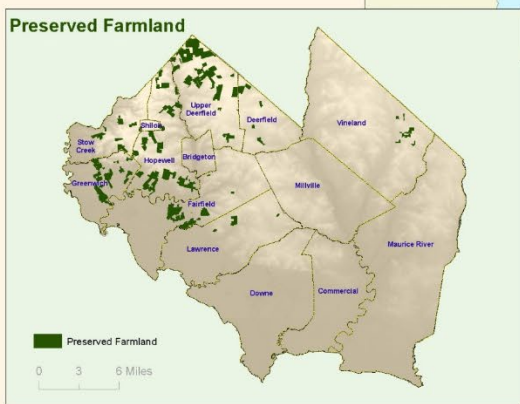
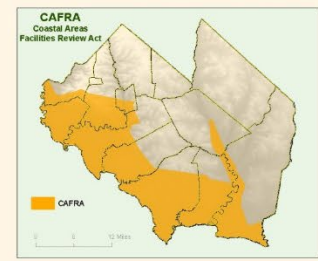
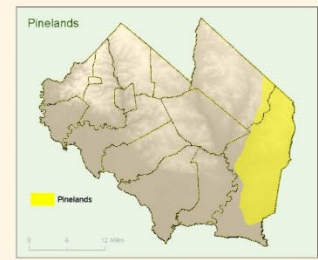
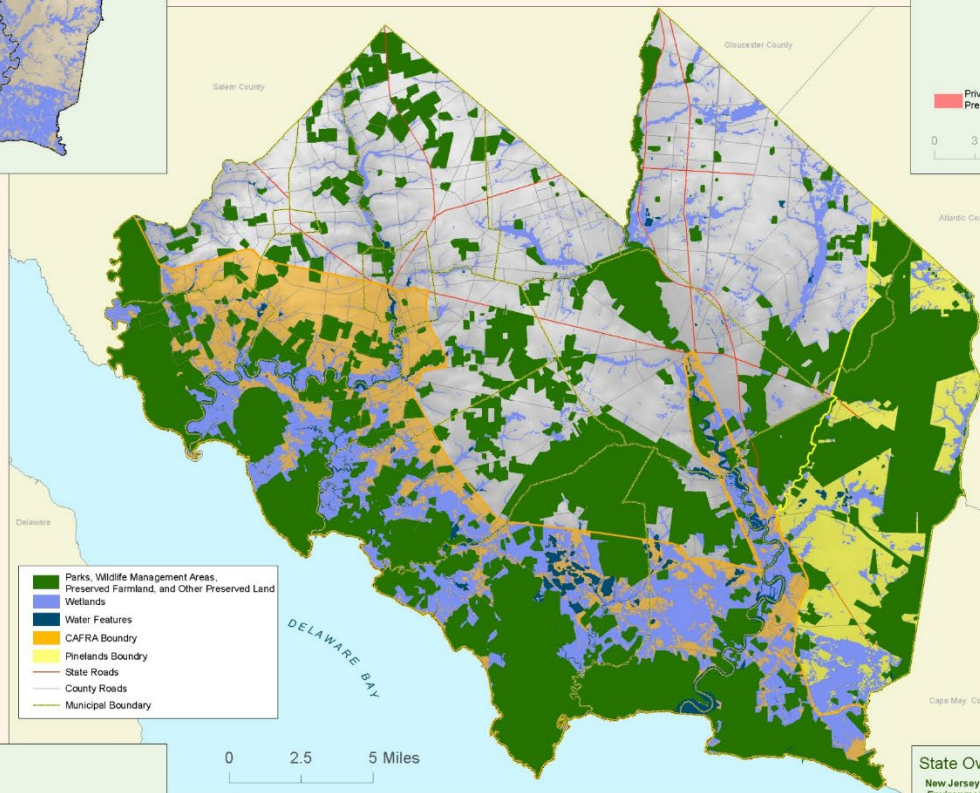
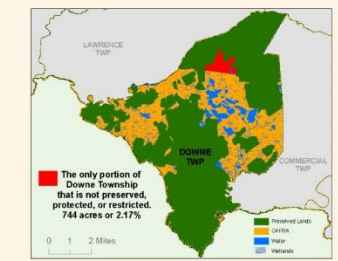
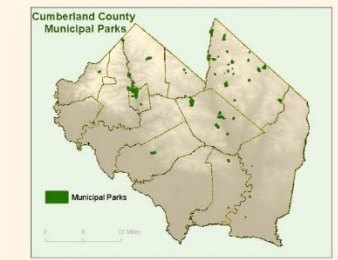
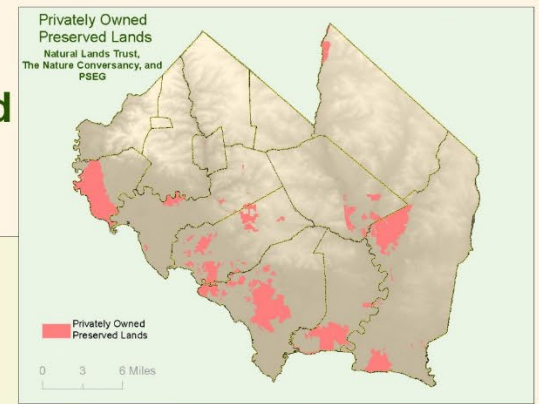
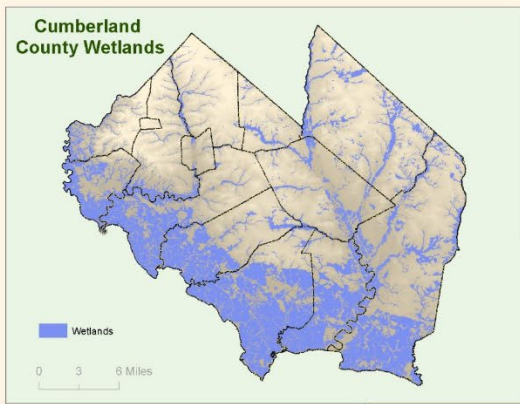
**UNION COUNTY BIO-BLITZ 2008**  
**June 13 and 14**



Data Provided by the County of Union  
Bureau of GIS  
Flight date: 04/2005  
Projection: NJ State Plane Feet, NAD 83  
Created: January 11, 2008



# Protected, Preserved, and Restricted Lands in Cumberland County



Cumberland County  
Department of Planning and Development  
800 East Commerce Street  
Bridgeton, NJ 08302  
Ph: 856-453-2175  
Fx: 856-453-9138  
Anthony J. Buono, Jr.  
August 2007  
Revised May 2008

Source: Cumberland County  
Department of Planning and  
Development, NJ DEP, and NJSADC.  
Special thanks to Sharon Mollick  
Please visit:  
[www.MoreToOffer.com](http://www.MoreToOffer.com) and  
[www.co.cumberland.nj.us](http://www.co.cumberland.nj.us)  
for more information regarding  
Cumberland County, New Jersey





# Spatial Distribution Of BLACK BEAR Damage In Corn

## ABSTRACT

Black bear (*Ursus americanus*) populations have been steadily increasing in New Jersey since the 1980's. Current research estimates the bear population at more than 3,000 bears in the prime bear region of northwestern New Jersey. This region is also home to a great deal of rural and agricultural land. Agricultural producers have reported an increase in bear sightings and subsequent crop damage in recent years. Although anecdotal evidence suggests that damage to agricultural crops has increased, limited studies have been conducted to quantify bear damage in New Jersey agricultural crops or to determine where damage is most likely to occur in a field. A research trial was initiated during the 2007 growing season to quantify bear damage and to determine the spatial distribution of bear damage in corn.



Black Bear *Ursus americanus*



FIELDWORK

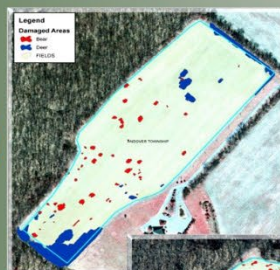


Using GPS Technology to quantify damage

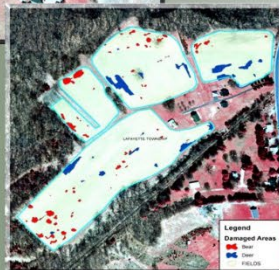
An experiment was conducted during the 2007 growing season to evaluate the spatial distribution of bear damage to agricultural crops in Sussex County, New Jersey. Spatial analysis using Global Positioning Systems GPS was conducted in corn (*Zea mays*). Corn was selected in response to a producer survey conducted during the 2006 growing season which reported bear damage to corn as a serious concern for agricultural producers in the region. Fields with a past history of bear damage were selected and assessed prior to harvest. Damage was quantified by evaluators walking through selected fields and locating the characteristic bear damage (figure 1).



Figure 1. Typical Bear Damage in Corn



Individual "bear rolls" were measured using a Trimble ProXR, submeter GPS unit. The perimeter of each roll was walked with one point being geo-referenced per second. Resulting polygons were mapped using ESRI ArcView 9.2. The spatial join feature was utilized to calculate the distance from the center of each bear damage polygon to the edge of the closest land characterized as forested (NJDEP Land Use/Land Cover data set, 2002). Means were subjected to analysis of variance and means separated using Duncan's Multiple Range test (SAS, 2007).



Map of Bear Damage



Figure 2. Damaged Area Over Time

18 fields were scouted totaling 124 acres. More than 600 individual bear damage polygons were created. Damage was variable ranging from less than 1% of the total field area to nearly 8% with an average loss of 2.24%. Crop loss was not determined since fields were evaluated as much as six weeks before the crop was harvested in certain situations. Damaged areas would likely grow the longer the crop remained in the field (figure 2).

PROXIMITY TO FOREST

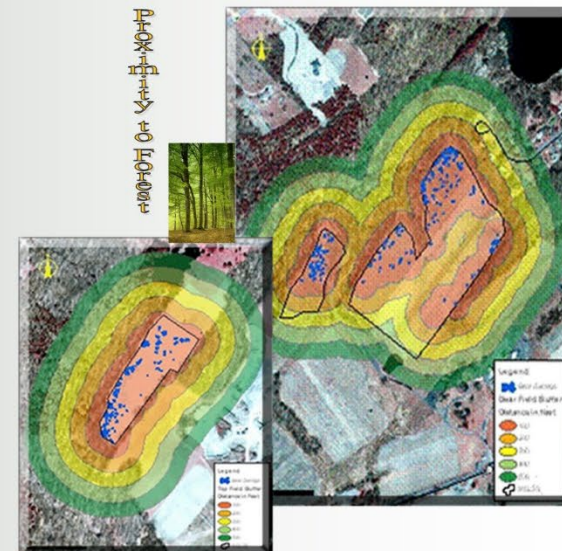


Figure 3. Spatial Distribution of Bear Damage

Numerical differences were observed in the linear distance from individual rolls to the forested areas with approximately 80% of the damage occurring between 0 and 200 feet ( $P = .0003$ ) (figure 3).



Office of GIS Management  
Division of Information Management  
Department of Natural & Shared Services



New Jersey Agricultural  
Experiment Station

## PROJECT TEAM

David Kunz, GISP (SCOGISM)  
Steven Komar (Rutgers Cooperative Extension)  
Tamah Conover (SCOGISM)  
Sarah Weinrich (SCOGISM)  
R. C. Mickel (Rutgers Cooperative Extension)

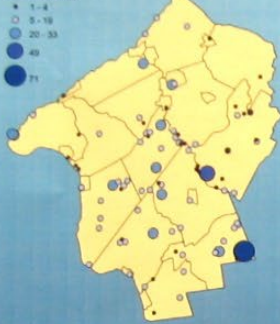


# Mosquito Trends From 2007 and The Arrival of *Aedes albopictus* in Hunterdon County



Kathy Bronish, Gary Donato and Tadhg Rainey  
Hunterdon County Department of Health  
Flemington, New Jersey

Maximum # of *Ae. japonicus*  
Collected per Trap



## *Aedes japonicus*

The map to the left depicts the maximum number of *Aedes japonicus* collected in single overnight traps at a given location.

This graphic illustrates how quickly and thoroughly this invasive mosquito species has infiltrated Hunterdon County in less than a decade. Although *Culex* spp are the most abundantly collected mosquitoes in our gravid traps, *Ae. japonicus* adults readily enter these traps. *Aedes japonicus* adults were first collected in the year 2000, at which point it was unusual to collect more than just a few specimens per trap. In 2007 greater than 20 specimens per trap were collected routinely, and in one instance 71 *Ae. japonicus* were collected in a single trap.

