

Delaware Flood Risk Mapping Resources

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RASCL Coffee Hour

September 28, 2020



Agenda

- Delaware Flood Planning Tool
 - Overview
 - Updates
- New sources of flood risk information
 - First Street Foundation's Flood Factor tool
 - Realtor.com

Delaware Flood Planning Tool

- Interactive web map application for researching flood risk in Delaware
- Available data
 - FEMA effective floodplain mapping
 - Preliminary floodplain mapping
 - Elevation contours
 - LOMR locations
 - Hydraulic models
- User friendly results and print functions

The screenshot displays the web application interface for the Delaware Flood Planning Tool. At the top, the State of Delaware logo and the text "The Official Website of the First State" are visible. The main content area is divided into two panels. The left panel, titled "Home", contains the following text: "Delaware Flood Planning Tool", "Overview", "The Delaware Department of Natural Resources and Environmental Control (DNREC) Flood Tool is an interactive web map application. This tool is designed to aid you in researching your flood risk in the state of Delaware. It is designed to provide floodplain managers, insurance agents, developers, real estate agents, engineers, surveyors, local planners and citizens with an effective means by which to make informed decisions about the degree of flood risk for a specific area or property. Map features are connected to geospatial databases that may be". Below this text are several navigation buttons: "Search", "Legend", "Results", "Print", "Contacts", and "Getting Started/Help". The right panel shows a map of Delaware with a grid overlay. The map includes labels for "Wilmington" and "Dover". A "Satellite" button is located in the top right corner of the map area. A zoom control with "+" and "-" buttons is on the left side of the map. At the bottom right of the map, the text "Federal Emergency Management..." is partially visible. The footer of the page contains the links "Privacy | Contact | Phone Directory".

Home

Search

Legend

Results

 Location is **Within** the the FEMA 100-year floodplain in the Effective Map. Preliminary data does not exist.

Effective Flood Zone:
AE

Preliminary Flood Zone:
n/a

FEMA Issued Flood Map:
10001C0168H

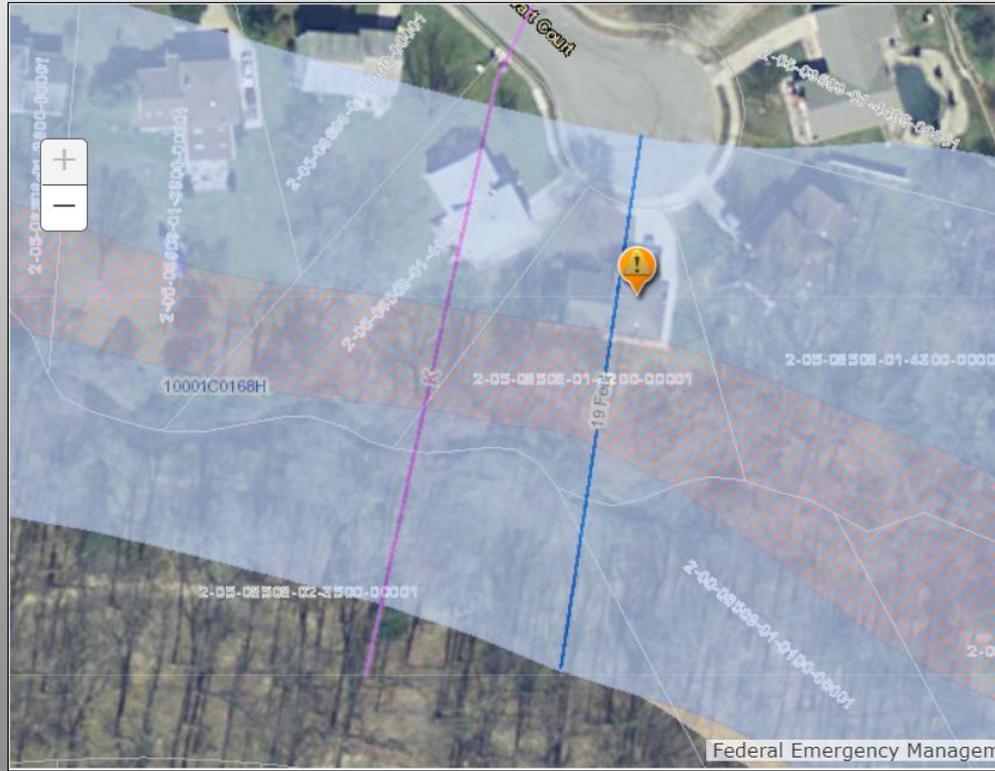
Effective Map Date:
5/4/2003

Watershed (HUC12):

