

Mount Laurel Township Interdisciplinary Team Review

For

**Flood Damage Area in Vicinity of
North Branch Pennsauken Creek**

February 9, 2007

for

Mount Laurel Township

**With Assistance from the USDA Natural Resources
Conservation Service**

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Attendees

Thomas Cappetti, Jr., Planner, and Jan Siegel of Alaimo Group,
Township Engineer
Natural Resources Conservation Service (NRCS)
Natasha Brown, District Conservationist, NRCS
Betsy Clark, Wildlife Biologist, NRCS
Michael Mirage, Engineer, NRCS
ShayMaria Silvestri, GIS Specialist/Geologist, NRCS
Greg Westfall, Water Resource Planner, NRCS

Introduction

The above people met at the Mount Laurel Township Municipal Building and reviewed past work done by Alaimo Group, Township Engineer, regarding a longstanding flood problem in the Ramblewood section of the North Branch of the Pennsauken Creek watershed. Tom Cappetti, Jr. of Alaimo Group reviewed several maps showing the extent and degree of flooding in this section during the July 12, 2004 flood. There were approximately six homes that suffered major damages (flooding on first floor) and approximately forty homes that suffered minor damages (flooded basements, yard flooding). Approximately 80 homes were affected by their inaccessibility to fire and rescue services due to flooding over Ramblewood Parkway (estimated to be approximately 4 feet deep) at the North Branch Pennsauken Creek crossing.

Historic Flooding and Losses

According to the Mount Laurel Flood Insurance Study and the National Flood Insurance Program flood claims database, the flood history here shows historic floods as follows:

September 1, 1940
August 1971
July 14, 1994
July 12, 2004

Historic flooding has been associated with various types of precipitation events. The September 1, 1940 event was the result of a highly localized storm arising

from an unusual combination of climatic factors. The August 1971 event is believed to be associated with Hurricane Doria. The July 12, 2004 flood was also associated with an extreme rain event. According to Tom Cappetti, Jr., the 2004 flood event has been described as a 100 year event.

As of January 23, 2007, there were 282 National Flood Insurance Program (NFIP) policies in force in Mount Laurel with a value of \$69,206,400. There have been 37 losses paid for a total of \$379,739 with two substantial damage claims since the beginning of the NFIP in 1978.

A repetitive flood loss property is one where two or more claims have been made to the National Flood Insurance Program (NFIP). According to the FEMA NFIP flood claims database there are five repetitive flood loss properties in Mount Laurel Township. One of these properties is located in the Ramblewood section adjoining the North Branch of the Pennsauken Creek while the remaining four properties are located in the Schoolhouse Lane, Country Court, Beechwood Drive and Heather Drive vicinity adjoining the main stem of Pennsauken Creek.

Flood Mitigation Alternatives Considered

According to Thomas Cappetti, Jr. the drainage area of the North Branch of Pennsauken Creek is approximately six square miles (3840 acres) to the New Jersey Turnpike and another 1.5 square miles (960 acres) downstream of the New Jersey Turnpike before entering the main stem of Pennsauken Creek. He noted that the watershed is approximately 90 percent developed with a drainage area that includes both Evesham Township at the upstream portion of the watershed and Mount Laurel in the downstream portion.

Thomas Cappetti, Jr. reported that there have been a number of alternatives to reduce flood damages explored here. Options that have been considered include sediment removal for a 1.9 mile section of the Creek by channel dredging, a series of check dams across the main stem of the North Branch of Pennsauken Creek and installation of a large retention basin in the existing location of the Ramblewood Country Club Golf Course. The channel dredging was surveyed and mapped, and the necessary DEP permits (Stream Encroachment, now in the second year of its five year approval) obtained with a cost estimate of approximately \$5 million. The group reviewed a map showing multiple spoil locations for the proposed sediment removal. Alaimo Group had estimated that the sediment would again buildup in the channel to 3+ feet over a 10 year period. Dredging of the stream and cleaning out storm drains would help alleviate flooding due to smaller storm frequencies. The channel dredging and check dam alternatives were found to not have a significant impact on downstream flooding due to major flood events as described above.

The Ramblewood County Club Golf Course retention basin alternative was seen as unlikely as there is litigation regarding the golf course owner attempting to develop the property for residential uses. The concept of regional detention basins had been considered but was determined to be not practical due to the high water table in the vicinity thus not allowing for substantial storage volume. Another alternative considered was the installation of a dam in the Township park upstream of the flood damage area. This alternative has seen local opposition due to a perceived loss of the use of the Township park. A suggestion was made to consider some type of dry dam arrangement to temporarily store flood water at that location and still have the use of some or all of the Township park during non-flood periods.