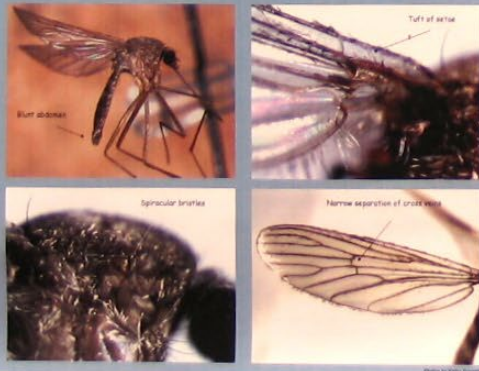
## *Culiseta inornata*

The map to the right shows collection locations of *Cs. inornata* in 2007. Although not a rare mosquito in New Jersey, prior to 2007 *Cs. inornata* adults were never collected in Hunterdon County. By the end of the season, this species was collected from seven widespread municipalities. Adults were collected in both gravid and CO<sub>2</sub>-baited traps with the majority collected in gravid traps. Even more surprising was the appearance of this species during extended dry spells that occurred through the summer and fall season.



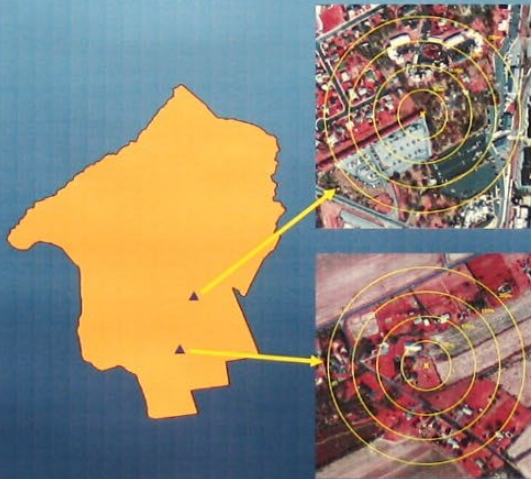
■ Location *Cs. inornata* Collected  
/// Municipality *Cs. inornata* Collected In

### Key characters of *Culiseta inornata*



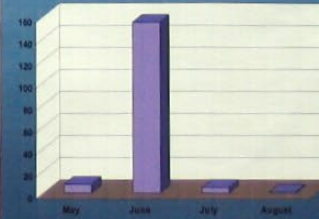
## *Aedes albopictus*

The map below documents our program's first *Ae. albopictus* collections. Only two adult specimens were collected in 2007. Both appeared in gravid traps. The first was collected on July 3<sup>rd</sup> and the second on October 5<sup>th</sup>. To this day we have had no biting complaints from the public. We suspect the Asian tiger mosquito is just taking hold within our jurisdiction. Concentric rings from the yellow center indicate 50m radii from the point of collection. As part of our surveillance goals for 2008, we intend to conduct surveillance from the point of the initial collections. Our goal is to more thoroughly identify the extent which this mosquito has established itself in Hunterdon.



Total # *Ae. sticticus* Collected  
At Each Location

Number of *Ae. sticticus* Collected per Month



## *Aedes sticticus*

We had never experienced an *Ae. sticticus* problem in the eight-year history of our program until 2007. Although adults would commonly appear in CO<sub>2</sub>-baited traps in the past, numbers were markedly higher in 2007 and were combined with numerous resident complaints. Problematic locations are noted on the map to the left. Most *Ae. sticticus* production was caused by rivers that overflowed their banks because of early season flooding. These included areas of the Musconetcong, Delaware, South Branch of the Raritan and Neshanic Rivers. *Aedes sticticus* complaints were long-lasting compared to most other species in our area.



Female *Aedes sticticus*



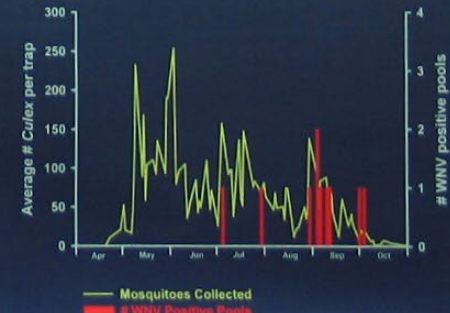
Male *Aedes sticticus*

## *Culex* species And West Nile Virus

The map on the left shows the distribution of *Culex* mosquito pools that tested positive for West Nile Virus (WNV) in 2007. Since the first appearance of WNV in Hunterdon back in 2000, virus activity has been predominantly in the southern half of the county. The year 2007 was no exception, with peak activity occurring in the southern township of Delaware.



The graph to the right shows mean number of *Culex* collected per night per trap throughout the 2007 season. Although somewhat lower than in past years, this represents the typical pattern of *Culex* mosquito activity in Hunterdon County. *Culex* mosquitoes start appearing in gravid traps by the end of April and peak by the beginning of June. Numbers then steadily decline through the summer months with spurts of activity in July and September. Meanwhile, WNV activity doesn't appear until July and peaks in early September, well after *Culex* numbers are on the decline. Final WNV positive pools in 2007 were recorded in early October.





# Data Integration

CUMBERLAND COUNTY

CAPE MAY COUNTY

DELAWARE BAY

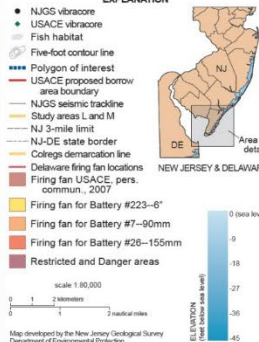
ATLANTIC OCEAN

NEW JERSEY  
DELAWARE

DELAWARE

# STUDY AREAS L AND M OFFSHORE RESOURCE EXPLORATION CAPE MAY, NEW JERSEY

## EXPLANATION



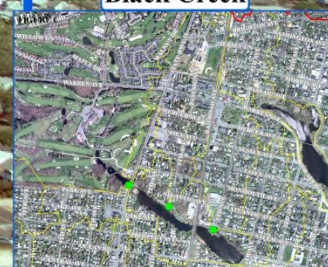


**FIGURE 8. Kellers Pond**  
This project would provide restoration and add additional stormwater management measures of an area at the headwaters of Weep Pond Brook. This area receives stormwater from existing commercial development and barrel land offsite. The New Jersey State and Gravel operation located on State Route 34 in Wall Township, NJ.

The area receives stormwater flow from about 25 acres of impervious surface (all commercial/industrial) and another 100 acres or so of barres land. The existing dam is "blown out" and not properly functioning. The area will be restored to a natural 10 to 15 acres. Yall-Tow-Whin, NJ.

The area contains a rich wildlife and wetland plant ecosystem that must be considered in design and construction of the project. The design is expected to include a new dam and weir to create a pond of perhaps 6 or so acres in size.

Reportedly, NJDEP has provided \$250,000 for further study of this option. Implementation costs are estimated at about \$300,000.



| Project Name  | Location                            | Project Address  | Funding Amount (\$) | Current Status   |
|---|-------------------------------------|--|---------------------|--|
| Installation of Domestic Sewerage Treatment Devices | Tucker of Western Falls Counties    | Design and construction of wastewater treatment facilities | 1,180,000           | Credent selected contractor, project will commence in Spring 2010                  |
| Installation of Oil/Water Control Pits              | Hamdenville of Hamdenville District | Flow, sediment, float, valve, catchment                    | 560,000             | Contract bid will be on request, final work will commence after final construction |
| Antennas of FM Radio                                | West of Route 71 at E. 2nd Street   | Plant Control, Equipment                                   | 180,000             | Design finished, work to commence in 2010  |
| Wreck Ponds Breakdown                               | Adjacent to Route 24                | Flow, Sedimentation & Control                              | 250,000             | Contract status  |
| Rain-Gutter   | Various Locations in Hamdenville    | Flow and Gutter, Water Quality                             | 124,000             | Bid solicitation in process  |

[illegible]

**FIGURE 3.** Black Creek BMP Projects

**Spring Lake Golf Course Wet Rehabilitation**

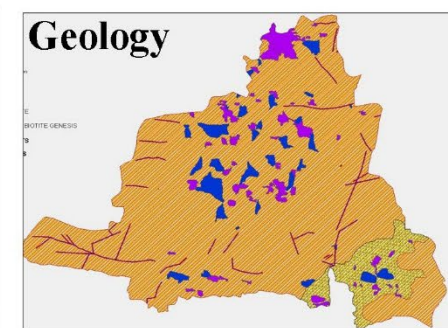
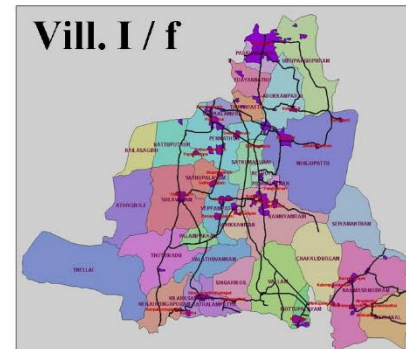
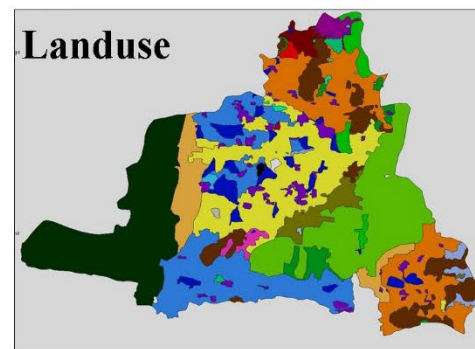
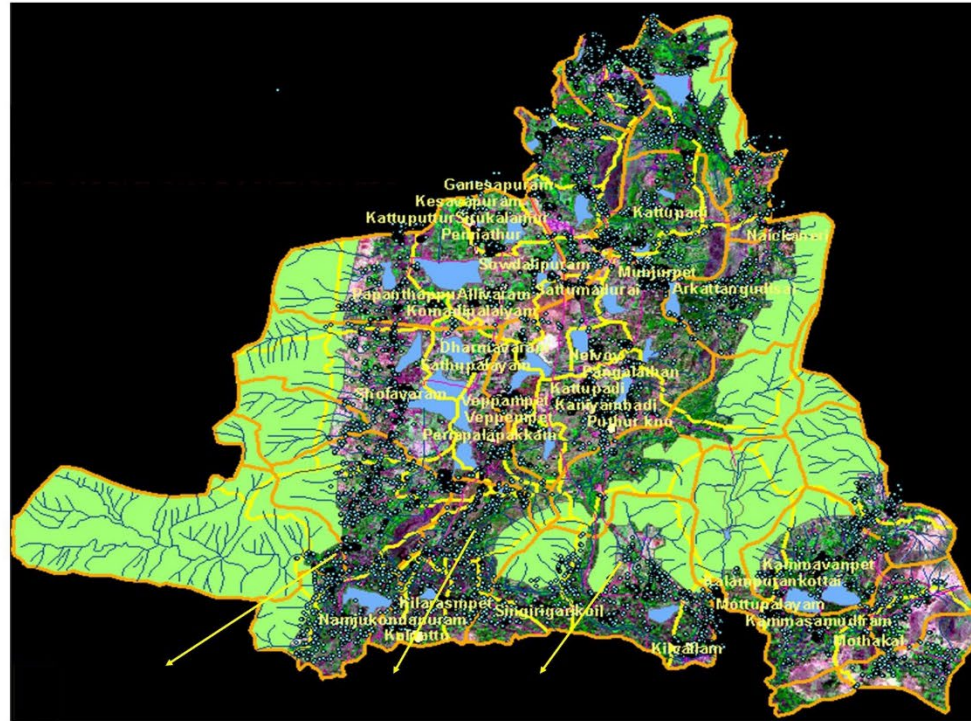
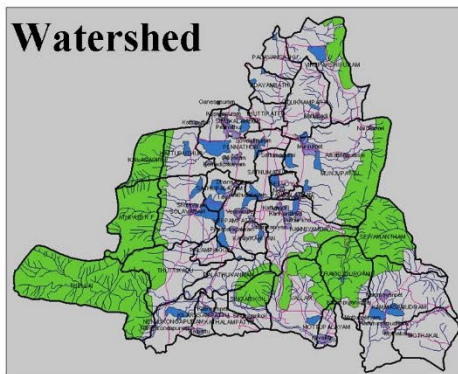
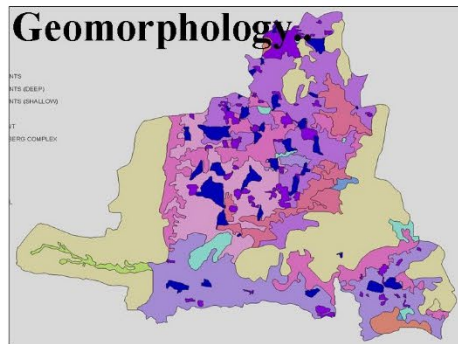
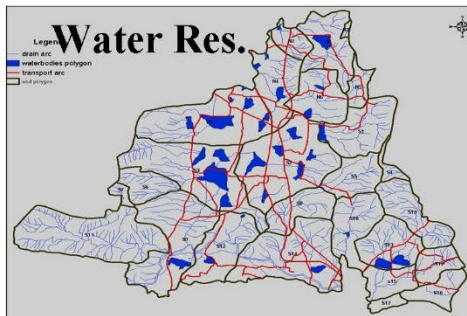
An existing pond of approximately 6 acres in size within the Spring Lake Golf Club is in need of restoration. The existing wetland and bedrock are in concern as the system is in danger and requires immediate attention. The project will be used to restore the Black Creek and Wreck Pond ecosystems. The wet structure is responsible for controlling all the runoff from the entire W-16 subwatershed area, which is the trapping of sediments and nutrients and preventing their discharge into Black Creek. The wet is in bad repair with numerous leaks and rotting timbers and is in danger of failure. Findings from reconnaissance and modeling efforts support the fact that this dam is vital to the ecological and flow conditions of Black Creek downstream of Route 7, as well as Wreck Pond.