Print

Contacts

Getting Started/Help



Legend

+ Elevation Contours

- Effective Flood Insurance Rate Map

Map

— Base Flood Elevation

— Transect

— Cross Sections

— LIMWA

FIRM Panel

CRBS

FEMA Flood Maps

- A
- AE
- AE, FLOODWAY
- AO
- VE
- X, 0.2 PCT ANNUAL CHANCE FLOOD HAZARD

- Preliminary Flood Insurance Rate Map

Areas

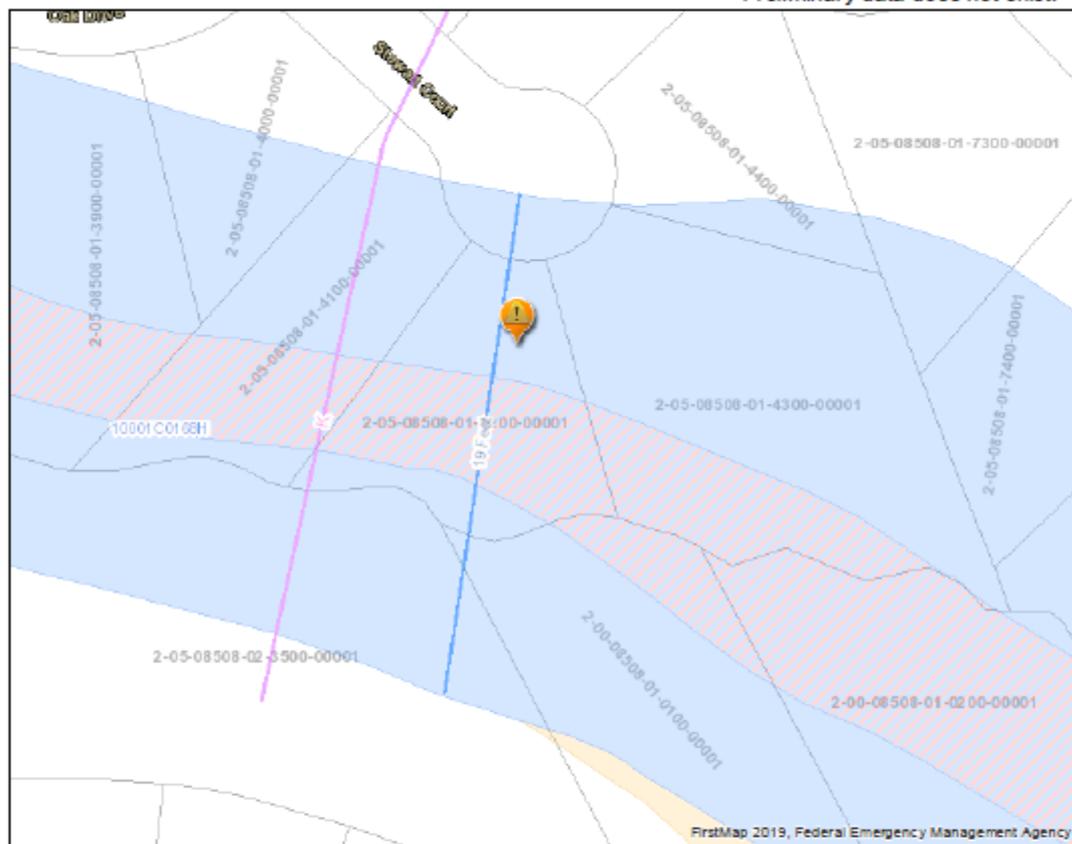
- A
- AE
- AE, FLOODWAY
- X, 0.2 PCT ANNUAL CHANCE FLOOD HAZARD

LOMR



Delaware Flood Planning Tool

Location is **Within** from the FEMA 100-year floodplain in the Effective Map. Preliminary data does not exist.



Location of flood information



September 27, 2020

Effective Flood Hazard Areas

- A
- AE
- AE, FLOODWAY
- AO
- VE
- X, 0.2 PCT ANNUAL CHANCE FLOOD HAZARD
- Base Flood Elevation
- LIMWA
- Cross Sections
- Transect

Preliminary Flood Hazard

- A
- AE
- AE, FLOODWAY
- X, 0.2 PCT ANNUAL CHANCE FLOOD HAZARD
- Contours**
- INDEX
- DEPRESSION
- HIDDEN
- INTERVAL

Effective Flood Zone: AE
 Preliminary Flood Zone: n/a
 FEMA Issued Flood Map: 10001C0168H
 Effective Date: 5/4/2003
 Watershed (HUC12):
 Upper Saint Jones River
 Effective Floodway: No
 Effective Base Flood Elevation: See profile in FIS Report to determine BFE

Flood Planning Tool updates

- Updated user interface
- Improved location search capabilities
- Stream centerlines for hydraulic model download
- Sea level rise – coastal inundation mapping
 - DGS/DNREC Coastal Programs developed mapping
 - Mean Higher-High Water (MHHW) to 7 feet above MHHW in 1-foot increments
- Users Guide

Welcome [Layers](#)

