

\* PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS  
 \*\* PANEL NOT PRINTED - OUTSIDE COUNTY BOUNDARY

**See Sheet 2 of 2 for LISTING OF COMMUNITIES and MAP REPOSITORIES.**

FEMA maintains information about map features, such as street locations and names, in or near designated flood hazard areas. Requests to revise information in or near designated flood hazard areas may be provided to FEMA during the community review period, at the final Consultation Coordination Officer's meeting, or during the statutory 90-day appeal period. Approved requests for changes will be shown on the final printed FIRM.

**NOTE TO USER**

Future revisions to this FIRM Index will only be issued to communities that are located on FIRM panels being revised. This FIRM Index therefore remains valid for FIRM panels dated (date) or earlier. Please refer to the "MOST RECENT FIRM PANEL DATE" column in the Listing of Communities table to determine the most recent FIRM index date for each community.

**MAP DATES**

This FIRM Index displays the map date for each FIRM panel at the time this index was printed. Because this index may not be distributed to unaffected communities in subsequent revisions, users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website at <http://mfc.fema.gov> or by calling the FEMA Map Information eXchange (FMIX) at 1-877-336-2627.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Map Service Center at the number listed above.



*Received 9/2/2010*

**MAP INDEX**

**FIRM FLOOD INSURANCE RATE MAP**  
**MONTGOMERY COUNTY, PENNSYLVANIA**  
 (ALL JURISDICTIONS)  
 (SEE LISTING OF COMMUNITIES TABLE)

**MAP INDEX**

SHEET 1 OF 2

**PANELS PRINTED:** 10, 14, 16, 17, 18, 19, 36, 37, 38, 39, 43, 59, 66, 67, 68, 69, 76, 77, 78, 79, 81, 82, 83, 84, 85, 87, 88, 89, 91, 92, 93, 94, 101, 102, 103, 104, 105, 107, 108, 109, 111, 112, 113, 114, 116, 117, 118, 119, 128, 129, 136, 137, 138, 139, 141, 142, 143, 144, 145, 177, 181, 182, 201, 202, 204, 208, 209, 210, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 227, 228, 229, 245, 254, 255, 256, 257, 258, 259, 261, 262, 263, 264, 265, 267, 270, 276, 277, 278, 279, 281, 282, 283, 284, 285, 287, 288, 289, 291, 292, 293, 294, 303, 311, 312, 313, 314, 316, 318, 319, 326, 327, 329, 331, 332, 334, 351, 352, 353, 354, 366, 367, 368, 369, 361, 362, 365, 366, 367, 368, 369, 376, 377, 378, 379, 381, 382, 384, 386, 388, 389, 401, 402, 403, 404, 406, 411, 412, 431, 432, 451

**MAP NUMBER**  
**42091CIND1A**  
**MAP REVISED**

Federal Emergency Management Agency



**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

**Coastal Base Flood Elevations** shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

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The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) Zone 18. **Horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

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Spatial Reference System Division  
National Geodetic Survey, NOAA  
Silver Spring Metro Center  
1315 East-West Highway  
Silver Spring, Maryland 20910  
(301) 713-3191

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov/>.

**BASE MAP SOURCE:** Road centerlines were obtained in digital spatial data format from the Delaware Valley Regional Planning Commission. County and township/borough boundaries were downloaded from the Pennsylvania Spatial Data Access website. 2002 and 2005 digital orthophotographs were provided by the Delaware Valley Regional Planning Commission. Streamlines were digitized based on the orthophotos. Adjustments were made to specific base map features to align them to 1"=200' scale orthophotos.

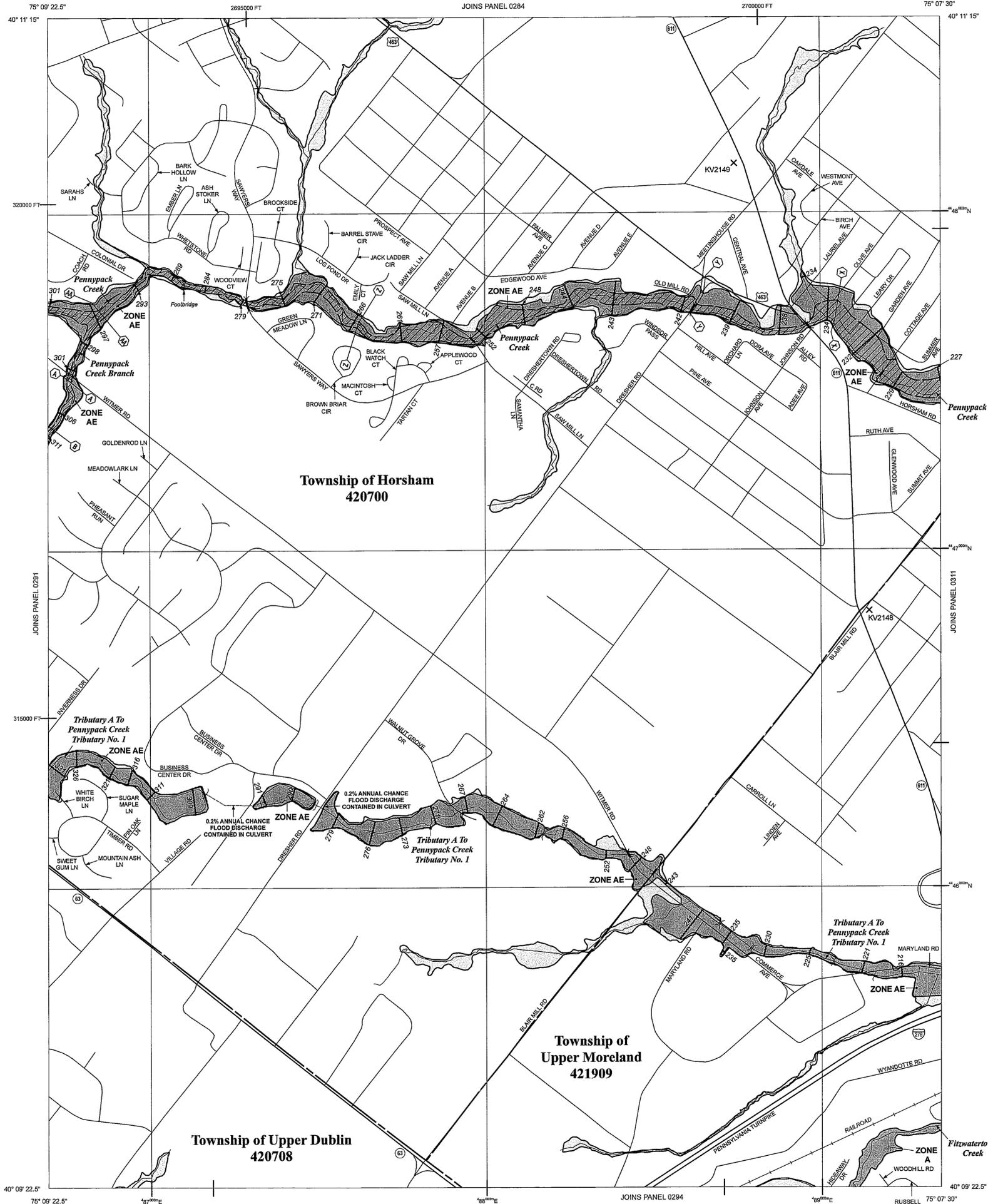
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**LEGEND**