**Storm Water Treatment Devices in Black Creek**

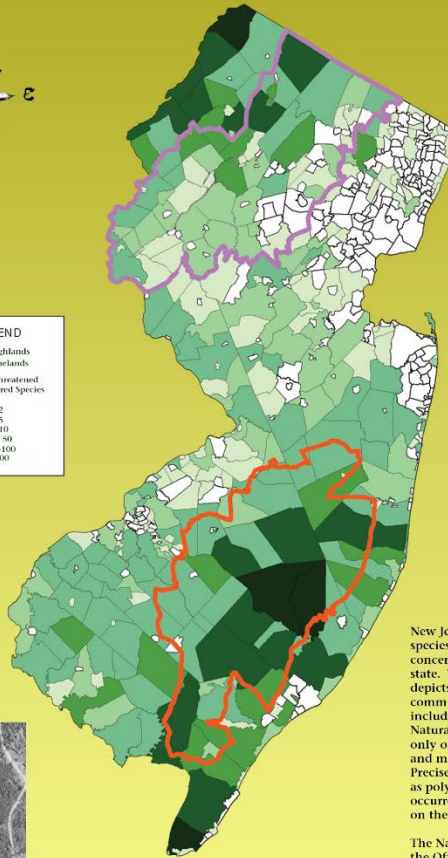
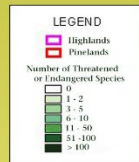
This project is a replacement of manufactured stormwater treatment devices on stormwater outfalls discharging into Wreck Pond. Black Creek and Wreck Pond are in need of treatment. The project will cost \$300,000 for design and \$1,200,000 for Final Design and Construction (NIDEP).



# Natural Resources Integrated for Better Sanitation & Water Management – A GIS Solution



# RARE PLANT SPECIES OF NEW JERSEY



1930 aerial image of a pristine site where several rare plant species once existed.



2002 aerial image of same site as above where development has extirpated the once-thriving rare plant species.



Rare plants and populations need to be continuously monitored for negative impacts such as development, changes in water table, mowing, deer browsing, and trampling.



New Jersey is home to 2,134 native plant species, including 802 species of conservation concern and 4 plants that are endemic to the state. The data being represented in the map depicts both rare plants and ecological communities in New Jersey, but does not include all the occurrences in the entire Natural Heritage Database. This map is based only on those occurrences with highly precise and moderately precise locational information. Precisely known occurrences are represented as polygons, while moderately precise occurrences are represented as centroids based on the best estimate of the occurrence location.

The Natural Heritage Program, located within the Office of Natural Lands Management, is part of the Natural Heritage Network. The Natural Heritage Database is the state's most comprehensive, centralized source of information on rare plant species and ecological communities. The Database is a compilation of information from a broad range of sources including museum and herbarium collection records, publications, knowledgeable experts, and fieldwork. The Database is continuously updated and improved as new data is obtained. Information from this database is available to assist individuals in the preservation of habitat for rare species and ecological communities.

For more information on the Natural Heritage Database, Rare Species and Ecological Community Lists, or contributing data, visit the New Jersey Natural Heritage Program website: <http://www.state.nj.us/dep/parksandforests/natural/heritage/index.html>

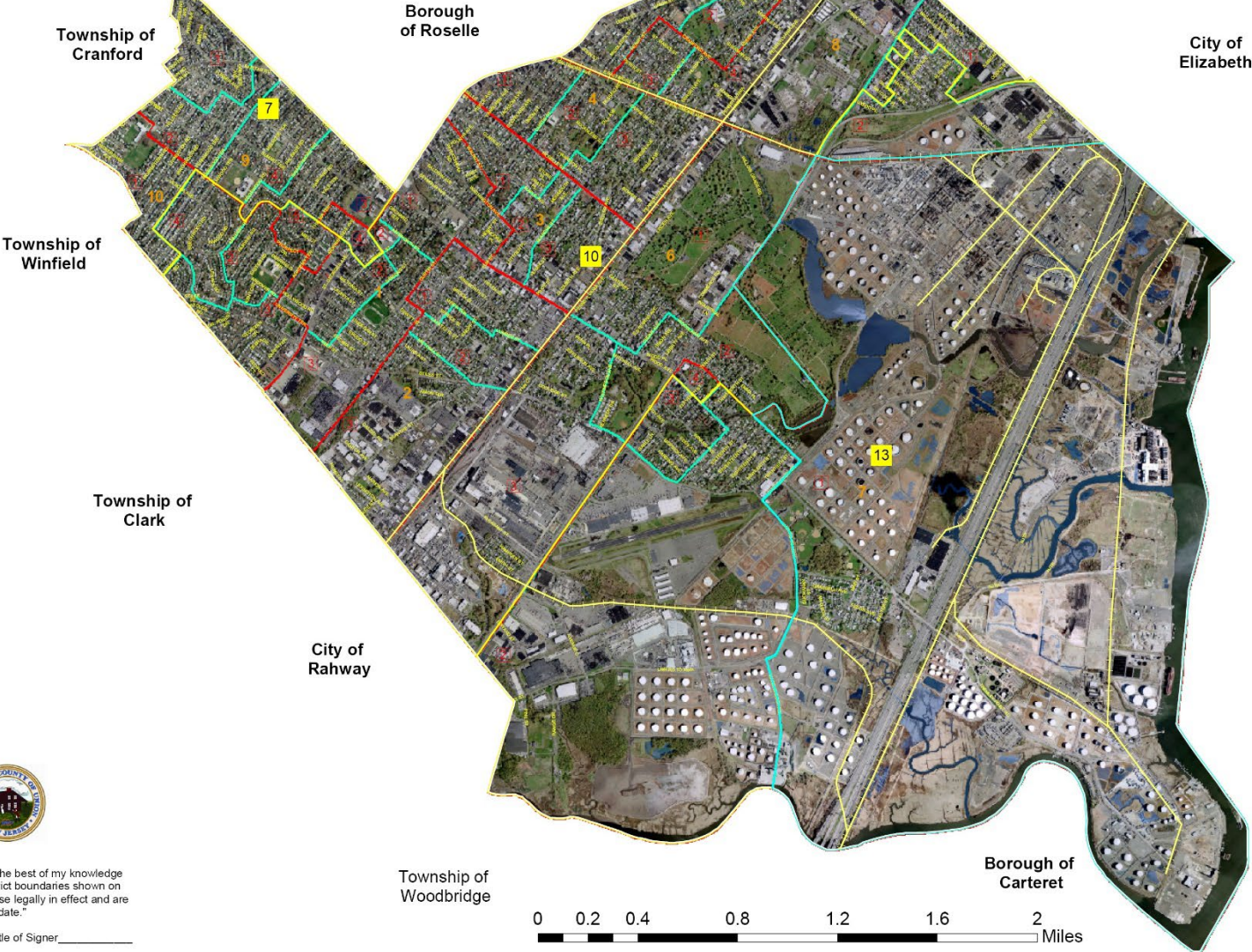


Photos by: Herb Lord, Rick Dutko, Martin Rapp, and J.S. Peterson.  
Poster design: Roman Senyk  
Data sources: Office of Natural Lands Management, Office of Geographic Information Systems

# **Instructional Presentation**



# City of Linden Board of Election Map



State of New York  
Staten Island



"I certify that to the best of my knowledge  
the election district boundaries shown on  
this map are those legally in effect and are  
accurate of this date."

Date \_\_\_\_\_ Title of Signer \_\_\_\_\_



**Legend**

- Railroads
- Roads
- Congressional Districts
- Municipal Boundary
- \*\*\* NJ Legislative District #22
- Lakes and Ponds
- Municipal Wards
- Municipal Districts

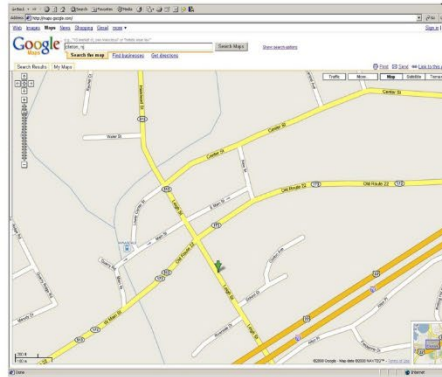
Data provided by Union County Board of Election &  
Bureau of GIS  
Scale: 1 in. = 1135 feet  
Projection: NJ State Plane Feet, NAD 83  
Created: 11/17/05



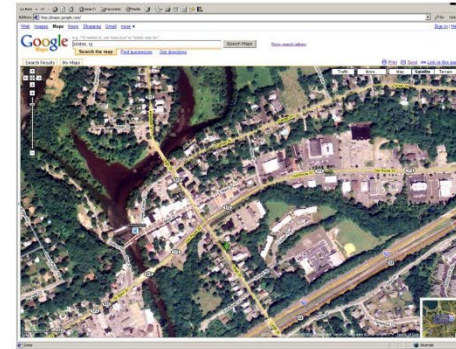
Am I In  
A Flood Zone?



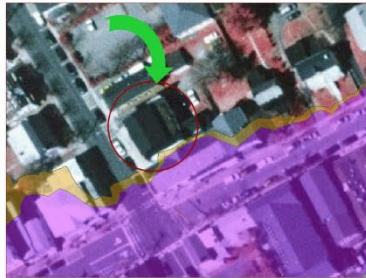
Hmmmm



OK I see it  
but no flood zone



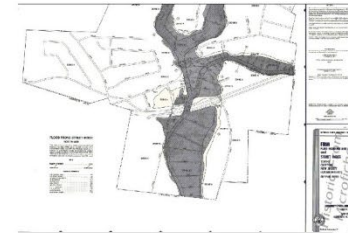
Whew, I'm just outside the flood zone!



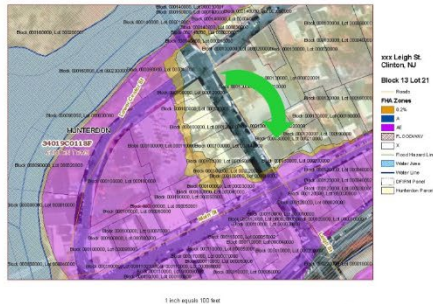
But, what about  
my neighbors!



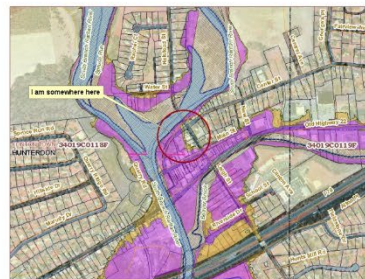
I see the flood zone  
Where is the house?



Ahh, there it is!



