

THE FIRST STATE WATERMARK



Delaware's Floodplain Management Newsletter

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FEBRUARY FLOODS HIT SUSSEX COUNTY STORM WORST SINCE 1962 IN MANY AREAS; RECOVERY CONTINUES

The final days of January and first week of February saw two coastal storms strike Delaware causing widespread damage and leading to a recovery effort which is continuing into the summer.



The view from the Addy Sea in Bethany Beach early on February 4, 1998

FEMA set up a Disaster Field Office in Bethany Beach on February 13th after Sussex County was declared a disaster area by President Clinton. FEMA began a series of Mitigation projects which were supported by State and local officials.

Elevation Reference Marks

In several parts of the County, residents have long maintained that elevation certificates were expensive or difficult to obtain. Several surveyors have noted that large geographical areas are not

covered by published elevation benchmarks. A combined effort by FEMA, the Delaware DNREC, and the Delaware Geological Survey led to the setting of 17 new elevation reference markers.

A preliminary report showing the location and elevation of these benchmarks is currently available from the DNREC Division of Soil and Water Conservation by contacting Michael Powell, at (302) 739-4411.

High Water Mark Survey

Major storms present excellent opportunities to check the accuracy of Flood Insurance Rate Maps and other flood management tools. While high water marks were still visible, FEMA contracted with Theodore Simpler, a local surveyor, to survey these high water marks to the sea level datum (NGVD 1929).

Here is a summary of these high water marks:

| <u>Location</u> | <u>Peak Stage</u> |
|---|-------------------|
| Dewey Beach (Read St., Rehoboth Bay) | 5.52 |
| Lewes/Rehoboth Canal near Savannah Rd. | 6.15 |
| Slaughter Beach (Cedar Creek @ Route 36 | 5.86 |
| Assawoman Bay (S. Bethany, avg. of 2 marks) | 4.01 |
| Assawoman Bay (Fenwick, avg. of 2 marks) | 4.12 |
| White's Creek near Ocean View | 5.91 |
| Indian River Bay nr. Holt's landing | 5.74 |
| Vines Creek @ Route 26 | 6.57 |
| Indian River nr. Oak Orchard | 6.23 |
| Bookhammer Landing/Joy Beach | 5.18 |
| Old Landing | 5.38 |
| Milton (Service Star hardware store) | 5.95 |
| Henlopen Acres Marina | 6.21 |

(all elevations are in NGVD 1929 datum)

Comparison to previous storms

Many longtime residents of flooded communities which abut Indian River or Rehoboth Bay reported that the storm of February 1998 was the highest since March, 1962. Many reported that the water level in the 1962 storm exceeded that in the February storm by 12 to 18 inches.

The following chart compares a FEMA high water from the 1998 storm with previous storm elevations at Read Street on Rehoboth Bay in Dewey Beach.

| | |
|--|-------------|
| 03/08/1962 (avg. of two water marks) | 6.99 |
| 02/04/1998 | 5.52 |
| 10/31/1991 | 4.54 |
| 12/12/1992 | 3.89 |
| 01/04/1992 | 3.82 |
| Source: Delaware Geological Survey Open File Report No. 37 | |

In most locations, the storm of February, 1998 exceeded 20-year flood heights but fell short of 50-year flood heights. Put another way, these water levels have a 2%-5% chance of being equaled or exceeded in any given year.

Residential Structure Elevation Surveys

FEMA has made flood mitigation funding available to the State of Delaware through two grant programs. The *Hazard Mitigation Grant Program* is available because of the disaster declaration and is taxpayer funded.



Water had been three feet deep in this home near Slaughter Beach before this photograph was taken

The *Flood Mitigation Assistance Program* is an annual grant funded through the National Flood Insurance Program and can only address insured buildings.

With input from local officials, Delaware's Hazard Mitigation Team has decided to make the elevation of highly flood-prone properties the top priority for these grants. In order to help determine whether any structures may qualify for a mitigation grant, FEMA deployed several surveyors to Sussex County and completed several hundred elevation certificates. They worked primarily where municipal, County officials, or civic associations identified flooded properties.

These elevation certificates confirm that many homes in areas such as Fenwick Island, South Bethany, Dewey Beach, Lewes, Slaughter Beach, Oak Orchard and elsewhere are subject to flood damage from the 20-year flood stage. This flood risk information is crucial because in order to qualify for these grants, properties must be proven to have a severe and frequent flood risk. Communities are in the process of working with the owners of such properties to determine interest in participation in one of these grants, which require a property owner cost-share of at least 25%.

Increased Cost of Compliance Coverage

Community officials take note: the "Substantial Damage" provisions of your floodplain regulations must be enforced for this coverage to be available!

