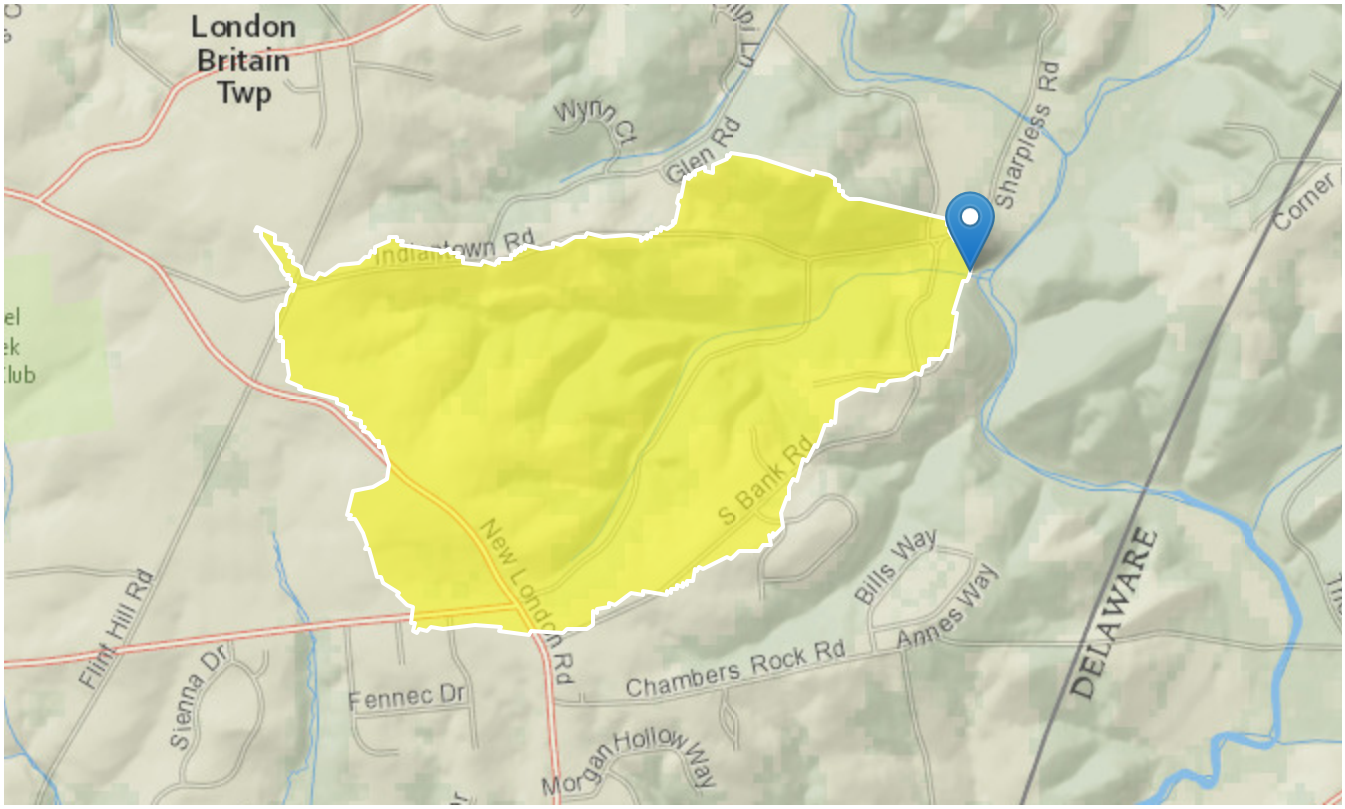
# UAPP411 Group 2 London Tract Run Analysis

**Region ID:** PA
**Workspace ID:** PA20220309174536237000
**Clicked Point (Latitude, Longitude):** 39.74514, -75.77354
**Time:** 2022-03-09 12:45:55 -0500




