# STONYCREEK RIVER WATERSHED ACT 167 - PHASE 2 STORMWATER MANAGEMENT PLAN 

## VOLUME III - TECHNICAL APPENDIX



## CAMBRIA AND SOMERSET COUNTIES, PENNSYLVANIA

FILE NO.
BLE PROJECT NO. 2005-1719-00

# STONYCREEK RIVER WATERSHED <br> ACT 167 - PHASE 2 <br> STORMWATER MANAGEMENT PLAN 

## CAMBRIA AND SOMERSET COUNTIES, PENNSYLVANIA

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FILE NO.<br>BLE PROJECT NO. 2005-1719-00

ENGINEERING CONSULTANT
BORTON-LAWSON ENGINEERING, INC.
3893 Adler Place, Suite 100
Bethlehem, PA 18017

# VOLUME III - TECHNICAL APPENDIX 

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## WATERSHED PEAK FLOWS SUMMARY TABLES

STONYCREEK RIVER
ACT 167 SUMMARY FLOW TABLES

| Subbasin | HMS Element | Subarea$\mathrm{DA}\left(\mathrm{mi}^{2}\right)$ | EXISTING CONDITIONS SUBAREA PEAK FLOWS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 2- Yr | 5- Yr | $10-\mathrm{Yr}$ | 25- Yr | 50- Yr | 100- Yr |
| 1 | W1000 | 7.28 | 0 | 0 | 15 | 1124 | 1295 | 1792 |
| 2 | W1010 | 2.56 | 82 | 168 | 260 | 266 | 291 | 452 |
| 3 | W1020 | 0.07 | 6 | 15 | 24 | 23 | 24 | 40 |
| 4 | W1040 | 8.81 | 220 | 440 | 669 | 699 | 773 | 1177 |
| 5 | W1050 | 6.43 | 340 | 612 | 881 | 985 | 1123 | 1598 |
| 6 | W1060 | 1.93 | 86 | 178 | 274 | 280 | 306 | 477 |
| 7 | W1070 | 0.32 | 3 | 14 | 31 | 49 | 55 | 83 |
| 8 | W1080 | 18.71 | 502 | 1143 | 1833 | 1983 | 2300 | 3120 |
| 9 | W1090 | 19.04 | 322 | 812 | 1365 | 1586 | 1827 | 2528 |
| 10 | W1100 | 3.55 | 234 | 401 | 562 | 774 | 844 | 1136 |
| 11 | W1110 | 6.02 | 343 | 594 | 836 | 958 | 1103 | 1529 |
| 12 | W1120 | 0.04 | 15 | 23 | 31 | 37 | 44 | 57 |
| 13 | W1130 | 10.16 | 387 | 695 | 1001 | 1119 | 1277 | 1815 |
| 14 | W1140 | 7.28 | 564 | 871 | 1156 | 1619 | 1816 | 2319 |
| 15 | W1150 | 12.24 | 558 | 981 | 1397 | 1582 | 1814 | 2544 |
| 16 | W1160 | 18.73 | 1457 | 2194 | 2870 | 3957 | 4494 | 5661 |
| 17 | W1170 | 1.92 | 81 | 157 | 236 | 334 | 339 | 488 |
| 18 | W1180 | 17.07 | 1198 | 1859 | 2474 | 3477 | 3883 | 4976 |
| 19 | W1190 | 18.08 | 1185 | 1784 | 2334 | 3218 | 3649 | 4598 |
| 20 | W1200 | 7.60 | 1500 | 2374 | 3174 | 4467 | 4890 | 6294 |
| 21 | W1210 | 6.27 | 1213 | 1927 | 2581 | 3634 | 3976 | 5119 |
| 22 | W1220 | 0.88 | 222 | 373 | 513 | 740 | 788 | 1040 |
| 23 | W1240 | 6.89 | 595 | 891 | 1161 | 1595 | 1818 | 2282 |
| 24 | W1250 | 9.62 | 1413 | 2331 | 3191 | 4593 | 4872 | 6417 |
| 25 | W1260 | 0.02 | 6 | 8 | 10 | 13 | 15 | 18 |
| 26 | W1270 | 0.01 | 4 | 5 | 7 | 8 | 10 | 11 |
| 27 | W1280 | 5.06 | 427 | 622 | 797 | 1074 | 1237 | 1529 |
| 28 | W1290 | 11.55 | 853 | 1273 | 1656 | 2269 | 2587 | 3240 |
| 29 | W1300 | 5.00 | 425 | 643 | 844 | 1166 | 1323 | 1671 |
| 30 | W1310 | 4.97 | 387 | 584 | 765 | 1057 | 1199 | 1512 |
| 31 | W1320 | 1.84 | 110 | 240 | 378 | 391 | 455 | 611 |
| 32 | W1340 | 3.83 | 48 | 159 | 303 | 408 | 461 | 669 |
| 33 | W1380 | 3.06 | 197 | 368 | 539 | 633 | 666 | 971 |
| 34 | W1390 | 9.82 | 405 | 772 | 1145 | 1330 | 1384 | 2046 |
| 35 | W1430 | 1.08 | 94 | 172 | 250 | 296 | 315 | 453 |
| 36 | W1450 | 3.91 | 234 | 421 | 606 | 721 | 774 | 1100 |
| 37 | W1490 | 4.67 | 242 | 534 | 841 | 875 | 1018 | 1370 |
| 38 | W1500 | 8.60 | 0 | 48 | 137 | 1688 | 1975 | 2591 |
| 39 | W1540 | 1.01 | 234 | 391 | 537 | 775 | 824 | 1086 |
| 40 | W1550 | 0.90 | 267 | 420 | 559 | 786 | 865 | 1111 |
| 41 | W670 | 1.43 | 274 | 425 | 566 | 610 | 1025 | 1271 |
| 42 | W680 | 8.29 | 559 | 1027 | 1490 | 2268 | 3616 | 4469 |
| 43 | W690 | 7.38 | 489 | 822 | 1139 | 1387 | 1536 | 2089 |
| 44 | W700 | 7.16 | 625 | 995 | 1343 | 1376 | 2518 | 3147 |
| 45 | W710 | 0.23 | 25 | 51 | 77 | 88 | 89 | 137 |
| 46 | W720 | 0.34 | 125 | 188 | 245 | 251 | 253 | 356 |
| 47 | W730 | 3.77 | 316 | 569 | 817 | 975 | 1046 | 1488 |
| 48 | W750 | 12.30 | 1470 | 2081 | 2631 | 3036 | 3743 | 4671 |
| 49 | W760 | 7.75 | 989 | 1480 | 1933 | 2047 | 2228 | 3015 |

