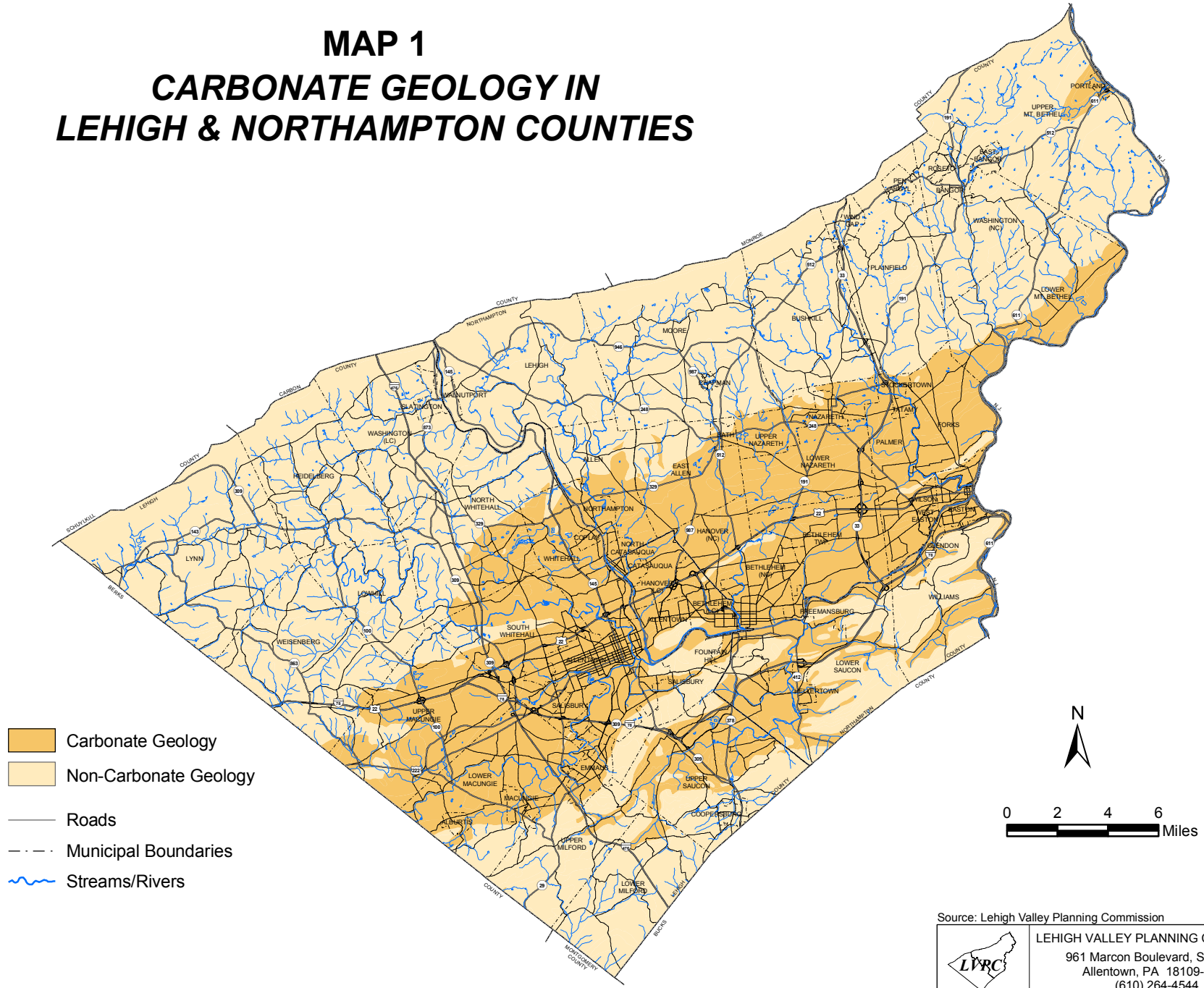
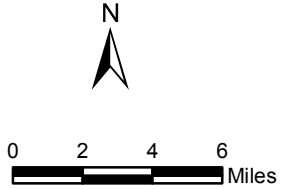


# MAP 1 CARBONATE GEOLOGY IN LEHIGH & NORTHAMPTON COUNTIES

1-3



- Carbonate Geology
- Non-Carbonate Geology
- Roads
- Municipal Boundaries
- Streams/Rivers



