

# THE GLENVILLE WETLAND MITIGATION BANK, NEW CASTLE COUNTY, DELAWARE



Christie Bonniwell, Wetland Scientist  
DelDOT Environmental Studies

# Wetland Mitigation

- ▣ Clean Water Act Section 404, 2008 rule: “restoration, creation, or enhancement of wetlands to compensate for permitted wetland losses”
  - Impacts >0.10 acres
  - DelDOT-Transportation Impacts

# Background

- ▣ Early 2000s Glenville Estates subdivision repeatedly inundated by flood events
- ▣ Approximately 140 homes severely damaged
- ▣ Mid-2000s purchased by state of Delaware





Glenville Estates Subdivision 2005

# Background



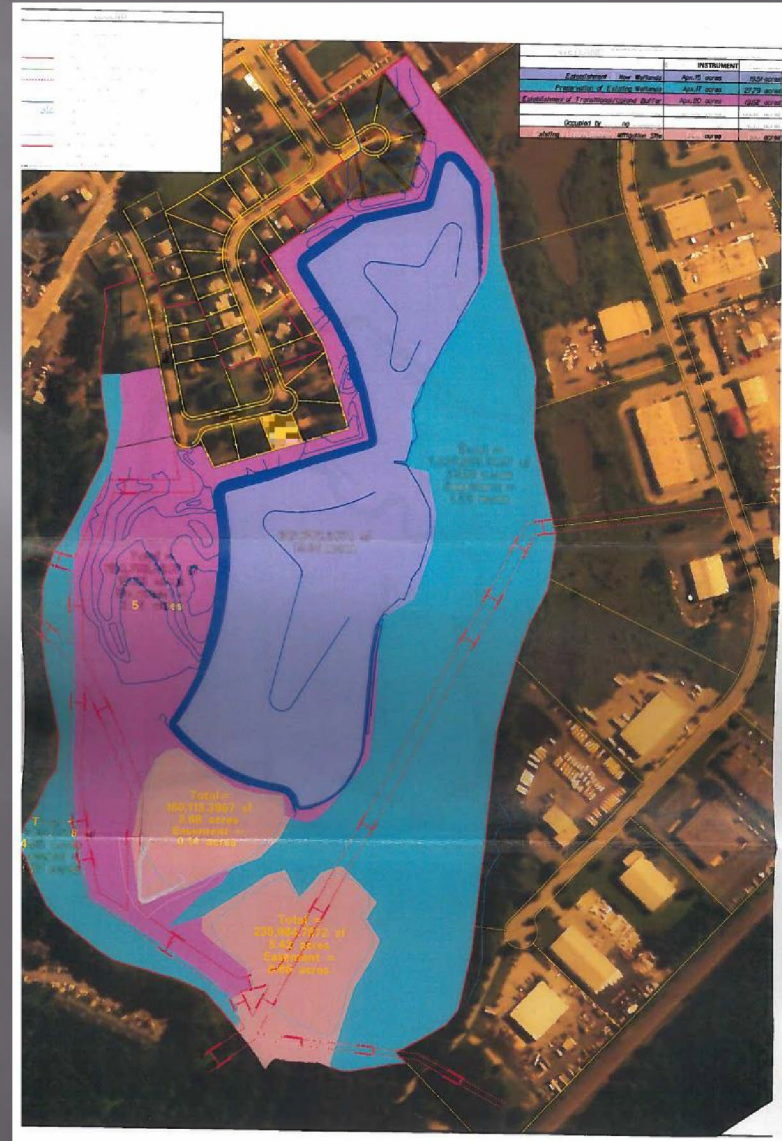
- ▣ Ideal location wetland habitat



- Creation Glenville Wetland Mitigation Bank
  - 19.6 acres creation
  - 25 acres preservation
  - 21.3 acres transitional upland buffer

# Background

WETLAND MITIGATION BANK OBJECTIVES		
	BANKING INSTRUMENT	PER PLAN
<i>Establishment of New Wetlands</i>	<i>Apx. 15 acres</i>	<i>19.51 acres</i>
<i>Preservation of Existing Wetlands</i>	<i>Apx. 17 acres</i>	<i>27.79 acres</i>
<i>Establishment of Transitional/Upland Buffer</i>	<i>Apx. 20 acres</i>	<i>19.62 acres</i>
<i>Total Conservation Area</i>	<i>Apx. 52 acres</i>	<i>66.92 acres</i>
<i>Area Occupied by Existing Easement</i>	<i>0</i>	<i>4.33 acres</i>
<i>Existing 5 acres Wetland Mitigation Site</i>	<i>9.05 acres</i>	<i>9.05 acres</i>