Survey done on 3/6

## Basin Characteristics

| Parameter Code | Parameter Description | Value | Unit |
|---|---|---|---|
| DRNAREA | Area that drains to a point on a stream | 1.06 | square miles |
| CARBON | Percentage of area of carbonate rock | 0 | percent |
| BSLOPD | Mean basin slope measured in degrees | 5.6696 | degrees |
| ROCKDEP | Depth to rock | 5 | feet |
| URBAN | Percentage of basin with urban development | 0.0328 | percent |

| Parameter Code | Parameter Description | Value | Unit |
|---|---|---|---|
| ELEV | Mean Basin Elevation | 308 | feet |
| PRECIP | Mean Annual Precipitation | 43 | inches |
| FOREST | Percentage of area covered by forest | 57.3477 | percent |
| BSLOPDRAW | Unadjusted basin slope, in degrees | 5.8783 | degrees |
| BSLPDRPA20 | Unadjusted basin slope, in degrees, from PA v1 | 6.766 | degrees |
| CENTROXA83 | X coordinate of the centroid, in NAD_1983_Albers, meters | 189527.7261 | meters |
| CENTROYA83 | Basin centroid horizontal (y) location in NAD 1983 Albers | 84683.3367 | meters |
| DRN | Drainage quality index from STATSGO | 3 | dimensionless |
| ELEVMAX | Maximum basin elevation | 440 | feet |
| GLACIATED | Percentage of basin area that was historically covered by glaciers | 0 | percent |
| IMPNLCD01 | Percentage of impervious area determined from NLCD 2001 impervious dataset | 0.2785 | percent |
| LC01DEV | Percentage of land-use from NLCD 2001 classes 21-24 | 1.8679 | percent |
| LC11DEV | Percentage of developed (urban) land from NLCD 2011 classes 21-24 | 14.2649 | percent |
| LC11IMP | Average percentage of impervious area determined from NLCD 2011 impervious dataset | 0.9621 | percent |
| LONG_OUT | Longitude of Basin Outlet | -75.773543 | degrees |
| MAXTEMP | Mean annual maximum air temperature over basin area from PRISM 1971-2000 800-m grid | 63.9 | degrees F |
| OUTLETXA83 | X coordinate of the outlet, in NAD_1983_Albers,meters | 190826.3774 | meters |
| OUTLETYA83 | Y coordinate of the outlet, in NAD_1983_Albers, meters | 85139.8149 | meters |
| STORAGE | Percentage of area of storage (lakes ponds reservoirs wetlands) | 0.24 | percent |

| Parameter Code | Parameter Description | Value | Unit |
|---|---|---|---|
| STRDEN | Stream Density -- total length of streams divided by drainage area | 2.68 | miles per square mile |
| STRMTOT | total length of all mapped streams (1:24,000-scale) in the basin | 2.84 | miles |

## Peak-Flow Statistics Parameters [Peak Flow Region 4 SIR 2019 5094]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 1.06 | square miles | 1.2 | 512 |
| CARBON | Percent Carbonate | 0 | percent | 0 | 68.5 |

## Peak-Flow Statistics Disclaimers [Peak Flow Region 4 SIR 2019 5094]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

## Peak-Flow Statistics Flow Report [Peak Flow Region 4 SIR 2019 5094]

| Statistic | Value | Unit |
|---|---|---|
| 50-percent AEP flood | 239 | ft^3/s |
| 20-percent AEP flood | 423 | ft^3/s |
| 10-percent AEP flood | 579 | ft^3/s |
| 4-percent AEP flood | 809 | ft^3/s |
| 2-percent AEP flood | 1000 | ft^3/s |
| 1-percent AEP flood | 1220 | ft^3/s |
| 0.5-percent AEP flood | 1450 | ft^3/s |
| 0.2-percent AEP flood | 1790 | ft^3/s |

*Peak-Flow Statistics Citations*

**Roland, M.A., and Stuckey, M.H.,2019, Development of regression equations for the estimation of flood flows at ungaged streams in Pennsylvania: U.S. Geological Survey Scientific Investigations Report 2019–5094, 36 p. (https:// doi.org/10.3133/sir20195094)**