Find it by Block & Lot



Ah, GIS  
I'm right here in Clinton





Spatial distribution of suicides in the block  
(single commonest cause of death in the block - 91 in a year)

| AGE GROUPS          | INCIDENCE/<br>100,000 |
|---------------------|-----------------------|
| 15 TO 25 YRS        | 100.2                 |
| 26 TO 40 YRS        | 97.1                  |
| 41 TO 59 YRS        | 73.5                  |
| 60 YRS AND<br>ABOVE | 173.3                 |
| Overall             | 78.3                  |

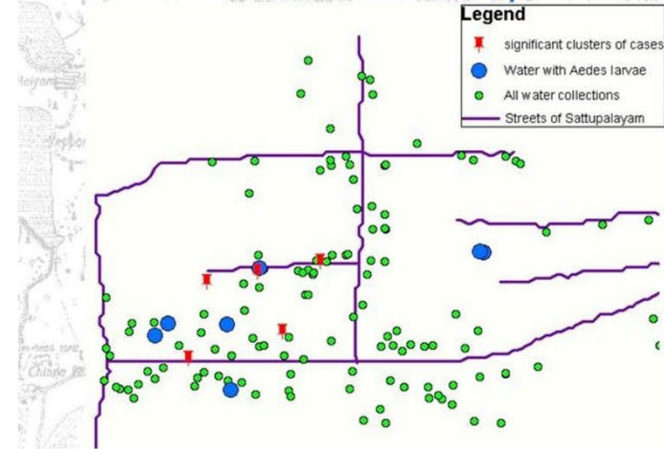


#### Interventions

- Day care for the elderly with community participation
- Community Mental Health programme



**Dengue outbreak Sattupalayam village.**  
School children participated in mosquito source reduction in the village.

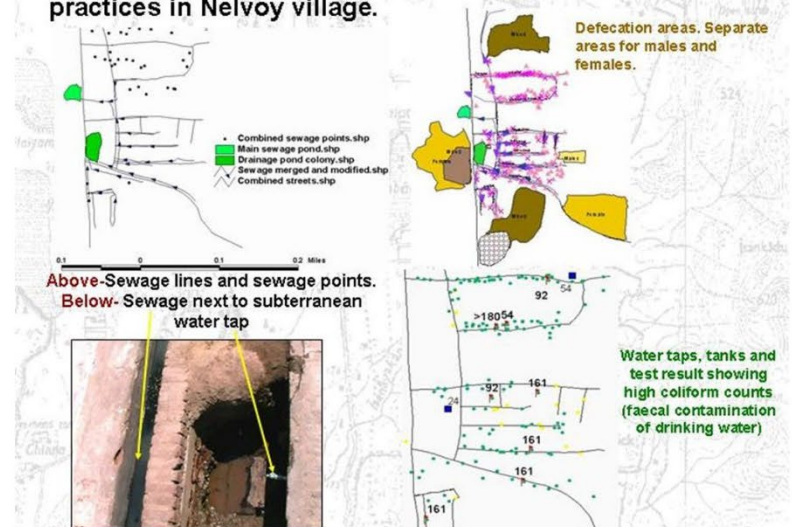


# Examples of GIS used in Health Interventions, Teaching and Policy Making

Cholera outbreak & intervention: GIS maps supplement pictures.  
Used for community education (personal hygiene, safe sanitary practices).



Students use this facility to GIS map water & sanitation practices in Nelvoy village.

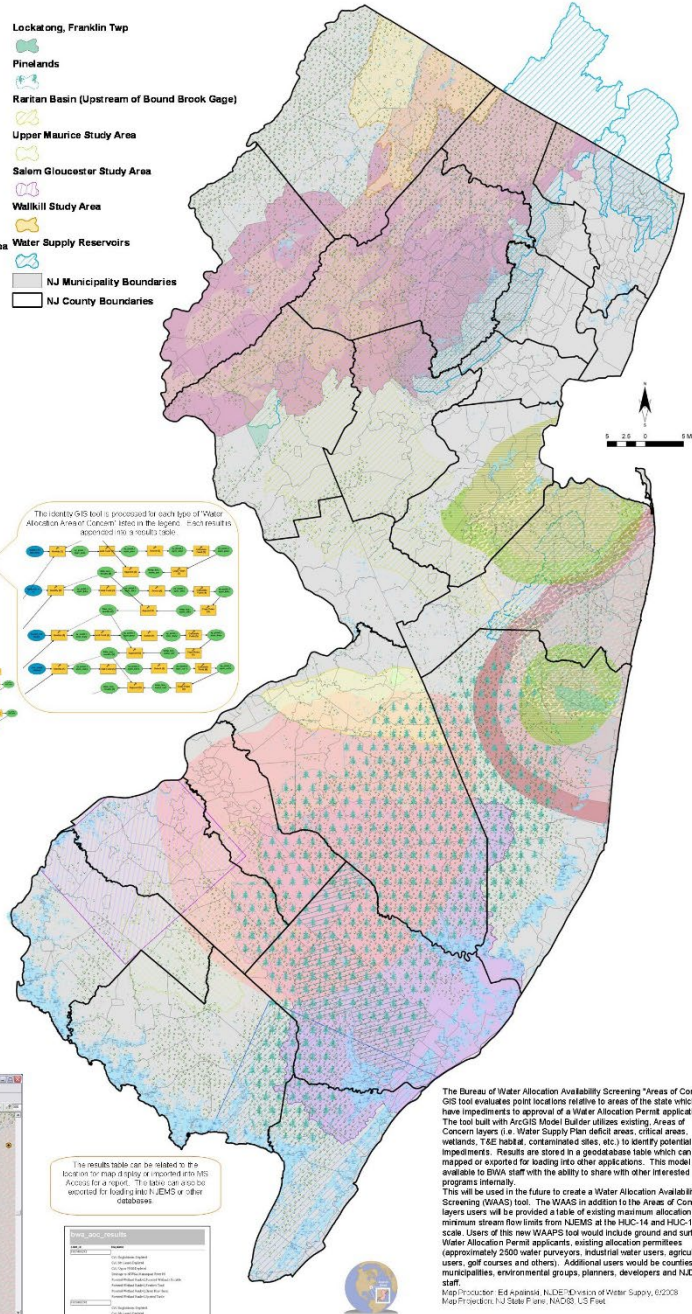
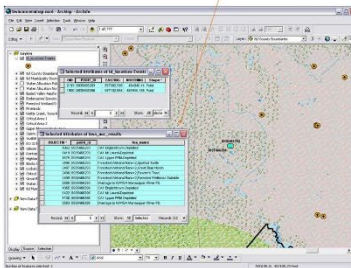
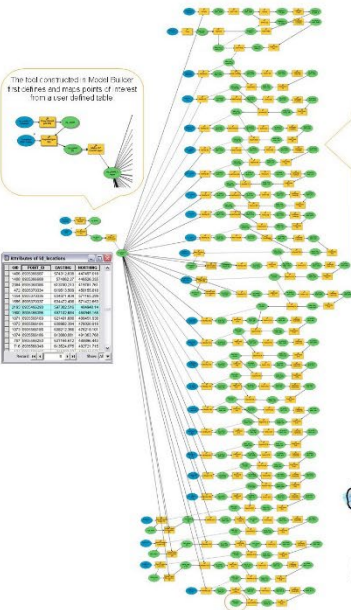




# NJDEP Bureau of Water Allocation "Areas of Concern" GIS Tool

## Legend

- Blacks Creek, Burlington County Critical Area 2
- Buried Valley Aquifers
- Critical Area 1
- Englishtown Aquifer
- CA1 Englishtown-Depleted
- CA1 Englishtown-Threatened
- Critical Area 1
- Middle PRMAquifer
- CA1 Middle PRM-Depleted
- CA1 Middle PRM-Threatened
- Critical Area 1
- MI Laurel Aquifer
- CA1 MI Laurel-Depleted
- CA1 MI Laurel-Threatened
- Critical Area 1
- Upper PRMAquifer
- CA1 Upper PRM-Threatened
- CA1 Upper PRM-Depleted
- Credit Receiving Area
- Critical Area 2
- CA2 Depleted
- CA2 Threatened
- Endangered Species Habitat
- Emergent Wetland Habitat
- Forested Wetland Habitat
- EO 32 Municipalities
- Gibson Bill
- Great Egg Harbor/Mullica Study Area
- Highlands
- Highlands Planning Area
- Highlands Preservation Area
- Kettle Creek, Toms River
- Lockatong, Franklin Twp
- Pinelands
- Raritan Basin (Upstream of Bound Brook Gage)
- Upper Maurice Study Area
- Salem Gloucester Study Area
- Walkill Study Area
- Water Supply Reservoirs
- NJ Municipality Boundaries
- NJ County Boundaries



The Bureau of Water Allocation Availability Screening "Areas of Concern" GIS tool evaluates point locations relative to areas of the state which have impediments to approval of a Water Allocation Permit application. The tool built with ArcGIS Model Builder utilizes existing Areas of Concern layers (i.e. Water Supply Plan deficit areas, critical areas, wetlands, T&E habitat, contaminated sites, etc.) to identify potential impediments. Results are stored in a geodatabase table which can be mapped or exported for loading into other applications. This model is available to BWS staff with the ability to share with other interested programs internally. This will be used in the future to create a Water Allocation Availability Screening (WAAS) tool. The WAAS in addition to the Areas of Concern layers users will be provided a table of existing maximum allocation and minimum stream flow limits from NJEMS at the HUC-14 and HUC-11 scale. Users of this new WAAS tool would include ground and surface Water Allocation Permit applicants, existing allocation permittees (approximately 2000 water purveyors, industrial water users, agricultural users, golf courses and others). Additional users would be counties, municipalities, environmental groups, planners, developers and NJDEP staff.

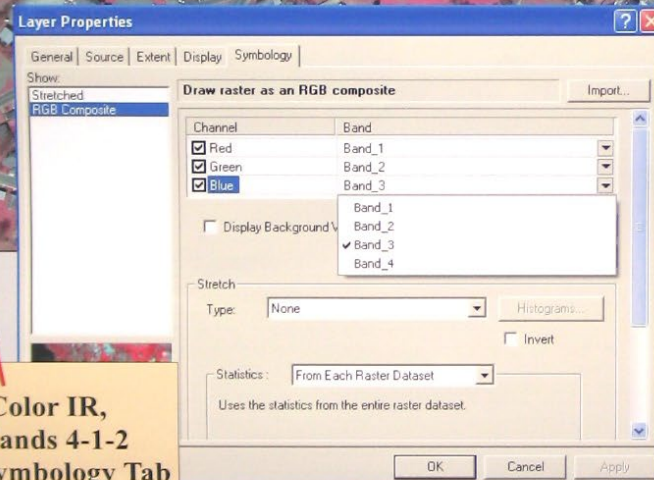
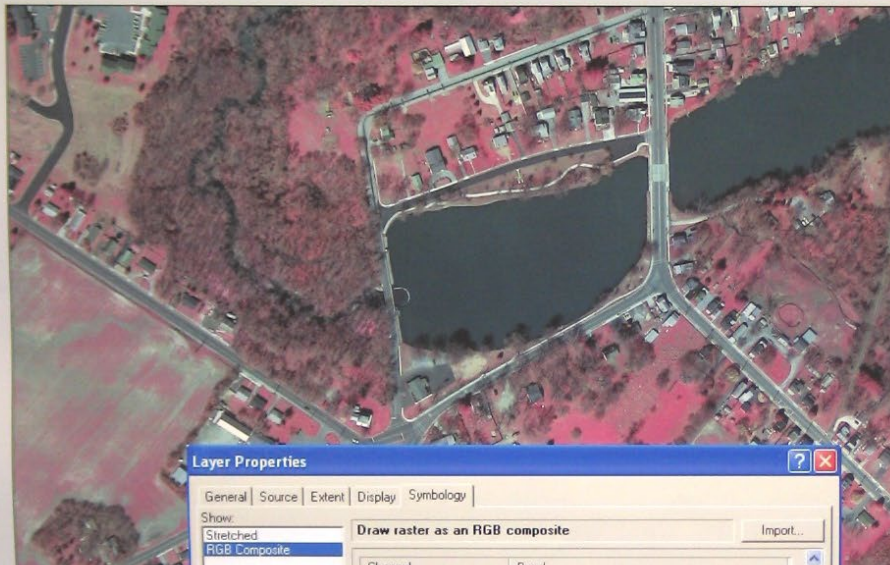
Map Producer: Ed Appanna, NJDEP Division of Water Supply, 6/2008  
Map Processor: J. Data Plans, NJDEP, 6/2008