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**  
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
- ZONE A** No Base Flood Elevations determined.
  - ZONE AE** Base Flood Elevations determined.
  - ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
  - ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
  - ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
  - ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
  - ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
  - ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE**  
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS**
- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- OTHER AREAS**
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  - ZONE D** Areas in which flood hazards are undetermined, but possible.
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  - Zone D boundary
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  - Base Flood Elevation line and value; elevation in feet\*
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- Bridge
  - Culvert
  - Cross section line
  - Transect line
- 87°07'45", 32°22'30"  
4276 000 M  
600000 FT  
DX5510 x  
• M1.5  
River Mile

**MAP REPOSITORY**  
Refer to listing of Map Repositories on Map Index

**EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP**  
DECEMBER 19, 1996

**EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL**  
MARCH 2, 1999    APRIL 21, 1999    AUGUST 9, 1999    OCTOBER 19, 2001  
[MONTH XX, XXXX] - to add, change and delete Special Flood Hazard Areas; to reflect updated topographic information; to change, add Base Flood Elevations; and to incorporate previously issued Letters of Map Revision.

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**MAP SCALE 1" = 500'**  
250 0 500 1000 FEET  
150 0 150 300 METERS

**NATIONAL FLOOD INSURANCE PROGRAM**

PANEL 0292G

**FIRM FLOOD INSURANCE RATE MAP**

**MONTGOMERY COUNTY, PENNSYLVANIA (ALL JURISDICTIONS)**

PANEL 292 OF 451  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
HORSHAM, TWP OF	420700	0292	G
UPPER DUBLIN, TWP OF	420708	0292	G
UPPER MORELAND, TWP OF	421909	0292	G

**PRELIMINARY JULY 31, 2010**

Notice to User: The Map Number shown below should be used in placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER 42091C0292G**  
**MAP REVISED XXXX XX, XXXX**

Federal Emergency Management Agency

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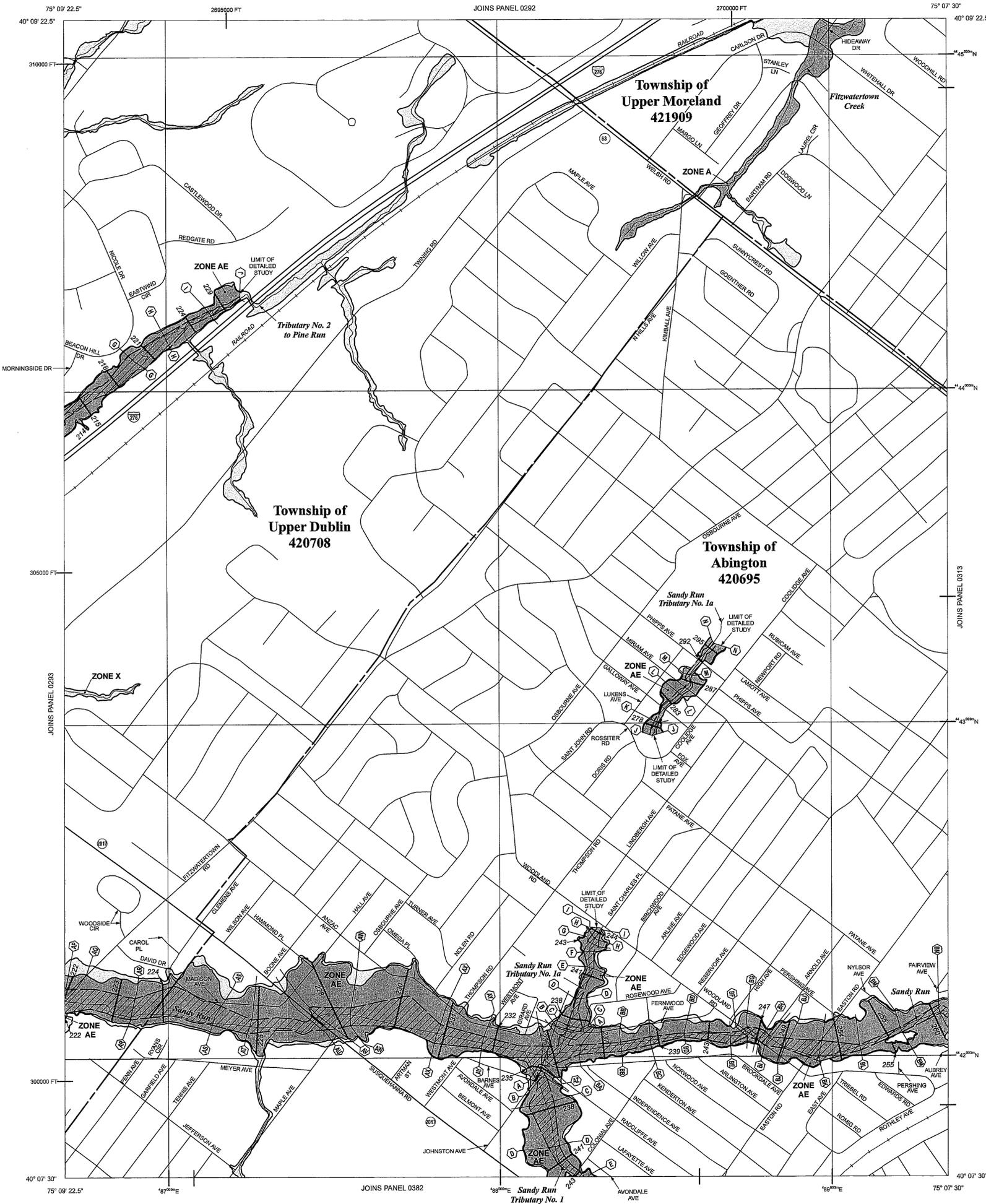
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- \* Referenced to the North American Vertical Datum of 1988
- Bridge
  - Culvert
  - Cross section line
  - Transect line
  - Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
  - 4276 000 M 1000-meter Universal Transverse Mercator grid values, zone 18
  - 600000 FT 5000-foot grid ticks; Pennsylvania State Plane coordinate system (FIPSZONE 3702), Lambert Conformal Conic projection
  - DX5510 x Bench mark (see explanation in Notes to Users section of this FIRM panel)
  - M1.5 River Mile