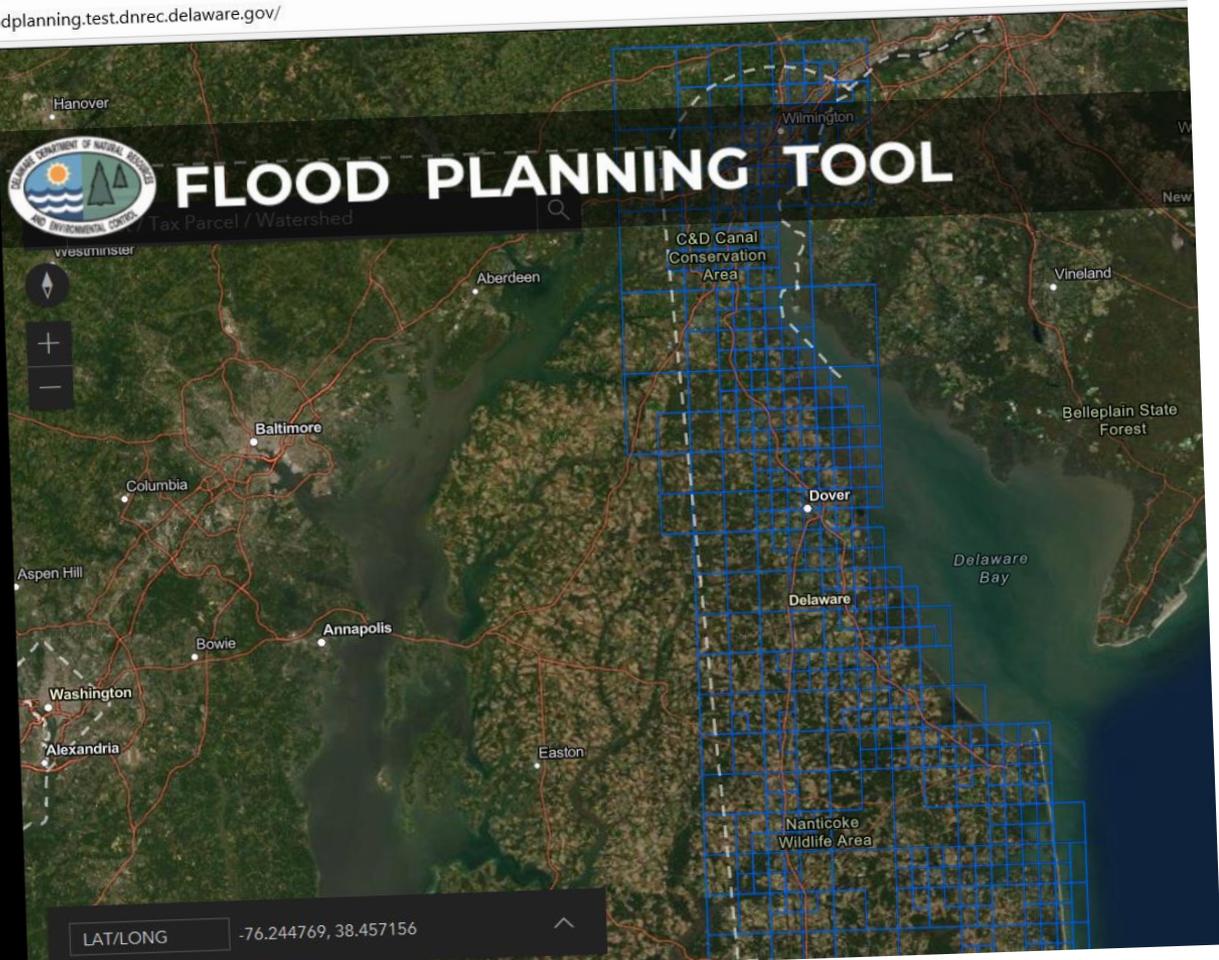
[Info](#) [Contact](#)

Welcome to the Delaware Flood Planning Tool

The Delaware Department of Natural Resources and Environmental Control (DNREC) Flood Tool is an interactive web map application. This tool is designed to aid you in researching your flood risk in the state of Delaware.