STONYCREEK RIVER
ACT 167 SUMMARY FLOW TABLES

| Subbasin | HMS <br> Element | Subarea <br> DA $\left(\mathrm{mi}^{2}\right)$ | EXISTING CONDITIONS SUBAREA PEAK FLOWS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $5-\mathrm{Yr}$ | $10-\mathrm{Yr}$ | $25-\mathrm{Yr}$ | $50-\mathrm{Yr}$ | $100-\mathrm{Yr}$ |  |
| 50 | W 770 | 6.34 | 576 | 1006 | 1420 | 1652 | 1785 | 2517 |
| 51 | W 780 | 0.35 | 40 | 80 | 120 | 138 | 141 | 214 |
| 52 | W 800 | 20.00 | 707 | 1249 | 1783 | 2131 | 2306 | 3242 |
| 53 | W 810 | 2.57 | 586 | 848 | 1086 | 1159 | 1625 | 2041 |
| 54 | W 820 | 1.20 | 376 | 532 | 672 | 769 | 1016 | 1251 |
| 55 | W 830 | 4.28 | 347 | 618 | 883 | 1013 | 1084 | 1550 |
| 56 | W840 | 13.07 | 1274 | 1845 | 2366 | 2469 | 2648 | 3539 |
| 57 | W850 | 7.36 | 970 | 1409 | 1812 | 2211 | 2683 | 3386 |
| 58 | W860 | 4.53 | 404 | 718 | 1022 | 1227 | 1507 | 2060 |
| 59 | W870 | 9.13 | 307 | 590 | 879 | 942 | 1055 | 1566 |
| 60 | W880 | 20.61 | 477 | 880 | 1284 | 1412 | 1600 | 2313 |
| 61 | W900 | 18.83 | 819 | 1352 | 1861 | 2545 | 2811 | 3722 |
| 62 | W910 | 12.56 | 563 | 945 | 1312 | 1525 | 1767 | 2404 |
| 63 | W920 | 12.05 | 256 | 600 | 978 | 1085 | 1256 | 1715 |
| 64 | W930 | 9.68 | 162 | 442 | 767 | 925 | 1060 | 1487 |
| 65 | W940 | 6.96 | 279 | 537 | 800 | 857 | 959 | 1426 |
| 66 | W950 | 2.02 | 48 | 135 | 236 | 284 | 325 | 457 |
| 67 | W960 | 1.61 | 0 | 0 | 0 | 218 | 247 | 356 |
| 68 | W970 | 3.67 | 220 | 478 | 750 | 774 | 900 | 1209 |
| 69 | W980 | 0.05 | 26 | 45 | 60 | 61 | 71 | 83 |
| 70 | W990 | 5.90 | 0 | 0 | 1 | 665 | 766 | 1061 |


