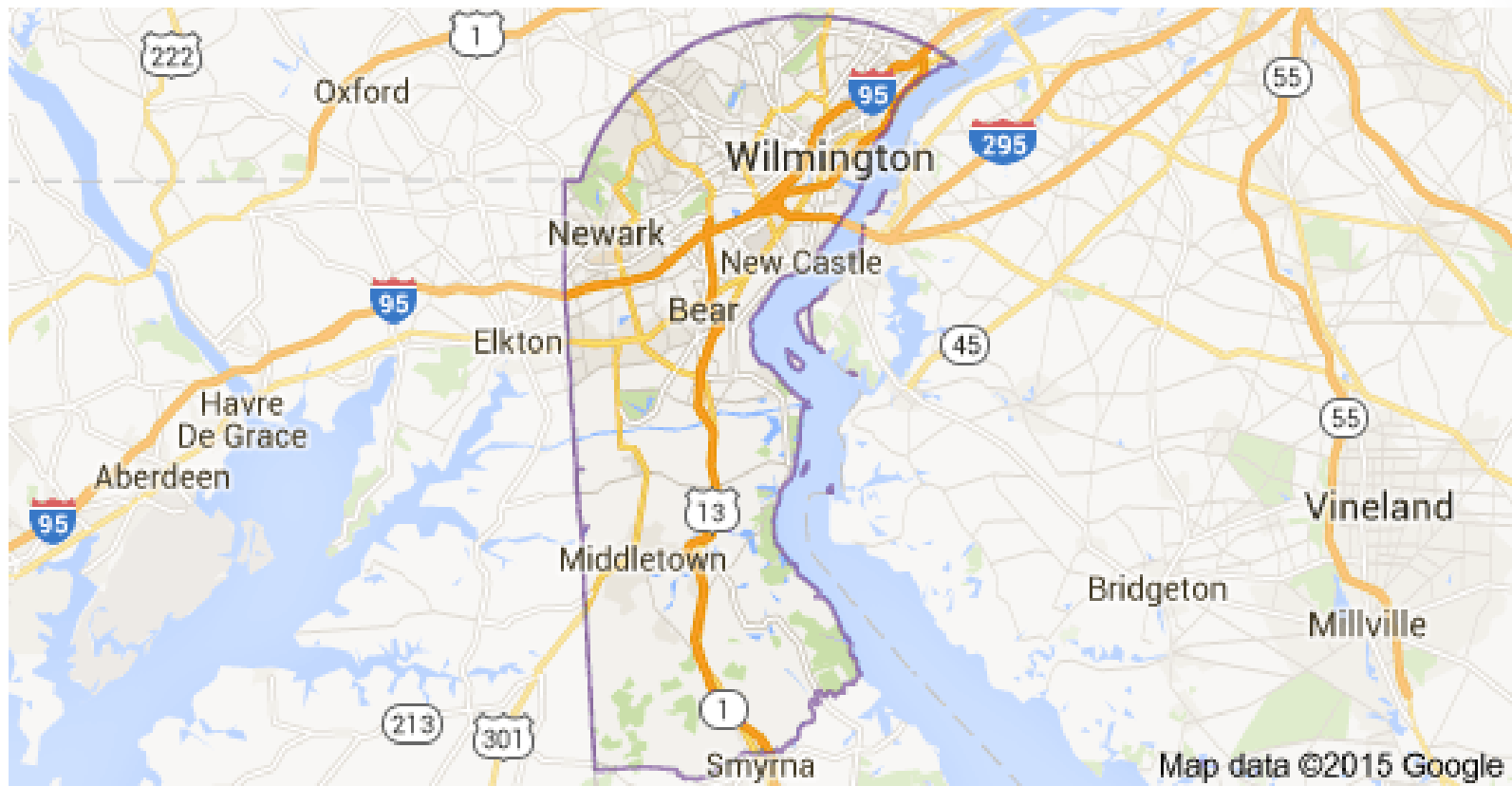


# COST SHARE FUNDING FOR URBAN WATER MANAGEMENT

NEW CASTLE CONSERVATION DISTRICT  
2430 OLD COUNTY ROAD  
NEWARK, DELAWARE 19702



# New Castle County, Delaware



# History and Types of Funding

- Cost-Share Program and 21<sup>st</sup> Century Project Funds provided in annual State Capital Budget through the Department of Natural Resources and Environmental Control (DNREC), Division of Watershed Stewardship.
- Community Transportation Funds provided in annual State Capital Budget & administered by DelDOT in coordination with State legislators.
- New Castle County Council and Department of Special Services.
- Other State funding through DNREC.
- Occasion funding from project participants.