FLOOD PLANNING TOOL

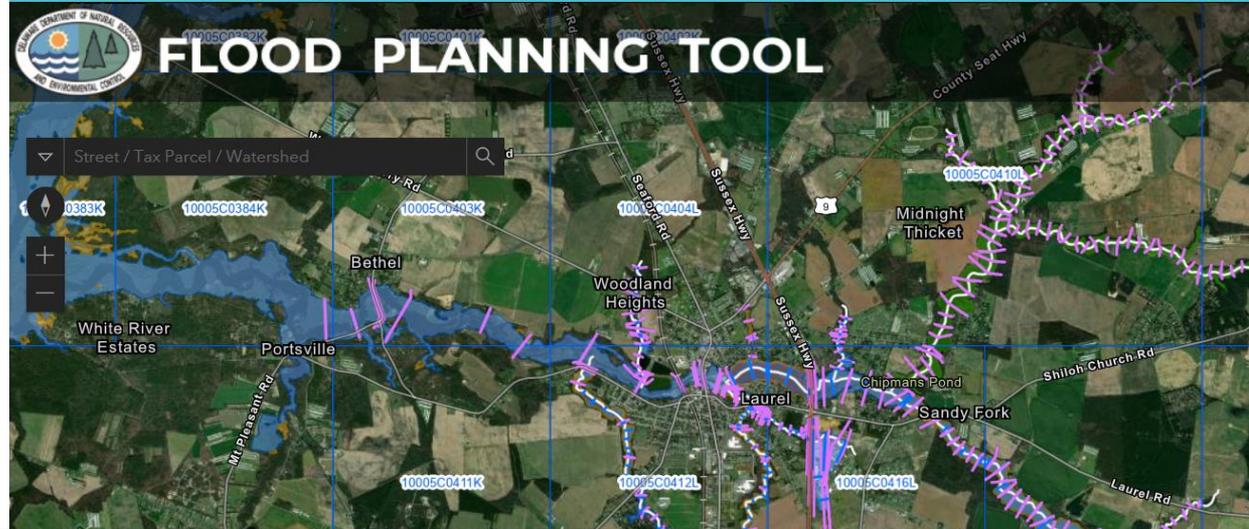


LAT/LONG

-76.244769, 38.457156



Hydraulic Model Download



Delaware The Official website of the First State

Home

Search

Legend

Results

n/a

FEMA Issued Flood Map:
10005C0412L

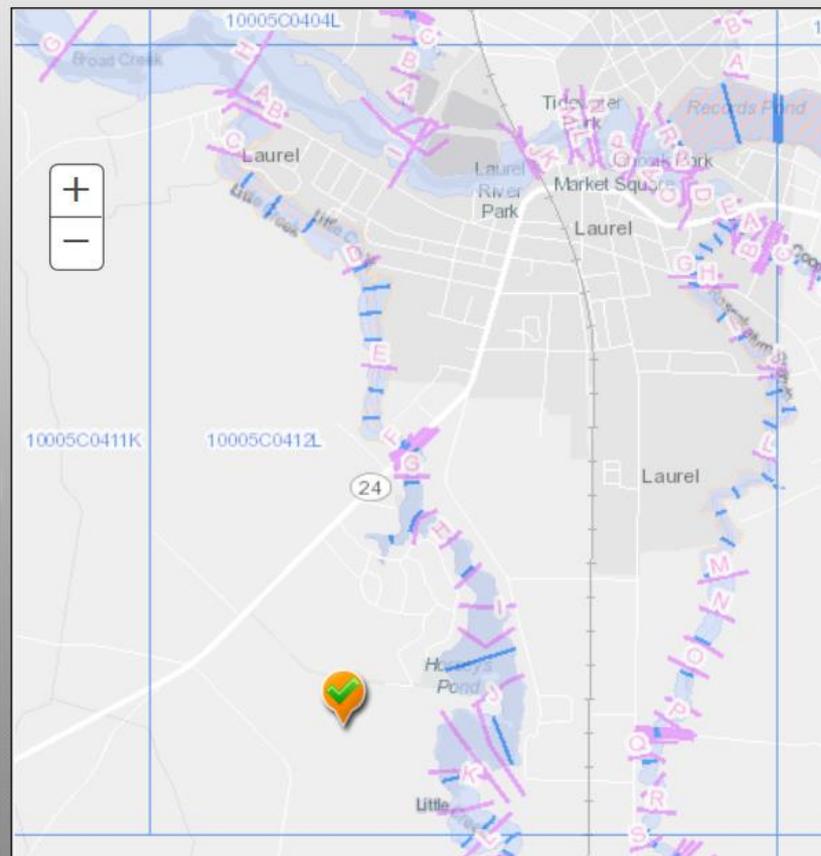
Effective Map Date:
6/19/2018

Watershed (HUC12):
Little Creek-Broad Creek

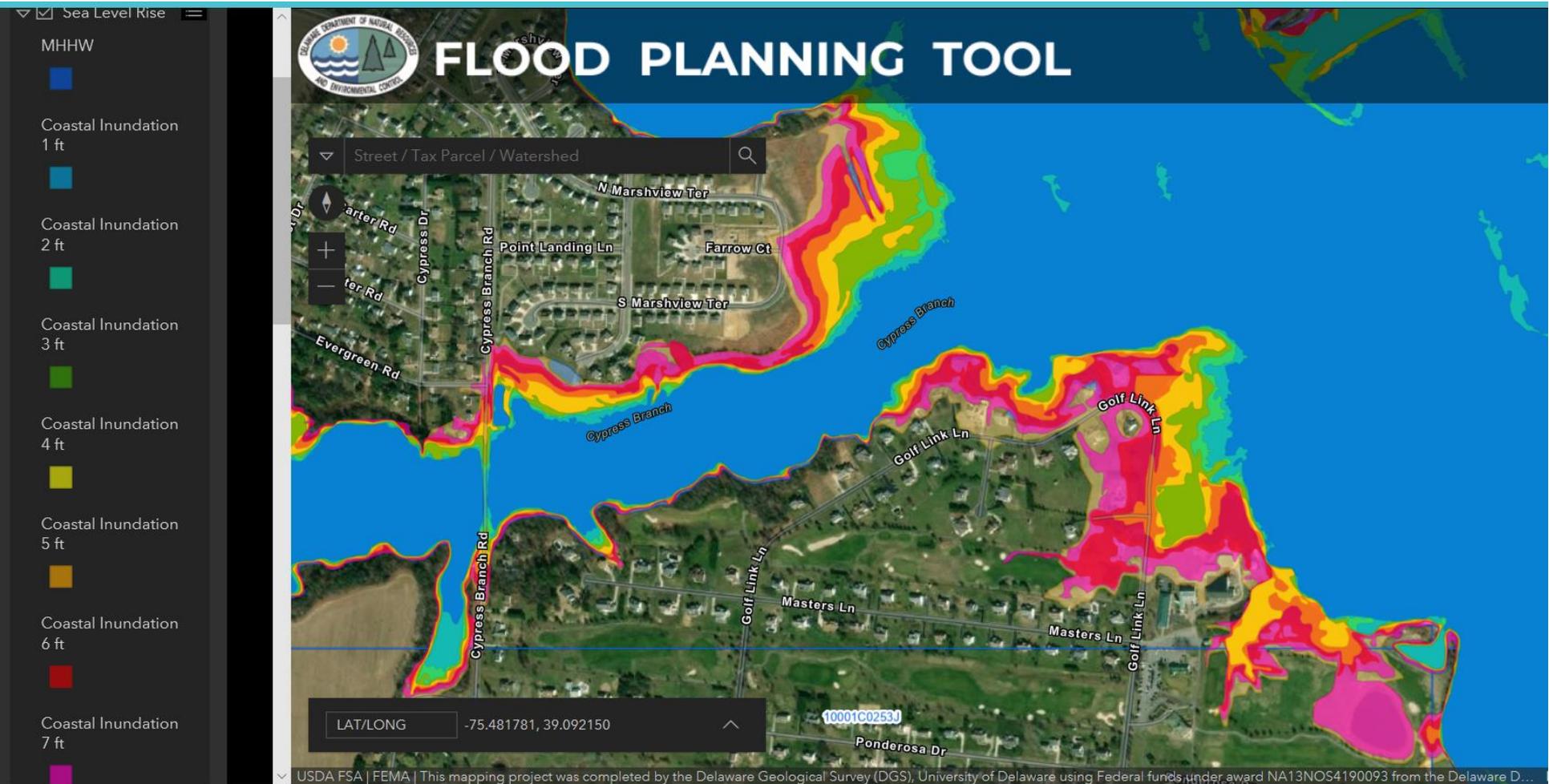
Download Model:

- Broad_Creek_Prong_1_STREAM_74.zip
- Broad_Creek_STREAM_65.zip
- Cooper_Branch_STREAM_77.zip
- Little_Creek_STREAM_70.zip
- Rossakatum_Branch_STREAM_76.zip

Print



Sea level rise inundation scenarios



First Street Foundation Flood Factor Tool

Find your home's Flood Factor

Past floods, current risks, and future projections based on peer-reviewed research from the world's leading flood modelers.



10 | 10

901 Pilottown Rd, Sussex County, Delaware



Summary

Score Map

Flood Depth Explained

Flood Risk Explorer

Environmental Changes

Personal Solutions

Area Risk Overview

10 | 10

EXTREME Flood Factor

901 Pilottown Rd, Sussex County, Delaware

FEMA Zone (est.): AE Flood insurance: required

Flood Factors across this area.

A property's Flood Factor is an indicator of its comprehensive flood risk, as determined by its **likelihood** of flooding and the potential **depth** of that flood.

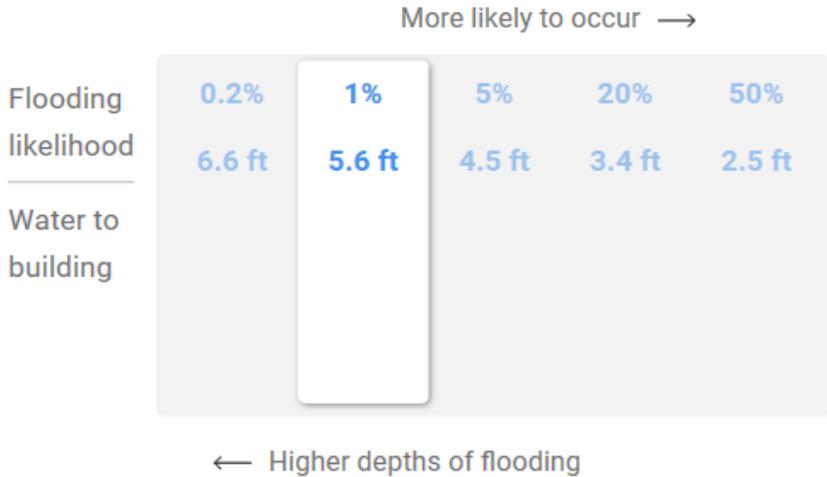
Properties with higher Flood Factors are more likely to flood, more likely to experience high floods, or both. [Learn more about Flood Factor scores.](#)

Filter properties by Flood Factor:

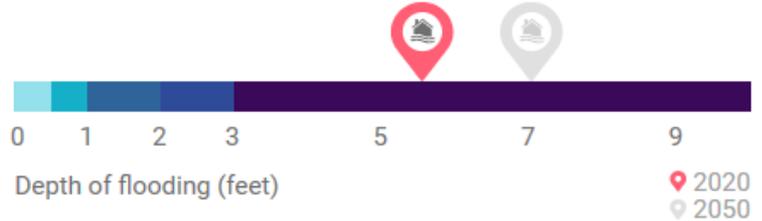
- All
- Minimal (1) Major (5-6)
- Minor (2) Severe (7-8)
- Moderate (3-4) Extreme (9-10)

This year In 15 years In 30 years

Select a projected flood risk for 2020:

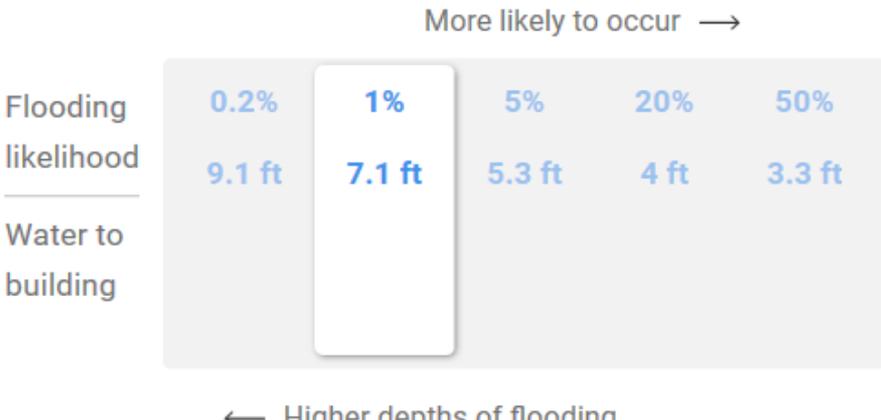


In 2020, it is **1% likely** that **5.4 feet - 5.8 feet** ft of water will reach the largest building on this property.