Source: Lehigh Valley Planning Commission

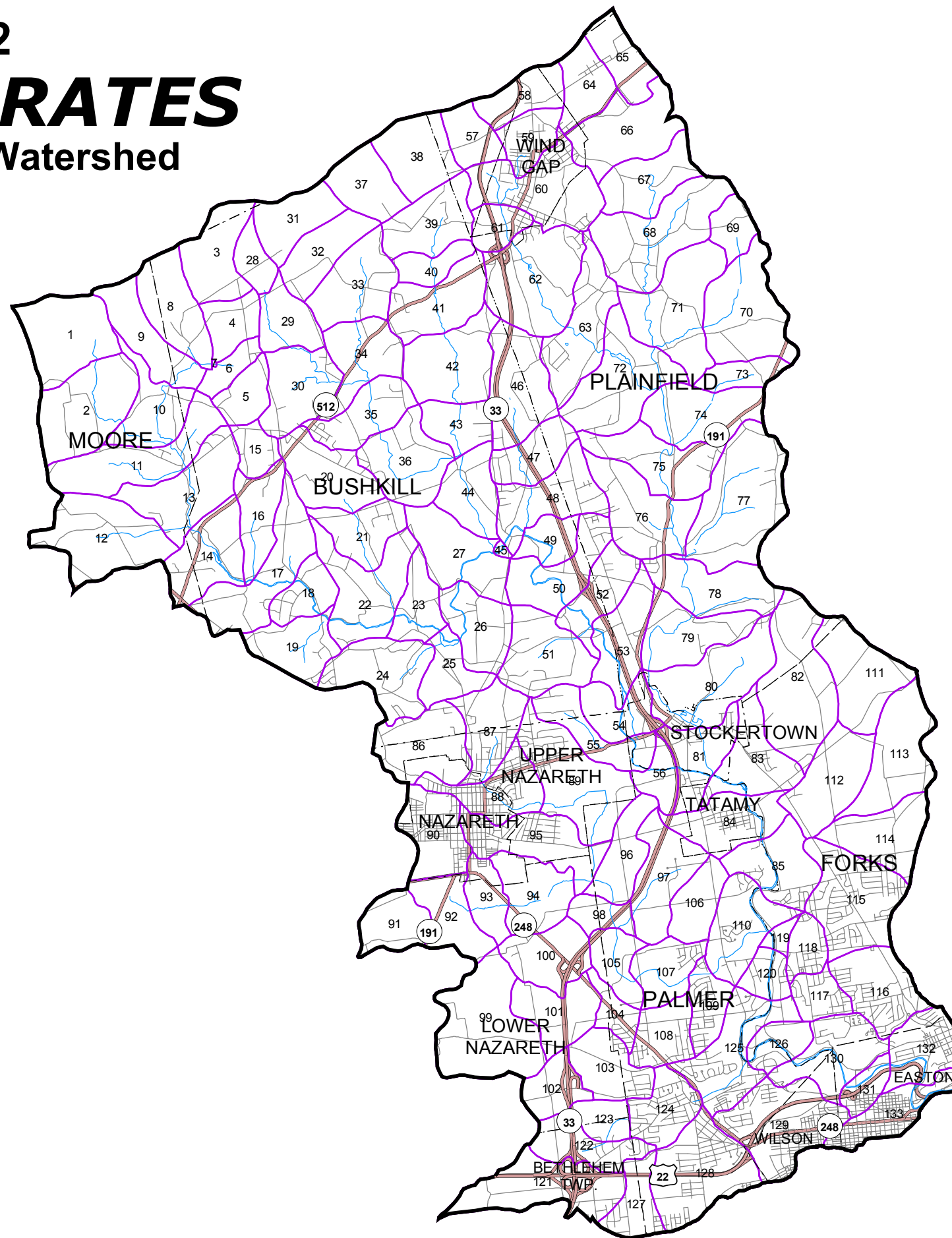
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# MAP 2

## **RELEASE RATES**

### Bushkill Creek Watershed

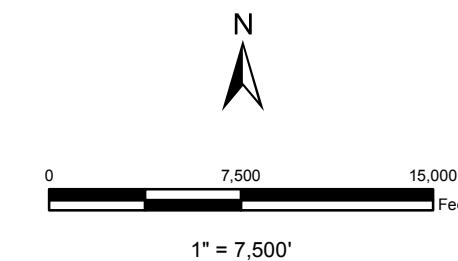


- 23 Subarea Boundaries
- Watershed Boundary
- Municipal Boundaries
- Streams
- Major Roads
- Minor/Other Roads

**RELEASE RATE SUMMARY TABLE**  
 Dual Release Rate Categories (30/--) define a 30% Release Rate for the 2-Year storm and the indicated Release Rate for the 10-, 25- and 100-Year storms.

BUSHKILL CREEK			
Subarea	Release Rate (%)	Subarea	Release Rate (%)
1 - 38	30/100	86 - 93	30/100
39 - 42	30/60	94 - 96	30/PND*
43 - 48	30/100	97	30/100
49 - 50	30/PND*	98	30/PND*
51	30/100	99 - 103	30/100
52 - 56	30/PND*	104 - 105	30/PND*
57 - 58	30/100	106	30/100
59 - 63	30/90	107	30/PND*
64 - 67	30/100	108	30/100
68	30/90	109 - 110	30/PND*
69 - 70	30/100	111 - 116	30/100
71	30/90	117 - 120	30/PND*
72 - 73	30/100	121 - 124	30/100
74 - 81	30/PND*	125 - 126	30/PND*
82	30/100	127 - 128	30/100
83 - 85	30/PND*	129 - 133	30/PND*

\*Conditional/Provisional No Detention Areas do not need detention controls for the 10-, 25-, or 100-year storms provided that adequate downstream capacity can be shown for increased peak flows. (See Plan Update for additional data.)