# Do You Feel Like You're Always Looking at New Jersey Through Rose-colored Glasses?

**Get Ready to Put  
a Little Color in  
Your Life!**

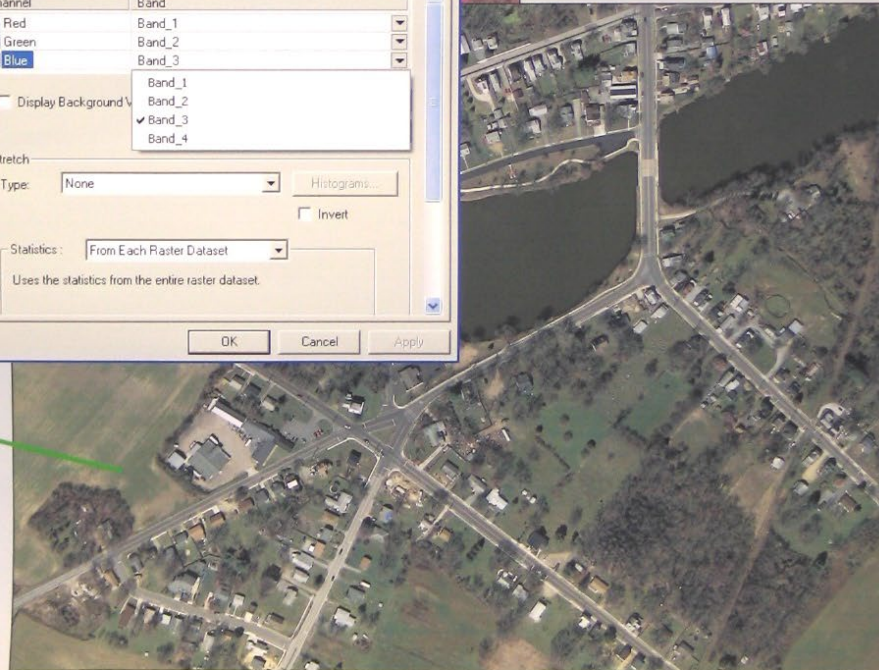
**With the New 2007  
4-Band Digital Images  
You Can Have  
Color IR or True Color  
It's Your Choice**



**For Color IR,  
Select Bands 4-1-2  
on the Symbology Tab**

**For True Color  
Select Bands 1-2-3**

**It's as Easy as That!**



*Coming Soon to a Terminal Near You!*

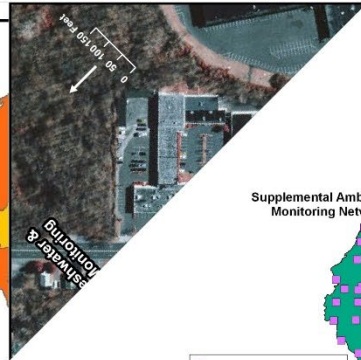


**Most Unique**



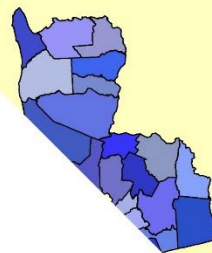
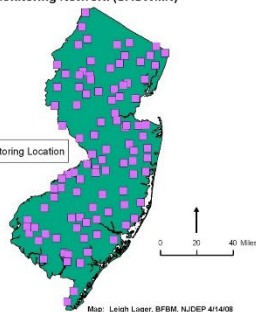
# NEW JERSEY'S WATER REGIONS

- ATLANTIC COAST
- LOWER DELAWARE
- NORTHEAST

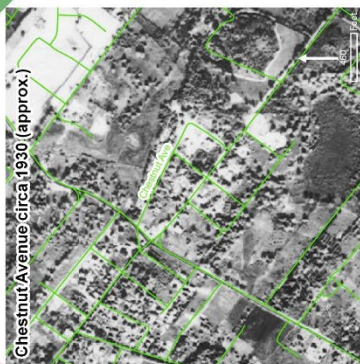
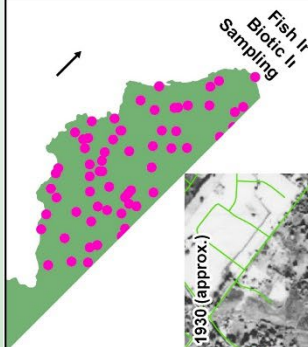
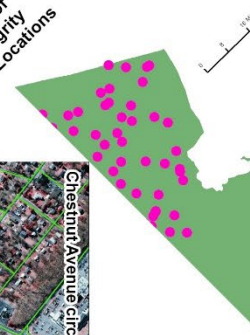


Supplemental Ambient Surface Water Monitoring Network (SASWMN)

■ SASWMN Monitoring Location



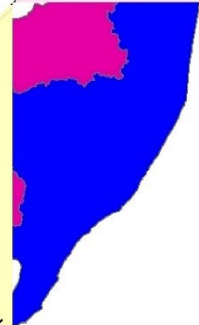
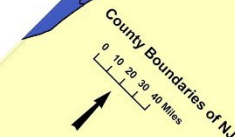
Index of Integrity Locations



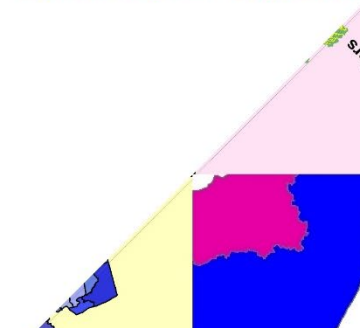
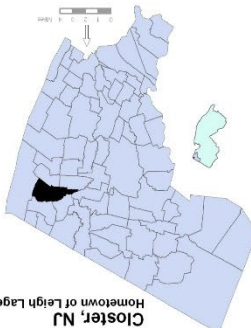
- NORTHWEST
- PARTIAN



Closter, NJ  
Hometown of Leigh Lager



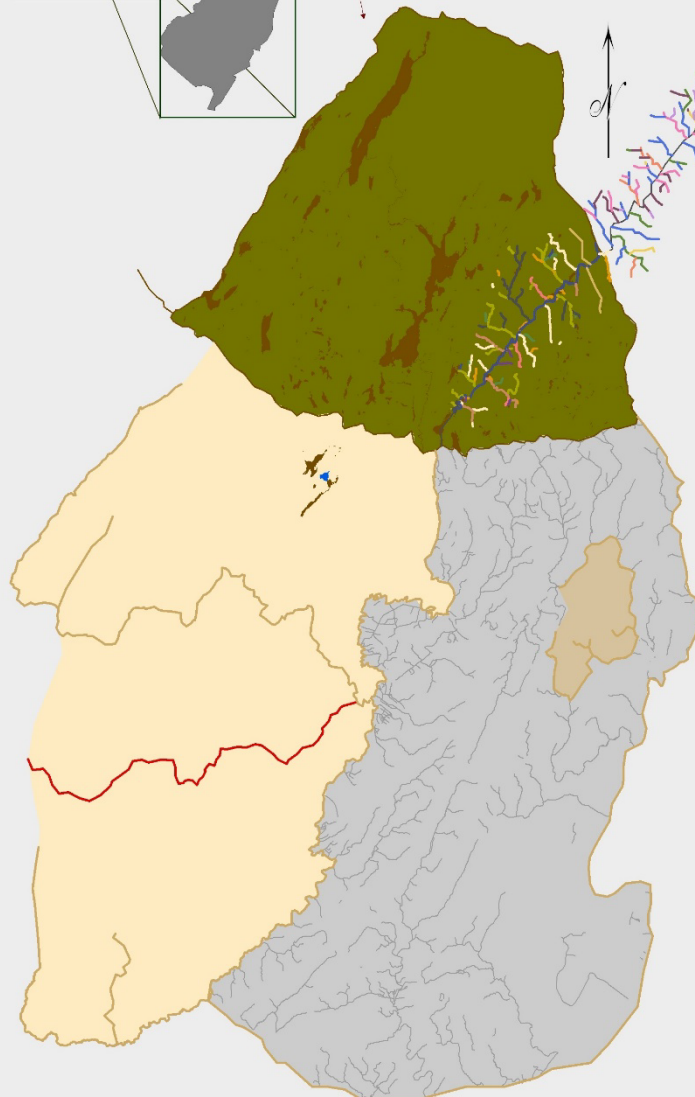
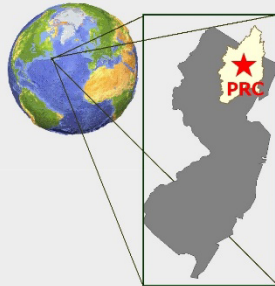
Category One Waters  
of New Jersey



County Boundaries of NJ



# OLD MAN 'PASSAIC'



## "Old Man Passaic - Give him a Break"

How many people have ever looked at a map of the Passaic River Watershed and seen this old man? John J. Little of Basking Ridge drew the rendition of the Basin for the Passaic River Coalition. The vision of the Basin as Little's Old Man Passaic has been eventually computerized by Lubica Cverckova.

The chin is the Dead River-upper Passaic River area; the mouth, the Whippany River; the nose, the Rockaway River; the brim of the hat, the Pequannock; the decoration on the hat, the Wanque Reservoir and Greenwood Lake; the right side of hat Ramapo River with its tributaries. The rest of the hat outlines the major lakes of the north-western area; the side of the hairline nearest the face, the Pompton River; the side of the Head, the Saddle River; and the piece of hair falling to the collar, the Lower Passaic.

This watershed incorporates the most densely populated land in the United States. The song below was written in the early 1970's when the Passaic River was considered one of the most polluted rivers in the United States.

Old Man Passaic  
by  
Brian Kuehnappel

*Old Man Passaic, lies in the basin that flows to the bay,  
A river of age, that's cut through the stages of time in his day,  
But you poisoned his blood, and you dug up his mud;  
Through industrial eyes, you can't see that he cries.*

(Chorus)

*Ah, can we save him?  
No, it's not too late.  
All come and join us,  
To never repeat the mistake.  
No, to never repeat the mistake.*

*Once he was young, a stream proud and clean with the  
mountains above.  
Over the Great Falls, he answers the call of the sea that he  
loves.  
But you stopped him half way; He never reaches the bay;  
On his banks, he can't see through man's factories.*

(Chorus)

*10,000 years - a legacy tells of a hundred mile trek;  
One drop of rain travels terrain that the glaciers had left;  
But a century's gone, sees from Stony Hill on  
Fifty-seven miles waste of technology's haste.*

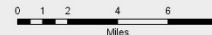
(Chorus)

*Over his banks, the waters they rage, and he gets his revenge;  
Never gave thanks, so helpless they'll be 'cause he'll win in the  
end;  
You can tear down his halls, you can build him new walls,  
But you'll never forget the path that he's led.*



PASSAIC RIVER COALITION

94 Mt. Bethel Rd  
Warren, NJ  
[www.passaicriver.org](http://www.passaicriver.org)







## Bicycle and Pedestrian Map

### Mapa para Ciclistas y Peatones

#### West Windsor, NJ

This map was funded with the support of the West Windsor Bicycle and Pedestrian Alliance (WWBPA), the West Windsor BikeFest (BikeFest), the Greater Mercer Transportation Management Association (GMTMA) and by the local bike shops listed below.

The map and the information contained herein was prepared with input from Mercer County, NJDOT, West Windsor Township and the support of WWBPA volunteers.

For more info about the sponsors visit:

WWBPA [www.princetononline.org/wwbpa](http://www.princetononline.org/wwbpa)  
GMTMA [www.gmtma.org](http://www.gmtma.org)  
BikeFest [www.westwindsorbikefest.com](http://www.westwindsorbikefest.com)

This is the first print edition of this map. An online version is available on our website. They will continue to evolve, but only with your input. Please email your suggested changes to the WWBPA at [WWBikePed@gmail.com](mailto:WWBikePed@gmail.com)



## Definitions

### Bike Lane/Camino para ciclistas

Designated travel lane for cyclists that is striped and signed accordingly. Camino diseñado para ciclistas que está marcado y señalado como corresponde.

### Bikeable/Para andar en bicicleta

A road in which the combination of general traffic volume/speed and physical road conditions is suitable for the average cyclist. Una calle que por la combinación del volumen/velocidad del tráfico general y sus propias condiciones físicas es apropiada para el ciclista promedio.

### Paved Multi-use Trails/Camino pavimentado usos múltiples

Designated trail for use by cyclists, pedestrians and other human powered activities. Camino diseñado para el uso de los ciclistas, peatones, y otras actividades impulsadas por humanos.

### Offroad Multi-use Trails/Caminos apartados de las carreteras

Designated unpaved trail for use by cyclists and pedestrians. Caminos sin pavimento diseñados para el uso de los ciclistas y peatones.

### Hiking Trails/Senderos para caminatas

Designated unpaved trail for pedestrians. Caminos sin pavimento para peatones.

### Pedestrian Walkway/Paseo para peatones

Paved walkway not alongside a road. Paseo pavimentado no paralelo a una calle.