| Subbasin | HMS Element | Subarea$\mathrm{DA}\left(\mathrm{mi}^{2}\right)$ | EXISTING CONDITIONS CUMULATIVE FLOWS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 2- Yr | 5- Yr | $10-\mathrm{Yr}$ | $25-\mathrm{Yr}$ | $50-\mathrm{Yr}$ | $100-\mathrm{Yr}$ |
| 1 | J168 | 3.91 | 234 | 421 | 606 | 721 | 774 | 1,100 |
| 2 | J171 | 38.22 | 1,277 | 2,387 | 3,452 | 4,092 | 4,387 | 6,263 |
| 3 | J176 | 3.83 | 48 | 159 | 303 | 408 | 461 | 669 |
| 4 | J179 | 24.72 | 397 | 991 | 1,686 | 2,065 | 2,386 | 3,336 |
| 5 | J182 | 9.97 | 804 | 1,216 | 1,593 | 2,202 | 2,497 | 3,153 |
| 6 | J187 | 16.61 | 1,280 | 1,894 | 2,452 | 3,342 | 3,822 | 4,768 |
| 7 | J192 | 26.60 | 2,077 | 3,098 | 4,030 | 5,521 | 6,295 | 7,888 |
| 8 | J197 | 24.36 | 3,719 | 5,954 | 8,022 | 11,341 | 12,327 | 15,947 |
| 9 | J200 | 59.76 | 2,514 | 3,780 | 5,022 | 7,044 | 8,023 | 10,251 |
| 10 | J207 | 13.87 | 2,713 | 4,302 | 5,753 | 8,101 | 8,866 | 11,413 |
| 11 | J212 | 94.90 | 3,953 | 5,930 | 7,784 | 10,823 | 12,304 | 15,623 |
| 12 | J217 | 115.55 | 4,765 | 7,135 | 9,327 | 12,990 | 14,786 | 18,714 |
| 13 | J222 | 22.39 | 941 | 1,671 | 2,389 | 2,691 | 3,079 | 4,342 |
| 14 | J225 | 126.39 | 4,998 | 7,511 | 9,867 | 13,870 | 15,710 | 19,949 |
| 15 | J230 | 28.45 | 1,246 | 2,197 | 3,127 | 3,573 | 4,094 | 5,745 |
| 16 | J239 | 43.74 | 882 | 2,116 | 3,491 | 4,038 | 4,677 | 6,448 |
| 17 | J244 | 36.82 | 1,522 | 2,674 | 3,800 | 4,481 | 5,133 | 7,216 |
| 18 | J249 | 29.42 | 650 | 1,215 | 1,789 | 1,949 | 2,200 | 3,207 |
| 19 | J252 | 68.87 | 2,104 | 3,795 | 5,471 | 6,237 | 7,093 | 10,130 |
| 20 | J257 | 13.17 | 0 | 0 | 15 | 1,706 | 1,965 | 2,719 |
| 21 | J262 | 85.99 | 1,299 | 3,213 | 5,336 | 7,240 | 8,391 | 11,528 |
| 22 | J265 | 57.09 | 1,020 | 2,564 | 4,288 | 5,110 | 5,917 | 8,174 |
| 23 | J270 | 71.16 | 1,299 | 3,217 | 5,344 | 6,292 | 7,287 | 10,042 |
| 24 | J273 | 88.39 | 2,766 | 4,905 | 7,005 | 8,272 | 9,443 | 13,360 |
| 25 | J282 | 244.48 | 5,966 | 9,556 | 13,043 | 20,988 | 24,183 | 31,748 |
| 26 | J289 | 346.53 | 7,916 | 12,942 | 17,870 | 25,991 | 29,771 | 39,330 |
| 27 | J294 | 20.43 | 2,084 | 3,024 | 3,884 | 4,289 | 4,842 | 6,313 |
| 28 | J299 | 387.31 | 8,651 | 14,016 | 19,270 | 27,655 | 31,486 | 41,459 |
| 29 | J302 | 33.93 | 3,578 | 5,138 | 6,554 | 7,412 | 8,696 | 11,116 |
| 30 | J307 | 32.88 | 1,131 | 2,096 | 3,029 | 3,454 | 3,711 | 5,357 |
| 31 | J314 | 401.39 | 8,822 | 14,262 | 19,584 | 28,046 | 31,875 | 41,933 |
| 32 | J321 | 49.37 | 1,488 | 2,748 | 3,953 | 5,691 | 6,005 | 8,443 |
| 33 | J324 | 451.32 | 9,818 | 15,976 | 22,074 | 30,113 | 33,883 | 44,538 |
| 34 | J329 | 466.77 | 9,984 | 16,225 | 22,405 | 30,515 | 34,259 | 44,993 |
| 35 | JBen Creek DS | 49.59 | 1,485 | 2,741 | 3,942 | 5,695 | 6,012 | 8,451 |
| 36 | JQuemah Creek DS | 99.26 | 660 | 1,561 | 2,708 | 6,097 | 7,238 | 10,161 |
| 37 | JShade Creek DS | 97.52 | 2,903 | 5,130 | 7,315 | 8,878 | 10,137 | 14,346 |
| 38 | JStony US-Ben Creek | 401.73 | 8,825 | 14,267 | 19,591 | 28,051 | 31,877 | 41,932 |
| 39 | JStony US-Quemah Creek | 145.22 | 5,313 | 8,016 | 10,519 | 14,949 | 17,042 | 21,644 |
| 40 | JStony US-Shade Creek | 249.01 | 6,013 | 9,623 | 13,127 | 21,099 | 24,301 | 31,880 |
| 41 | JStony US-Wells Creek | 77.83 | 3,348 | 5,019 | 6,609 | 9,204 | 10,477 | 13,324 |
| 42 | Lk Stonycreek | 25.26 | 472 | 838 | 1,222 | 1,919 | 2,104 | 2,927 |
| 43 | NForkDam | 9.82 | 392 | 771 | 1,144 | 1,329 | 1,383 | 2,003 |
| 44 | Outlet1 | 468.19 | 9,995 | 16,240 | 22,425 | 30,532 | 34,202 | 44,921 |