Source: Lehigh Valley Planning Commission

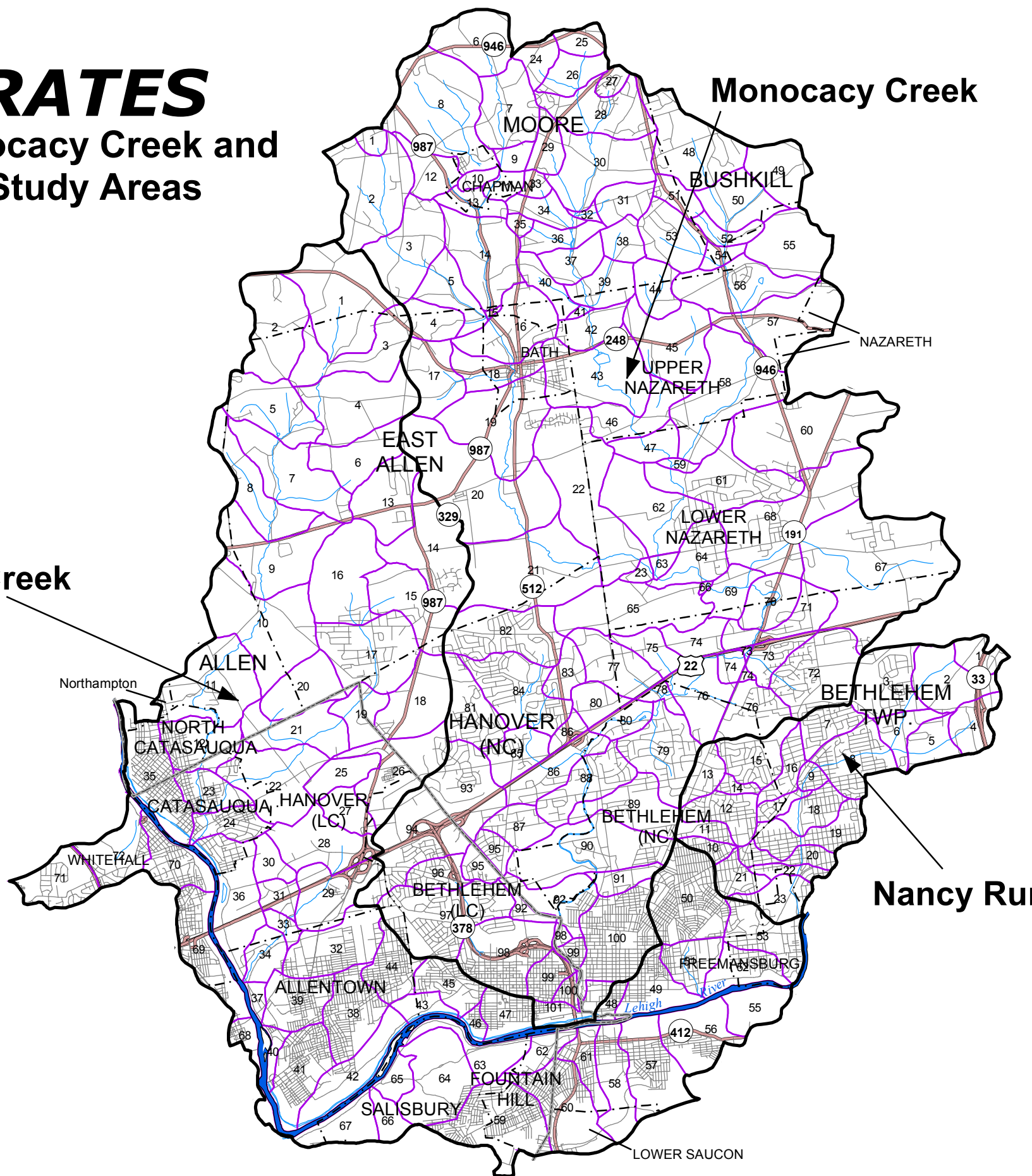


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# MAP 3 RELEASE RATES

## Catasauqua Creek, Monocacy Creek and Nancy Run Act 167 Study Areas



- Subarea Boundaries
- Watershed Boundaries
- County Boundaries
- Municipal Boundaries
- Streams/Rivers
- Major Roads
- Minor/Other Roads

### RELEASE RATE SUMMARY TABLES

Dual Release Rate Categories (30/-) define a 30% Release Rate for the 2-Year storm and the indicated Release Rate for the 10-, 25- and 100-Year storms

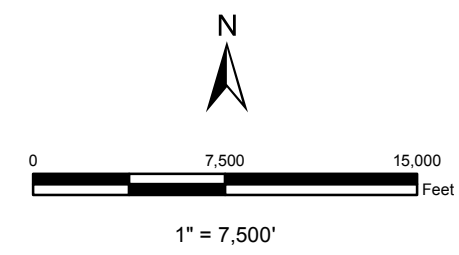
CATASAUQUA CREEK STUDY AREA			
Subarea	Release Rate (%)	Subarea	Release Rate (%)
1 - 8	30/100	44	30/100
9 - 12	30/CND I*	45	30/CND I*
13 - 21	30/100	46 - 49	30/CND II*
22 - 24	30/CND I*	50 - 51	30/100
25 - 33	30/100	52 - 58	30/CND II*
34	30/CND I*	59 - 60	30/100
35 - 37	30/CND II*	61	30/CND I*
38 - 39	30/100	62 - 70	30/CND II*
40 - 43	30/CND II*	71 - 72	30/100

MONOCACY CREEK STUDY AREA			
Subarea	Release Rate (%)	Subarea	Release Rate (%)
1 - 3	30/90	53	30/80
4	30/80	54	30/60
5	30/70	55	30/80
6	30/100	56	30/60
7	30/80	57 - 62	30/50
8	30/90	63 - 72	30/100
9 - 11	30/80	73 <sup>A</sup>	30/100
12	30/90	73 <sup>B</sup>	30/PND*
13 - 16	30/70	74 <sup>C</sup>	30/100
17	30/80	74 <sup>D</sup>	30/PND*
18 - 22	30/50	75	30/100
23 - 25	30/100	76 <sup>A</sup>	30/100
26 - 28	30/90	76 <sup>B</sup>	30/PND*
29 - 36	30/80	77	30/100
37	30/70	78 - 79	30/PND*
38	30/80	80 <sup>E</sup>	30/100
39 - 42	30/70	80 <sup>F</sup>	30/PND*
43	30/50	81 - 85	30/100
44	30/80	86 <sup>E</sup>	30/100
45 - 47	30/50	86 <sup>F</sup>	30/PND*
48	30/100	87 - 92	30/PND*
49	30/90	93 - 94	30/100
50	30/70	95 - 96	30/90
51	30/80	97	30/80
52	30/70	98 - 101	30/PND*

<sup>A</sup> Area East of Rt. 191  
<sup>B</sup> Area West of Rt. 191  
<sup>C</sup> Area East of Rt. 191 or North of Rt. 22  
<sup>D</sup> Area Between Rt. 191 & Rt. 22  
<sup>E</sup> Area North of Rt. 22  
<sup>F</sup> Area South of Rt. 22

NANCY RUN STUDY AREA			
Subarea	Release Rate (%)	Subarea	Release Rate (%)
1	30/100	10 - 11	30/100
2 - 3	30/90	12	30/90
4	30/100	13 - 14	30/70
5	30/80	15	30/60
6	30/60	16 - 23	30/50
7 - 9	30/50		

\*Conditional/Provisional No Detention Areas do not need detention controls for the 10-, 25-, or 100-Year storms, provided that adequate downstream capacity can be shown for increased peak flows. (See Plan Update for additional details.)



