



Oak Orchard Drainage Project Update

Oak Orchard Public Workshop
Melissa Hubert, Acting Drainage Program Manager
October 16, 2019

Oak Orchard Project Team

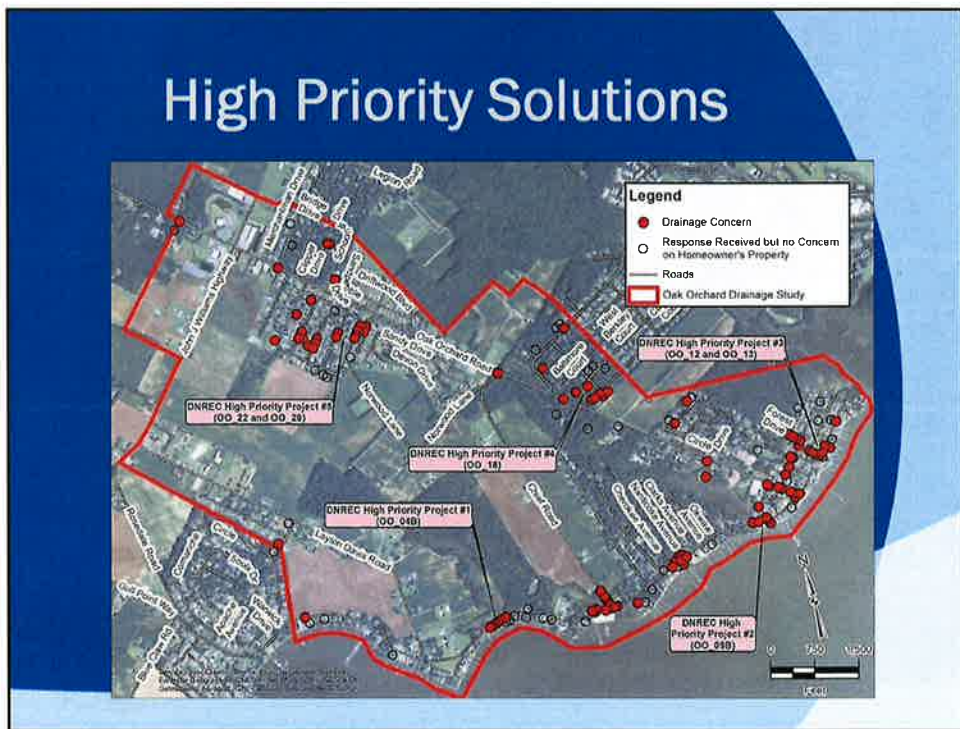
- DNREC, Division of Watershed Stewardship
 - Melissa Hubert, Acting Drainage Program Mgr.
 - Karl Workman, Landowner Liaison
 - Alissa Buck, Environmental Permitting
- AECOM – Consulting Engineer
 - Mary Roman, PE, CFM; Associate Vice President
 - Rob Ainslie, PE, LEED AP; Civil Engineer



Project Objectives

Flooding, Drainage, or Stormwater?

<p><u>Flooding</u></p> <p>The submergence of land that is normally dry and can be caused by rainfall or tidal events</p>	<p><u>Drainage</u></p> <p>Removal of runoff over an acceptable period of time which is typically 24-48 hours</p>	<p><u>Stormwater Management</u></p> <p>Management of increased runoff caused by a change in land use.</p>
		



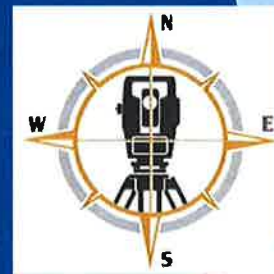
High Priority Solutions

Project	Location	Anticipated Construction Start
Project #1 (OO_04B)	River Road 2000' West of Chiefs Road	Contract 3
Project #2 (OO_09B)	Intersection of Cerise Avenue & River Road	Contract 4
Project #3 (OO_12 & OO_13)	Mercer Avenue and Forest Drive	2020
Project #4 (OO_18)	Southwest Corner of Captains Grant	2020
Project #5 (OO_22 & OO_28)	Oak Meadow Drive	Contract 2

CONTRACT 1

Overall Project Accomplishments

- AECOM has submitted 90% plans for Mercer Avenue and Captains Grant Projects
- AECOM has submitted preliminary design plans for Oak Meadows
- AECOM has submitted concept plans for River Road near Chief Road and Cerise Lane
- DNREC has continued coordination with DeIDOT as they will be responsible for long-term maintenance and operations.