The group went to Haines Court and discussed the problem with flooding in the basements of several homes that are not adjoining the Ramblewood Country Club Golf Course and were not flooded by overland flows. It is believed that the flooding was due to a backup through the existing public stormwater system. A suggestion was made to investigate the feasibility of installation of backflow devices on stormwater outfalls as long as there is sufficient water storage for internal drainage.

No analysis has been done to date to determine the feasibility of non-structural measures that would reduce flood damages. These measures could include voluntary buyouts, structure elevations or relocations.

On-Going Mitigation Planning

Tom Cappetti, Jr. and Jan Siegel noted that the Township had attempted to apply for state funding for flood mitigation measures under the voter-approved November 2003 Bond Act, however, the Township did not have an existing plan for flood mitigation.

Greg Westfall noted that there are only 33 municipalities state-wide that have FEMA-approved Flood Mitigation Plans. Mount Laurel does not yet have one. He encouraged the Township to participate in a current effort by Burlington County Office of Emergency Management to develop a county-wide Flood Mitigation Plan. Flood Mitigation Plans target repetitive flood loss properties for one of several alternatives including voluntary buyouts, structure elevations or relocations.

The New Jersey State Office of Emergency Management is encouraging municipalities to develop All Natural Hazard Plans which would include flooding as well as other natural hazards. Only two municipalities (Atlantic City and Wayne Township) in New Jersey have these plans. The All Natural Hazard Plan makes a municipality eligible for a larger source of funding than the Flood Mitigation Plan alone does.

Recommendations

There are several things that the municipality and individual property owners could do as follows:

1. Municipality develop an alternate access route to provide emergency services (fire and rescue) during flood periods to those individual properties which are inaccessible to these public service during a flood.
2. Property owners obtain and maintain flood insurance coverage.
3. Property owners have their electrical and phone utility entrances moved to the first or higher floors so that they are operable after a flood.
4. Property owners avoid improvements in basements and storing valuable contents in basements.
5. Municipality install flapgates on all stormwater outfalls to prevent flood waters from backing up into higher ground.
6. Municipality become a participant in the Community Rating System by doing some or all of 18 different types of activities to reduce flood vulnerability, to reduce flood losses and reduce individual property owner flood insurance premiums. For more information and possible participation contact the State NFIP Coordinator John Moyle or Tom Brett and check out the following websites:

<http://www.fema.gov/business/nfip/crs.shtm> or
<http://training.fema.gov/EMIWeb/CRS/>

7. Municipality currently has a flood damage prevention ordinance (See Appendix), approved in 1981 and amended in 1987,1989 and 1999, that should continue to be enforced so as to protect the continued eligibility of its residents to participate in the National Flood Insurance Program.
8. Municipality conduct a property owner survey to identify those structures (by street address) as to their participation in the NFIP as well as who, where, when and how much flood loss (in dollars) has occurred.
9. Municipality conduct an engineering survey of the first floor and basement low openings of structures located in or near the flood zone to provide the necessary information for development of various mitigation measures including flood warning system and non-structural measures such as elevating, relocating or buying out flood-prone structures.
10. Following completion of a flood mitigation plan, the municipality formally request funding through one or more of several programs that would provide assistance to reduce flood damages. These programs generally require that there be a minimum 25 percent local match. Participation can occur by contacting your County Emergency Management Coordinator.
11. Municipality make a written request to the NRCS State Conservationist regarding technical and cost share assistance to local units of government

(State, County and local), as funding permits, for watershed planning and implementation for flood damage reduction through the Watershed Protection and Flood Prevention Act (PL83-566). There are over a dozen watershed planning and implementation projects in New Jersey. One example is the Assunpink Creek Watershed Project which protects the City of Trenton and Hamilton Township in Mercer County from flooding. Further information can be found at:

<http://www.nj.nrcs.usda.gov/programs/watersheds/index.html>

Initial contact should be made with the local District Conservationist Natasha Brown. Her contact information is given below.

Future Contacts

State National Flood Insurance Program (NFIP) Coordinator

John Moyle
Flood Plain Management Section
New Jersey Department of Environmental Protection
501 East State Street
Trenton, NJ

Phone: 609-292-2296
E-mail: john.moyle@dep.state.nj.us

Community Rating System Contact

Tom Brett
1327 Old Meadow Road
Pittsburgh, PA 15241
Phone: 412-221-4679
E-mail: tbrett@iso.com

Flood Mitigation Assistance Program, Hazard Mitigation Grant Program, Pre-Disaster Mitigation Program

Mr. Kevin Tuno
Burlington County OEM
P.O. Box 6000
One Academy Drive
Westampton, NJ 08060

Phone – 609-518-7200

Fax - 609-518-7214
E-mail – ktuno@co.burlington.nj.us

County Water Resource Coordinator

Identify funding sources for both flood mitigation planning and implementation.