## Low-Flow Statistics Parameters [Low Flow Region 1]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 1.06 | square miles | 4.78 | 1150 |
| BSLOPD | Mean Basin Slope degrees | 5.6696 | degrees | 1.7 | 6.4 |
| ROCKDEP | Depth to Rock | 5 | feet | 4.13 | 5.21 |
| URBAN | Percent Urban | 0.0328 | percent | 0 | 89 |

## Low-Flow Statistics Disclaimers [Low Flow Region 1]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

## Low-Flow Statistics Flow Report [Low Flow Region 1]

| Statistic | Value | Unit |
|---|---|---|
| 7 Day 2 Year Low Flow | 0.331 | ft^3/s |
| 30 Day 2 Year Low Flow | 0.404 | ft^3/s |
| 7 Day 10 Year Low Flow | 0.156 | ft^3/s |
| 30 Day 10 Year Low Flow | 0.198 | ft^3/s |
| 90 Day 10 Year Low Flow | 0.28 | ft^3/s |

*Low-Flow Statistics Citations*

**Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)**

## Annual Flow Statistics Parameters [Statewide Mean and Base Flow]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 1.06 | square miles | 2.26 | 1720 |
| ELEV | Mean Basin Elevation | 308 | feet | 130 | 2700 |
| PRECIP | Mean Annual Precipitation | 43 | inches | 33.1 | 50.4 |
| FOREST | Percent Forest | 57.3477 | percent | 5.1 | 100 |

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| URBAN | Percent Urban | 0.0328 | percent | 0 | 89 |

## Annual Flow Statistics Disclaimers [Statewide Mean and Base Flow]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

## Annual Flow Statistics Flow Report [Statewide Mean and Base Flow]

| Statistic | Value | Unit |
|---|---|---|
| Mean Annual Flow | 1.32 | ft^3/s |

*Annual Flow Statistics Citations*

**Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)**

## General Flow Statistics Parameters [Statewide Mean and Base Flow]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 1.06 | square miles | 2.26 | 1720 |
| PRECIP | Mean Annual Precipitation | 43 | inches | 33.1 | 50.4 |
| CARBON | Percent Carbonate | 0 | percent | 0 | 99 |
| FOREST | Percent Forest | 57.3477 | percent | 5.1 | 100 |
| URBAN | Percent Urban | 0.0328 | percent | 0 | 89 |

## General Flow Statistics Disclaimers [Statewide Mean and Base Flow]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

## General Flow Statistics Flow Report [Statewide Mean and Base Flow]

| Statistic | Value | Unit |
|---|---|---|
| Harmonic Mean Streamflow | 0.286 | ft^3/s |

*General Flow Statistics Citations*

**Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)**

## Base Flow Statistics Parameters [Statewide Mean and Base Flow]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 1.06 | square miles | 2.26 | 1720 |
| PRECIP | Mean Annual Precipitation | 43 | inches | 33.1 | 50.4 |
| CARBON | Percent Carbonate | 0 | percent | 0 | 99 |
| FOREST | Percent Forest | 57.3477 | percent | 5.1 | 100 |
| URBAN | Percent Urban | 0.0328 | percent | 0 | 89 |

## Base Flow Statistics Disclaimers [Statewide Mean and Base Flow]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

## Base Flow Statistics Flow Report [Statewide Mean and Base Flow]

| Statistic | Value | Unit |
|---|---|---|
| Base Flow 10 Year Recurrence Interval | 0.572 | ft^3/s |
| Base Flow 25 Year Recurrence Interval | 0.501 | ft^3/s |
| Base Flow 50 Year Recurrence Interval | 0.462 | ft^3/s |

*Base Flow Statistics Citations*

**Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)**

## Bankfull Statistics Parameters [Statewide Bankfull Noncarbonate 2018 5066]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 1.06 | square miles | 2.62 | 207 |
| CARBON | Percent Carbonate | 0 | percent | | |