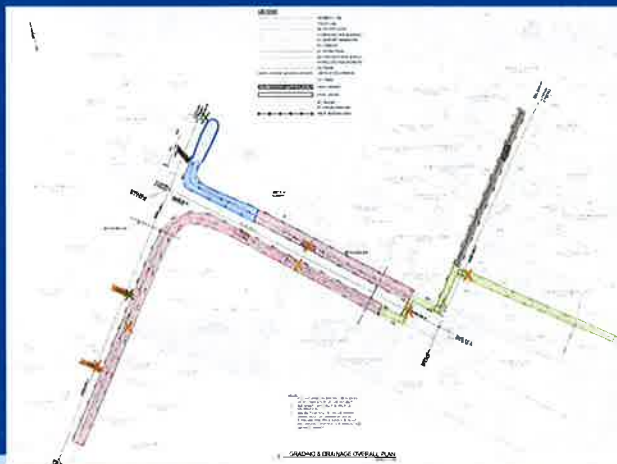
Project #3

Mercer Avenue & Forest Drive
(OO_12 & OO_13)



Project #3

Mercer Avenue & Forest Drive
(OO_12 & OO_13)



Project Highlights

- Replace and extend outfall with 24" or Eq. pipe.
- Install Tidegate or Eq. Structure
- Replace & Extend 15" pipe to Paul St.
- Regrade swales
- Extend Swale NE side of Mercer Ave.
- New Inlets and Cross road Culverts

Funding Secured!

Oak Orchard Contract #1

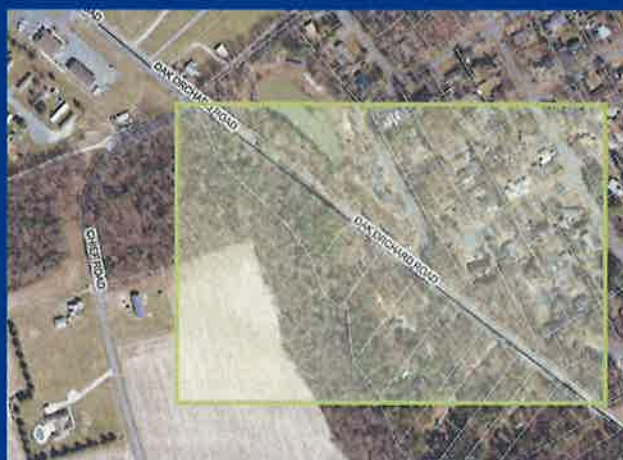
Mercer Avenue & Forest Drive (OO 12 & OO 13)
Critical Steps

- Permit for Outfall Extension
- Easements from Landowners on Bay Front.
- Landowner Agreements from Affected Properties
- Final Design
- Contracting

Anticipated Construction 2020

Project #4

Southwest Corner of Captains Grant
(OO_18)



Project #4

Southwest Corner of Captains Grant
(OO_18)



Project Highlights

- Reconstruct Outfall Downstream of Oak Orchard Rd.
 - Addition of a Stilling Basin
- Replace Culvert Under Oak Orchard Rd. (increased size)
- Regrade Swales
- SWMP might be modified to facilitate swale drainage

Funding Secured!