**MAP REPOSITORY**  
Refer to listing of Map Repositories on Map Index

**EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP**  
DECEMBER 19, 1998

**EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL**  
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**PANEL 0294G**

**FIRM FLOOD INSURANCE RATE MAP**

**MONTGOMERY COUNTY, PENNSYLVANIA (ALL JURISDICTIONS)**

**PANEL 294 OF 451**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

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UPPER DUBLIN, TWP OF	420708	0294	G
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**PRELIMINARY**  
**JULY 31, 2010**

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**MAP REVISED XXXX XX, XXXX**

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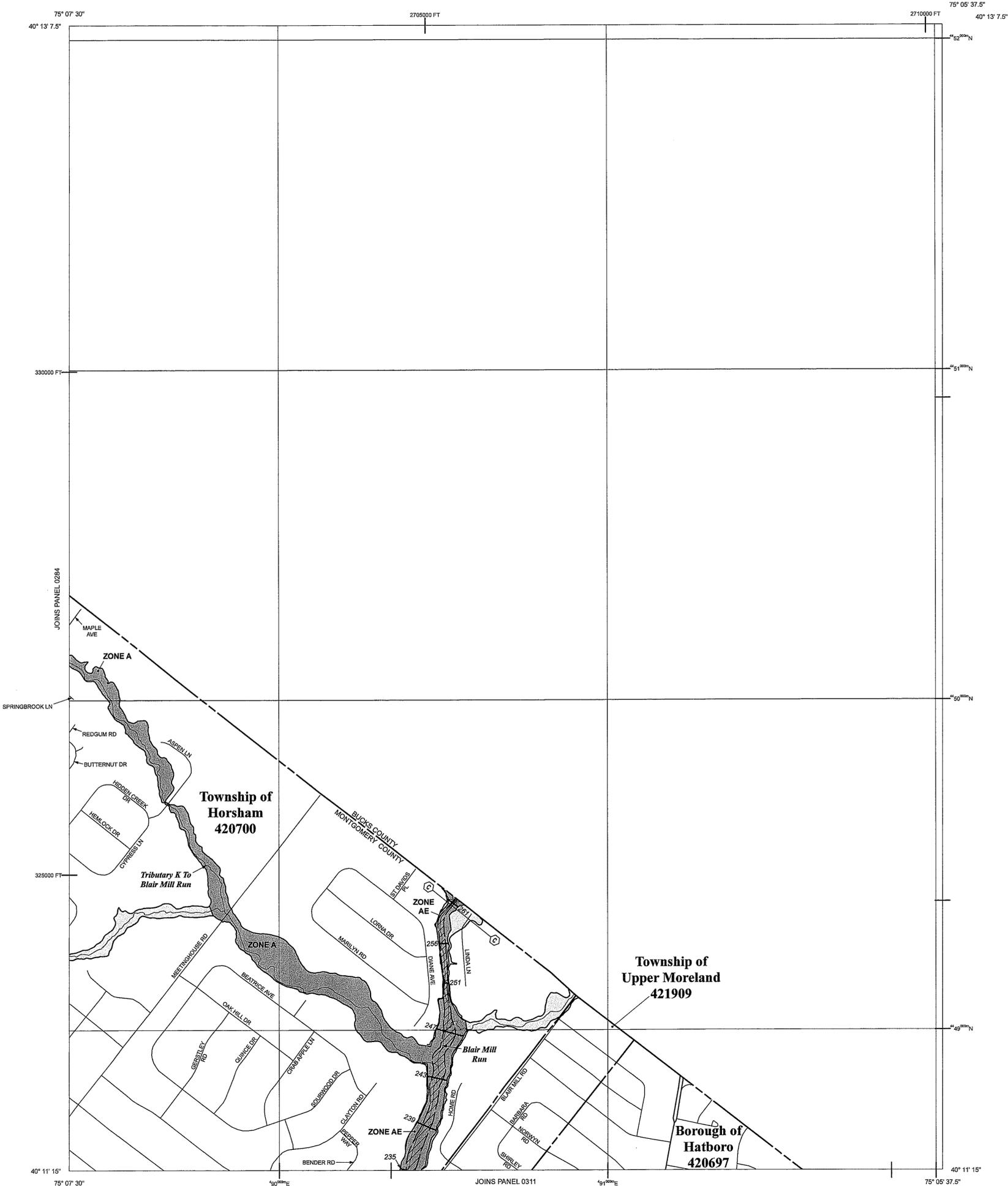
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- \* Referenced to the North American Vertical Datum of 1988
- Bridge
  - Culvert
  - Cross section line
  - Transect line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)  
4276 000 M 1000-meter Universal Transverse Mercator grid values, zone 18  
600000 FT 5000-foot grid ticks: Pennsylvania State Plane coordinate system (FIPSZONE 3702), Lambert Conformal Conic projection  
DX5510 x Bench mark (see explanation in Notes to Users section of this FIRM panel)  
● M1.5 River Mile

**MAP REPOSITORY**  
Refer to listing of Map Repositories on Map Index

**EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP**  
DECEMBER 18, 1998

**EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL**  
MARCH 2, 1998 - APRIL 21, 1999 - AUGUST 9, 1999 - OCTOBER 19, 2001

[MONTH XX, XXXX] - to add, change and delete Special Flood Hazard Areas; to reflect updated topographic information; to change, add Base Flood Elevations; and to incorporate previously issued Letters of Map Revision.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

**MAP SCALE 1" = 500'**  
0 500 1000 FEET  
0 150 300 METERS

**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 0303G**

**FIRM FLOOD INSURANCE RATE MAP**

**MONTGOMERY COUNTY, PENNSYLVANIA (ALL JURISDICTIONS)**

**PANEL 303 OF 451**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
HORSHAM, BORO OF	420700	0303	G
HORSHAM, TWP OF	420700	0303	G
UPPER MORELAND, TWP OF	421909	0303	G

**PRELIMINARY JULY 31, 2010**

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER 42091C0303G**  
**MAP REVISED XXXX XX, XXXX**

**Federal Emergency Management Agency**

**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

**Coastal Base Flood Elevations** shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) Zone 18. **Horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov/> or contact the National Geodetic Survey at the following address:

Spatial Reference System Division  
National Geodetic Survey, NOAA  
Silver Spring Metro Center  
1315 East-West Highway  
Silver Spring, Maryland 20910  
(301) 713-3191

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov/>.