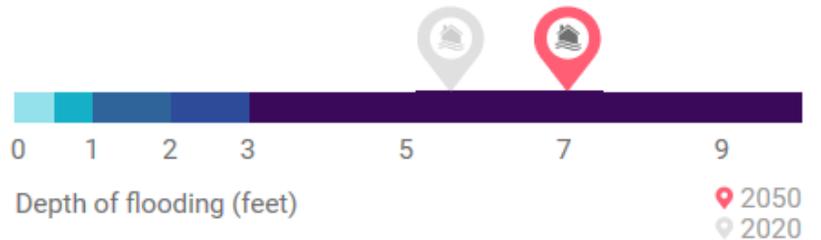


This year In 15 years **In 30 years**

Select a projected flood risk for 2050:



In 2050, it is **1% likely** that **6.7 feet - 7.6 feet** ft of water will reach the largest building on this property.



Flood Factor Model and Data

- Property-specific flood score, 1-10 scale
- Probabilistic modeling
 - fluvial, pluvial, coastal flood sources
 - 5-year, 100-year, 500-year
- Large national data set and model; provides aggregated, generalized data
- Based on 20-meter Digital Elevation Model
- Does not model roads and hydraulic structures
- Extent of model validation unclear

Usefulness:

- Risk awareness
- Planning
- General risk identification

Not Recommended for:

- Determinations for insurance and zoning decisions
- Setting a BFE for permitting
- Providing data for Letters of Map Change (LOMC)

Flood Factor vs. Flood Insurance Rate Map (FIRM) in Delaware

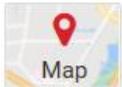
- Delaware has modernized, digital FIRM floodplain maps
- FIRM modeling incorporates local information and data
- DNREC works to improve FIRMs through Cooperating Technical Partner program
- Flood Factor modeling is done on a national scale; no local input or validation
- Spot check of Delaware locations shows reasonable Flood Factor results in some locations and questionable results in other locations

< Back

Bethany Beach, DE



Delaware > Sussex County > Bethany Beach > Surf Rd



5	6	2,236	9,601
beds	baths	sq ft	sqft lot

Commute Time [REDACTED] Surf Rd, Bethany Beach, DE 19930

FEMA Zone **VE** (est.) • Flood Factor 6/10 **NEW**

How much home can you afford?

Price Unavailable



[View up to 3 home estimates](#)

< Back

Seaford, DE

x



Delaware >

Sussex County >

Seaford >

Brinsfield Ave

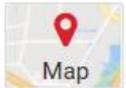
Brinsfield Ave

Seaford, Delaware

[View on Google Maps](#)

Off Market

Google



0.6

acres lot

Commute Time

Brinsfield Ave, Seaford, DE 19973

FEMA Zone AE (est.) • Flood Factor 1/10 **NEW**

How much home can you afford?

Est. **\$176,000**



[View up to 3 home estimates](#)

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< Back

Wilmington, DE

x

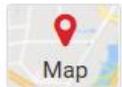


Delaware >

New Castle County >

Wilmington >

Ramblewood Dr



Map

3

beds

1.5

baths

1,242

sq ft

0.39

acres lot

Commute Time



Ramblewood Dr, Wilmington, DE 19810



FEMA Zone X (est.) • Flood Factor



8/10

NEW

Be Ready to Buy. How Much Can You Borrow?

Est. **\$294,800**



View up to 3 home estimates

Flood Risk Information



To help you make informed decisions about this property, we provide two independent flood risk assessments:

FEMA



Outside Special Flood Hazard Area and indicates **moderate to low risk**.

The FEMA flood risk model is based on historic flood patterns and covers a general area, not an individual property. It's also used to determine insurance and building code requirements.

[Learn more about FEMA flood maps and zones and what they are used for](#)

Flood Factor



Flood risk is **increasing** as sea levels rise and weather patterns change.[†]

Flood Factor identifies the past, present, and future flood risk for a home by identifying risks from rain, rivers, tides and storm surge using advanced modeling techniques.

[Take a closer look at this property's Flood Factor and risk details](#)

[Learn about the differences between FEMA and Flood Factor assessments](#)

[More on how to prepare and protect your home](#)

Flood Insurance

Since this property is located in **FEMA Zone X (est.)***, flood insurance is likely **not federally required**, but you may want to consider purchasing for added protection. Some lenders may require flood insurance.

[†]Flood risk data is provided by Flood Factor™, a product of First Street Foundation®. The Flood Factor model is designed to approximate flood risk and not intended to include all possible risks of flood.

* Most probable FEMA flood zone as estimated by MassiveCert, Inc.



FEMA

The Federal Emergency Management Agency (FEMA) creates flood maps showing potential risks based on historic flood patterns and flood risk is represented by different zone types. These maps are used to determine flood insurance and building code requirements.

Find your home's Flood Zone

- Flood risk ratings are represented by zones, are not specific to individual properties
- Assumes entire zone is equally at risk, does not differentiate by flood depth
- Historic flood patterns assessed
- Legal standard used by banks, lenders and insurance companies

Flood Factor™

The First Street Foundation is a nonprofit organization that created Flood Factor™ in an effort to provide accurate, publicly available flood risk assessments for individual properties. Because Flood Factor™ shows the risk of flooding from rain, rivers, tides, and storm surge, and forecasts how these risks will change over time because of the environment, a home's Flood Factor™ often differs from its FEMA flood zone designations.

