SPECIAL FLOOD HAZARD REPORT

UNAMI CREEK AND TRIBUTARIES

BUCKS AND MONTGOMERY COUNTIES, PA

APPROVED FOR PUBLIC RELEASE;
DISTRIBUTION UNLIMITED.

June 1976

PREPARED FOR
BUCKS COUNTY PLANNING COMMISSION
BY
DEPARTMENT OF THE ARMY
PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
PHILADELPHIA, PENNSYLVANIA

REPT. NO.: DAENWAP-82040/SFEN 04-76/06

81 9 10 218
TO THE REQUESTOR:

This Flood Plain Information (FPI) Report was prepared by the Philadelphia District office of the U.S. Army Corps of Engineers, under the continuing authority of the 1960 Flood Control Act, as amended. The report contains valuable background information, discussion of flood characteristics and historical flood data for the study area. The report also presents through tables, profiles, maps and text, the results of engineering studies to determine the possible magnitude and extent of future floods, because knowledge of flood potential and flood hazards is important in land use planning and for management decisions concerning floodplain utilization. These projections of possible flood events and their frequency of occurrence were based on conditions in the study area at the time the report was prepared.

Since the publication of this FPI Report, other engineering studies or reports may have been published for the area. Among these are Flood Insurance Studies prepared by the Federal Emergency Management Agency. Flood Insurance Studies generally provide different types of flood hazard data (including information pertinent to setting flood insurance rates) and different types of floodplain mapping for regulatory purposes and in some cases provide updated technical data based on recent flood events or changes in the study area that may have occurred since the publication of this report.

It is strongly suggested that, where available, Flood Insurance Studies and other sources of flood hazard data be sought out for the additional, and, in some cases, updated flood plain information which they might provide. Should you have any questions concerning the preparation of, or data contained in this FPI Report, please contact:

U.S. Army Corps of Engineers
Philadelphia District
Custom House, 2nd and Chestnut Streets
Philadelphia, PA 19106

ATTN: Flood Plain Mgt. Services Branch, NAPEN-M

Telephone number: (215) 597-4807
**Title:** Special flood hazard report: Unami Creek and tributaries, Bucks and Montgomery Counties, Pa.

**Author:**

**Type of Report & Period Covered:** Special flood hazard report

**Performing Organization Name and Address:**
U.S. Army Engineer District Philadelphia
2nd & Chestnut Sts.
Philadelphia, PA 19106

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U.S. Army Engineer District Philadelphia
2nd & Chestnut Sts.
Philadelphia, PA 19106

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- Unami Creek, Pa.
- Molasses Creek, Pa.
- Schmoutz Creek, Pa.
- Licking Creek, Pa.
- Bucks County Planning Commission

**Abstract:**

This special flood hazard information report was undertaken by the U.S. Army Corps of Engineers Philadelphia District at the request of the Bucks County Planning Commission. It covered the Unami Creek from its confluence with the Perkiomen Creek in Marlborough Township, Montgomery County to the study limit at Trolley Bridge Road, Milford Township, Bucks County, Pa. at a distance of 15.9 miles. Tributaries to the Unami Creek also studied in this report include Schmoutz Creek,
Molasses Creek and Licking Creek.

The hydrology, hydraulics and drainage areas of the creeks were described. The data included peak flows for the 10, 50, 100 year floods, rise and duration of flooding and flood profiles.

The information given within the scope of this report should be considered for its historical value. Since the publication of this report other flood insurance studies have been undertaken and should also be consulted for current information.
SPECIAL FLOOD HAZARD INFORMATION REPORT
UNAMI CREEK AND TRIBUTARIES,
BUCKS AND MONTGOMERY COUNTIES, PENNSYLVANIA

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<th>Page</th>
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<td>2</td>
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<tr>
<td>Rates of Rise and Duration of Flooding</td>
<td>5</td>
<td>9</td>
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<table>
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<th>Plate Number</th>
<th>Page</th>
</tr>
</thead>
<tbody>
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<td>General Map</td>
<td>1</td>
<td>At End of Report</td>
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<td>2 - 17</td>
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</tr>
<tr>
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<td>18 - 19</td>
<td>At End of Report</td>
</tr>
</tbody>
</table>
1.0 AUTHORITY FOR STUDY

This Special Flood Hazard Information Report was undertaken at the request of the Bucks County Planning Commission with the indorsement of the Pennsylvania Department of Environmental Resources. This report was prepared by the Philadelphia District, U. S. Army Corps of Engineers under continuing authority provided in Section 206 of the 1960 Flood Control Act as amended.