Source: Lehigh Valley Planning Commission

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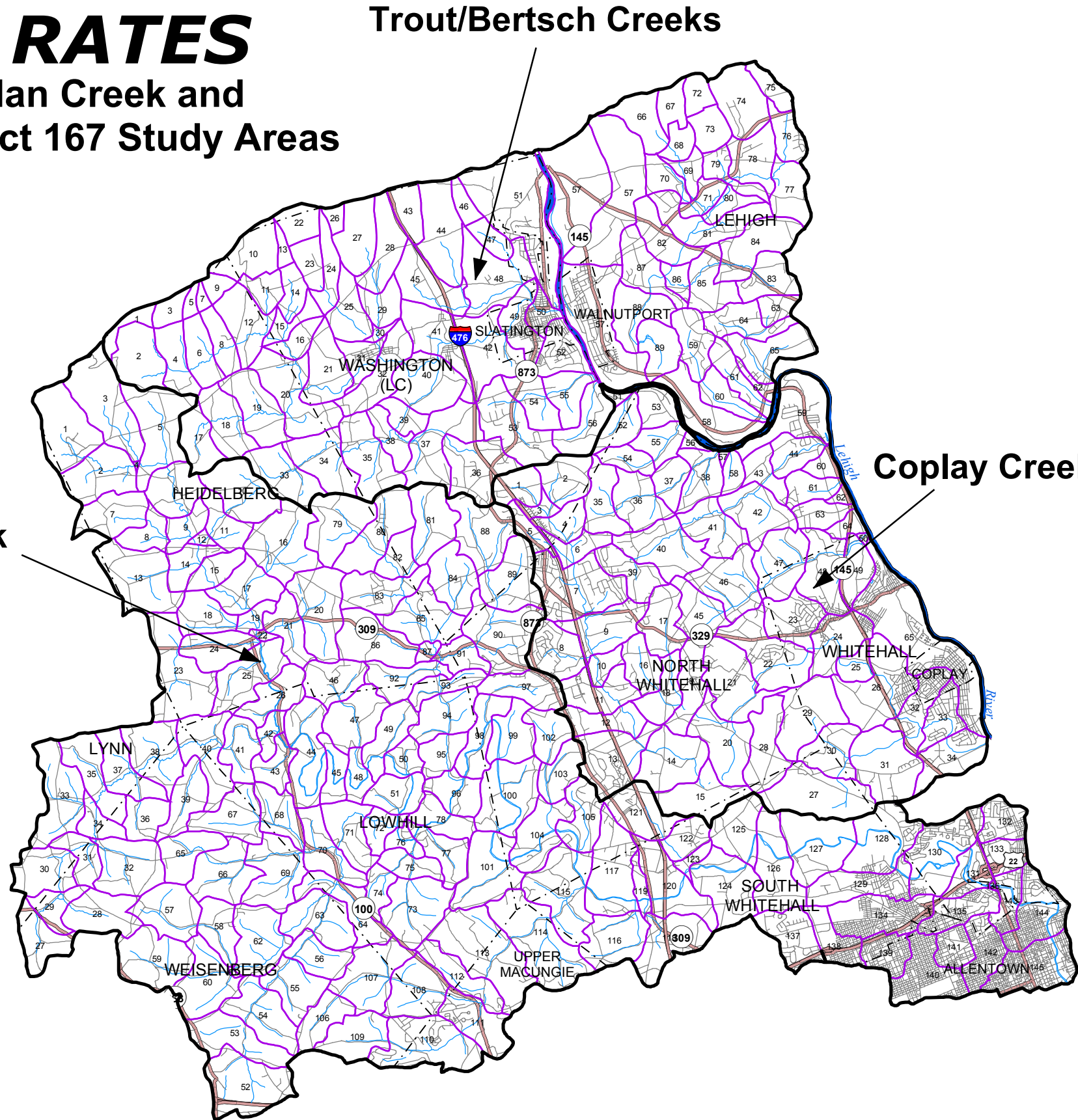




# MAP 4

## **RELEASE RATES**

### Coplay Creek, Jordan Creek and Trout/Bertsch Creeks Act 167 Study Areas



- 23 Subarea Boundaries
- Watershed Boundaries
- Municipal Boundaries
- Major Roads
- Minor/Other Roads
- River
- Streams

**RELEASE RATE SUMMARY TABLES**  
 Dual Release Rate Categories (30/--) define a 30% Release Rate for the 2-Year storm and the indicated Release Rate for the 10-, 25- and 100-Year storms.

COPLAY CREEK STUDY AREA			
Subarea	Release Rate (%)	Subarea	Release Rate (%)
1 - 11	30/100	35	30/100
12 - 15	30/90	36 - 38	30/CND I*
16 - 19	30/100	39 - 40	30/100
20 - 21	30/90	41 - 44	30/CND I*
22	30/100	45	30/100
23 - 26	30/CND I*	46 - 50	30/CND I*
27	30/100	51 - 53	30/CND II*
28	30/90	54	30/100
29	30/100	55	30/CND I*
30 - 34	30/CND I*	56 - 65	30/CND II*

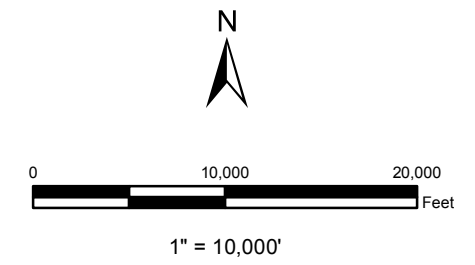
  

JORDAN CREEK STUDY AREA			
Subarea	Release Rate (%)	Subarea	Release Rate (%)
1 - 95	30/100	118	30/100
96	30/PND*	119 - 120	30/PND*
97	30/100	121 - 122	30/100
98 - 101	30/PND*	123 - 131	30/PND*
102	30/100	132	30/100
103 - 105	30/PND*	133	30/PND*
106 - 113	30/100	134 - 135	30/100
114 - 115	30/PND*	136	30/PND*
116	30/100	137 - 138	30/100
117	30/PND*	139 - 145	30/PND*

TROUT/BERTSCH CREEKS STUDY AREA			
Subarea	Release Rate (%)	Subarea	Release Rate (%)
1 - 20	30/100	53	30/100
21	30/CND I*	54 - 55	30/CND I*
22 - 29	30/100	56 - 58	30/CND II*
30 - 32	30/CND I*	59 - 60	30/100
33 - 37	30/100	61 - 62	30/CND II*
38 - 42	30/CND I*	63 - 64	30/100
43 - 44	30/100	65	30/CND I*
45	30/90	66 - 81	30/100
46 - 48	30/100	82	30/CND I*
49 - 50	30/CND I*	83 - 84	30/100
51 - 52	30/CND II*	85 - 89	30/CND I*

\*Conditional/Provisional No Detention Areas do not need detention controls for the 10-, 25- or 100-Year storms, provided that adequate downstream capacity can be shown for increased peak flows. (See Plan Update for additional details.)