### Sidewalk/Acera

Paved walkway alongside a road. Paseo pavimentado paralelo a una calle.

### Non-Bikeable/No para andar en bicicleta

A road that is unsuitable for cyclists. Camino no apropiado para ciclistas.

## Safety Tips

### Consejos de Seguridad

#### Always wear a helmet

Head injuries cause 90% of all cycling deaths.

Wearing a helmet can prevent up to 75% of cycling deaths.

Siempre lleve un casco  
90% de muertes de choques en bicicletas son resultado de trauma en la cabeza.  
100% cumplimiento en el uso de cascos reduciría en un 75% muertes en bicicleta.



Be predictable  
Sea previsible

#### Use hand signals...

...before turning or changing lanes.  
Look over your shoulder and proceed when it is safe.

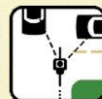
Use señales de mano...  
...antes de girar o cambiar de carril.  
Mire sobre su hombro y proceda cuando sea seguro para usted.



Keep both hands ready to brake  
You may not stop in time if you brake one-handed. Allow extra distance for stopping in the rain, since brakes are less efficient when wet.

Use las dos manos para frenar  
Ud. toma el riesgo de no parar si usa sola una mano para frenar. Cuando está lloviendo necesita más distancia para frenar porque los frenos mojados son menos eficientes.

Be visible, wear bright clothes  
Sea visible, lleve ropa brillante



Take the lane...  
...when it's too narrow for a bicycle and a vehicle to travel safely side by side within the lane. Move to the left!

Use el carril...  
...cuando el camino es demasiado estrecho para una bicicleta y un coche estar lado a lado. Muévase a la izquierda!



Use the correct size bike  
Use la bicicleta de tamaño adecuado



Follow the Three Foot Rule  
Ride at least 3 feet from car doors or the curb.

Avoid road hazards like gravel, gravel and pot holes.

Sign the Rule of the Three Feet  
Mantenga 3 pies del borde/hombro y de las puertas de coches.

Evite desperdicios, obstáculos y riesgos.  
Usted es más visible donde los conductores esperan ver un vehículo.



Lock your bike in good repair  
Do the ABC Quick-Check:  
Air pressure  
Brakes  
Chain, crank, cassette  
Quick releases (seat, wheels)  
Mantenga su bicicleta en buen funcionamiento  
Haga el rápido chequeo (FACIL)  
Frenos  
Aire (presión)  
Cierre rápido (asiento, ruedas) y cadena  
Llantas

Three Options for Turning Left  
1) Make the left turn as a vehicle.  
Cycle straight through to the right corner of the intersection, and:  
2) Cross as a pedestrian.  
or 3) Make a quick 90 degree left turn and then proceed as a vehicle.

3) Opciones para Girar a la Izquierda  
1) Gire a la izquierda como un vehículo.  
Siga derecho hasta la esquina derecha de la intersección, y:  
2) Cruce como peatón.  
o 3) Haga un giro de 90 grados a la izquierda y entonces siga como un vehículo.



## Local Bike Shops

### Tiendas de Bicicletas

The Bicycle Rack  
683 State Hwy No 33 (Airport Rd. and Mercer St.)  
Highstown, NJ 08520  
609-448-2928  
[www.thebicyclerack.net](http://www.thebicyclerack.net)

Halter's Cycles  
4095 Route One South  
Mouth Junction, NJ 08852  
732-329-9022  
[www.halterscycles.com](http://www.halterscycles.com)

Knapp's Cyclery  
1761 Princeton Ave.  
Lawrenceville, NJ 08648  
609-393-1199  
<http://knappscyclery.com>

Kopp's Cycle  
America's Oldest Bike Shop  
38 Spring St. Princeton, NJ 08542  
609-924-1052  
<http://koppscycle.net>

## NJ Bike Laws

### La Ley sobre Bicicletas

Helmets mandatory under age 17  
Anyone under 17 who rides a bike, is a passenger or is towed as a passenger must wear a properly fitted helmet.

Cascos son requeridos en menores de 17 años  
Cualquier persona menor de 17 años que monta una bicicleta, es un pasajero o es llevado en bicicleta tiene que llevar un casco.



Obey the law, signs & signals  
Bicyclist granted all the rights and subject to all the duties of motorists.

Ride as near to the right as practicable.  
Exceptions: Move left to: 1) turn left, 2) avoid road hazards, 3) pass slower vehicles and 4) when travelling at the same speed as traffic.

Obedezca la ley y los señales  
A los ciclistas se le conceden todos los derechos de los conductores de vehículos y están sujetos a cumplir con los respectivos deberes.

Manténgase tan cerca de la derecha como le sea factible

Excepciones: Muévase a la izquierda: 1) para girar a la izquierda, 2) para evitar peligros y obstáculos, 3) para pasar a los vehículos más lentos y 4) cuando viaje a la misma velocidad del tráfico.



## Bicycle Map

### Mapa para Ciclistas





NEW  
JERSEY

COUNTY  
BOUND  
ARIES

OTHER  
STATES

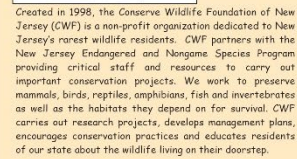
WATER

100 MILES

N  
W  
E  
S



This map illustrates several of the winning entries, as well as other notable entries, in areas of the state where those species are known to occur.



## PENNSYLVANIA



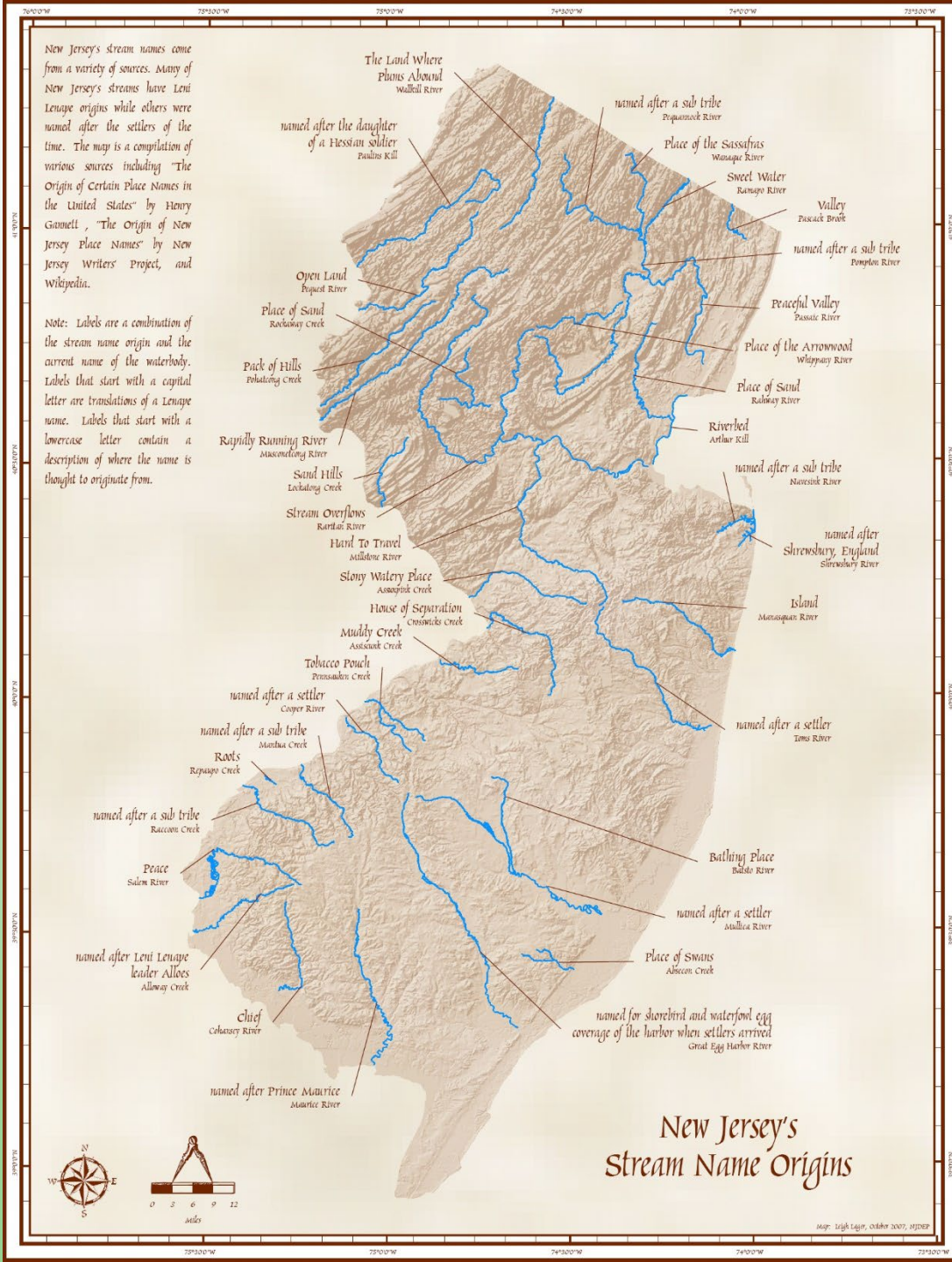


# **Small Format**



New Jersey's stream names come from a variety of sources. Many of New Jersey's streams have Leni Lenape origins while others were named after the settlers of the time. The map is a compilation of various sources including "The Origin of Certain Place Names in the United States" by Henry Gamett, "The Origin of New Jersey Place Names" by New Jersey Writers' Project, and Wikipedia.

Note: Labels are a combination of the stream name origin and the current name of the waterbody. Labels that start with a capital letter are translations of a Lenape name. Labels that start with a lowercase letter contain a description of where the name is thought to originate from.





# STATUS OF LIDAR IN NEW JERSEY JUNE 2008

Del. River Portions of Warren and Sussex  
FEMA Funded Mass Points in 2008  
USGS will create 3m DEM

Metro N. Jersey  
NGA Spec, USGS Contract  
Data Collected, Posting soon  
1m DEM

Highlands  
Data Collected/Delivered  
Mass Points, 2ft Contours  
5ft. Gridded DEM

Hunterdon and Middlesex  
Mass Points Collected by FEMA  
USGS to Create 3m DEM

Somerset  
Data Collected  
NGA spec, USGS Contract  
1m DEM, Data in Production

Mercer County  
Interest in 2009 by  
NGA, USGS, & County

Gloucester County  
FEMA Mass Points Collected  
USGS to Produce 3m DEM  
Possible Contours?

Camden, Burlington  
Flown Leaf-on Summer 2004  
3m DEM at NED

Ocean, Atlantic  
and Southern Monmouth  
Funding Being  
Sought

Upland Salem  
Not Funded

Cape May, Cumberland Funded  
Salem Funded below CAFRA  
Various Agencies, Winter 2008  
2m DEM

## Legend

- Sussex\_Warren
- National Geospatial-Intelligence Agency
- Hunterdon\_Middlesex
- Highlands
- Somerset County
- Mercer County
- Burlington\_Camden
- Lower Monmouth
- Gloucester County
- Lower Salem Cumberland and C. May



0 5 10 20 30 40  
Miles

Sources: NJDEP, USGS National Mapping

Lawrence Thornton, NJDEP  
for: The GIC Roundtable  
June 2008







# WARINANCO PARK

Elizabeth/Roselle, NJ

County of Union

Department of Parks and Community Renewal

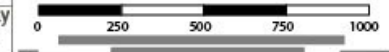


A SUBURB OF THE UNION COUNTY TOWN OF CHOSEN REDEVELOPERS



## Legend

- Handicap Accessible
- Restrooms
- Parking
- Reservable Picnic Area
- Stream
- Park Boundary
- Baseball/Softball Field
- Basketball Court
- Municipal Boundary
- Cross Country Path
- Water Fountain
- Playground
- Buildings
- Non-Reservable Picnic Area
- Paved Paths
- Tree Canopy
- Tennis Court
- Soccer Field
- Bicycle Path