2.0 DESCRIPTION OF AREA AND LIMITS OF STUDY

This report covers the Unami Creek from its confluence with the Perkiomen Creek in Marlborough Township, Montgomery County, to the study limit at Trolley Bridge Road, Milford Township, Bucks County, Pennsylvania, a distance of 15.9 miles. The flood plain varies along the entire stream but is generally characterized by gently rolling hills occasionally giving way to areas where the side slopes are extremely steep. Due to the rural nature of the area, many of the overbanks are covered with brush and trees. Although the land adjacent to the stream is primarily undeveloped, there are some homes and a Boy Scout Camp along the stream. In addition to that portion of Unami Creek within Bucks County, this report also contains information on Unami Creek in Montgomery County.

Tributaries to the Unami Creek also studied in this report include Schmoutz Creek, Molasses Creek and Licking Creek. The study areas of Unami Creek and its Tributaries are shown on the General Map. A tabulation of stream mileages and respective drainage areas can be found in Table 1.

3.0 DESCRIPTION OF WORK

3.1 Surveys

Field surveys, including stream profiles, cross sections and bridge measurements were performed by the Philadelphia District, U. S. Army Corps of Engineers.
3.2 Hydrology

There are no stream gages located on Unami Creek to record historical flood events. The hydrologic analysis consisted of formulating a rainfall-runoff model for the entire Unami Creek Basin using the Corps of Engineers' HEC-1 Computer Program, Flood Hydrograph Package. Using the model, hydrographs were computed and peak flows determined from frequency rainfall distributions for hypothetical storms having recurrence intervals of 10-, 50-, and 100-years. The 100-Year Flood is defined as the flood which occurs once in 100 years on the average and has a 1% chance of being equalled or exceeded in any year. Peak flows for the 500-Year Flood were obtained by extrapolating the discharge-frequency curve computed for flood events up to the 100-Year Flood and by comparison with Corps of Engineers' Standard Project Flood calculations. A tabulation of peak flows for Unami Creek and its Tributaries is given in Table 2.

3.3 Hydraulics

Water surface profiles for the 10-, 50-, 100-, and 500-Year Flood events for the Unami Creek and its Tributaries were computed using the Corps of Engineers' HEC-II Backwater Program. Starting water surface elevations for the Unami Creek were obtained through analysis of flooding conditions and backwater effects of the Perkiomen Creek. Similarly, starting water surface elevations for Unami Creek Tributaries were obtained from corresponding flood elevations on the Unami Creek. Water surface profiles shown in this report were developed based on existing conditions of the watershed at the time field surveys were performed. During an actual flood, debris collecting on bridges and culverts could decrease their water-carrying capacity and cause backwater effects upstream of these structures. However, since the location and extent of debris accumulation are impossible to predict, it was necessary, for the purposes of this report, to assume that bridge and culvert openings would remain unobstructed. In addition to bridges and culverts, there are 9 small dams located on Unami Creek within the study area. These dams have essentially no flood storage capacity, nor will they significantly alter the flow characteristics of floodwaters. Water surface profiles thus developed can be found on Plates 2 through 17. A tabulation of flood elevations at all bridges and culverts can be found in Table 3.

Typical stream cross sections on Unami Creek and its Tributaries and respective water surface elevations for the four frequency flood events are shown on Plates 18 and 19. Maximum
velocities of flow which are expected to occur at these selected cross sections are given in Table 4. Predicted rates of rise and duration of flooding for the 100-Year Flood on the Unami Creek is shown in Table 5.

4.0 ACKNOWLEDGMENTS

The assistance and cooperation of the Bucks County Planning Commission and private citizens in supplying data for the preparation of this report are appreciated.