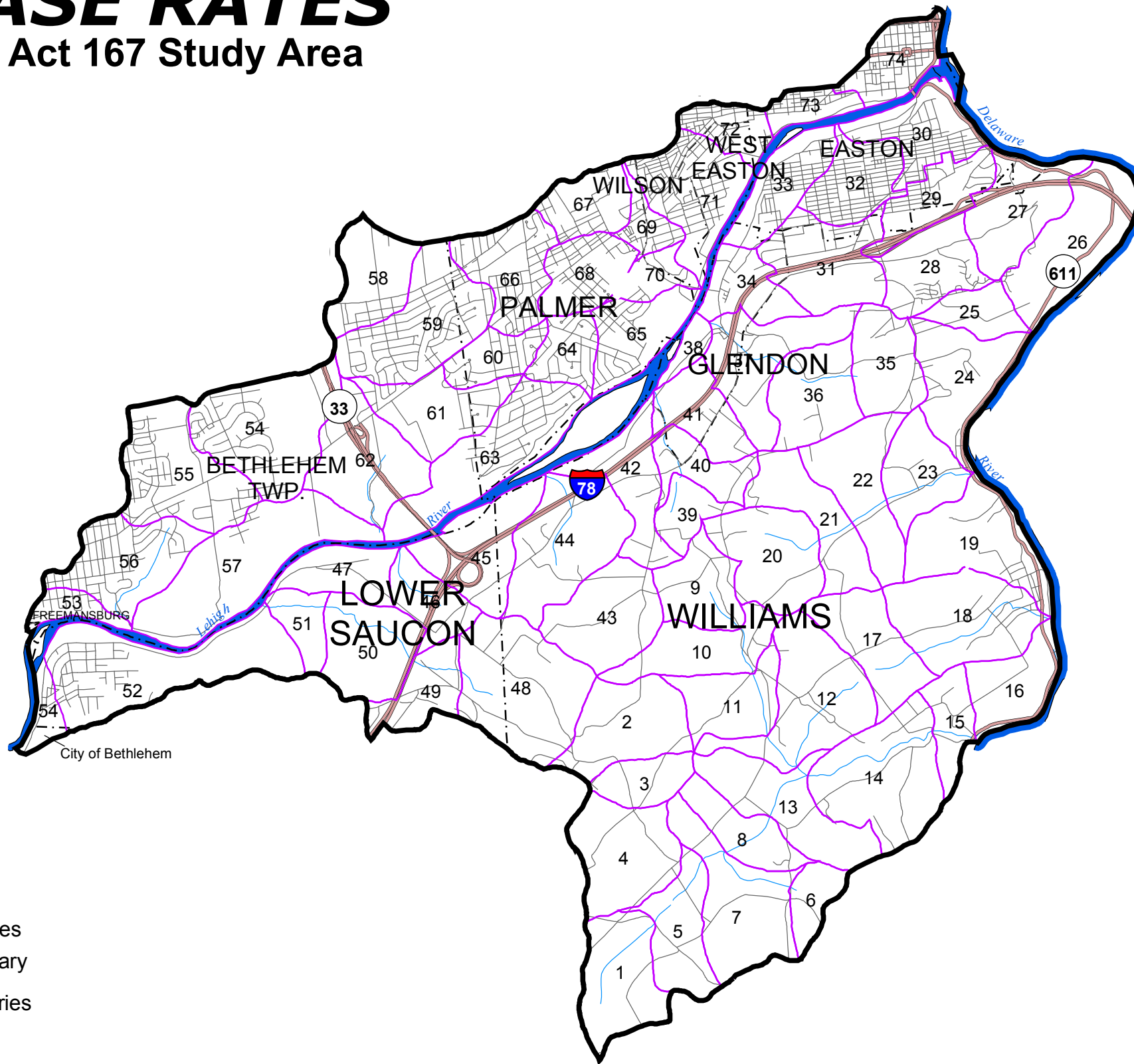
Source: Lehigh Valley Planning Commission

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# MAP 5 RELEASE RATES

## Fry's Run Act 167 Study Area

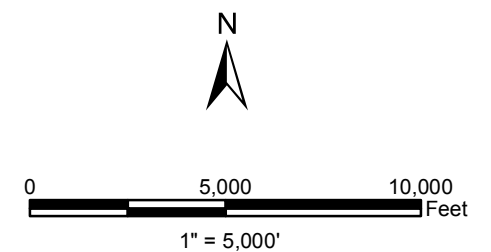


- 23 Subarea Boundaries
- Watershed Boundary
- - - - Municipal Boundaries
- Streams/Rivers
- Major Roads
- Minor/Other Roads

**RELEASE RATE SUMMARY TABLES**  
 Dual Release Rate Categories (30/--) define a 30% Release Rate for the 2-Year storm and the indicated Release Rate for the 10-, 25- and 100-Year storms.

FRY'S RUN STUDY AREA			
Subarea	Release Rate (%)	Subarea	Release Rate (%)
1 - 13	30/100	42	30/CND II*
14 - 15	30/CND I*	43 - 44	30/100
16	30/CND II*	45 - 47	30/CND II*
17 - 18	30/100	48 - 50	30/100
19	30/CND II*	51	30/CND I*
20 - 23	30/100	52 - 53	30/CND II*
24 - 27	30/CND II*	54 - 55	30/100
28 - 29	30/100	56	30/CND I*
30	30/CND II*	57	30/CND II*
31 - 32	30/100	58 - 62	30/100
33 - 34	30/CND II*	63 - 65	30/CND II*
35 - 37	30/100	66 - 70	30/100
38	30/CND II*	71 - 74	30/CND II*
39 - 41	30/100		

\*Conditional No Detention Areas do not need detention controls for the 10-, 25- or 100-year storms provided that adequate downstream capacity can be shown for increased peak flows. (See Plan Update for additional details.)