# Cost-share & 21<sup>st</sup> Century Funds

<u>Cost share</u>	<u>21<sup>st</sup> Century</u>
• FY06 - \$3.205m	\$3.321m
• FY07 - \$3.205m	\$6.000m
• FY08 - \$3.205m	\$2.000m
• FY09 - \$3.205m	\$0
• FY10 - \$1.5mm	\$0
• FY11 - \$1.5mm	\$0
• FY12 - \$1.5mm	\$0
• FY13 - \$1.5mm	\$0
• FY14 - \$1.5mm	\$0
• FY15 - \$1.5mm	\$0
• FY16 - \$1.5mm	\$3.000m



# Drainage Assistance Hot Line

Drainage Concerns.pdf - Adobe Reader

File Edit View Window Help

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Tools Sign Comment



**DRAINAGE & STORMWATER ASSISTANCE**

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL  
DIVISION OF SOIL AND WATER CONSERVATION

Thousands of drainage and stormwater concerns are expressed each year in Delaware! An assistance program has been requested at the recommendation of the Governor's Surface Water Task Force to aid residents statewide with their unique drainage and stormwater concerns. Residents can call the number below or send an email to report their concerns when convenient. Once an individual's information has been logged into the system the concern will be assigned to the proper agency. If you are unsure of who to call this will allow you to have one central point of contact when seeking solutions to drainage and stormwater concerns!

ASSISTING DELAWARE RESIDENTS WITH MANY DRAINAGE AND STORMWATER CONCERNS:

- Water Runoff
- Standing Water
- Stormwater Ponds
- Tax Ditches
- Restoration Opportunities
- Stream Bank Stabilization
- Beaver Dams



**DRAINAGE AND STORMWATER ASSISTANCE**

**302-855-1955**

DELAWARE HELP LINE (Toll Free):  
1-800-464-4357

E-MAIL: [DNREC\\_DRAINAGE@STATE.DE.US](mailto:DNREC_DRAINAGE@STATE.DE.US)

STATE OF DELAWARE  
DNREC  
DIVISION OF SOIL AND WATER CONSERVATION

Drainage Concerns Date modified: 10/6/2015 1:37 PM Date created: 10/6/2015 1:37 PM Offline status: Online  
Adobe Acrobat Document Size: 1.04 MB Offline availability: Not available

1:47 PM 10/6/2015

# District Drainage Database Report for Legislators

**Project Tracking**

Project Name  RecordID   
Project Number  Legislative Request No.  Cost Share No.  Misc. Docs.

General Info | TA & CS | Legislative Requests | Funding | Study & Design | Construction | Payments **SEARCH**

**General Contact Information**

Date   
First Name  Relationship   
Last Name   
Title   
Address   
Development   
Parcel Number  Watershed   
Home Phone   
Work Phone   
Mobile Phone   
Fax Number   
Email Address

**Description of Problem**

Senate District  Representative District  County Council District   
Archive ☐ Funding Status

Record: 2194 of 2194 No Filter Search

# District Resource Publication

## Landowner Guide to Urban Drainage Projects



 **NEW CASTLE  
Conservation District**

### CONSERVATION PRACTICES FOR URBAN WATER MANAGEMENT PROJECTS

There are a variety of conservation practices that can be used for urban water management projects. Pictures and descriptions of these practices are listed below.

#### Swale

A swale is a concave surface depression in the ground designed to carry surface water from one location to another. It is usually very shallow and wide to allow for mowing the grass. Once the swale is installed, top soil and seed are put in place and the area is covered in protective erosion control matting. In certain cases, the swale may be planted with sod.



#### Berm

A berm is a small raised area higher in elevation than the adjacent area. Many times, it is used to intercept water and keep it from flowing into another location.



#### Erosion Control Matting

Erosion control matting is usually straw or some other material between bio-degradable netting. It comes in a roll and is placed over the disturbed area and tacked into place using long metal staples. This matting protects the soil and grass seed from erosion and drying out until the seed can germinate and grow. It is critical that the seeded area be watered on a regular basis. It may be necessary to remove the netting once the grass has become established.