Additional copies of this report can be obtained from the Bucks County Planning Commission. The Philadelphia District Office of the Corps of Engineers, Department of the Army, will upon request provide technical assistance to planning agencies in the interpretation and use of the data presented as well as planning guidance and further assistance, including the development of additional technical information.
### TABLE 1
DRAINAGE AREAS
UNAMI CREEK AND ITS TRIBUTARIES

<table>
<thead>
<tr>
<th>Location</th>
<th>Feet Above Mouth</th>
<th>Drainage Areas</th>
<th>Total (a) sq. mi.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Tributary sq. mi.</td>
<td></td>
</tr>
<tr>
<td>Unami Creek</td>
<td></td>
<td>---</td>
<td>48.8</td>
</tr>
<tr>
<td>Confluence with Perkiomen Creek</td>
<td>0</td>
<td>---</td>
<td>24.3</td>
</tr>
<tr>
<td>Schmoutz Creek</td>
<td>46,815</td>
<td>3.79</td>
<td>19.7</td>
</tr>
<tr>
<td>Molasses Creek</td>
<td>53,000</td>
<td>3.40</td>
<td>9.7</td>
</tr>
<tr>
<td>Licking Creek</td>
<td>64,170</td>
<td>3.59</td>
<td>9.7</td>
</tr>
<tr>
<td>Schmoutz Creek</td>
<td></td>
<td>---</td>
<td>3.8</td>
</tr>
<tr>
<td>Confluence with Unami Creek</td>
<td>0</td>
<td>---</td>
<td>3.4</td>
</tr>
<tr>
<td>Molasses Creek</td>
<td></td>
<td>---</td>
<td>3.6</td>
</tr>
<tr>
<td>Confluence with Unami Creek</td>
<td>0</td>
<td>---</td>
<td>3.6</td>
</tr>
</tbody>
</table>

(a) Includes tributary.
TABLE 2
PEAK FLOWS FOR THE 10-YEAR, 50-YEAR, 100-YEAR AND 500-YEAR FLOODS
UNAMI CREEK AND ITS TRIBUTARIES

<table>
<thead>
<tr>
<th>Location</th>
<th>Feet Above Drainage</th>
<th>Drainage Area sq. mi.</th>
<th>10-Year Flood cfs</th>
<th>50-Year Flood cfs</th>
<th>100-Year Flood cfs</th>
<th>500-Year Flood cfs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unami Creek Confluence with Perkiomen Creek</td>
<td>0</td>
<td>48.8</td>
<td>8,000</td>
<td>12,000</td>
<td>20,200</td>
<td>35,000</td>
</tr>
<tr>
<td>Downstream of confluence with Schmoutz Creek</td>
<td>46,815</td>
<td>24.3</td>
<td>4,900</td>
<td>9,800</td>
<td>12,700</td>
<td>21,500</td>
</tr>
<tr>
<td>Downstream of confluence with Molasses Creek</td>
<td>53,000</td>
<td>19.7</td>
<td>4,500</td>
<td>9,200</td>
<td>11,900</td>
<td>19,200</td>
</tr>
<tr>
<td>Downstream of confluence with Licking Creek</td>
<td>64,170</td>
<td>9.7</td>
<td>2,400</td>
<td>5,200</td>
<td>6,900</td>
<td>12,000</td>
</tr>
<tr>
<td>Schmoutz Creek Confluence with Unami Creek</td>
<td>0</td>
<td>3.8</td>
<td>1,060</td>
<td>2,300</td>
<td>3,000</td>
<td>5,100</td>
</tr>
<tr>
<td>Molasses Creek Confluence with Unami Creek</td>
<td>0</td>
<td>3.4</td>
<td>1,060</td>
<td>2,300</td>
<td>3,000</td>
<td>5,100</td>
</tr>
<tr>
<td>Licking Creek Confluence with Unami Creek</td>
<td>0</td>
<td>3.6</td>
<td>1,060</td>
<td>2,300</td>
<td>3,000</td>
<td>5,100</td>
</tr>
</tbody>
</table>
# TABLE 3