Ms. Gina Berg
Water Resource Coordinator
Resource Conservation
Land Use Office
1900 Briggs Road
Mount Laurel, NJ 08054

Phone – 856-642-3850
E-mail - gberg@co.burlington.nj.us

NRCS District Conservationist

Ms. Natasha Brown
District Conservationist
USDA Natural Resources Conservation Service
1971 Jacksonville-Jobstown Road
Columbus, NJ 08022

Phone – 609-267-1639 X3
Fax - 609-261-3007
E-mail - natasha.brown@nj.usda.gov

References

Camilli, Danielle. Sept. 24, 2006. Flooding Frustrates Many in Mount Laurel.
Burlington County Times

Federal Emergency Management Agency. September 22, 1999. Flood Insurance Study. Township of Mount Laurel, New Jersey, Burlington County. Washington, DC. 21pp. plus Flood profiles and maps.

Federal Emergency Management Agency. National Flood Insurance Program Flood Claims Database. Mount Laurel Township, Burlington County, New Jersey.

Appendix

Mount Laurel Township Flood Damage Protection Ordinance

Chapter 83: FLOODPLAIN PROTECTION Editor's Note: Section 1 of Ord. No. 1984-13, adopted 5-7-1984, amends this chapter to delete the words "Planning Board" wherever they may appear and to substitute the words "appropriate reviewing agency" therefor. This change will be made during the course of normal supplementation. [HISTORY: Adopted by the Township Council of the Township of Mount Laurel 3-2-1981 as Ord. No. 1981-1. Amendments noted where applicable.]

GENERAL REFERENCES

Site plan review — See Ch. 124.

Subdivision of land — See Ch. 138.

Zoning — See Ch. 154.

ARTICLE I Authorization; Findings of Fact; Purpose and Objectives

§ 83-1. Statutory authority.

The Legislature of the State of New Jersey has delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety and general welfare of its citizenry.

§ 83-2. Findings of fact.

- A The flood hazard areas of the Township of Mount Laurel are subject to periodic inundation . which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.
- B These flood losses are caused by the cumulative effect of obstructions in areas of special flood . hazards which increase flood heights and velocities and, when inadequately anchored, damage uses in other areas. Uses that are inadequately floodproofed, elevated or otherwise protected from flood damage also contribute to the flood loss.

§ 83-3. Purpose.

It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

- A To protect human life and health.
- B To minimize expenditure of public money for costly flood control projects.
- C To minimize the need for rescue and relief efforts associated with flooding and generally . undertaken at the expense of the general public.
- D To minimize prolonged business interruptions.
- E To minimize damage to public facilities and utilities such as water and gas mains, electric,

- . telephone and sewer lines, streets and bridges located in areas of special flood hazard.
- F To help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood hazard.
- G To ensure that potential buyers are informed that property is in an area of special flood hazard, said information to be obtained by the buyer.
- H To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

§ 83-4. Methods of reducing losses.

In order to accomplish its purposes, this chapter includes methods and provisions for:

- A Restricting or prohibiting uses which are dangerous to health, safety and property due to water or erosion hazards or which result in damaging increases in erosion or in flood heights or velocities.
- B Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction.
- C Controlling the alteration of natural floodplains, stream channels and natural protective barriers which help accommodate or channel floodwaters.
- D Controlling filling, grading, dredging and other development which may increase flood damage.
- E Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.

ARTICLE II Definitions

§ 83-5. Definitions.

- A Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application.
- B As used in this chapter, the following terms shall have the meanings indicated:
 - APPEAL — A request for a review of the Construction Official's interpretation of any provision of this chapter or a request for a variance.
 - APPROPRIATE REVIEWING AGENCY — A development permit sought pursuant to this chapter in conjunction with any other developmental approval, such as but not limited to subdivision, site plan or variance approval, shall be within the jurisdiction of either the Planning Board, Township Council or Zoning Board of Adjustment determined by whichever has jurisdiction over the other aspects of the development. It is the intention of this provision to consolidate all matters before one reviewing agency. In the event that no other developmental approval is requested or required and only a development permit pursuant to this chapter is sought, the "appropriate reviewing agency" shall be the Planning Board. [Added 5-7-1984 by Ord. No. 1984-13]
 - AREA OF SHALLOW FLOODING — A designated AO Zone on the Flood Insurance Rate Map (FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident.
 - AREA OF SPECIAL FLOOD HAZARD — The land in the floodplain within a community subject to a one-percent or greater chance of flooding in any given year.
 - BASE FLOOD — The flood having a one-percent chance of being equaled or exceeded in any

given year.