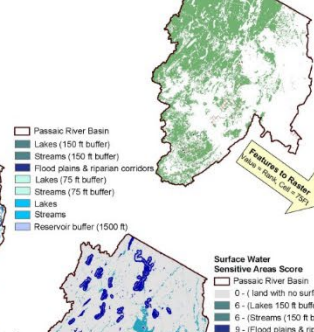
# **Software Integration**

# COMPUTATION OF WATER RESOURCE VALUES OF LAND FOR THE PASSAIC RIVER BASIN USING GIS

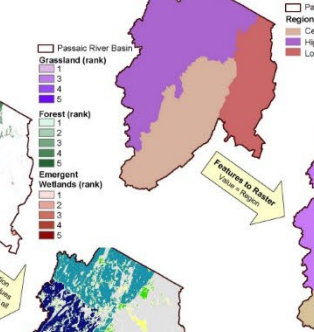
## SURFACE WATER SENSITIVE AREAS



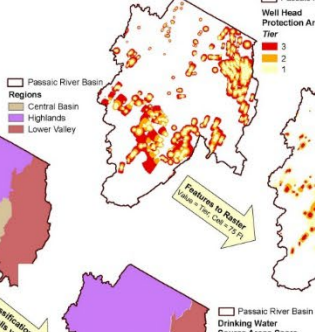
## LANDSCAPE PROJECT CONSERVATION AREAS



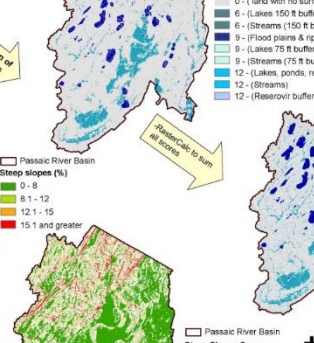
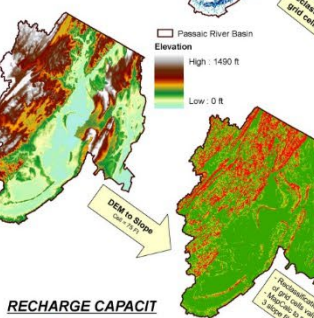
## DRINKING WATER SOURCE AREAS



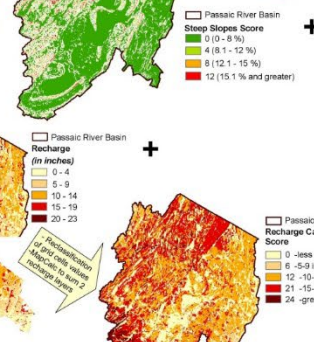
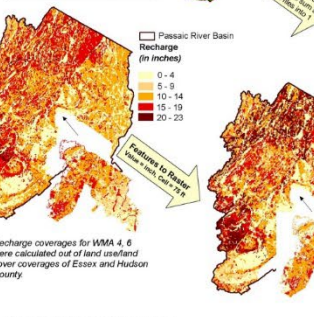
## WELL HEAD PROTECTION AREAS



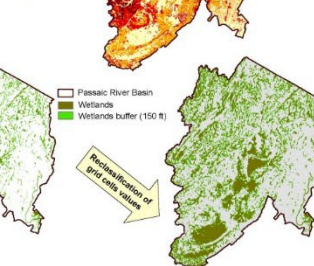
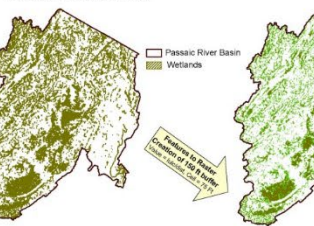
## STEEP SLOPES



## RECHARGE CAPACIT

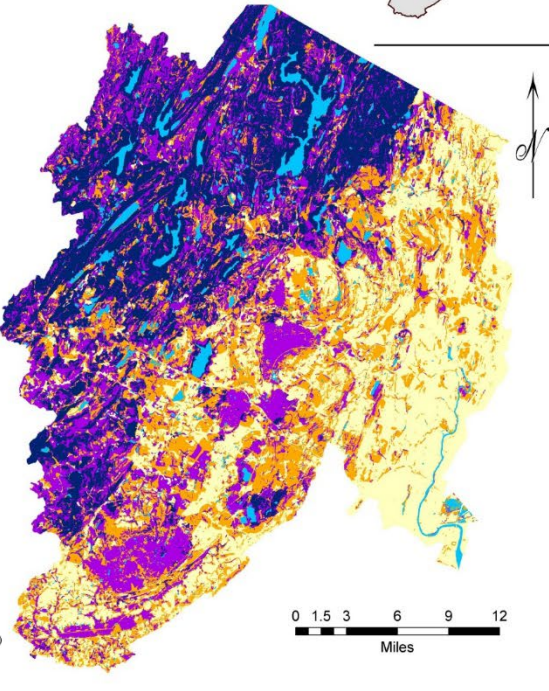
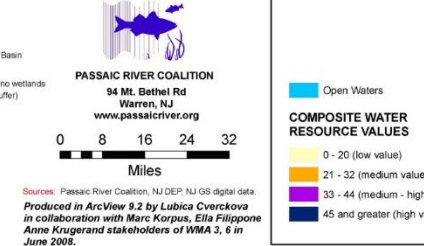
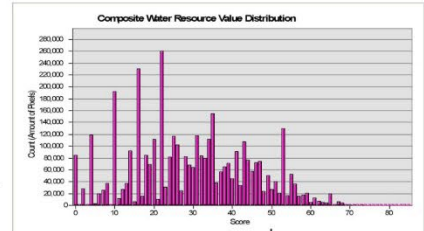


## WETLANDS AND THEIR TRANSITION AREAS



The map represents a procedure of calculation water resource values of land for the Passaic River Basin, NJ using Geographic Information System. Seven parameters such as, Recharge Capacity, Drinking Water Source Areas, Steeply Sloped Areas, Well Head Protection Areas, Lakes, Streams, Reservoirs and Nearby Lands, Wetlands and Surrounding Lands and Conservation Areas, have been implemented into the analysis to identify those lands that have the highest water resource values based on value system created by stakeholders of WMA 3 and 6.

The graph below shows the amount of pixels (count) within each score. This information has been used to determine what scores will fall at each interval.







# Open Source GIS Delivery

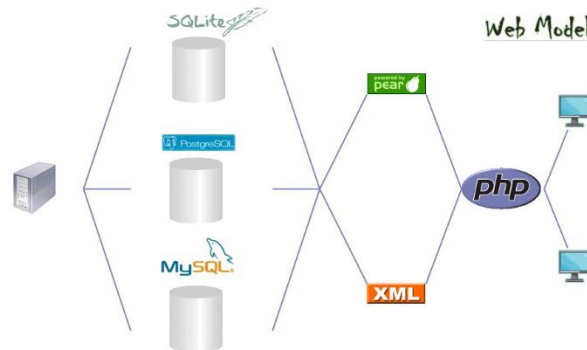
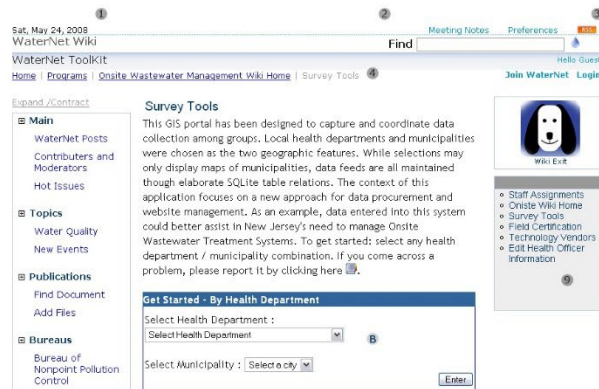
## Web Model Supporting data Capture and Collaboration

### About the Features

- 1 PHP time stamp generated from server
- 2 SQLite full-text word prominence site search
- 3 RSS feed that channels all user posts
- 4 Beloved breadcrumbbumps included
- 5 Javascript expand / contract menu
- 6 Simple sign-up with user agreement
- 7 Encrypted authentication with session rolls
- 8 SQLite data relations totally normalized
- 9 Draggable Javascript menu included
- A Editable content capturing user and time
- B AJAX implemented splash screen (php GET)
- C Focused views by hide / show onclick event
- D GIS tiles done manually in ArcView 9.0 and with Visual Basic Applications
- E Map tiles dynamically loaded by municipality
- F Javascript expand / contract grouping
- G Color charts showing group goals (realtime)
- H Upload MS Word forms with file validation
- I Data entry reduction via CSV file parser
- J HTML graphs dynamically generated as data enters the application

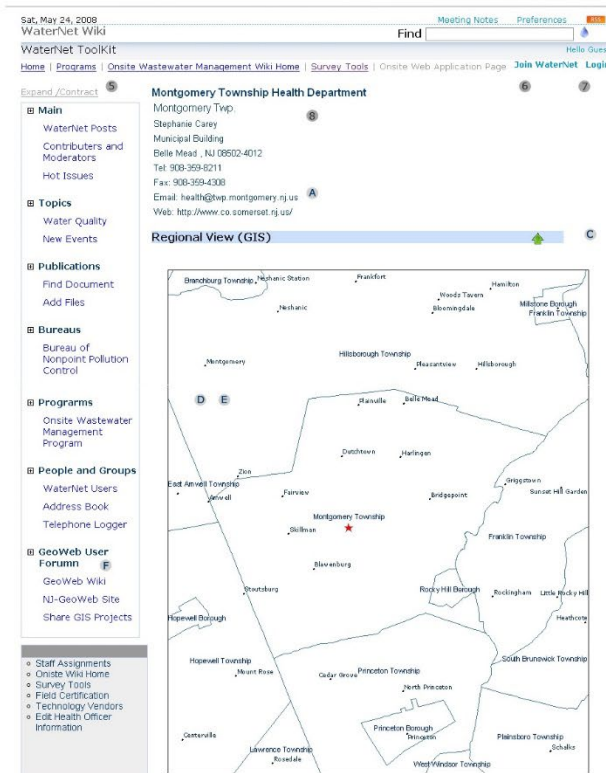
### Other Data Tools (not shown)

- Full-text search SQLite table generator
- Double submit "core / crust" validator
- Totally validated and editable contact book
- XML data loader (works with MS Excel)
- Web forms that generate RTF GIS reports
- Reader flag, edit, and delete tools
- Lots of acclimated and error messages
- All file uploads are downloadable
- Includes documentation



Example illustrating a cost effective way to manage low volume wastewater discharges (Septic Systems) across all of New Jersey.

by Doug Carroll



### Low Volume Wastewater Data

#### Facts

- Approximately 120 Health Departments are responsible for permitting septic systems
- Nearly 120 different data management systems are in place monitoring these discharges
- NJDEP develops design standards for septic systems, relying on feedback from Health Departments
- Septic management involves cooperation among inspectors, pumpers, engineers, real estate agents, land surveyors and government officials
- Each septic system in New Jersey will treat hundreds to thousands of gallons of wastewater per day
- Health departments and NJDEP are responsible for investigating and tracking water quality complaints

#### Future

- GIS Web systems are suited for decentralized data management and can assist well in coordination and high level data validation

### Integrateable GIS Viewers

#### This Application

HTML, CSS, Javascript, PHP, XML, PEAR, SQLite 2.6, Targu, AJAX, VEA, ArcObjects, Text\_Wiki, Apache, JIS with IE and Firefox.

ESRI ArcView 9.x, TextPad, Dreamweaver, Adobe Photoshop, MS Word Documents, MS Excel Documents, CSV text.

#### This Application's Future

- WMS Services with Open Layers
- ESRI's new ArcGIS Flex
- KML and better AJAX support

| G | Report Status                     |  |
|---|-----------------------------------|--|
| H | Upload Report For Montgomery Twp. |  |
| J | Load Data                         |  |
| I | Graphs and Charts                 |  |

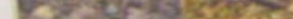
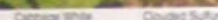
There are no graphs or charts available for 2004.

#### 2005 Septic Permits

|                          |        |    |
|--------------------------|--------|----|
| Total issued: 60         |        |    |
| New                      | 13.33% | 8  |
| Repair                   | 60%    | 36 |
| Alterations Malfunctions | 18.33% | 11 |
| Alterations Expansions   | 6.67%  | 4  |
| Technology               | 1.67%  | 1  |



Most common NJ Butterflies  
(Pictures are not to scale)



**Mimicry:**  
Pipevine Swallowtails and Monarchs are noxious to birds; to avoid being eaten, other species look similar to these noxious species.



© 2008 Blackwell Publishing Ltd, *Journal of Internal Medicine* 263: 105–114

**Abstract**—The purpose of this presentation is twofold:

a. *Flag* is dependent for us on 100% coverage in printed positive letters to clients.

### Explanation of "Wages"

[illegible]

The app is the most direct bridge to an instantly new experience to the North American market as the website <http://www.ubisoft.com/games/assassinscreed/index.html> with a list of 30 other countries already covered and 100 more countries announced as well as features. Meanwhile, the team also launched <http://www.ubisoft.com/games/assassinscreed>. Ubisoft's reported earnings of 10 million dollars are in line with the company's 2009 revenue, which was 10 million dollars.