HEC-HMS MODEL OUTPUT TABLES
Project: Stoneycreek River Simulation Run: Run 2-yr
Volume Units: IN

| J168 | 3.9092000 | 234.24 | 29Oct2007, $14: 20$ | 0.52 |
| :--- | :--- | :--- | :--- | :--- |
| J171 | 38.2160400 | 1277.06 | 29Oct2007, $17: 10$ | 0.47 |
| J176 | 3.8288000 | 47.81 | 29Oct2007, 14:55 | 0.17 |
| J179 | 24.7155000 | 397.05 | 29Oct2007, 16:10 | 0.25 |
| J182 | 9.9661000 | 804.39 | 29Oct2007, 15:25 | 0.84 |
| J187 | 16.6090000 | 1279.85 | 29Oct2007, 16:15 | 0.93 |
| J192 | 26.6017844 | 2076.69 | 29Oct2007, 16:20 | 0.90 |
| J197 | 24.3644000 | 3718.60 | 29Oct2007, 13:25 | 0.74 |
| J200 | 59.7566044 | 2514.31 | 29Oct2007, 18:05 | 0.70 |
| J207 | 13.8675000 | 2713.07 | 29Oct2007, 12:50 | 0.79 |
| J212 | 94.8996044 | 3953.02 | 29Oct2007, 18:25 | 0.73 |
| J217 | 115.5490044 | 4764.93 | 29Oct2007, 18:35 | 0.74 |
| J222 | 22.3940000 | 941.12 | 29Oct2007, 15:50 | 0.50 |
| J225 | 126.3875044 | 4998.10 | 29Oct2007, 19:50 | 0.73 |
| J230 | 28.4537015 | 1246.15 | 29Oct2007, 15:50 | 0.52 |