BASEMENT — Any area of the building having its floor subgrade (below ground level) on all sides. [Added 8-8-1987 by Ord. No. 1987-28]

BREAKAWAY WALL — A wall that is not part of the structural support of the building and is intended, through its design and construction, to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or supporting foundation system. [Added 8-8-1987 by Ord. No. 1987-28]

DEVELOPMENT — Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials located within the area of special flood hazard. [Amended 9-13-1999 by Ord. No. 1999-9]

ELEVATED BUILDING — A nonbasement building which is built, in the case of a building in an area of special flood hazard, to have the top of the elevated floor or, in the case of a building in a coastal high-hazard area, to have the bottom of the lowest horizontal structural member of the elevated floor elevated above the ground level by means of piling, columns (posts and piers), or shear walls parallel to the flow of the water and which is adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In an area of special flood hazard, "elevated building" also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of floodwaters. In areas of coastal high hazard, "elevated building" also includes a building otherwise meeting the definition of "elevated building" even though the lower area is enclosed by means of breakaway walls. [Added 8-8-1987 by Ord. No. 1987-28]

FLOOD OR FLOODING — A general and temporary condition of partial or complete inundation of normally dry land areas from:

(
1 The overflow of inland or tidal water; and/or
)

(
2 The unusual and rapid accumulation or runoff of surface waters from any source.
)

FLOOD INSURANCE RATE MAP (FIRM) — The official map on which the Federal Insurance Administration has delineated both the areas of special flood hazard and the risk premium zones applicable to the community.

FLOOD INSURANCE STUDY

THE OFFICIAL REPORT PROVIDED IN WHICH THE FEDERAL INSURANCE ADMINISTRATION HAS PROVIDED FLOOD PROFILES, AS WELL AS FLOOD BOUNDARY — Floodway Map and the water surface elevation of the base flood.

FLOODPLAIN MANAGEMENT REGULATIONS — Zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance and erosion control ordinance) and other applications of the police power. The term describes such state or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction. [Added 9-13-1999 by Ord. No. 1999-9]

FLOODWAY — The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water

surface elevation more than 0.2 foot.

HABITABLE FLOOR[Repealed 8-8-1987 by Ord. No. 1987-28]

HISTORIC STRUCTURE[Added 9-13-1999 by Ord. No. 1999-9]:

- (Listed individually in the National Register of Historic Places (a listing maintained by the
1 Department of Interior) or preliminarily determined by the Secretary of the Interior as
) meeting the requirements for individual listing on the National Register;
- (Certified or preliminarily determined by the Secretary of the Interior as contributing to the
2 historical significance of a registered historic district preliminarily determined by the
) Secretary to qualify as a registered historic district;
- (
3 Individually listed on a state inventory of historic places in states with historic preservation
) programs which have been approved by the Secretary of the Interior; or
- (Individually listed on a local inventory of historic places in communities with historic
4 preservation programs that have been certified either;
) (
- a By an approved state program as determined by the Secretary of the Interior; or
)
- (
- b Directly by the Secretary of the Interior in states without approved programs.
)

LOWEST FLOOR — The lowest floor of the lowest enclosed area, including the basement. An unfurnished or flood-resistant enclosure, usable solely for the parking of vehicles, building access or storage in an area other than a basement is not considered a building's lowest floor, provided that such enclosure is not built so to render the structure in violation of other applicable nonelevated design requirements. [Added 8-8-1987 by Ord. No. 1987-28]

MANUFACTURED HOME — A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle." [Added 8-8-1987 by Ord. No. 1987-28; amended 9-13-1999 by Ord. No. 1999-9]

MANUFACTURED HOME PARK OR MANUFACTURED HOME SUBDIVISION — A parcel or contiguous parcels of land divided into two or more manufactured home lots for rent or sale. [Added 8-8-1987 by Ord. No. 1987-28]

NEW CONSTRUCTION — Structures for which the start of construction commenced on or after the effective date of this chapter.

NEW MANUFACTURED HOME PARK OR SUBDIVISION — A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads) is completed on or after the effective date of the floodplain management regulations adopted by Mount Laurel Township. [Added 9-13-1999 by Ord. No. 1999-9]

RECREATIONAL VEHICLE — A vehicle which is built on a single chassis; 400 square feet or less when measured at the longest horizontal projections; designed to be self-propelled or permanently towable by a light-duty truck; and designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use. [Added 9-13-1999 by Ord. No. 1999-9]

START OF CONSTRUCTION — For other than new construction or substantial improvements under the Coastal Barrier Resources Act (P.L. No. 97-348), includes substantial improvements and means the date the building permit was issued, provided that the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement was within 180 days of the permit date. The "actual start" means either the first placement of permanent construction of a structure on a site such as the pouring of a slab or footings, the installation of piles, the construction of columns or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings or piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor or other structural part of a building, whether or not that alteration effects the external dimensions of the building. [Amended 8-8-1987 by Ord. No. 1987-28; 9-13-1999 by Ord. No. 1999-9]

STRUCTURE — A walled and roofed building, a manufactured home or a gas or liquid storage tank that is principally above ground. [Amended 9-13-1999 by Ord. No. 1999-9]

SUBSTANTIAL DAMAGE — Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50% of the market value of the structure before the damage occurred. [Added 9-13-1999 by Ord. No. 1999-9]

SUBSTANTIAL IMPROVEMENT[Amended 9-13-1999 by Ord. No. 1999-9] — Any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which exceeds 50% of the market value of the structure before the start of construction of the improvement. This term includes structures which have incurred substantial damage regardless of the actual repair work performed. The term does not, however, include either

(Any project for improvement of a structure to correct existing violations of state or local health, sanitary or safety code specifications which have been identified by the local code enforcement officer and which are the minimum necessary to assure safe living conditions;

or

(Any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as a historic structure.