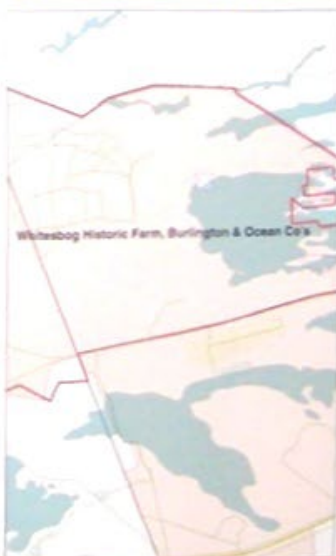
[illegible]

Butterfly  
C  
Case Jersey



Presented by Henry J. Kindervatter with special thanks to Dr. James Springer (for technical guidance) and Sharon Wander (Pipewine Swallowtail picture)

Limestone Ridge Preserve-NLT  
Blairstown Twp., Warren Co.



Whitesbog Historic Farm:  
Manchester, Ocean;  
Plumstead & Pemberton, Burlington

Legend - Limestone Ridge

— Railroads  
 — Roads (Toll Arter)  
☒ NJ Butterfly Viewing Sites

Grasslands - Critical Habitat

RANK

-  Suitable (1)
-  Priority Species (2)
-  State Threatened (3)
-  State Endangered (4)
-  Federal T and E (5)

### Bedrock Outcrop Areas

**GEOABB**

- Extensive Outcropping
- Some Outcropping
- State Preserved Lands
- Counties

Legend - Whitesbog Area

☐ Railroads  
☐ Roads (Tele Atlas)  
☒ NJ Butterfly Viewing Sites

Grasslands - Critical Habitat

BANK

-  Suitable (1)
-  Priority Species (2)
-  State Threatened (3)
-  State Endangered (4)
-  Federal T and E (5)

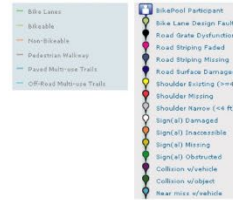
### Bedrock Outcrop Areas

**GEOABS**

- Extensive Outcropping
- Some Outcropping
- State Preserved Land
- Counties



# Bikeability



## Identify Safe Bicycling Routes with Public Participation GIS

**BikePool:** local cyclists self-identify route, schedule and personal details to share commute

**BikePool Participant - Ken Carlson home**

Name: Ken Carlson home  
Date: 04/24/2008  
Category: BikePool Participant

Ken commutes by bike across Route 130 to Cranbury. He stops the water and nighttime riding, but gets plenty of miles otherwise.  
Commented By: Chris Schaefer Apr 25, 2008 11:27 AM EDT

1 Picture(s)

Video

**Bike Racks:** community locates, photographs and documents bike racks

**Southbound side of tracks**

Name: Southbound side of tracks  
Date: 11/05/2007  
Category: Bike Rack

Southbound side of tracks.  
Commented By: Chris Schaefer Sep 09, 2007 6:04 PM EDT

1 Picture(s)

Video

**Accidents and Near Misses:** cyclists report details, WWBPA reports to authorities

**Near miss - Windsor Edinburg Rd before South Ln**

Name: Near miss - Windsor Edinburg Rd before South Ln  
Date: 04/24/2008  
Category: Near miss w/vehicle

They passed. I barely got this video of a West Windsor Fire Chief truck as it passed me about 1.5 feet away. The road, which you can see has a very narrow shoulder. It is not wide enough for a cyclist and most ride to the left of the white line and a car to share the lane. It's very clear from the video and pictures. From the video that this passing vehicle passed me extremely close AND forced the oncoming car to move over the white line.  
Commented By: Chris Schaefer Apr 25, 2008 11:27 AM EDT

2 Picture(s)

Video

**Collision w/vehicle - Youngs Rd and NJ Transit bridge**

Name: Collision w/vehicle - Youngs Rd and NJ Transit bridge  
Date: 11/05/2007  
Category: Collision w/vehicle

Driver M Uribe crossed NJ Transit bridge at approx. 40 mph. The passenger mirror of his vehicle collided with cyclist Chris Schaefer. Both people stopped. Uribe said he was 'tired to sleep'.  
Commented By: Chris Schaefer Feb 26, 2008 2:14 PM EDT

2 Picture(s)

Video

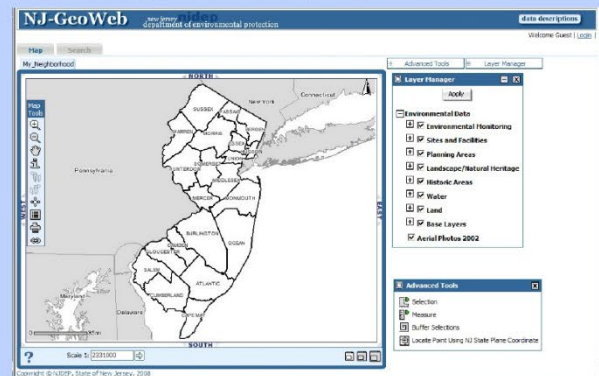


## NJ-GeoWeb

The Bureau of Geographic Information Systems has developed NJ-GeoWeb, a suite of data and feature-rich GIS applications for both Intranet and Internet user communities. The applications are being built using Orion OnPoint software which will enable BGIS to develop and deploy the applications more rapidly, requiring less custom coding. NJ-GeoWeb will use existing map serving technologies and connections to multiple environmental data sources (NJEMS, COMPASS, etc.) to allow the combining of map layers and associated tabular data from multiple map services into a single integrated map. Another major advancement is the ability to integrate NJ-GeoWeb applications with other NJDEP environmental applications and documents that exist on the Web. Applications built for NJ-GeoWeb will gradually replace those applications in the current i-ManDj suite.

## Layer Manager

Layers grouped into logical classes in Layer Manager allow users to find the data they are after more easily.



### Advanced Tools

The Advanced Tools provide very useful functions and enable basic GIS analysis.

Users can select features from an active GIS layer using a number of selection tools: by polygon, line, point, circle, or rectangle. The selected set of features are highlighted on the map and displayed to the user in a selection list for the layer. Further, these selections can be saved and later retrieved in a future NJ-GeoWeb session.

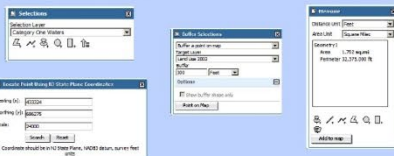
Users can generate buffer areas around those selected features, or simply buffer around any point on the map. The user can optionally target features from another layer that fall within the buffered areas to be a new selection set.

Users can use the Measure tool to display a location's NJ state plane coordinate (point), measure the distance between points (line), measure the distance along a multi-segmented line (multi-segment), and measure the areas and perimeters of irregular polygons, circles, and rectangles.

Users can enter NJ state plane coordinates and zoom to the location at a specific map

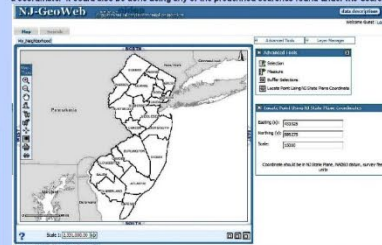
Users can enter the airplane coordinates and zoom to this location at a specific map scale.

Selection Layer

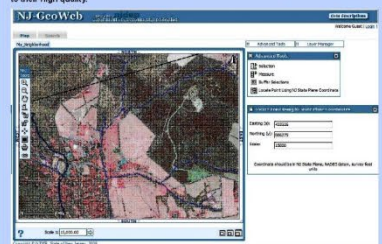


### Analysis - Proximity to C1 Waters

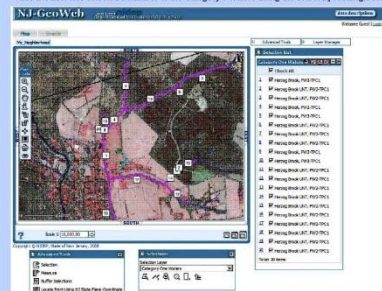
There are several ways to get to a location of interest. In this instance it is being done by entering a coordinate. It could also be done using any of the predefined searches found under the Search tab.



Once zoomed to the location, the user can turn on any relevant layers to their study. In this case the Category 1 Waters have been turned on. These streams have been given this designation due to their high quality.



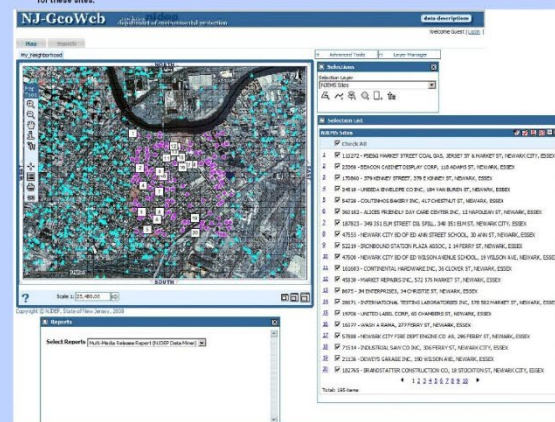
Using the Selection tools under Advanced Tools, users may select features for further analysis. Here the user has selected a number of the Category 1 Waters using the select by rectangle tool



Using the Buffer selections tool under Advanced Tools, the user can create 300 foot buffer areas around the Category 1 Waters and select and highlight the polygons from the Land Use 2002 layer that fall within the buffered regions.

### Integration with External Web Application - DEP Data Miner

In this example, multiple NJEMS Sites are selected using the Selection tool (by rectangle). These selected sites can be passed to a customized report in DEP Data Miner to enable users to view additional environmental data that reside in the NJEMS database for these sites.



## Reports - DEP Data Miner - Multi-Media Release Report

Here is a portion of the Multi-Media Release Report from DEP Data Miner. The NJEMS Sites selected in NJ-GeoWeb were passed to this report via the report tool launched from the report button on the selections list. The release numbers are not coming from the GIS database, but from NJEMS and FACITS. This section of the report summarizes the releases by medium of various pollutants in pounds per year for each of the sites that were selected in NJ-GeoWeb that release to more than one medium. The release data is from 2002. Any numbers displayed in red indicate an exceedance of permit thresholds.

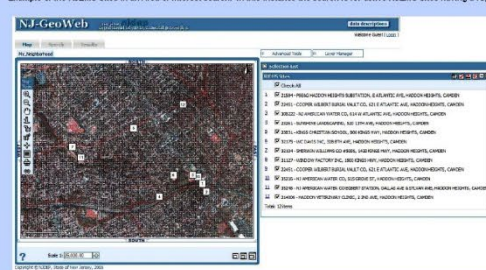
[illegible]

In this section of the Multi-Media Release Report, all of the release numbers are aggregated from all of the NJEMS Sites that were selected in NJ-GeoWeb that are multi-media release sites. In this

| Discipline                   | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Discipline 1 - 2016 - 2030   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 2 - 2016 - 2030   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 3 - 2016 - 2030   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 4 - 2016 - 2030   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 5 - 2016 - 2030   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 6 - 2016 - 2030   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 7 - 2016 - 2030   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 8 - 2016 - 2030   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 9 - 2016 - 2030   |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 10 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 11 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 12 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 13 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 14 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 15 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 16 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 17 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 18 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 19 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 20 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 21 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 22 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 23 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 24 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 25 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 26 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 27 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 28 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 29 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 30 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 31 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 32 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 33 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 34 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 35 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 36 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 37 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 38 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 39 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 40 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 41 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 42 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 43 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 44 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 45 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 46 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 47 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 48 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 49 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 50 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 51 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 52 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 53 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 54 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 55 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 56 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 57 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 58 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 59 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 60 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 61 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 62 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 63 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 64 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 65 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 66 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 67 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 68 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 69 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 70 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 71 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 72 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 73 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 74 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 75 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 76 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 77 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 78 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 79 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 80 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 81 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 82 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 83 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 84 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 85 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 86 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 87 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 88 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 89 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 90 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 91 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 92 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 93 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 94 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 95 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 96 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 97 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 98 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 99 - 2016 - 2030  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Discipline 100 - 2016 - 2030 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |

Credits: NJDEP, BGIS, OIRM  
NJOT, OGIS

Example of the NJEMS Sites in an Area of Interest search. In this instance the search is for active NJEMS Sites having a Right-To-Know program interest in Haddon Heights Boro.



The search results are rendered on the map with labels that correspond to the reference numbers for the NJEMS sites in the selection list.