# Background

- ▣ Historically, White Clay Creek & Red Clay Creek met where present confluence of Hershey Run & White Clay Creek are located
- ▣ In or prior to 1708 European colonists redirected flow of Red Clay Creek

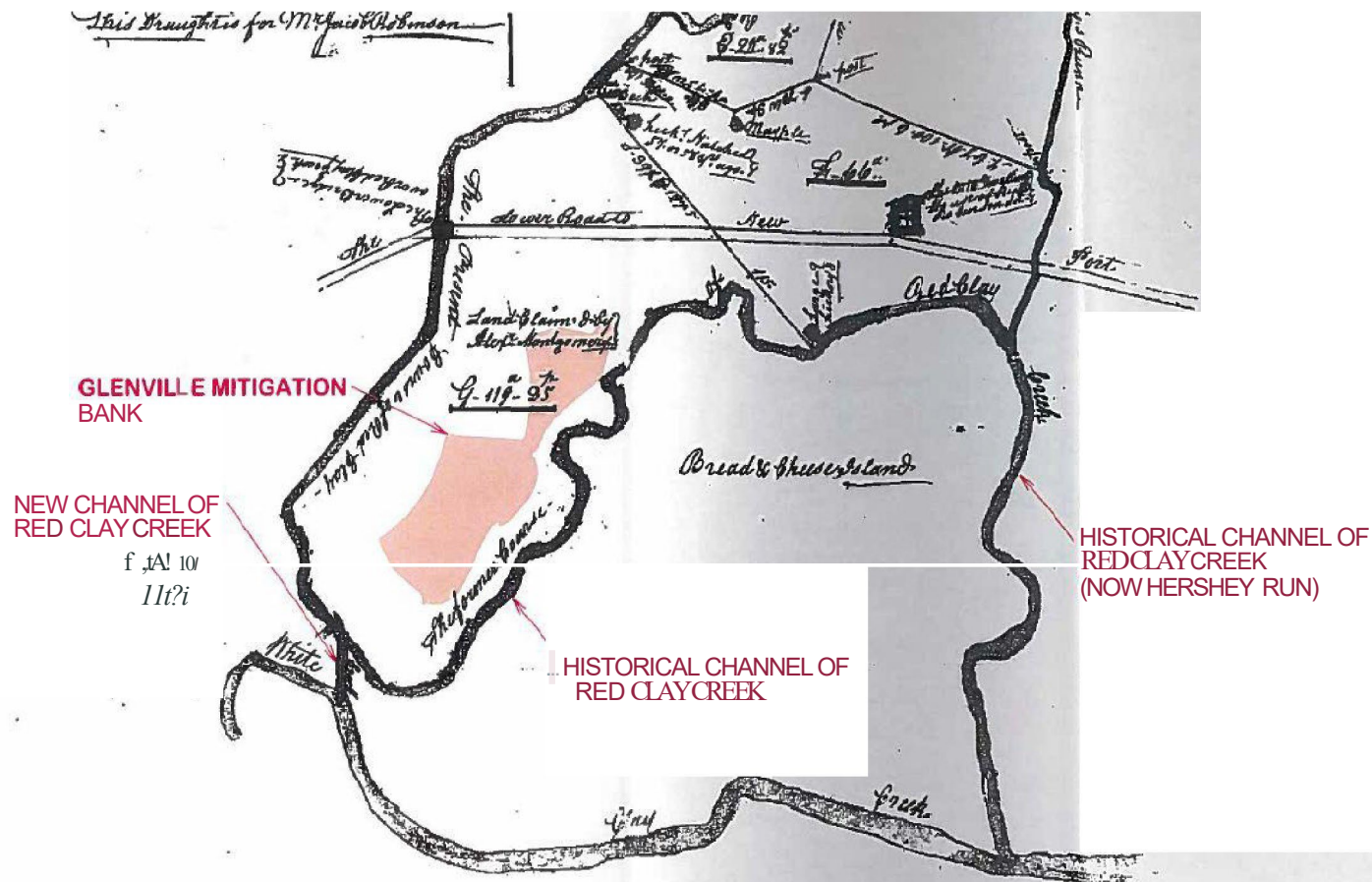


# GLENVILLE WETLAND MITIGATION BANK



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CLAY CREEK R LOCATION  
RED MAP