VARIANCE — A grant of relief from the requirements of this chapter which permits construction in a manner that would otherwise be prohibited by this chapter.

ARTICLE III General Provisions

§ 83-6. Applicability.

This chapter shall apply to all areas of special flood hazard within the jurisdiction of the Township of Mount Laurel.

§ 83-7. Basis for establishing areas of special flood hazard. [Amended 5-7-1984 by Ord. No. 1984-13; 9-13-1999 by Ord. No. 1999-9]

The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled "The Flood Insurance Study for the Township of Mount Laurel," dated or to be dated September 22, 1999, with accompanying Flood

Insurance Rate Maps and Flood Boundary-Floodway Maps is hereby adopted by reference and declared to be a part of this chapter. The Flood Insurance Study is on file at the Mount Laurel Township Municipal Building, 100 Mount Laurel Road, Mount Laurel, New Jersey 08054.

§ 83-8. Compliance required; violations and penalties. [Amended 10-1-1984 by Ord. No. 1984-33]

No structure or land shall hereinafter be constructed, located, extended, converted or altered without full compliance with the terms of this chapter and other applicable regulations. Any person who violates this chapter or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than \$1,000 or imprisoned for not more than 90 days, or both, for each violation, and, in addition, shall pay all costs and expenses involved in the case. Nothing herein contained shall prevent the township from taking such other lawful action as is necessary to prevent or remedy any violation. Each day that the condition persists shall be deemed to be a separate violation.

§ 83-9. Conflict with other regulations or restrictions.

This chapter is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. However, where this chapter and other ordinances, easements, covenants or deed restrictions conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

§ 83-10. Interpretation.

In the interpretation and application of this chapter, all provisions shall be:

- A Considered as minimum requirements.
- B Liberally construed in favor of the governing body.
- C Deemed neither to limit nor repeal any other powers granted under state statutes.

§ 83-11. Warning and disclaimer of liability.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This chapter does not imply that land outside the area of the special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the Township of Mount Laurel, any officer or employee thereof or the Federal Insurance Administration for any flood damages that result from reliance on this chapter or any administrative decision lawfully made thereunder.

ARTICLE IV Administration

§ 83-12. Development permits.

- A A development permit shall be obtained before construction of development begins within any area of special flood hazard established in § 83-7. Application for a development permit shall be made on forms furnished by the Planning Board and may include but not be limited to: plans in duplicate, drawn to scale, showing the nature, location, dimensions and elevations of the area in question; existing or proposed structures; full storage of materials; drainage facilities; and the location of the foregoing.

- B Specifically, the following information is required to be submitted by a registered professional engineer or licensed land surveyor by the applicant for the development permit:
- (1 Elevation in relation to mean sea level to which any structure has been floodproofed.)
 - (2 Elevation in relation to mean sea level of the lowest floor, including basement, of all structures.)
 - (3 Elevation of area of special flood hazard and floodway as delineated in § 83-7.)
 - (4 Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the criteria in § 83-17B.)
 - (5 Location of special flood hazard area and floodway as determined by a topographical survey.)
 - (6 Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.)
- C The Planning Board shall be responsible for issuing the development permit in accordance with the provisions of this chapter, except that development permits shall be issued by the Township Council with respect to any proposal within a planned unit development. Appeals from the Township Council determination with respect to a development permit in a planned unit development area shall be to the courts. No development permit shall be issued unless the Planning Board approves a site plan for the proposed construction or development in accordance with the provisions of the Site Plan Ordinance Editor's Note: See Ch. 124, Site Plan Review. and any other relevant ordinances of the Township of Mount Laurel. In the event there is a conflict between the provisions of this chapter and any other ordinance of the Township of Mount Laurel, the provisions of this chapter shall prevail. But said conflict shall be resolved by the Planning Board in the exercising of its variance powers granted pursuant to this chapter.
- D A development permit shall not be required if the Construction Official certifies that the proposed construction or development is not within the special flood hazard area, said certification to be obtained by the applicant's filing an application with the Construction Official, approved by the Construction Official and depositing an application fee in the amount of \$15 with said Construction Official for complex Construction Official determinations as to whether construction or development is within the special flood hazard area. With respect to complex determinations, the Construction Official has the discretion to ask for information required for the development permit as hereinabove set forth, or any part thereof. The fee for simple determination shall be \$5. The Construction Official shall make his determination within 15 days of the township's receipt of the application and requisite fees. An aggrieved party may appeal from the Construction Official's determination to the appropriate reviewing agency within 10 days of said determination, and said appeal shall be reviewed and determined by the appropriate reviewing agency in accordance with the provisions of this chapter. [Amended 5-7-1984 by Ord. No. 1984-13]