**BASE MAP SOURCE:** Road centerlines were obtained in digital spatial data format from the Delaware Valley Regional Planning Commission. County and township/borough boundaries were downloaded from the Pennsylvania Spatial Data Access website. 2002 and 2005 digital orthophotographs were provided by the Delaware Valley Regional Planning Commission. Streamlines were digitized based on the orthophotos. Adjustments were made to specific base map features to align them to 1"=200' scale orthophotos.

Based on updated topographic information, this map reflects more detailed and up-to-date **stream channel configurations and floodplain delineations** than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables may reflect stream channel distances that differ from what is shown on the map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

**Corporate limits** shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the **Map Service Center (MSC)** website at <http://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have **questions about this map**, how to order products or the National Flood Insurance Program in general, please call the **FEMA Map Information Exchange (FMIX)** at 1-877-FEMA-MAIP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/business/nfi>.

**LEGEND**

**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**  
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently deteriorated. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

**ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

**OTHER AREAS**

**ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.  
**ZONE D** Areas in which flood hazards are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**

**OTHERWISE PROTECTED AREAS (OPAs)**

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet\*
- Base Flood Elevation value where uniform within zone; elevation in feet\*

\* Referenced to the North American Vertical Datum of 1988

- Bridge
  - Culvert
  - Cross section line
  - Transect line
- 81°07'45", 32°22'30"  
4276 000 M  
600000 FT  
DX5510 x  
● M1.5  
River Mile

**MAP REPOSITORY**  
Refer to listing of Map Repositories on Map Index

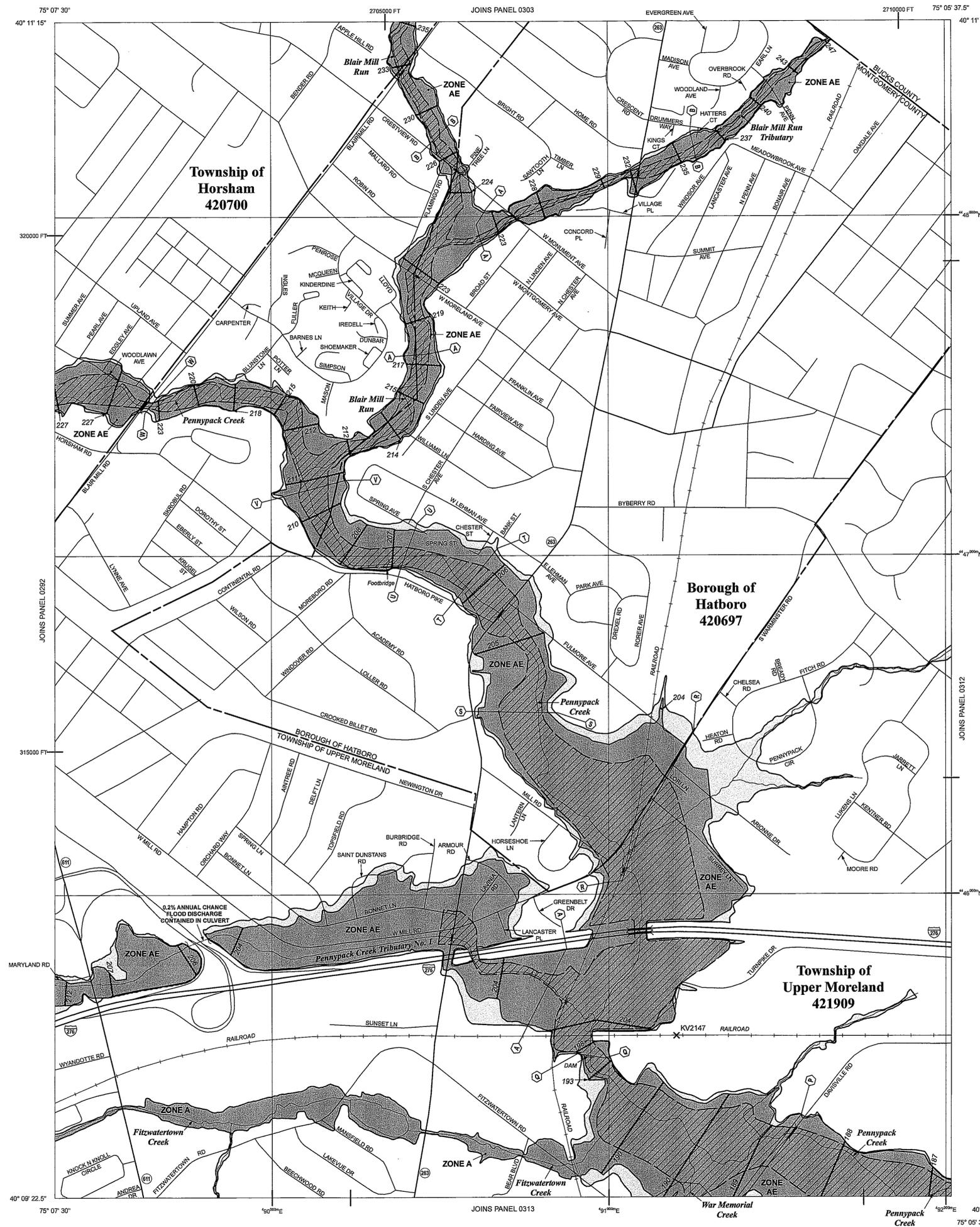
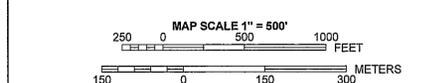
**EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP**  
DECEMBER 18, 1998

**EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL**  
MARCH 2, 1998 APRIL 21, 1999 AUGUST 9, 1999 OCTOBER 19, 2001

[MONTH XX, XXXX] - to add, change and delete Special Flood Hazard Areas; to reflect updated topographic information; to change, add Base Flood Elevations; and to incorporate previously issued Letters of Map Revision.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.