Oak Orchard Contract #1

Southwest Corner of Captains Grant (OO_18)
Critical Steps

- Permit for Outfall Reconstruction & Stilling Basin
- Landowner Agreements from Affected Properties
- Final Design
- Contracting

Anticipated Construction 2020

Project #5

Oak Meadows
(OO_22 & OO_28)



Project #5

Oak Meadows
(OO_22 & OO-28)



Project Highlights

- Upgrade Existing Storm Drain System to 2-36" pipes
- Regrade Existing Swales
- Add swales

Oak Orchard Contract #2

Oak Meadows (OO 22 & OO 28) Next Steps

- Additional Field Work due to Increased Study Area
 - Parcels just north of Oak Meadows
 - Impacts to Wet Ponds in River Winds Community
- Design & Review
- Permitting
- Landowner Agreements/Easements
- Final Design (July 2020)
- Funding
- Contracting

Funding for construction not secured at this time.

Project #1

River Road 2,000' West of Chiefs Road
(OO_04B)

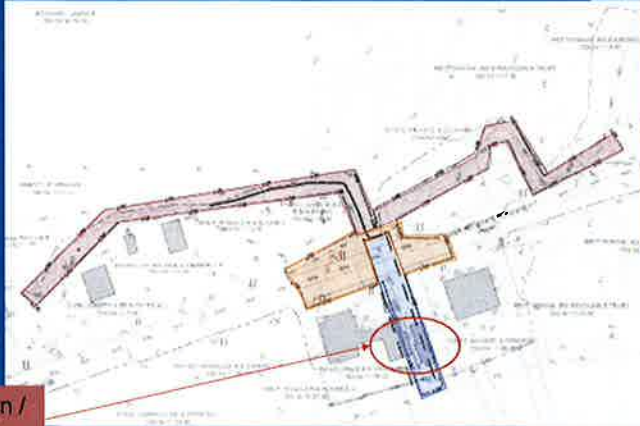


Project #1

River Road 2,000' West of Chiefs Road
(OO_04B)

Project Highlights

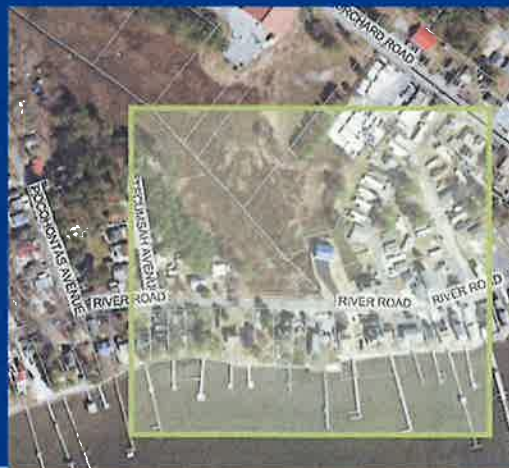
- Increase Outfall capacity along existing alignment.
- Construct bulkhead to reduce back bay flooding.
- Provide drainage for area between River Rd. & Bulkhead
- Backflow Prevention that maintains tidal connection.



Landowner Coordination /
Agreement Critical Here

Project #2

Intersection of Cerise Avenue & River Rd
(OO_09B)



Project #2

Intersection of Cerise Avenue & River Rd.
(OO_09B)

Project Highlights

- Increase Outfall capacity along existing alignment.
- Construct bulkhead to reduce back bay flooding.
- Property Owner Issue
- Backflow Prevention that maintains tidal connection.



Oak Orchard Contract #3 & 4

Path Forward

River Road West of Chiefs Road (OO_04B) and
Intersection of Cerise Avenue & River Road (OO_09B)

- Contract for further Design
- Additional Field Work
- Continue Coordination with DELDOT
- Design & Review
- Permitting
- Landowner Agreements/Easements
- Final Design
- Funding
- Contracting

Funding for further design work and construction not secured at this time.

Public Comments & Questions

Contact Information

Karl Workman, Project Planner

karl.workman@Delaware.gov

Melissa Hubert, Acting Drainage Program
Manager

melissa.hubert@Delaware.gov

Drainage Program, Georgetown Field Office
(302) 855-1930