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| J239 | 43.7412800 | 882.18 | 29Oct2007, 15:35 | 0.28 |
| :--- | :--- | :--- | :--- | :--- |
| J244 | 36.8165015 | 1521.55 | 29Oct2007, 16:10 | 0.51 |
| J249 | 29.4239000 | 649.55 | 29Oct2007, 17:45 | 0.37 |
| J252 | 68.8721560 | 2103.97 | 29Oct2007, 16:35 | 0.44 |
| J257 | 13.1739000 | 0.00 | 29Oct2007, 00:00 | 0.00 |
| J262 | 85.9936476 | 1299.22 | 29Oct2007, 16:40 | 0.23 |
| J265 | 57.0895800 | 1020.25 | 29Oct2007, 16:20 | 0.28 |
| J270 | 71.1585800 | 1299.04 | 29Oct2007, 16:25 | 0.28 |
| J273 | 88.3907560 | 2766.06 | 29Oct2007, 17:40 | 0.46 |
| J282 | 244.4784520 | 5966.49 | 29Oct2007, 23:30 | 0.50 |
| J289 | 346.5263080 | 7916.16 | 29Oct2007, 22:35 | 0.49 |
| J294 | 20.4305000 | 2083.87 | 29Oct2007, 14:20 | 0.90 |
| J299 | 387.3064080 | 8650.75 | 29Oct2007, 22:35 | 0.53 |
| J302 | 33.9296000 | 3578.14 | 29Oct2007, 14:55 | 0.97 |
| J307 | 32.8777000 | 1131.21 | 29Oct2007, 16:30 | 0.46 |
| J314 | 401.3895080 | 8821.52 | 29Oct2007, 22:55 | 0.54 |
| J321 | 49.3666400 | 1488.43 | 29Oct2007, 19:10 | 0.50 |
| J324 | 451.3185980 | 9818.33 | 29Oct2007, 22:35 | 0.54 |
| J329 | 466.7654980 | 9984.26 | 29Oct2007, 23:10 | 0.54 |
| JBen Creek DS | 49.5918500 | 1484.77 | 29Oct2007, 19:45 | 0.50 |
| JQuemah Creek DS | 99.2579476 | 660.31 | 30Oct2007, 00:20 | 0.19 |

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| JShade Creek DS | 97.5205560 | 2902.56 | 29Oct2007, 19:15 | 0.46 |
| :--- | :--- | :--- | :--- | :--- |
| JStony US-Ben Creek | 401.7267480 | 8825.40 | 29Oct2007, 22:55 | 0.54 |
| JStony US-Quemah Creek | 145.2205044 | 5312.90 | 29Oct2007, 23:25 | 0.71 |
| JStony US-Shade Creek | 249.0057520 | 6013.21 | 29Oct2007, 23:55 | 0.50 |
| JStony US-Wells Creek | 77.8336044 | 3348.28 | 29Oct2007, 18:50 | 0.73 |
| Lk Stonycreek | 25.2596200 | 471.50 | 29Oct2007, 18:40 | 0.61 |
| NForkDam | 9.8185000 | 391.64 | 29Oct2007, 15:15 | 0.41 |
| Outlet1 | 468.1926980 | 9994.96 | 29Oct2007, 23:35 | 0.54 |
| R100 | 32.8777000 | 118.00 | 29Oct2007, 17:15 | 0.46 |
| R120 | 9.8185000 | 350.98 | 29Oct2007, 16:30 | 0.41 |
| R1330 | 3.8288000 | 37.64 | 29Oct2007, 18:20 | 0.17 |
| R140 | 387.3064080 | 8646.82 | 29Oct2007, 22:55 | 0.53 |
| R1440 | 3.9092000 | 231.31 | 29Oct2007, 15:05 | 0.52 |
| R150 | 33.9296000 | 3543.69 | 29Oct2007, 15:35 | 0.97 |
| R1520 | 85.9936476 | 1299.12 | 29Oct2007, 16:40 | 0.23 |
| R1560 | 24.3644000 | 455.53 | 29Oct2007, 19:05 | 0.60 |
| R160 | 20.4305000 | 2058.52 | 29Oct2007, 15:05 | 0.90 |
| R20 | 466.7654980 | 9978.76 | 29Oct2007, 23:35 | 0.54 |
| R200 | 346.5263080 | 7912.45 | 29Oct2007, 22:55 | 0.49 |
| R210 | 244.4784520 | 5965.08 | 29Oct2007, 23:55 | 0.50 |
| R220 | 88.3907560 | 2740.66 | 29Oct2007, 19:20 | 0.46 |