**NATIONAL FLOOD INSURANCE PROGRAM**

PANEL 0311G

**FIRM FLOOD INSURANCE RATE MAP**

**MONTGOMERY COUNTY, PENNSYLVANIA (ALL JURISDICTIONS)**

PANEL 311 OF 451  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HATBORO, BOR OF	420697	0311	G
HORSHAM, TWP OF	420700	0311	G
UPPER MORELAND, TWP OF	421909	0311	G

**PRELIMINARY**  
JULY 31, 2010

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER 42091C0311G**  
**MAP REVISED XXXX XX, XXXX**

**Federal Emergency Management Agency**

**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) Zone 18. Horizontal datum was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov/> or contact the National Geodetic Survey at the following address:

Spatial Reference System Division  
National Geodetic Survey, NOAA  
Silver Spring Metro Center  
1315 East-West Highway  
Silver Spring, Maryland 20910  
(301) 713-3191

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov/>.

**BASE MAP SOURCE:** Road centerlines were obtained in digital spatial data format from the Delaware Valley Regional Planning Commission. County and township/borough boundaries were downloaded from the Pennsylvania Spatial Data Access website. 2002 and 2005 digital orthophotographs were provided by the Delaware Valley Regional Planning Commission. Streamlines were digitized based on the orthophotos. Adjustments were made to specific base map features to align them to 1"=200' scale orthophotos.

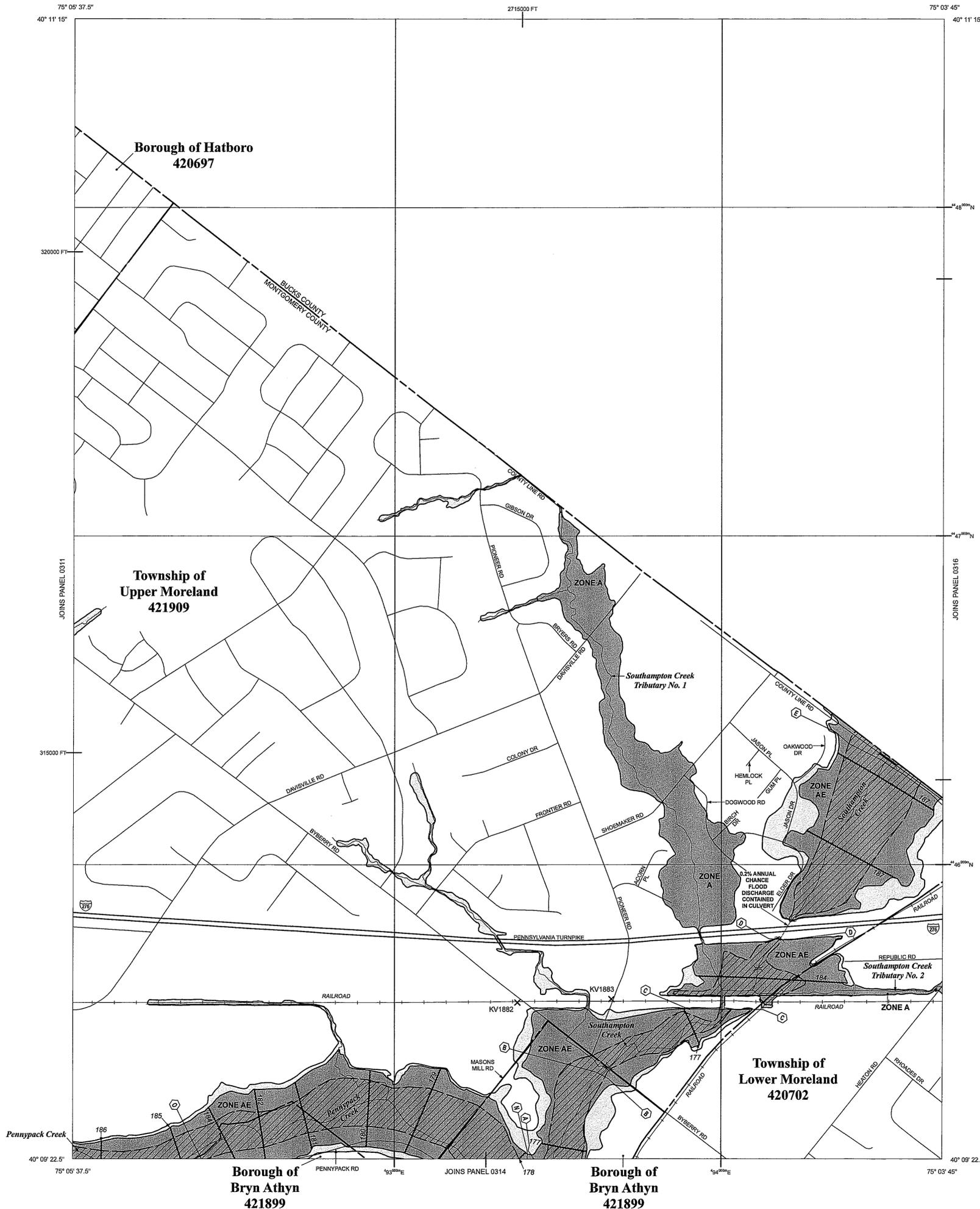
Based on updated topographic information, this map reflects more detailed and up-to-date stream channel configurations and floodplain delineations than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables may reflect stream channel distances that differ from what is shown on the map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

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If you have questions about this map, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange (FMIX) at 1-877-FEMA-MAP (1-877-338-2627) or visit the FEMA website at <http://www.fema.gov/business/nfp>.



**LEGEND**

**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently discarded. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- OTHER AREAS** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**  
**OTHERWISE PROTECTED AREAS (OPAs)**

- CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet\*
- Base Flood Elevation value where uniform within zone; elevation in feet\*

- \* Referenced to the North American Vertical Datum of 1988
- Bridge
- Culvert
- Cross section line
- Transect line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 87°07'45", 32°22'30"
- 4276 000 M
- 600000 FT
- DX5510 x
- M1.5
- River Mile

**MAP REPOSITORY**  
Refer to listing of Map Repositories on Map Index

**EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP**

DECEMBER 19, 1996

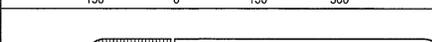
**EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL**

MARCH 2, 1998    APRIL 21, 1999    AUGUST 9, 1999    OCTOBER 19, 2001

[MONTH XX, XXXX] - to add, change and delete Special Flood Hazard Areas; to reflect updated topographic information; to change, add Base Flood Elevations; and to incorporate previously issued Letters of Map Revision.