Source: Lehigh Valley Planning Commission



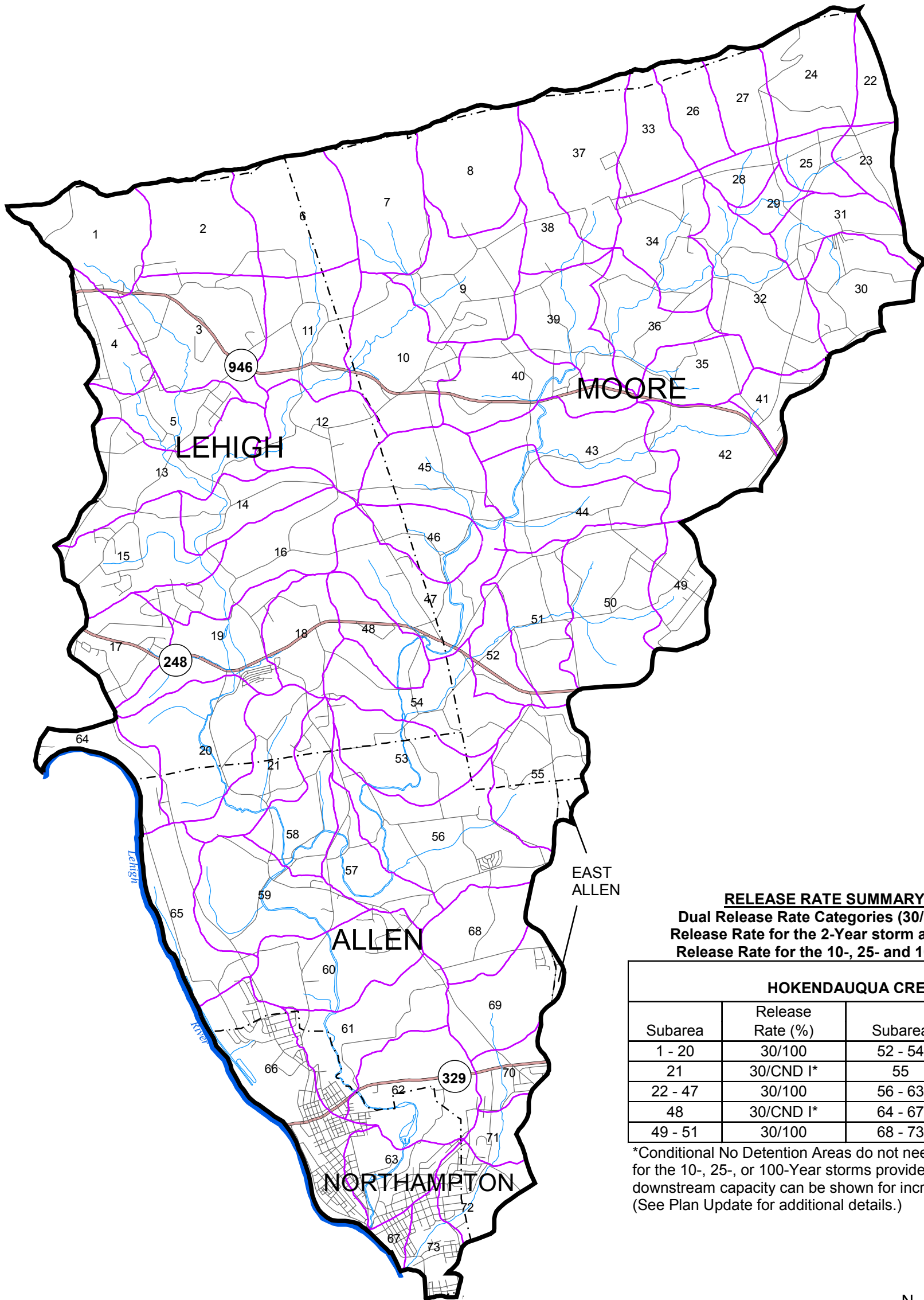
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# MAP 6

## **RELEASE RATES**

### Hokendauqua Creek Act 167 Study Area

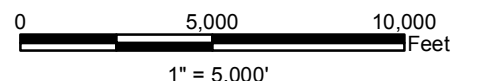


- 23 Subarea Boundaries
- Watershed Boundary
- - - - Municipal Boundaries
- Major Roads
- Minor/Other Roads
- River
- Streams

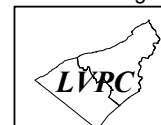
**RELEASE RATE SUMMARY TABLES**  
 Dual Release Rate Categories (30/--) define a 30% Release Rate for the 2-Year storm and the indicated Release Rate for the 10-, 25- and 100-Year storms.

HOKENDAUQUA CREEK			
Subarea	Release Rate (%)	Subarea	Release Rate (%)
1 - 20	30/100	52 - 54	30/CND I*
21	30/CND I*	55	30/100
22 - 47	30/100	56 - 63	30/CND I*
48	30/CND I*	64 - 67	30/CND II*
49 - 51	30/100	68 - 73	30/100

\*Conditional No Detention Areas do not need detention controls for the 10-, 25-, or 100-Year storms provided that adequate downstream capacity can be shown for increased peak flows. (See Plan Update for additional details.)