§ 83-13. Implementation of regulations. [Amended 5-7-1984 by Ord. No. 1984-13]

The appropriate reviewing agency is hereby designated to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions. The Township Council is hereby designated to administer and implement this chapter by granting or denying development permit applications in accordance with its provisions with respect to planned unit development areas. Any references in this chapter to the "appropriate reviewing agency" shall be deemed to be a reference to the Township Council if the application is for a development permit within a planned unit development area.

§ 83-14. Duties and responsibilities of appropriate reviewing agency. [Amended 5-7-1984 by Ord. No. 1984-13]

A Duties of the appropriate reviewing agency shall include but not be limited to:

- (1 Review all development permit applications to determine that the permit requirements of this chapter have been satisfied.)
- (Review all development permit applications to determine that all necessary permits have 2 been obtained from those federal, state or local governmental agencies from which prior) approval is required.
- (Review all development permit applications to determine if the proposed development is 3 located in the floodway, and, if located in the floodway, assure that the encroachment) provisions of § 83-18A are met.

B Use of other base flood data. When base flood elevation data has not been provided in accordance with § 83-7, Basis for establishing areas of special flood hazard, the appropriate reviewing agency and/or the local administrator shall obtain, review and reasonably utilize any base flood elevation data available from a federal, state or other source in order to administer § 83-17A, specific standards for residential construction, and § 83-17B, specific standards for nonresidential construction. With respect to other base flood elevation data permitted to be utilized pursuant to this subsection, the appropriate reviewing agency shall utilize the Floodplain Information, Parker's Creek, prepared by M. Paul Austin, Engineering Associates, Inc., dated October 1970. [Amended 8-8-1987 by Ord. No. 1987-28]

C Information to be obtained and maintained.

- (The applicant shall submit three copies of a survey showing the following information to the 1 appropriate reviewing agency prior to the issuance of a certificate of occupancy with respect) to the development in the special flood hazard area:
 - (The actual elevation in relation to mean sea level of the lowest habitable floor, including a basement, of all new or substantially improved structures, and whether or not the structure) contains a basement.
 - (For all new or substantially improved floodproofed structures, the actual elevation in b) relation to mean sea level.
- (The appropriate reviewing agency shall condition the issuance of the development permit 2 upon the receipt of the aforementioned information from the applicant. The appropriate) reviewing agency shall provide for the verification of the aforementioned information where practicable and maintain the floodproofing certifications required in § 83-12B(4) and maintain for public inspection all records pertaining to the provisions of this chapter.

D Alteration of watercourses. The appropriate reviewing agency, at the applicant's expense, shall:

- . (Notify adjacent communities and the Department of Environmental Protection prior to any
1 alteration or relocation of a watercourse and submit evidence of such notification to the
) Federal Insurance Administration.
- (
2 Require that maintenance is provided within the altered or relocated portion of said
) watercourse so that the flood-carrying capacity is not diminished.
- E Interpretation of firm boundaries. Except as to Construction Official determinations as set forth
. in § 83-12D, the Planning Board shall make interpretations where needed as to the exact
location of the boundaries of the areas of special flood hazard (for example, where there
appears to be a conflict between a mapped boundary and actual field conditions). The person
contesting the location of the boundary shall be given a reasonable opportunity to appeal the
interpretation as provided in § 83-15.

§ 83-15. Appeals; variance procedure.

A Appeal board.

- . (The Planning Board shall hear and decide appeals from the Construction Official's
1 determination as to the location of the proposed construction or development and shall
) review applicant requests for variances from the requirements of this chapter. Applications
for development permits shall be reviewed in accordance with the timing provisions and
other procedural and fee requirements applicable to site plans. No variance may be
considered unless there exists an application for a development permit.
- (The governing body shall hear and decide appeals when it is alleged there is an error in any
2 requirement, decision or determination made by the Planning Board in the enforcement or
) administration of this chapter.
- (Those aggrieved by the decision of the Construction Official with respect to the location of
3 the proposed construction or development may appeal such decision to the Planning Board.
) Those aggrieved by any decision of the Planning Board may appeal such decision to the
governing body with respect to development permits. The Planning Board shall consider
each appeal as if a de novo application. The governing body shall hear and consider appeals
in accordance with the provisions applicable to appeals from site plan determinations. Those
aggrieved by any decision of the governing body may appeal such decision to the courts.
- (In passing upon development permit applications, the Planning Board shall consider all
4 technical evaluations, all relevant factors, standards specified in other sections of this chapter
) and:
 - (
a The danger that materials may be swept onto other land to the injury of others.
)
 - (
b The danger to life and property due to flooding or erosion damage.
)
 - (
c The susceptibility of the proposed facility and its contents to flood damage and the effect
) of such damage on the individual owner.
 - (
d The importance of the services provided by the proposed facility to the community.
)