## ELEVATION DATA

**BRIDGES ACROSS UNAMI CREEK AND ITS TRIBUTARIES**

<table>
<thead>
<tr>
<th>Identification</th>
<th>Feet Above Mouth</th>
<th>Underclearance Elevation</th>
<th>Water Surface Elevation (a)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>100-Year Flood Feet - Mean Sea Level Datum</td>
<td>500-Year Flood Feet - Mean Sea Level Datum</td>
</tr>
<tr>
<td>Unami Creek</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading RR</td>
<td>150</td>
<td>192.9</td>
<td>191.6</td>
</tr>
<tr>
<td>Perkiomenville Road</td>
<td>1,325</td>
<td>190.9</td>
<td>194.6</td>
</tr>
<tr>
<td>Pa. Rte. 63</td>
<td>9,410</td>
<td>208.5</td>
<td>215.7</td>
</tr>
<tr>
<td>Swamp Creek Road</td>
<td>13,220</td>
<td>216.4</td>
<td>223.7</td>
</tr>
<tr>
<td>Price Road</td>
<td>24,945</td>
<td>314.0</td>
<td>322.0</td>
</tr>
<tr>
<td>Swamp Creek Road</td>
<td>29,200</td>
<td>324.2</td>
<td>330.7</td>
</tr>
<tr>
<td>Upper Ridge Valley Road</td>
<td>36,145</td>
<td>416.0</td>
<td>421.1</td>
</tr>
<tr>
<td>Nursery Road</td>
<td>40,590</td>
<td>424.0</td>
<td>428.9</td>
</tr>
<tr>
<td>Pa. Turnpike, N.E. Extension</td>
<td>42,650</td>
<td>439.8</td>
<td>431.8</td>
</tr>
<tr>
<td>Trumbauersville Road</td>
<td>43,880</td>
<td>429.3</td>
<td>432.9</td>
</tr>
<tr>
<td>Kummer Road</td>
<td>51,515</td>
<td>441.3</td>
<td>445.9</td>
</tr>
<tr>
<td>Allentown Road</td>
<td>58,180</td>
<td>463.9</td>
<td>463.7</td>
</tr>
<tr>
<td>Private Road</td>
<td>61,880</td>
<td>481.1</td>
<td>483.2</td>
</tr>
<tr>
<td>Milford Square Pike</td>
<td>62,200</td>
<td>482.0</td>
<td>485.6</td>
</tr>
<tr>
<td>Pa. Rte. 663</td>
<td>64,040</td>
<td>491.3</td>
<td>495.5</td>
</tr>
<tr>
<td>Private Road</td>
<td>65,960</td>
<td>494.9</td>
<td>500.1</td>
</tr>
<tr>
<td>Mill Pond Road</td>
<td>69,670</td>
<td>513.8</td>
<td>515.7</td>
</tr>
<tr>
<td>Brick Tavern Road</td>
<td>72,210</td>
<td>523.0</td>
<td>527.5</td>
</tr>
<tr>
<td>Private Road</td>
<td>73,175</td>
<td>529.1</td>
<td>531.5</td>
</tr>
<tr>
<td>Weand Road</td>
<td>76,275</td>
<td>531.6</td>
<td>555.8</td>
</tr>
<tr>
<td>Rosedale Road</td>
<td>76,925</td>
<td>538.0</td>
<td>562.4</td>
</tr>
<tr>
<td>Grant Road</td>
<td>79,425</td>
<td>582.1</td>
<td>584.7</td>
</tr>
<tr>
<td>Trolley Bridge Road</td>
<td>84,010</td>
<td>663.5</td>
<td>665.3 (b)</td>
</tr>
</tbody>
</table>

## Schmoutz Creek

<table>
<thead>
<tr>
<th>Identification</th>
<th>Feet Above Mouth</th>
<th>Underclearance Elevation</th>
<th>Water Surface Elevation (a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pa. Turnpike, N.E. Extension</td>
<td>2,190</td>
<td>445.5</td>
<td>441.1</td>
</tr>
<tr>
<td>Doerr Road</td>
<td>2,840</td>
<td>443.2</td>
<td>442.8</td>
</tr>
<tr>
<td>Walnut Lane</td>
<td>5,485</td>
<td>450.4</td>
<td>455.6</td>
</tr>
</tbody>
</table>
### TABLE 3 (Continued)

#### ELEVATION DATA

**BRIDGES ACROSS UNAMI CREEK AND ITS TRIBUTARIES**

<table>
<thead>
<tr>
<th>Identification</th>
<th>Feet Above Mouth</th>
<th>Underclearance Elev.</th>
<th>Water Surface Elevation (a)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>100-Year 500-Year Flood</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Feet - Mean Sea Level Datum</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Identification</th>
<th>Feet Above Mouth</th>
<th>Underclearance Elev.</th>
<th>Water Surface Elevation (a)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>100-Year 500-Year Flood</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Feet - Mean Sea Level Datum</td>
</tr>
</tbody>
</table>