#### Pipe

Certain drainage projects require the installation of a pipe into the ground to transport water away from or off of the property. Usually, a high density polyethylene pipe is used and it can be either solid or perforated. Certain projects may call for the use of concrete, corrugated metal or aluminum pipe.



#### Slotted Drain

A slotted drain is a special type of pipe with a small grate along the length of the pipe to allow for water to enter the pipe.

# Assistance to Private Landowners

- Give details about cost-share funding for urban water management
- Categories
- % match
- Amount of funding available
- Process, drainage database, visit by District staff person, cost-share application, Board approval, landowner has project installed by contractor, inspected by District staff
- Types of Projects
  - Drainage and Erosion control
  - Special Projects (estimate cost > \$10,000)





# Eroding slope in yard re-graded to a riprap lined swale





# Downspouts on house tied into a sub-surface drainage system





# Streambank erosion stabilized with riprap





# Swale in suburban residential yard – surface water





# Carousel “Bark” Park

- Funds provided by New Castle County and USDA NRCS
- Designed by USDA and NCCD
- Total project cost: \$156,589
- Project provides water quality benefits to an impaired/TMDL watershed that provides drinking water to a large customer base.
- Project supported by state-wide environmental NGO, Delaware National Estuary Program, and regional private water purveyor.

# Carousel Bark Park Site Conditions





# Carousel Bark Park Completed



# Chelsea Estates – Jay Drive

- Funding provided by New Castle County, 21<sup>st</sup> Century Fund, and Community Transportation Fund
- Scope of Project – drainage improvement project behind a church and residential area.
- Project cost – Bid - \$39,450
- Final cost - \$40,927.50



# Chelsea Estates – Jay Drive Site Conditions





# Chelsea Estates – Jay Drive Completed Project



# Delaware Bay Dikes Projects

- Funded by State Capital Budget appropriations & FEMA
- Condition and damages from Hurricane Sandy
- Five dike projects along Delaware Bay/River coast
- Red Lion Dike
- Gambacorta and Army Creek Dikes
- Broad Marsh Dike
- Buttonwood Dike
- Total cost for all five projects
  - Construction: \$ 5,063,053    Engineering: \$ 991,447
- Red Lion, Gambacorta & Army Creek dikes stabilized with 1-ton super sacks/sand bags.



# Army Creek Dike – Hurricane Sandy & Emergency Repairs





# Army Creek Dike - Completed



# Green Valley – 2<sup>nd</sup> Street

- Funded with 21<sup>st</sup> Century Funds and Community Transportation Funds
- Eroding slope behind townhomes adjacent to the White Clay Creek, a National Wild and Scenic River Watershed
- Installed imbricated stone wall at top of slope, under-drain, re-graded slope, seeded, and stabilized with erosion control matting.
- Available Funding: \$193,602
  - 21<sup>st</sup> Century – \$138,602 & \$55,000 Community Transportation Funds
- Total costs of this project - \$127,648
- Bid price - \$96,765



# Green Valley – 2<sup>nd</sup> Street Site Conditions





# Green Valley – 2<sup>nd</sup> Street Under Construction





# Green Valley – 2<sup>nd</sup> Street Completed



# Breezewood II Project

- Ditch cleanout and sanitary sewer crossing
- 21<sup>st</sup> Century Fund and New Castle County funds
- Scope of Project – regrading of 3600' of drainage ditch and replacement of 2 sections of concrete encased County sewer line with ductile iron pipe.
- Estimated Project cost: \$203,710 = \$140,635 (ditch) + \$63,085 (sewer line)
- Low bid = \$118,797.
- Currently under construction
- Project required soil testing for contaminants, wetland investigation, extensive survey & negotiation regarding construction access with regional utility and major developer



# Breezewood II - Site Conditions





# Breezewood II – Construction





# Breezewood II – Lower Section “Under Construction”





# Contact Information

- Kevin Donnelly, District Coordinator
- 302-832-3100 ext. 125
- [Kevin.Donnelly@state.de.us](mailto:Kevin.Donnelly@state.de.us)
- New Castle Conservation District  
2430 Old County Road  
Newark, DE 19702

Website: [www.newcastleconservationdistrict.org](http://www.newcastleconservationdistrict.org)



Project photographs taken by Rick  
Mickowski, Conservation Planner/ Public  
Outreach Coordinator