Find your home's Flood Factor™

- Accurate, property-level flood risk information
- Current and future environmental changes factored in
- Considers precipitation as an additional risk
- Historic flood patterns assessed

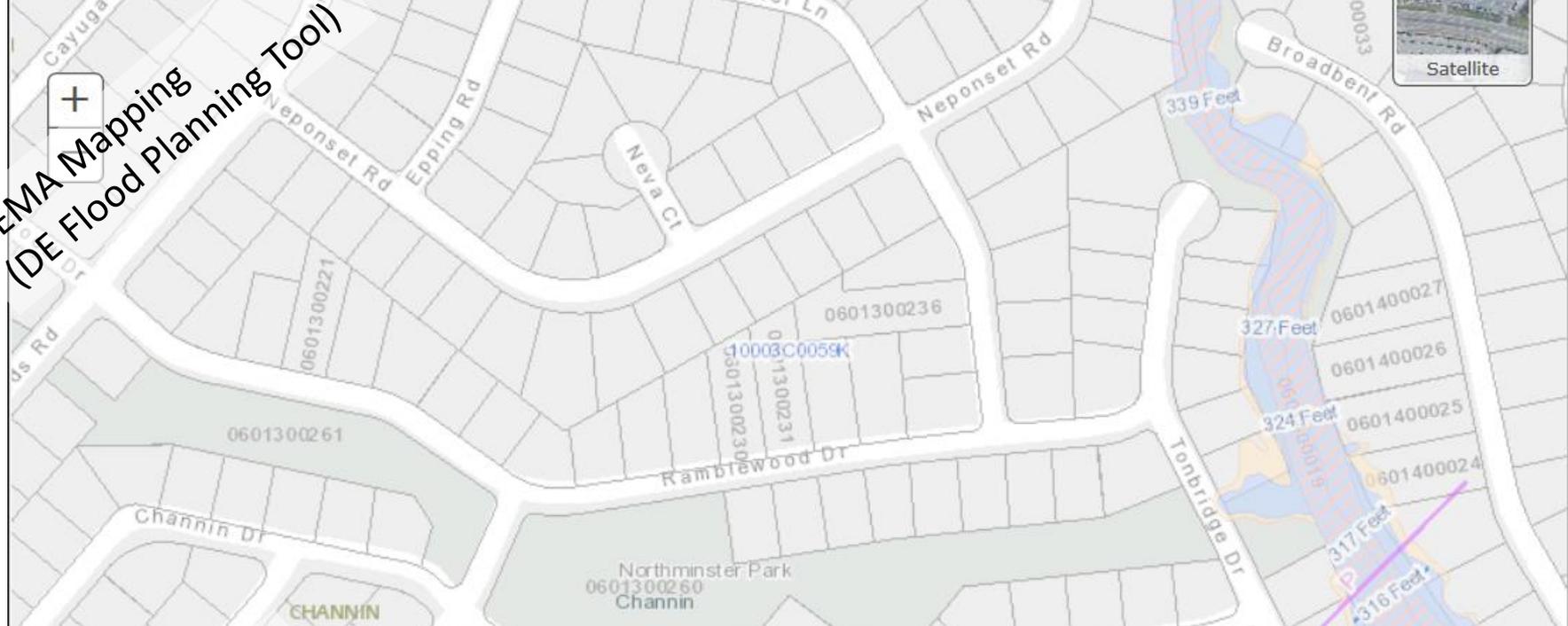
Thanks! Questions?

Gina.Tonn@Delaware.gov

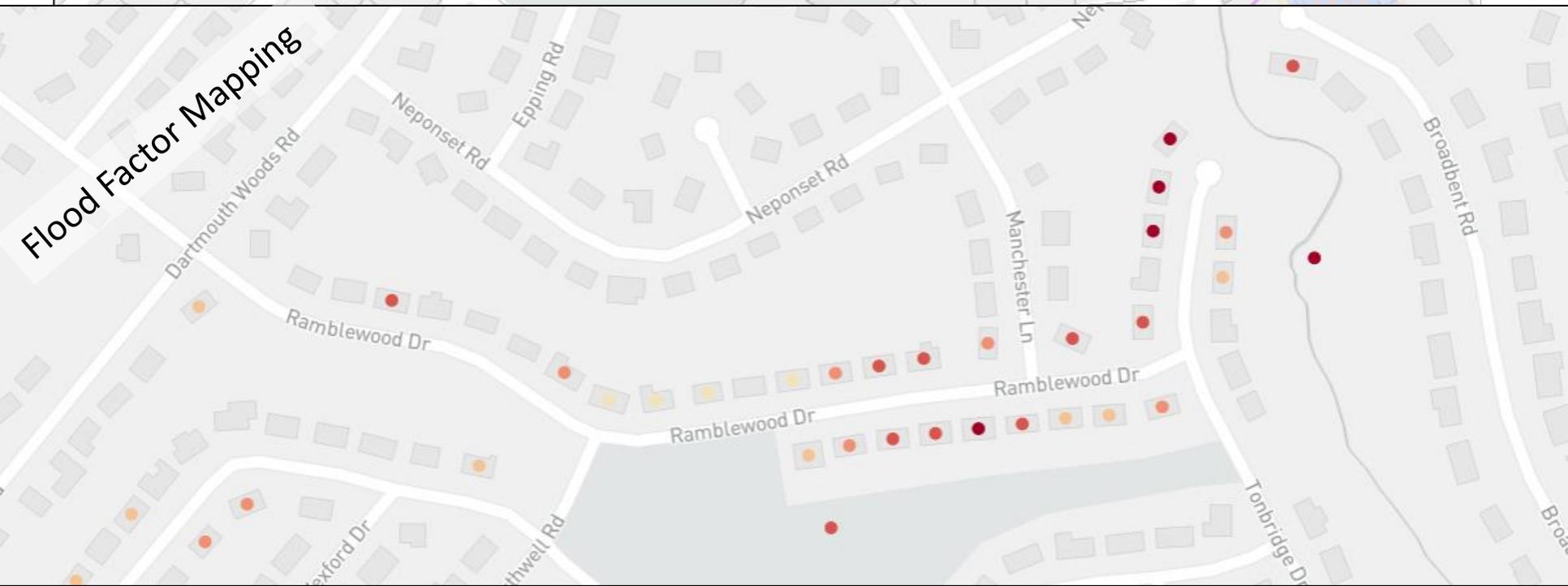
302-739-9921

Delaware Flood Planning Tool - <http://de.gov/floodplanning>

FEMA Mapping (DE Flood Planning Tool)