- (e The necessity to the facility of a waterfront location, where applicable.)
- (f The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage.)
- (g The compatibility of the proposed use with existing and anticipated development.)
- (h The relationship of the proposed use to the Comprehensive Plan and floodplain management program of that area.)
- (i The safety of access to the property in time of flood for ordinary and emergency vehicles.)
- (j The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site.)
- (k The cost of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems and streets and bridges.)
- (Upon consideration of the factors of Subsection A(4) and the purposes of this chapter, the appropriate reviewing agency may attach such conditions to the granting of variances as it deems necessary to further the purposes of the chapter. [Amended 5-7-1984 by Ord. No. 1984-13])
- (The Secretary of the appropriate reviewing agency or the Township Clerk, whichever the case may be, shall maintain the records of all appeal actions, including technical information, and report any variances to the Federal Insurance Administration upon request. [Amended 5-7-1984 by Ord. No. 1984-13])

B Conditions for variances.

- (Generally, variances may be issued for new construction and substantial improvements to be erected on a lot of 1/2 acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, provided that items listed in Subsection A(4)(a) through (k) above have been fully considered. As the lot size increases beyond the 1/2 acre, the technical justification required for issuing the variance increases.)
- (Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure. [Amended 9-13-1999 by Ord. No. 1999-9])
- (Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.)
- (Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.)
- (Variances shall only be issued upon:)

- 5 (
-) a A showing of good and sufficient cause;
-)
- (
- b A determination that failure to grant the variance would result in exceptional hardship to
-) the applicant; and
- (
- c A determination that the granting of a variance will not result in increased flood heights,
-) additional threats to public safety, extraordinary public expense, create nuisances, cause
-) fraud on or victimization of the public as identified in Subsection A(4) above or conflict
- with existing local laws or ordinances.
- (Any applicant to whom a variance is granted shall be given written notice that the structure
- 6 will be permitted to be built with a lowest floor elevation below the base flood elevation and
-) that the cost of flood insurance will be commensurate with the increased risk resulting from
- the reduced lowest floor elevation.

ARTICLE V Flood Hazard Reduction

§ 83-16. General standards.

In all areas of special flood hazard, the following standards are required:

A Anchoring.

- (
- 1 All new construction and substantial improvements shall be anchored to prevent flotation,
-) collapse or lateral movement of the structure.
- (
- 2 All manufactured homes shall be anchored to resist flotation, collapse or lateral movement.
-) Methods of anchoring may include but are not limited to use of over-the-top or frame ties to
-) ground anchors. This requirement is in addition to applicable state and local anchoring
- requirements for resisting wind forces. [Added 8-8-1987 by Ord. No. 1987-28]

B Construction material and methods.

- (
- 1 All new construction and substantial improvements shall be constructed with materials and
-) utility equipment resistant to flood damage in accordance with the provisions of Subsection
-) A above.
- (
- 2 All new construction and substantial improvements shall be constructed using methods and
-) practices that minimize flood damage and will not increase flood levels on upstream
-) properties.

C Utilities.

- (
- 1 All new and replacement water supply systems shall be designed to minimize or eliminate
-) infiltration of floodwaters into the system.
- (
- 2 All new and replacement sanitary sewerage systems shall be designed to minimize or
-) eliminate infiltration of floodwaters into the systems and discharge from the systems into
-) floodwaters.
- (
- 3 On-site waste disposal systems shall be located to avoid impairment to them or
-) contamination from them during flooding.

(Electrical, heating, ventilation, plumbing and air-conditioning equipment and other service
4 facilities shall be designed and/or located so as to prevent water from entering or
) accumulating within the components during conditions of flooding. [Added 8-8-1987 by
Ord. No. 1987-28]

D Subdivision proposals.

(
1 All subdivision proposals shall be consistent with the need to minimize flood damage.
)

(
2 All subdivision proposals shall have public utilities and facilities, such as sewer, gas,
) electrical and water systems, located and constructed to minimize flood damage.
)

(
3 All subdivision proposals shall have adequate drainage provided to reduce exposure to flood
) damage.
)

(
4 Base flood elevation data shall be provided for all subdivision and site plan and any other
) type of development proposal.
)

E For all new construction and substantial improvements, fully enclosed areas below the lowest
floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood
forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting
this requirement must either be certified by a registered professional engineer or architect or
must meet or exceed the following minimum criteria: [Added 8-8-1987 by Ord. No. 1987-28]

(
1 A minimum of two openings have a total net area of not less than one square inch for every
) square foot of enclosed area subject to flooding shall be provided.
)

(
2 The bottom of all openings shall be no higher than one foot above grade.
)

(
3 Openings may be equipped with screens, louvers or other coverings or devices, provided that
) they permit the automatic entry and exit of floodwaters.
)

§ 83-17. Specific standards.