**Schmoutz Creek (continued)**

- **Kumry Road**: 7,740, 465.6, 464.3, 464.0, 464.2, 465.7
- **Private Road**: 9,645, 477.9, 480.4, 481.0
- **Drinkman Road**: 12,375, 492.4, 495.3, 496.0
- **Pa. Rte. 663**: 13,115, 498.6, 505.3, 511.8
- **Sleepy Hollow Road**: 15,240, 515.8, 519.7, 520.4
- **Angstadt Road**: 16,535, 526.9, 530.1, 530.7
- **Private Road**: 16,985, 530.9, 536.0, 536.7
- **Private Road**: 17,280, 535.8, 540.5, 541.2
- **Angstadt Road**: 17,580, 539.4, 543.2, 543.8
- **Erdman Road**: 18,110, 542.6, 546.2, 547.0
- **County Line Road**: 21,640, 597.9, 602.2 (b), 602.9 (b)

**Molasses Creek**

- **Rosenberger Road**: 1,980, 461.1, 464.9, 465.8
- **Pa. Turnpike, N.E. Extension**: 5,040, 516.4, 510.3, 513.8
- **Pa. Rte. 663**: 7,690, 522.3, 521.4, 524.9
- **Steinburg Road**: 11,720, 539.1, 541.6 (b), 542.0 (b)

**Licking Creek**

- **Allentown Road**: 30, 491.4, 495.7, 497.4
- **Weiss Road**: 5,215, 515.8, 518.9, 519.6
- **Private Road**: 8,455, 545.9, 551.4, 552.6
- **Baumans Road**: 9,530, 556.2, 560.6, 561.4
- **Steinburg Road**: 10,180, 569.4, 571.9, 575.9
- **Joann Road**: 13,180, 608.5, 613.9, 614.6
- **Cassel Road**: 15,670, 644.5, 645.2, 648.8 (b)

(a) Flood elevations are listed for the upstream side of the bridge.

(b) Flood elevations for downstream side of bridge.

---

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### TABLE 4

**MAXIMUM VELOCITIES**

**UNAMI CREEK AND ITS TRIBUTARIES**

<table>
<thead>
<tr>
<th>Cross Section</th>
<th>Feet Above Mouth</th>
<th>Maximum Velocities</th>
<th>100-Year Flood</th>
<th>500-Year Flood</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Channel ft/sec</td>
<td>Overbank(a) ft/sec</td>
<td>Channel ft/sec</td>
</tr>
<tr>
<td>Unami Creek</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2,475</td>
<td>13.2</td>
<td>7.8</td>
<td>15.0</td>
</tr>
<tr>
<td>5</td>
<td>16,060</td>
<td>13.1</td>
<td>2.8</td>
<td>15.3</td>
</tr>
<tr>
<td>11</td>
<td>43,635</td>
<td>6.5</td>
<td>2.5</td>
<td>7.3</td>
</tr>
<tr>
<td>17</td>
<td>75,060</td>
<td>4.1</td>
<td>2.4</td>
<td>5.1</td>
</tr>
<tr>
<td>Schmoutz Creek</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>3,775</td>
<td>2.5</td>
<td>0.9</td>
<td>1.7</td>
</tr>
<tr>
<td>22</td>
<td>11,035</td>
<td>10.3</td>
<td>5.1</td>
<td>12.1</td>
</tr>
<tr>
<td>Molasses Creek</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>3,340</td>
<td>9.8</td>
<td>4.1</td>
<td>5.0</td>
</tr>
<tr>
<td>Licking Creek</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>4,725</td>
<td>7.3</td>
<td>3.2</td>
<td>3.6</td>
</tr>
</tbody>
</table>

(a) Value given is maximum of left or right overbank velocity.
TABLE 5
RATES OF RISE AND DURATION OF FLOODING
UNAMI CREEK
100-YEAR FLOOD

<table>
<thead>
<tr>
<th>Location</th>
<th>Feet Above Mouth</th>
<th>Maximum Rate of Rise ft/hr</th>
<th>Height of Rise ft</th>
<th>Time of Rise hrs</th>
<th>Duration of Critical Stage hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross Section 2</td>
<td>2,475</td>
<td>1.2</td>
<td>10.8</td>
<td>11.3</td>
<td>25.1</td>
</tr>
</tbody>
</table>
LEGEND

- Streambed
- - 500 Year Flood
- - - 100 Year Flood
- - - - 50 Year Flood
- - - - - 10 Year Flood
- Top of Bridge Railing
- Bridge Floor
- Underclearance
- Top of Rail (Railroad Bridge)
- Top of Low Bank
- Cross Section

DEPARTMENT OF THE ARMY
PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
PHILADELPHIA, PENNSYLVANIA
SPECIAL FLOOD HAZARD INFORMATION REPORT
UNAMI CREEK
BUCKS & MONTGOMERY COUNTIES, PA
HIGH WATER PROFILES
UNAMI CREEK