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**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 0312G**

**FIRM FLOOD INSURANCE RATE MAP**

**MONTGOMERY COUNTY, PENNSYLVANIA (ALL JURISDICTIONS)**

**PANEL 312 OF 451**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
BRYNATHYN, BOR OF	421899	0312	G
HATBORO, BOR OF	420697	0312	G
LOWER MORELAND, TWP OF	420702	0312	G
UPPER MORELAND, TWP OF	421909	0312	G

**PRELIMINARY**  
**JULY 31, 2010**

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
42091C0312G

**MAP REVISED**  
XXXX XX, XXXX

**Federal Emergency Management Agency**

**NOTES TO USERS**

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**Coastal Base Flood Elevations** shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

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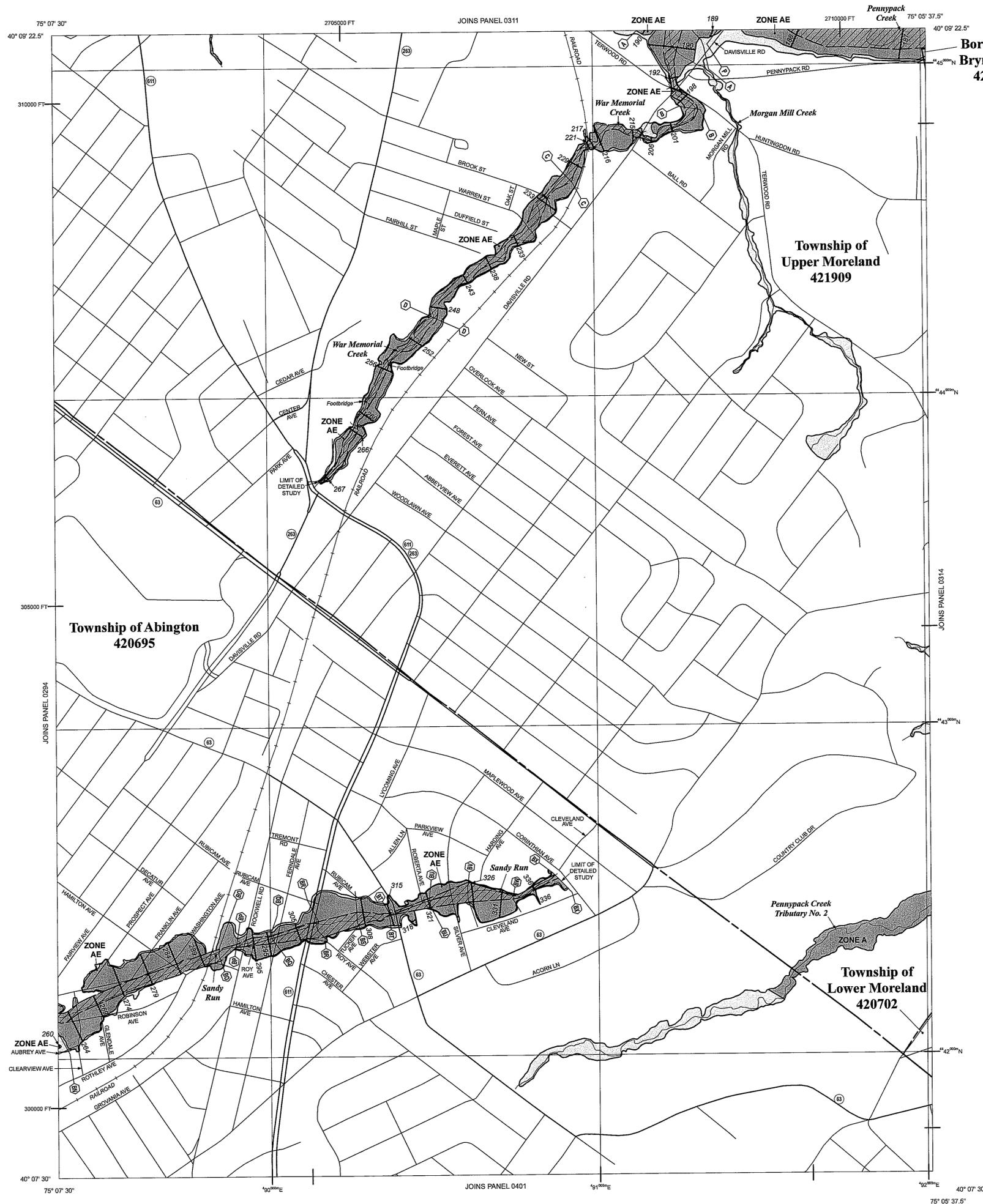
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**LEGEND**

- SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**  
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, AV, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
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- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently determined. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance of greater flood.
- ZONE AR9** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE**  
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS**
- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- OTHER AREAS**
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- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**
- OTHERWISE PROTECTED AREAS (OPAs)**  
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
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- 1000-meter Universal Transverse Mercator grid values, zone 18
- 5000-foot grid ticks; Pennsylvania State Plane coordinate system (FIPSZONE 3702), Lambert Conformal Conic projection
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5
- River Mile

**MAP REPOSITORY**  
Refer to listing of Map Repositories on Map Index

**EFFECTIVE DATE OF COUNTY-WIDE FLOOD INSURANCE RATE MAP**  
DECEMBER 19, 1996

**EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL**  
MARCH 2, 1998    APRIL 21, 1999    AUGUST 9, 1999    OCTOBER 19, 2001  
[MONTH XX, XXXX] - to add, change and delete Special Flood Hazard Areas; to reflect updated topographic information; to change, add Base Flood Elevations; and to incorporate previously issued Letters of Map Revision.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

**MAP SCALE 1" = 500'**  
250 0 500 1000 FEET  
150 0 150 300 METERS

**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 0313G**

**FIRM**  
**FLOOD INSURANCE RATE MAP**

**MONTGOMERY COUNTY, PENNSYLVANIA (ALL JURISDICTIONS)**

**PANEL 313 OF 451**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
ABINGTON, TWP OF	420685	0313	G
БРЫN АТНУН, БОR OF	421899	0313	G
LOWER MORELAND, TWP OF	420702	0313	G
UPPER MORELAND, TWP OF	421909	0313	G

**PRELIMINARY**  
**JULY 31, 2010**

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
42091C0313G

**MAP REVISED**  
XXXX XX, XXXX

**Federal Emergency Management Agency**

**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) Zone 18. Horizontal datum was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov/> or contact the National Geodetic Survey at the following address:

Spatial Reference System Division  
National Geodetic Survey, NOAA  
Silver Spring Metro Center  
1315 East-West Highway  
Silver Spring, Maryland 20910  
(301) 713-3191

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov/>.