In all areas of special flood hazard where base flood elevation data has been as set forth
in § 83-7, Basis for establishing areas of special flood hazard, or in § 83-14B, Use of
other base flood data, the following standards are required:

A Residential construction. New construction and substantial improvement of any residential
structure shall have the lowest habitable floor area elevated to one foot above base flood
elevation. The low point (gutter line) for all new streets, access drives and parking lots shall be
18 inches above the base flood elevation or six inches above the five-hundred-year flood,
whichever is less. The low point on access drives and parking lots served by existing streets
shall be established as outlined above or at the average elevation of the existing street for the lot
frontage, whichever is less restrictive.

B Nonresidential construction.

- . (New construction and substantial improvement of any commercial, industrial or other
1 nonresidential structure shall either have the lowest floor, including basement, elevated to
) the level of the base flood elevation or, together with the attendant utility and sanitary
facilities:
 - (
a Be floodproofed so that below the base flood level the structure is watertight with walls
) substantially impermeable to the passage of water;
 - (
b Have structural components capable of resisting hydrostatic and hydrodynamic loads and
) effects of buoyancy; and
 - (
c Be certified by a registered professional engineer or architect that the design and methods
) of construction are in accordance with accepted standards of practice for meeting the
) applicable provisions of this subsection. Such certification shall be provided to the official
as set forth in § 83-14C(1)(b). [Amended 8-8-1987 by Ord. No. 1987-28]
 - (The low point (gutter line) for all new streets, access drives and parking lots shall be 18
2 inches above the base flood elevation or six inches above the five-hundred-year flood,
) whichever is less. The low point on access drives and parking lots served by existing streets
shall be established as outlined above or at the average elevation of the existing street for the
lot frontage, whichever is less restrictive.
- C Manufactured homes. [Added 8-8-1987 by Ord. No. 1987-28]
 - . (
 - 1 Manufactured homes shall be anchored in accordance with § 83-16A(2).
)
 - (All manufactured homes to be placed or substantially improved within an area of special
2 flood hazard shall be elevated on a permanent foundation such that the top of the lowest
) floor is at or above the base flood elevation.

§ 83-18. Floodways.

Located within areas of special flood hazard established in § 83-7 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles and erosion potential, the following provisions apply:

- A Encroachments, including fill, new construction, substantial improvements and other
. developments, are prohibited unless a technical evaluation demonstrates that encroachments
shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- B If the requirements of Subsection A are satisfied, all new construction and substantial
. improvements shall comply with all applicable flood hazard reduction provisions of this article.

§ 83-19. Storage of materials.

No materials that are buoyant, flammable, explosive or in time of flooding could be injurious to human, animal or plant life may be stored below an elevation of one foot above the elevation of the one-hundred-year flood level.

ARTICLE VI Penalties

§ 83-20. Violations and penalties. [Amended 10-1-1984 by Ord. No. 1984-33]

Any person, firm or corporation who shall violate any provisions of this chapter shall be liable to a fine not exceeding \$1,000 or to imprisonment for a term not exceeding 90

days, or both. Each day in which such violation continues shall constitute a separate violation or offense.

Community Rating System

The Community Rating System (CRS) will credit those local activities that advise people about the flood hazard, flood insurance and flood protection measures.

Elevation Certificates

The activities can be directed toward floodplain residents, property owners, insurance agents, real estate agents, or other segments of the local populace. One activity, 310 (Elevation Certificates), is mandatory for CRS classification.

Establishing whether a building is insurable is key to CRS public information activities

Credit is provided if the community maintains FEMA elevation certificates for new and substantially improved construction.

Map Information

Credit is awarded or applied for providing inquirers with information from the community's Flood Insurance Rate Map (FIRM), including whether a property is in a Special Flood Hazard Area (SFHA), which zone, and its base flood elevation. Credit depends on publicizing this service and advising inquirers about the flood insurance purchase requirement.

Outreach Projects

Credit is provided for advising people of the flood hazard, the availability of flood insurance, and or flood protection methods.

Hazard Disclosure

Credit is provided if real estate agents advise prospective property purchasers of the flood hazard. Other disclosure methods may also be credited.

Flood Protection Information

Credit is provided if the local library maintains documents about flood insurance, flood protection, floodplain management, and natural and beneficial functions of floodplains. Additional credit is provided if similar information is available on the community's website.

Flood Protection Assistance

Credit is provided if a community provides technical advice to interested property owners and publicizes the services available.