Flood Factor Mapping



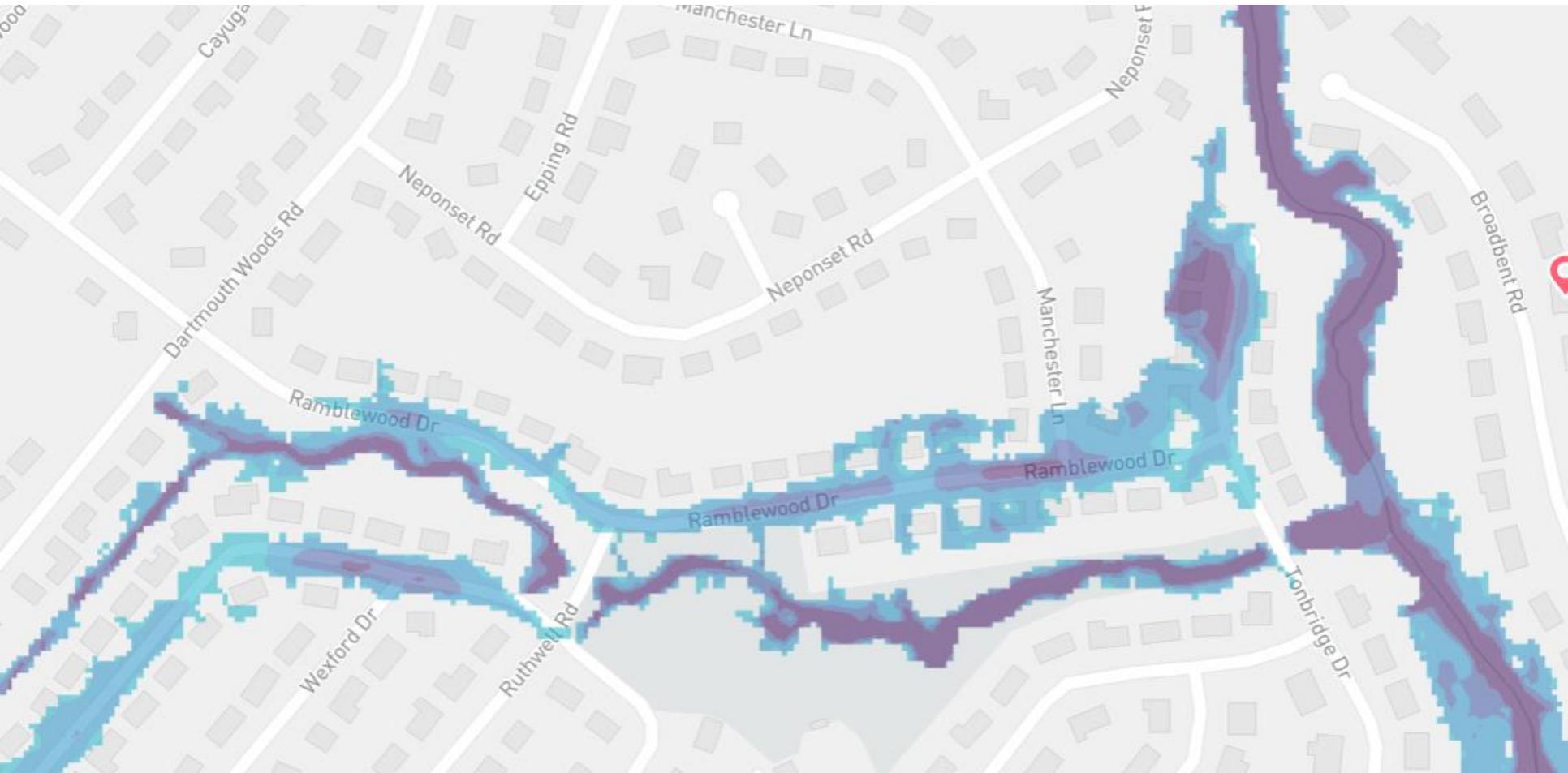
In 2020, it is **1% likely** that **0 ft** of water will reach the largest building on this property.



0 0.5 1 2 3+

Depth of flooding (feet)

📍 2020
📍 2050



	19958 View page	Sussex County View page	Delaware View page
Risk status ⓘ	Increasing	Increasing	Increasing
This year # properties at risk ⓘ	4,838	41,422	58,517
In 30 years # properties at risk ⓘ	7,114	52,435	71,189
% Change in properties at risk ⓘ	 +47%	 +26.6%	 +21.7%

Flood Factor and FEMA

FEMA flood maps identify over 1.1 million miles of flood hazard areas, and while the maps can provide detailed information for homeowners on their flood risks, they are not available everywhere. Flood Factor's national flood model shows that flood risk is more widespread in the United States, with over 24 million properties at risk over the next 30 years. Flood Factor also includes flood risk from urban stormwater flooding, storm surge and future conditions like sea level rise.