**BASE MAP SOURCE:** Road centerlines were obtained in digital spatial data format from the Delaware Valley Regional Planning Commission. County and township/borough boundaries were downloaded from the Pennsylvania Spatial Data Access website. 2002 and 2005 digital orthophotographs were provided by the Delaware Valley Regional Planning Commission. Streamlines were digitized based on the orthophotos. Adjustments were made to specific base map features to align them to 1"=200' scale orthophotos.

Based on updated topographic information, this map reflects more detailed and up-to-date stream channel configurations and floodplain delineations than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables may reflect stream channel distances that differ from what is shown on the map. Also, the road to floodplain relationships for unrevised streams may differ from what is shown on previous maps.

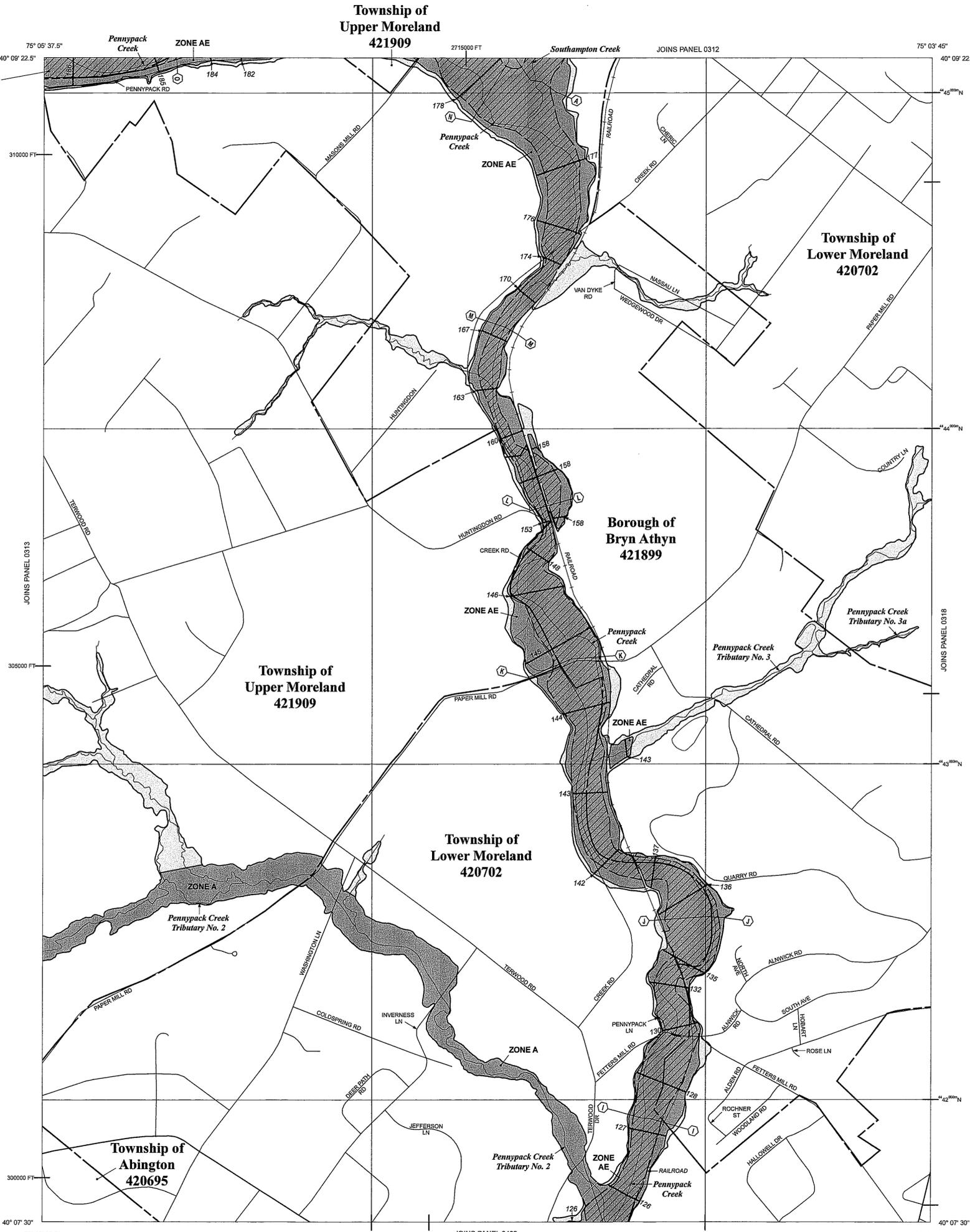
Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels, community map repository addresses, and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the Map Service Center (MSC) website at <http://msc.fema.gov/>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have questions about this map, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange (FMIX) at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/business/nfiio>.