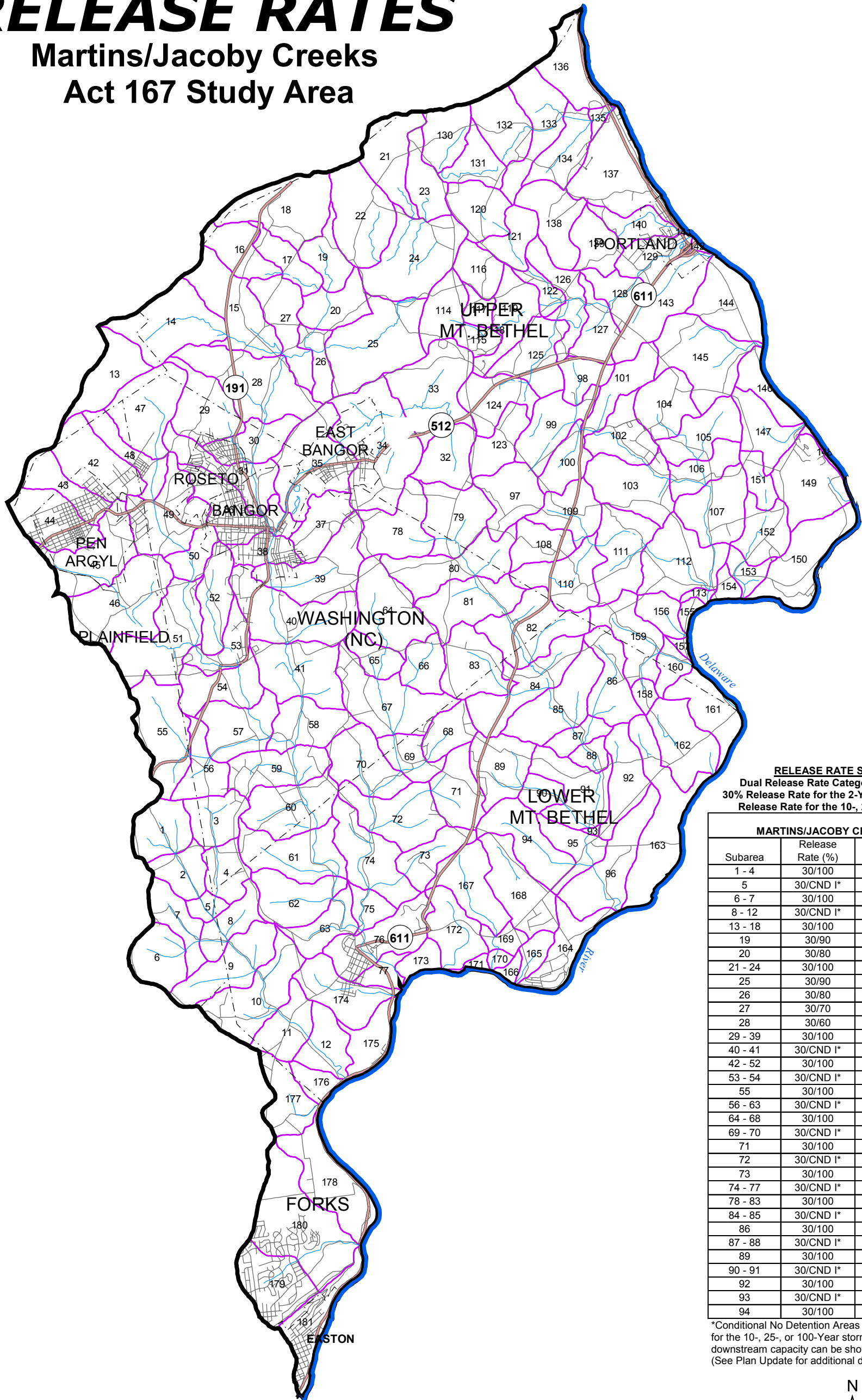
Source: Lehigh Valley Planning Commission



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# MAP 7 RELEASE RATES

## Martins/Jacoby Creeks Act 167 Study Area

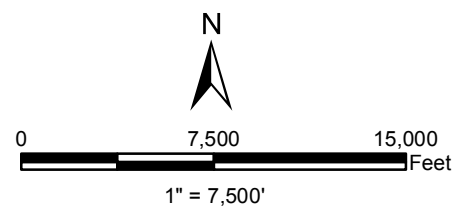


**RELEASE RATE SUMMARY TABLE**  
Dual Release Rate Categories (30/-) define a 30% Release Rate for the 2-Year storm and the indicated Release Rate for the 10-, 25- and 100-Year storms.

MARTINS/JACOBY CREEKS STUDY AREA			
Subarea	Release Rate (%)	Subarea	Release Rate (%)
1 - 4	30/100	95 - 96	30/CND I*
5	30/CND I*	97 - 105	30/100
6 - 7	30/100	106 - 107	30/CND I*
8 - 12	30/CND I*	108 - 110	30/100
13 - 18	30/100	111 - 113	30/CND I*
19	30/90	114 - 118	30/100
20	30/80	119	30/80
21 - 24	30/100	120	30/100
25	30/90	121	30/90
26	30/80	122	30/80
27	30/70	123	30/100
28	30/60	124	30/90
29 - 39	30/100	125	30/80
40 - 41	30/CND I*	126	30/70
42 - 52	30/100	127 - 128	30/60
53 - 54	30/CND I*	129	30/100
55	30/100	130 - 131	30/80
56 - 63	30/CND I*	132 - 134	30/100
64 - 68	30/100	135	30/CND I*
69 - 70	30/CND I*	136 - 137	30/CND II*
71	30/100	138 - 140	30/100
72	30/CND I*	141 - 150	30/CND II*
73	30/100	151	30/100
74 - 77	30/CND I*	152 - 153	30/CND I*
78 - 83	30/100	154 - 157	30/CND II*
84 - 85	30/CND I*	158 - 159	30/100
86	30/100	160	30/CND I*
87 - 88	30/CND I*	161 - 166	30/CND II*
89	30/100	167 - 168	30/100
90 - 91	30/CND I*	169 - 170	30/CND I*
92	30/100	171 - 178	30/CND II*
93	30/CND I*	179 - 180	30/100
94	30/100	181	30/CND II*

\*Conditional No Detention Areas do not need detention controls for the 10-, 25-, or 100-Year storms provided that adequate downstream capacity can be shown for increased peak flows. (See Plan Update for additional details).