## Bankfull Statistics Parameters [Appalachian Highlands D Bieger 2015]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 1.06 | square miles | 0.07722 | 940.1535 |

## Bankfull Statistics Parameters [Piedmont P Bieger 2015]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 1.06 | square miles | 0.289575 | 939.99906 |

## Bankfull Statistics Parameters [USA Bieger 2015]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 1.06 | square miles | 0.07722 | 59927.7393 |

## Bankfull Statistics Disclaimers [Statewide Bankfull Noncarbonate 2018 5066]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

## Bankfull Statistics Flow Report [Statewide Bankfull Noncarbonate 2018 5066]

| Statistic | Value | Unit |
|---|---|---|
| Bankfull Area | 12.9 | ft^2 |
| Bankfull Streamflow | 49.4 | ft^3/s |
| Bankfull Width | 14.7 | ft |
| Bankfull Depth | 0.927 | ft |

## Bankfull Statistics Flow Report [Appalachian Highlands D Bieger 2015]

| Statistic | Value | Unit |
|---|---|---|
| Bieger_D_channel_width | 15.6 | ft |
| Bieger_D_channel_depth | 1.14 | ft |

| Statistic | Value | Unit |
|---|---|---|
| Bieger_D_channel_cross_sectional_area | 18 | ft^2 |

## Bankfull Statistics Flow Report [Piedmont P Bieger 2015]

| Statistic | Value | Unit |
|---|---|---|
| Bieger_P_channel_width | 14.1 | ft |
| Bieger_P_channel_depth | 1.17 | ft |
| Bieger_P_channel_cross_sectional_area | 16.3 | ft^2 |

## Bankfull Statistics Flow Report [USA Bieger 2015]

| Statistic | Value | Unit |
|---|---|---|
| Bieger_USA_channel_width | 12.6 | ft |
| Bieger_USA_channel_depth | 1.22 | ft |
| Bieger_USA_channel_cross_sectional_area | 17.6 | ft^2 |

## Bankfull Statistics Flow Report [Area-Averaged]

| Statistic | Value | Unit |
|---|---|---|
| Bankfull Area | 12.9 | ft^2 |
| Bankfull Streamflow | 49.4 | ft^3/s |
| Bankfull Width | 14.7 | ft |
| Bankfull Depth | 0.927 | ft |
| Bieger_D_channel_width | 15.6 | ft |
| Bieger_D_channel_depth | 1.14 | ft |
| Bieger_D_channel_cross_sectional_area | 18 | ft^2 |
| Bieger_P_channel_width | 14.1 | ft |
| Bieger_P_channel_depth | 1.17 | ft |
| Bieger_P_channel_cross_sectional_area | 16.3 | ft^2 |
| Bieger_USA_channel_width | 12.6 | ft |
| Bieger_USA_channel_depth | 1.22 | ft |
| Bieger_USA_channel_cross_sectional_area | 17.6 | ft^2 |

*Bankfull Statistics Citations*

**Clune, J.W., Chaplin, J.J., and White, K.E.,2018, Comparison of regression relations of bankfull discharge and channel geometry for the glaciated and nonglaciated settings of Pennsylvania and southern New York: U.S. Geological Survey Scientific Investigations Report 2018–5066, 20 p. (https://doi.org/10.3133/sir20185066)**

**Bieger, Katrin; Rathjens, Hendrik; Allen, Peter M.; and Arnold, Jeffrey G.,2015, Development and Evaluation of Bankfull Hydraulic Geometry Relationships for the Physiographic Regions of the United States, Publications from USDA-ARS / UNL Faculty, 17p. (https://digitalcommons.unl.edu/usdaarsfacpub/1515?utm_source=digitalcommons.unl.edu%2Fusdaarsfacpub%2F1515&utm_medium=PDF&utm_campaign=PDFCoverPages)**



Application Version: 4.7.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2