PLATE 6
DEPARTMENT OF THE ARMY
PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
PHILADELPHIA, PENNSYLVANIA
SPECIAL FLOOD HAZARD INFORMATION REPORT
UNAMI CREEK
BUCKS & MONTGOMERY COUNTIES, PA
HIGH WATER PROFILES
PLATE 7
LEGEND

---
Streambed

--
500 Year Flood

---
100 Year Flood

----
50 Year Flood

------
10 Year Flood

| | |
---|---|
Top of Bridge Railing
Bridge Floor
Underclearance

| |
---|
Top of Rail (Railroad Bridge)

| |
---|
Top of Low Bank

| |
---|
Cross Section
LEGEND
Streambed
100 Year Flood
50 Year Flood
30 Year Flood
10 Year Flood
Top of Bridge Railing
Bridge Floor
Underclearance
Top of Low Bank
Cross Section

DEPARTMENT OF THE ARMY
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PHILADELPHIA, PENNSYLVANIA
SPECIAL FLOOD HAZARD
INFORMATION REPORT
UNAMI CREEK
BUCKS & MONTGOMERY COUNTIES, PA.
HIGH WATER PROFILES
SCHMOOUTZ CREEK

PLATE 1C
LEGEND

---
Streambed
---
500 Year Flood
---
100 Year Flood
---
50 Year Flood
---
10 Year Flood

Top of Bridge Railing
Bridge Floor
Underclearance

○
Top of Rail (Railroad Bridge)

△
Top of Low Bank

Cross Section

DEPARTMENT OF THE ARMY
PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
PHILADELPHIA, PENNSYLVANIA
SPECIAL FLOOD HAZARD
INFORMATION REPORT
UNAMI CREEK
BUCKS & MONTGOMERY COUNTIES, PA
HIGH WATER PROFILES
MOLASSES CREEK
LEGEND

- - - - Streambed
- - - - 500 Year Flood
- - - - 100 Year Flood
- - - - 50 Year Flood
- - - - 10 Year Flood

Top of Bridge Railing
Bridge Floor
Underclearance

Top of Low Bank
Cross Section
NOTES:

[Diagram with numbers and measurements]

CROSS SECTION NO. 11
STA. 436 + 35

CROSS SECTION NO. 17
STA. 750 + 60

HORIZONTAL STATIONING IN FEET
LEGEND

- - - - - - - - - -
| Ground Line      |

- - - -
| 500 Year Flood  |

- - -
| 100 Year Flood  |

- -
| 50 Year Flood   |

- -
| 10 Year Flood   |

NOTES:
The Cross Sections on Unami, Licking, Molasses and Schmoutz Creeks not shown in this report are on file at the Philadelphia District Corps of Engineers and are available for inspection upon request.

Cross Sections taken looking Downstream.

DEPARTMENT OF THE ARMY
PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
PHILADELPHIA, PENNSYLVANIA

SPECIAL FLOOD HAZARD
INFORMATION REPORT
UNAMI CREEK
BUCKS & MONTGOMERY COUNTIES, PA
SELECTED CROSS SECTIONS
UNAMI CREEK

PLATE 18
CROSS SECTION NO. 20
STA. 37 + 75
SCHMOUTZ CREEK

CROSS SECTION NO. 22
STA. 110 + 35
SCHMOUTZ CREEK
CROSS SECTION NO. 26
STA. 33 + 40
MOLASSES CREEK

CROSS SECTION NO. 31
STA. 47 + 25
LICKING CREEK

HORIZONTAL STATIONING IN FEET
LEGEND

- - - - Ground Line
- - - - 500 Year Flood
- - - - 100 Year Flood
- - - - 50 Year Flood
- - - - - - 10 Year Flood

NOTES:
The Cross Sections on Unami, Licking, Molasses and Schmoutz Creeks not shown in this report are on file at the Philadelphia District Corps of Engineers and are available for inspection upon request.

Cross Sections taken looking Downstream.

DEPARTMENT OF THE ARMY
PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
PHILADELPHIA, PENNSYLVANIA
SPECIAL FLOOD HAZARD INFORMATION REPORT
UNAMI CREEK
BUCKS & MONTGOMERY COUNTIES, PA
SELECTED CROSS SECTIONS
LICKING, MOLASSES AND SCHMOUTZ CREEKS

PLATE 19