- 23 Subarea Boundaries
- Watershed Boundary
- Municipal Boundaries
- Major Roads
- Minor/Other Roads
- River
- Streams/Rivers

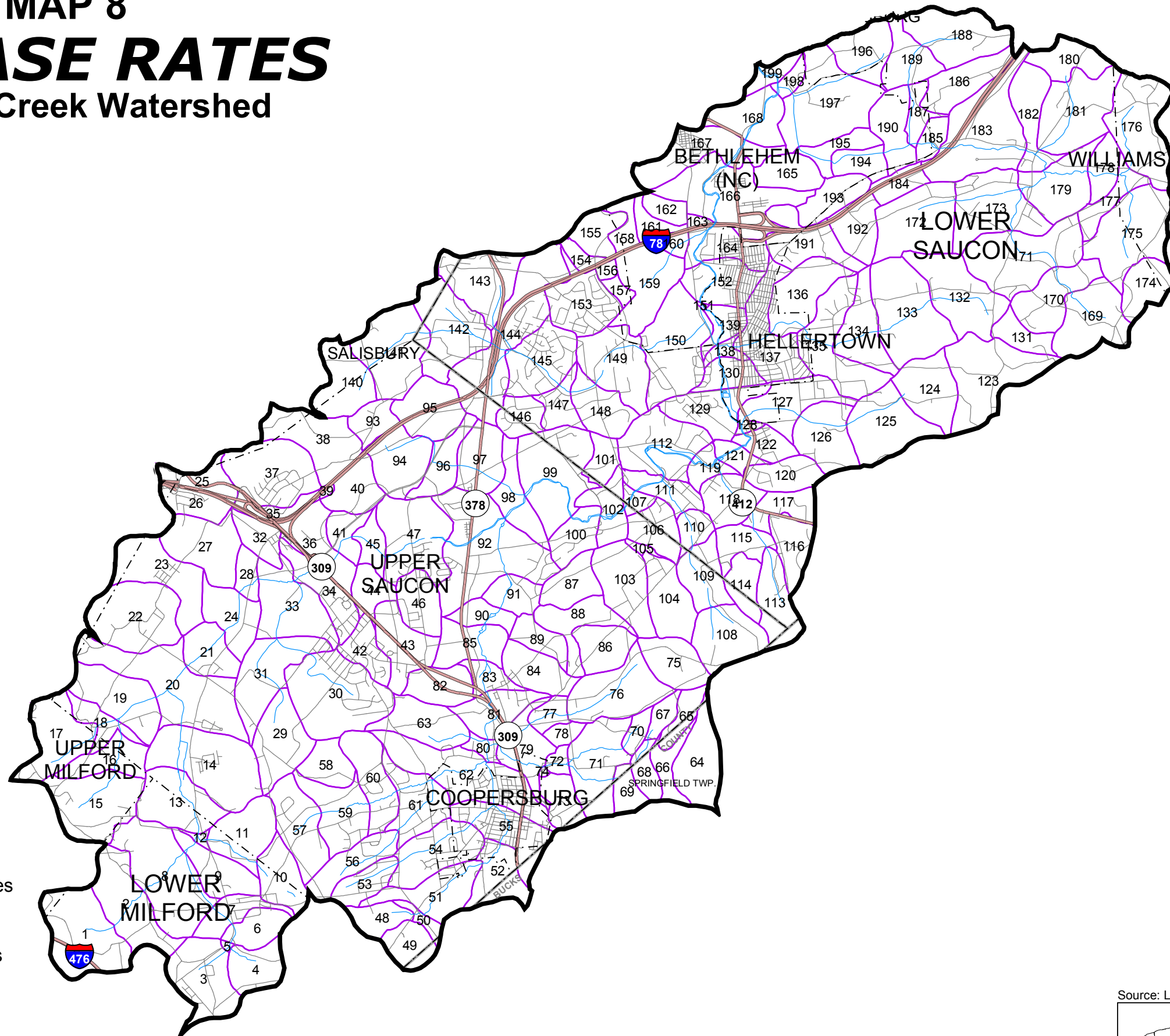




# MAP 8

## RELEASE RATES

### Saucon Creek Watershed

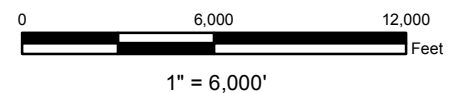


- Subarea Boundaries
- Watershed Boundaries
- County Boundaries
- Municipal Boundaries
- Streams/Rivers
- Major Roads
- Minor/Other Roads

**RELEASE RATE SUMMARY TABLE**  
Dual Release Rate Categories (30/--) define a 30% Release Rate for the 2-Year storm and the indicated Release Rate for the 10-, 25- and 100-Year storms.

SAUCON CREEK			
Subarea	Release Rate (%)	Subarea	Release Rate (%)
1 - 2	30/90	119	30/100
3 - 5	30/100	120	30/50
6 - 7	30/80	121 - 122	30/100
8	30/90	123 - 124	30/80
9	30/80	125 - 126	30/70
10	30/90	127	30/100
11 - 12	30/80	128 - 130	30/PND*
13 - 14	30/70	131 - 132	30/100
15 - 16	30/90	133	30/80
17 - 18	30/80	134 - 136	30/70
19 - 21	30/70	137	30/100
22 - 23	30/90	138 - 139	30/PND*
24	30/70	140	30/100
25 - 28	30/50	141 - 142	30/80
29	30/70	143	30/90
30	30/80	144	30/70
31	30/60	145 - 146	30/60
32	30/50	147 - 149	30/50
33 - 34	30/60	150	30/100
35 - 47	30/50	151 - 152	30/PND*
48	30/70	153 - 158	30/80
49	30/80	159	30/70
50	30/70	160 - 162	30/60
51 - 54	30/60	163 - 168	30/PND*
55	30/50	169 - 172	30/70
56	30/70	173	30/60
57	30/80	174	30/90
58 - 60	30/70	175 - 178	30/70
61	30/60	179	30/60
62	30/50	180 - 181	30/70
63	30/60	182	30/60
64 - 65	30/80	183 - 184	30/50
66	30/70	185 - 187	30/100
67	30/80	188	30/50
68	30/70	189	30/100
69	30/60	190	30/PND*
70	30/70	191	30/100
71 - 74	30/60	192	30/50
75	30/70	193	30/100
76 - 78	30/60	194 - 195	30/PND*
79 - 111	30/50	196	30/100
112	30/100	197 - 199	30/PND*
113 - 118	30/50		

\*Provisional No Detention Areas do not need detention controls for the 10-, 25- or 100-year storms provided that adequate downstream capacity can be shown for increased peak flows. (See Plan Update for additional details.)



Source: Lehigh Valley Planning Commission

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