ICC coverage is now a part of every NFIP policy. ICC pays for the cost of complying with community floodplain management regulations when a structure is substantially damaged and therefore must be brought into compliance. Previously, NFIP insurance only paid for flood damage, not elevating.

Already, owners of heavily damaged structures have filed claims to have their homes raised or otherwise retrofitted. Permitting officials need to be aware of how the ICC claims process works.

Communities generally define "Substantial Damage" by one of two ways:

1. Damage where the cost to repair equals or exceeds 50% of the pre-damage market value of the structure. (most places use this definition)

2. Damage from one or more events in which the cumulative cost of repairs equals or exceeds 50% of the pre-damage market value of the structure.

Property owners are paying up to \$75 for this coverage and will want to use it to elevate or otherwise retrofit their home or business. ICC claims must be accompanied by a letter from a local building or zoning permitting official declaring that the property is substantially damaged and that the property must be brought into compliance with floodplain management regulations.

Remember, however, that all substantially damaged buildings must be brought into NFIP compliance whether insured or not.

Letters of Map Amendment/Revision

The demand for LOMA/LOMR's continues to increase dramatically. Some factoids:

Number of LOMAs issued in Delaware:

- Before 1990 - 2
- 1990-1994 - 27
- 1995-1997 - 45

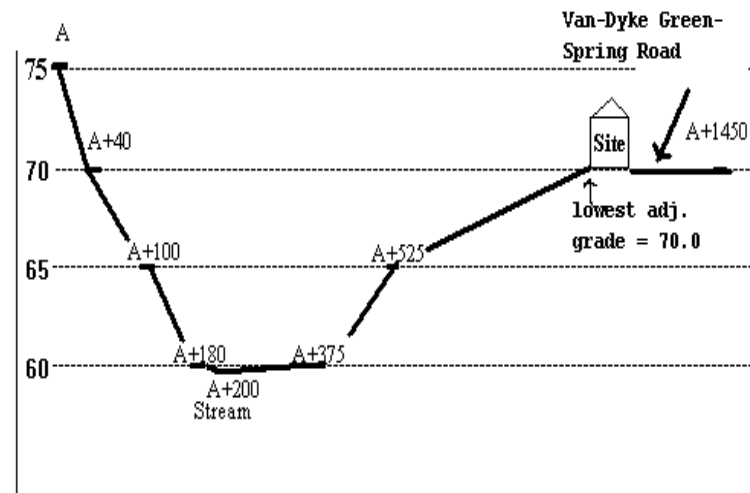
Letter of Map Amendment is just that - a letter from FEMA amending the effective Flood Insurance Rate Map. In most cases, the purpose of the letter is to take a structure (which is shown to be in a Special Flood Hazard Area) and legally remove it from the Special Flood Hazard Area. The LOMA is an important document because it carries the same weight as, in fact it becomes part of, the Flood Insurance Rate Map.

A structure will generally qualify for a LOMA when it is built on natural ground which is above the Base Flood Elevation.

Zone A (No Base Flood Elevation)

Over time, FEMA has clarified the information which is necessary to process a request for LOMA in Zone A. FEMA now generally requires that

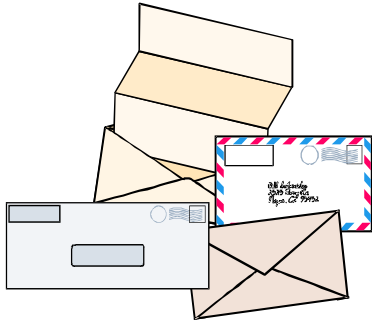
requests for LOMA's in Zone A (no BFE) include a cross-section which extends from the structure in question, includes the lowest adjacent grade to the building, extends through the source of flooding and extends up the adjacent bank to the elevation of the structure. The figure below shows a typical cross-section which resulted in the structure being removed from Zone A and placed in Zone X by a LOMA.



These cross sections typically need only a few elevation points, as necessary to capture major elevation breaks, and **do not need to be tied into a sea level datum**. The purpose of the cross section is to establish a base flood elevation relative to the house and whether the lowest adjacent grade to the house is above that "on-site" BFE.

UPCOMING EVENTS

- October 4, 1998, 11:00 a.m. to 5:00 p.m. University of Delaware, Lewes, **Coast Day '98** - marine exhibits, ship tours, live music. Free admission, \$2 parking.
- October 21, 1998, 9:00 a.m. to 1:00 p.m. Virden Center, Lewes, **National Flood Insurance Program** seminar for Insurance Agents.



Alternatives to "snail mail":

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