**Township of Upper Moreland 421909**



**LEGEND**

**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently deteriorated. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Areas to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**  
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**  
**ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

**OTHER AREAS**  
**ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.  
**ZONE D** Areas in which flood hazards are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**  
**OTHERWISE PROTECTED AREAS (OPAs)**

- CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet\*
- Base Flood Elevation value where uniform within zone; elevation in feet\*

- \* Referenced to the North American Vertical Datum of 1988
- Bridge
- Culvert
- Cross section line
- Transect line

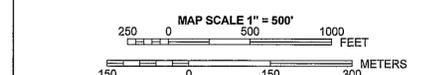
87°07'45", 32°22'30"  
4276 000 M  
600000 FT  
DX5510 x  
● M1.5  
River Mile

**MAP REPOSITORY**  
Refer to listing of Map Repositories on Map Index  
**EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP**  
DECEMBER 19, 1999

**EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL**  
MARCH 2, 1998    APRIL 21, 1999    AUGUST 9, 1999    OCTOBER 19, 2001  
(MONTH XX, XXXX) - to add change and delete Special Flood Hazard Areas; to reflect updated topographic information; to change, add Base Flood Elevations; and to incorporate previously issued Letters of Map Revision.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

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PANEL 0314G

**FIRM**  
FLOOD INSURANCE RATE MAP

**MONTGOMERY COUNTY, PENNSYLVANIA (ALL JURISDICTIONS)**

**PANEL 314 OF 451**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY, TWP OF	NUMBER	PANEL	SUFFIX
ABINGTON, TWP OF	420695	0314	G
BRYNATHYN BOR OF	421899	0314	G
LOWER MORELAND, TWP OF	420702	0314	G
UPPER MORELAND, TWP OF	421909	0314	G

**PRELIMINARY**  
**JULY 31, 2010**

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
42091C0314G  
**MAP REVISED**  
XXXX XX, XXXX

**Federal Emergency Management Agency**

**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

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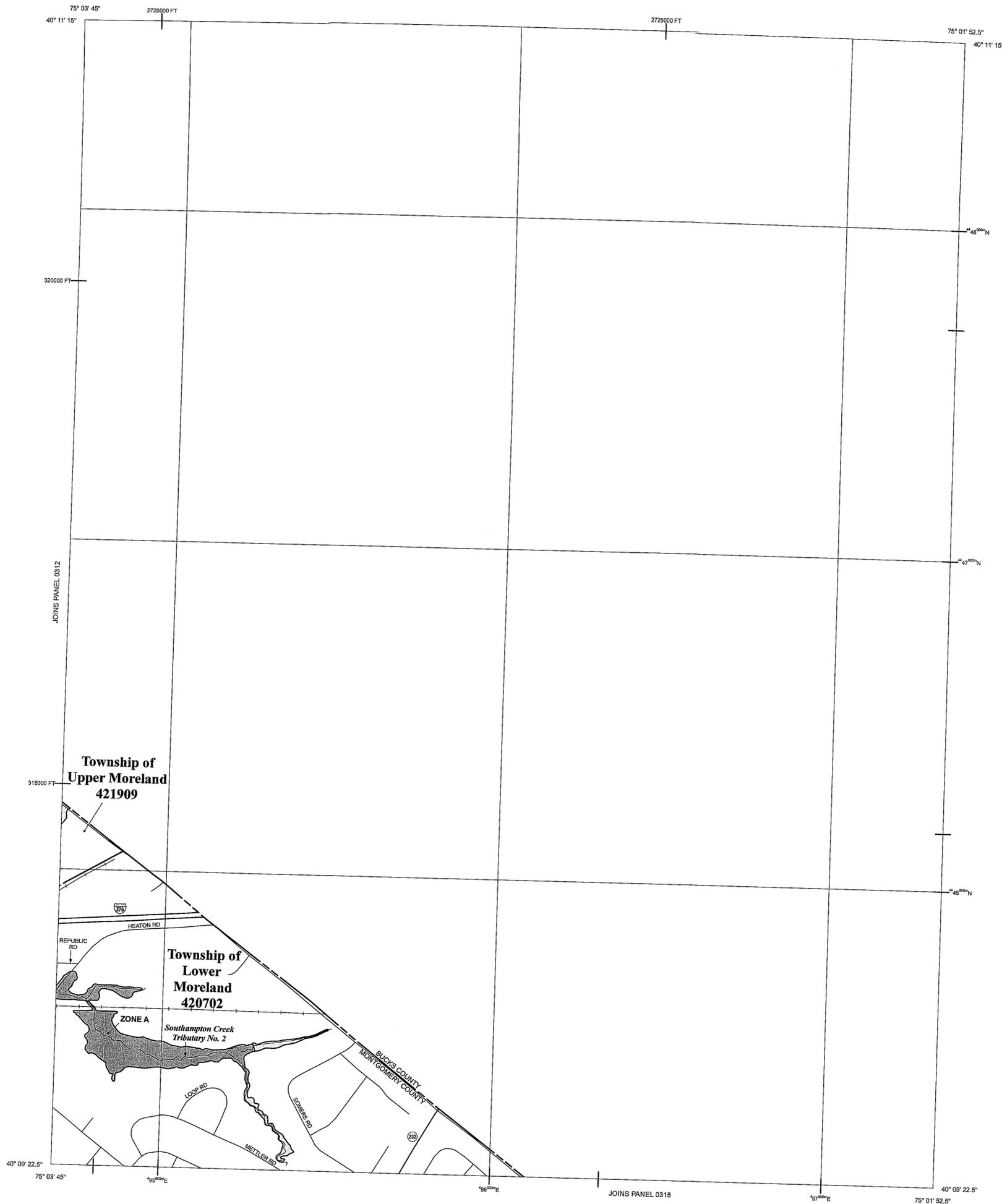
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**LEGEND**

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  - CBRS and OPA boundary
  - Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
  - Base Flood Elevation line and value; elevation in feet\*
  - Base Flood Elevation value where uniform within zone; elevation in feet\*
- \* Referenced to the North American Vertical Datum of 1988
- Bridge
  - Culvert
  - Cross section line
  - Transect line
  - Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
  - 1000-meter Universal Transverse Mercator grid values, zone 18
  - 5000-foot grid ticks; Pennsylvania State Plane coordinate system (FIPSZONE 3702), Lambert Conformal Conic projection
  - Bench mark (see explanation in Notes to Users section of this FIRM panel)
  - M1.5 River Mile

**MAP REPOSITORY**  
Refer to listing of Map Repositories on Map Index

**EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP**  
DECEMBER 19, 1996

**EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL**  
MARCH 2, 1998 APRIL 21, 1999 AUGUST 9, 1999 OCTOBER 19, 2001  
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150 0 150 300 METERS

**NATIONAL FLOOD INSURANCE PROGRAM**

PANEL 0316G

**FIRM FLOOD INSURANCE RATE MAP**

**MONTGOMERY COUNTY, PENNSYLVANIA (ALL JURISDICTIONS)**

**PANEL 316 OF 451**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
LOWER MORELAND, TWP OF	420702	0316	G
UPPER MORELAND, TWP OF	421909	0316	G

**PRELIMINARY JULY 31, 2010**

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER 42091C0316G**  
**MAP REVISED XXXX XX, XXXX**

**Federal Emergency Management Agency**