# Background

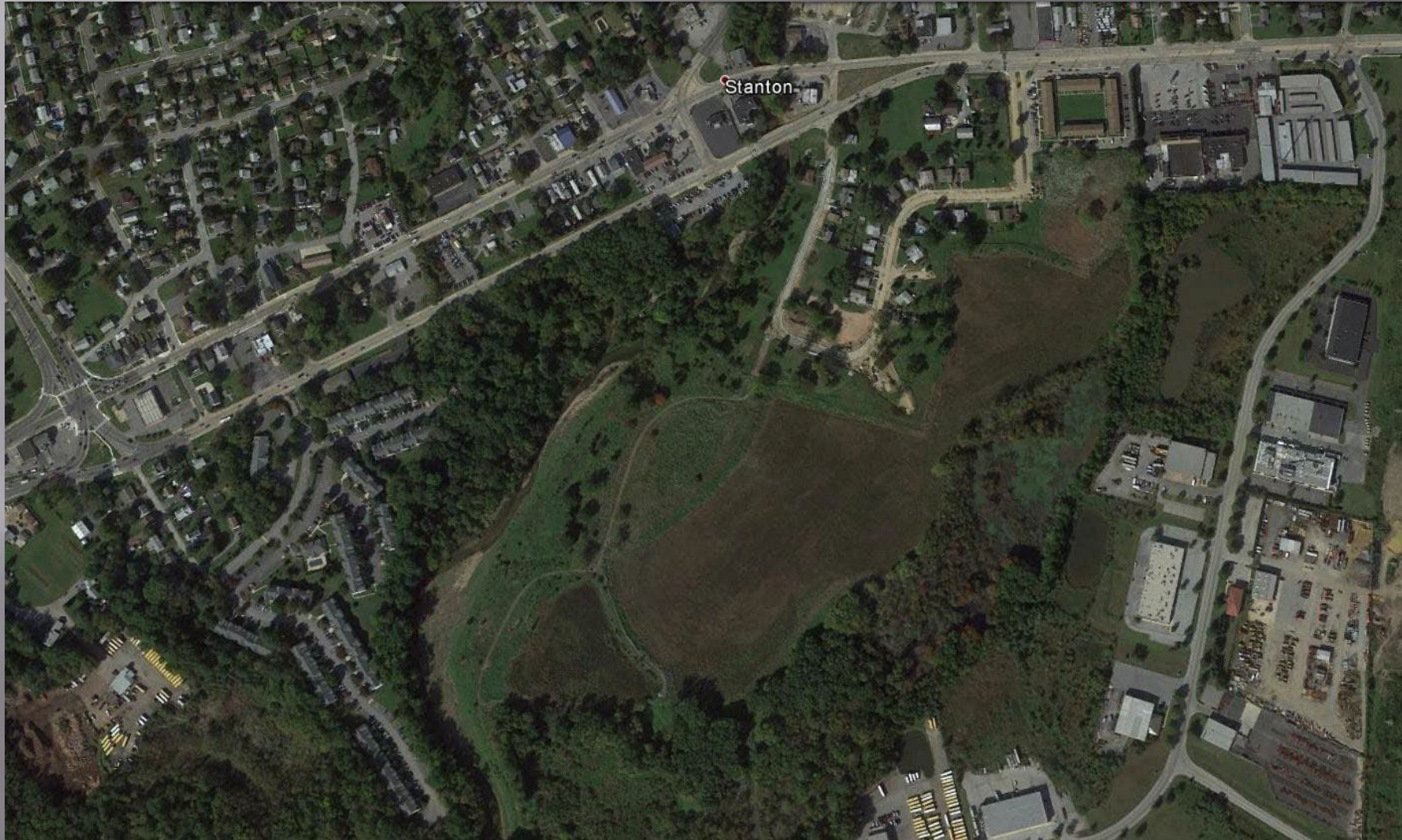
- ▣ Original confluence emergent freshwater tidal marsh
- ▣ New confluence pushed higher in watershed
- ▣ Flood storage capacity severely reduced
  - Exacerbated flood events
- ▣ Described as being on peninsula

# Background



- ▣ Site excavation completed Fall 2008
- ▣ Planting grasses Sept-Oct 2008
- ▣ Saplings April 2009
- ▣ Additional saplings sept 2009 & April 2013

# Glenville Wetland Mitigation Bank



Glenville Wetland Mitigation Bank 2011







# Wetland Mitigation Banks

- ▣ wetland mitigation bank:
  - System of credits and debits ensure compensation for unavoidable ecological loss
- ▣ Work with Interagency Review Team (IRT)
  - Lead by US Army Corps of Engineers
- ▣ Approved number of mitigation credits from a created site
  - Credits may be bought by anyone who negatively impacts wetland ecosystems

# Future Conditions

- ▣ Continuous need improve transportation or development
- ▣ Limited land availability
- ▣ Timely process
  - 2-5 years to establish a bank
- ▣ Ideal way compensate for unavoidable impacts to wetlands



# Thank You



Kenneth Dunne, DelDOT  
Environmental Studies