| R260 | 57.0895800 | 1019.10 | 29Oct2007, 16:35 | 0.28 |
| :--- | :--- | :--- | :--- | :--- |
| R270 | 94.5898476 | 617.70 | 30Oct2007, 01:15 | 0.18 |
| R280 | 71.1585800 | 1297.53 | 29Oct2007, 16:40 | 0.28 |
| R290 | 13.1739000 | 0.00 | 29Oct2007, 00:00 | 0.00 |
| R310 | 68.8721560 | 2088.70 | 29Oct2007, 17:55 | 0.44 |
| R330 | 36.8165015 | 1521.17 | 29Oct2007, 16:10 | 0.51 |
| R340 | 29.4239000 | 648.55 | 29Oct2007, 18:30 | 0.37 |
| R370 | 43.7412800 | 878.06 | 29Oct2007, 16:05 | 0.28 |
| R390 | 24.7155000 | 397.01 | 29Oct2007, 16:10 | 0.25 |
| R410 | 126.3875044 | 4977.74 | 29Oct2007, 23:50 | 0.72 |
| R420 | 28.4537015 | 1239.03 | 29Oct2007, 16:25 | 0.52 |
| R430 | 22.3940000 | 938.79 | 29Oct2007, 16:10 | 0.50 |
| R480 | 115.5490044 | 4749.06 | 29Oct2007, 20:00 | 0.74 |
| R50 | 49.3666400 | 1482.22 | 29Oct2007, 19:45 | 0.50 |
| R520 | 94.8996044 | 3944.26 | 29Oct2007, 19:05 | 0.73 |
| R560 | 13.8675000 | 2523.16 | 29Oct2007, 13:30 | 0.79 |
| R570 | 59.7566044 | 2495.17 | 29Oct2007, 19:20 | 0.70 |
| R580 | 25.2596200 | 293.94 | 30Oct2007, 05:30 | 0.45 |
| R60 | 451.3185980 | 9808.97 | 29Oct2007, 23:10 | 0.53 |
| R600 | 26.6017844 | 2043.83 | 29Oct2007, 18:10 | 0.90 |
| R610 | 16.6090000 | 1279.49 | 29Oct2007, 16:15 | 0.93 |

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| R620 | 9.9661000 | 796.20 | 29Oct2007, 16:25 | 0.84 |
| :--- | :--- | :--- | :--- | :--- |
| R80 | 401.3895080 | 8821.34 | 29Oct2007, 22:55 | 0.54 |
| R90 | 38.2160400 | 1242.08 | 29Oct2007, 19:20 | 0.47 |
| Reservoir-Indian Lake | 24.3644000 | 455.53 | 29Oct2007, 19:05 | 0.60 |
| Reservoir-Lake Gloria | 3.8288000 | 37.68 | 29Oct2007, 17:45 | 0.17 |
| Reservoir-Lake Stonycreek | 25.2596200 | 293.94 | 30Oct2007, 05:30 | 0.45 |
| Reservoir-North Fork | 9.8185000 | 391.64 | 29Oct2007, 15:15 | 0.41 |
| Reservoir-Quemahoning | 94.5898476 | 617.74 | 30Oct2007, 01:00 | 0.18 |
| Reservoir-Stoughton Lake | 9.6825000 | 113.85 | 29Oct2007, 19:00 | 0.19 |
| W1000 | 7.2782000 | 0.00 | 29Oct2007, 00:00 | 0.00 |
| W1010 | 2.5590000 | 81.93 | 29Oct2007, 14:45 | 0.33 |
| W1020 | 0.0727545 | 6.31 | 29Oct2007, 12:25 | 0.33 |
| W1040 | 8.8149000 | 220.46 | 29Oct2007, 16:10 | 0.33 |
| W1050 | 6.4345000 | 339.77 | 29Oct2007, 14:45 | 0.51 |
| W1060 | 1.9283000 | 85.98 | 29Oct2007, 13:45 | 0.36 |
| W1070 | 0.3167800 | 3.23 | 29Oct2007, 14:05 | 0.13 |
| W1080 | 18.7090000 | 501.53 | 29Oct2007, 15:20 | 0.33 |
| W1090 | 19.0440000 | 322.26 | 29Oct2007, 16:10 | 0.25 |
| W1100 | 3.5546000 | 233.84 | 29Oct2007, 14:25 | 0.57 |
| W1110 | 6.0173000 | 343.36 | 29Oct2007, 15:00 | 0.58 |
| W1120 | 0.0424015 | 14.84 | 29Oct2007, 12:20 | 0.90 |

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Project: Stoneycreek River Simulation Run: Run 5-yr
Volume Units: IN

| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| J168 | 3.9092000 | 421.20 | 29Oct2007, 14:10 | 0.86 |
| J171 | 38.2160400 | 2386.78 | 29Oct2007, 16:30 | 0.79 |
| J176 | 3.8288000 | 158.96 | 29Oct2007, 14:05 | 0.41 |
| J179 | 24.7155000 | 991.11 | 29Oct2007, 15:35 | 0.52 |
| J182 | 9.9661000 | 1215.65 | 29Oct2007, 15:20 | 1.24 |
| J187 | 16.6090000 | 1894.06 | 29Oct2007, 16:15 | 1.36 |
| J192 | 26.6017844 | 3098.27 | 29Oct2007, 16:15 | 1.31 |
| J197 | 24.3644000 | 5954.10 | 29Oct2007, 13:20 | 1.14 |
| J200 | 59.7566044 | 3780.44 | 29Oct2007, 18:00 | 1.08 |
| J207 | 13.8675000 | 4301.65 | 29Oct2007, 12:50 | 1.20 |
| J212 | 94.8996044 | 5930.07 | 29Oct2007, 18:20 | 1.11 |
| J217 | 115.5490044 | 7135.26 | 29Oct2007, 18:25 | 1.12 |
| J222 | 22.3940000 | 1670.84 | 29Oct2007, 15:40 | 0.84 |
| J225 | 126.3875044 | 7510.85 | 29Oct2007, 18:30 | 1.11 |
| J230 | 28.4537015 | 2197.42 | 29Oct2007, 15:40 | 0.86 |

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| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| J239 | 43.7412800 | 2115.57 | 29Oct2007, 15:15 | 0.57 |
| J244 | 36.8165015 | 2674.02 | 29Oct2007, 16:00 | 0.84 |
| J249 | 29.4239000 | 1215.01 | 29Oct2007, 17:25 | 0.66 |
| J252 | 68.8721560 | 3795.47 | 29Oct2007, 16:25 | 0.76 |
| J257 | 13.1739000 | 0.00 | 29Oct2007, 00:00 | 0.00 |
| J262 | 85.9936476 | 3212.94 | 29Oct2007, 16:05 | 0.47 |
| J265 | 57.0895800 | 2563.96 | 29Oct2007, 15:45 | 0.57 |
| J270 | 71.1585800 | 3216.72 | 29Oct2007, 15:55 | 0.57 |
| J273 | 88.3907560 | 4904.54 | 29Oct2007, 17:30 | 0.78 |
| J282 | 244.4784520 | 9555.56 | 29Oct2007, 22:50 | 0.81 |
| J289 | 346.5263080 | 12941.70 | 29Oct2007, 22:10 | 0.80 |
| J294 | 20.4305000 | 3023.79 | 29Oct2007, 14:20 | 1.29 |
| J299 | 387.3064080 | 14016.03 | 29Oct2007, 22:15 | 0.85 |
| J302 | 33.9296000 | 5137.69 | 29Oct2007, 14:55 | 1.38 |
| J307 | 32.8777000 | 2095.71 | 29Oct2007, 16:00 | 0.79 |
| J314 | 401.3895080 | 14261.53 | 29Oct2007, 22:30 | 0.86 |
| J321 | 49.3666400 | 2748.41 | 29Oct2007, 18:30 | 0.83 |
| J324 | 451.3185980 | 15975.98 | 29Oct2007, 22:00 | 0.86 |
| J329 | 466.7654980 | 16224.96 | 29Oct2007, 22:35 | 0.86 |
| JBen Creek DS | 49.5918500 | 2740.79 | 29Oct2007, 19:05 | 0.83 |
| JQuemah Creek DS | 99.2579476 | 1561.27 | 29Oct2007, 21:35 | 0.41 |


| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| JShade Creek DS | 97.5205560 | 5129.59 | 29Oct2007, 19:05 | 0.77 |
| JStony US-Ben Creek | 401.7267480 | 14266.57 | 29Oct2007, 22:35 | 0.86 |
| JStony US-Quemah Creek | 145.2205044 | 8015.52 | 29Oct2007, 22:55 | 1.08 |
| JStony US-Shade Creek | 249.0057520 | 9622.78 | 29Oct2007, 23:15 | 0.81 |
| JStony US-Wells Creek | 77.8336044 | 5018.97 | 29Oct2007, 18:45 | 1.11 |
| Lk Stonycreek | 25.2596200 | 837.65 | 29Oct2007, 17:15 | 0.97 |
| NForkDam | 9.8185000 | 771.10 | 29Oct2007, 14:40 | 0.71 |
| Outlet1 | 468.1926980 | 16240.40 | 29Oct2007, 23:00 | 0.86 |
| R100 | 32.8777000 | 2081.36 | 29Oct2007, 16:40 | 0.79 |
| R120 | 9.8185000 | 748.31 | 29Oct2007, 15:50 | 0.71 |
| R1330 | 3.8288000 | 103.11 | 29Oct2007, 16:45 | 0.41 |
| R140 | 387.3064080 | 14009.73 | 29Oct2007, 22:30 | 0.85 |
| R1440 | 3.9092000 | 414.87 | 29Oct2007, 15:00 | 0.86 |
| R150 | 33.9296000 | 5085.62 | 29Oct2007, 15:35 | 1.38 |
| R1520 | 85.9936476 | 3213.29 | 29Oct2007, 16:10 | 0.47 |
| R1560 | 24.3644000 | 810.91 | 29Oct2007, 17:25 | 0.96 |
| R160 | 20.4305000 | 2987.71 | 29Oct2007, 15:00 | 1.29 |
| R20 | 466.7654980 | 16217.31 | 29Oct2007, 23:00 | 0.86 |
| R200 | 346.5263080 | 12934.89 | 29Oct2007, 22:30 | 0.80 |
| R210 | 244.4784520 | 9551.52 | 29Oct2007, 23:15 | 0.81 |
| R220 | 88.3907560 | 4856.34 | 29Oct2007, 19:10 | 0.78 |


| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| R260 | 57.0895800 | 2558.80 | 29Oct2007, 16:00 | 0.57 |
| R270 | 94.5898476 | 1483.09 | 29Oct2007, 21:50 | 0.40 |
| R280 | 71.1585800 | 3210.46 | 29Oct2007, 16:05 | 0.57 |
| R290 | 13.1739000 | 0.00 | 29Oct2007, 00:00 | 0.00 |
| R310 | 68.8721560 | 3763.90 | 29Oct2007, 17:45 | 0.76 |
| R330 | 36.8165015 | 2673.16 | 29Oct2007, 16:05 | 0.84 |
| R340 | 29.4239000 | 1212.93 | 29Oct2007, 18:00 | 0.66 |
| R370 | 43.7412800 | 2104.02 | 29Oct2007, 15:40 | 0.57 |
| R390 | 24.7155000 | 990.98 | 29Oct2007, 15:40 | 0.52 |
| R410 | 126.3875044 | 7484.57 | 29Oct2007, 23:25 | 1.10 |
| R420 | 28.4537015 | 2183.89 | 29Oct2007, 16:15 | 0.86 |
| R430 | 22.3940000 | 1665.80 | 29Oct2007, 16:00 | 0.84 |
| R480 | 115.5490044 | 7115.97 | 29Oct2007, 19:50 | 1.12 |
| R50 | 49.3666400 | 2736.59 | 29Oct2007, 19:05 | 0.83 |
| R520 | 94.8996044 | 5915.89 | 29Oct2007, 19:00 | 1.11 |
| R560 | 13.8675000 | 4005.07 | 29Oct2007, 13:30 | 1.20 |
| R570 | 59.7566044 | 3754.41 | 29Oct2007, 19:20 | 1.07 |
| R580 | 25.2596200 | 534.46 | 30Oct2007, 03:20 | 0.77 |
| R60 | 451.3185980 | 15962.52 | 29Oct2007, 22:40 | 0.86 |
| R600 | 26.6017844 | 3047.38 | 29Oct2007, 18:10 | 1.31 |
| R610 | 16.6090000 | 1893.94 | 29Oct2007, 16:15 | 1.36 |


| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| R620 | 9.9661000 | 1203.41 | 29Oct2007, 16:20 | 1.24 |
| R80 | 401.3895080 | 14260.87 | 29Oct2007, 22:35 | 0.86 |
| R90 | 38.2160400 | 2330.37 | 29Oct2007, 18:40 | 0.79 |
| Reservoir-Indian Lake | 24.3644000 | 810.91 | 29Oct2007, 17:25 | 0.96 |
| Reservoir-Lake Gloria | 3.8288000 | 103.34 | 29Oct2007, 16:10 | 0.41 |
| Reservoir-Lake Stonycreek | 25.2596200 | 534.46 | 30Oct2007, 03:15 | 0.77 |
| Reservoir-North Fork | 9.8185000 | 771.10 | 29Oct2007, 14:40 | 0.71 |
| Reservoir-Quemahoning | 94.5898476 | 1483.23 | 29Oct2007, 21:40 | 0.40 |
| Reservoir-Stoughton Lake | 9.6825000 | 323.61 | 29Oct2007, 16:35 | 0.46 |
| W1000 | 7.2782000 | 0.00 | 29Oct2007, 00:00 | 0.00 |
| W1010 | 2.5590000 | 168.49 | 29Oct2007, 14:30 | 0.60 |
| W1020 | 0.0727545 | 14.79 | 29Oct2007, 12:20 | 0.60 |
| W1040 | 8.8149000 | 440.31 | 29Oct2007, 15:50 | 0.60 |
| W1050 | 6.4345000 | 611.83 | 29Oct2007, 14:35 | 0.84 |
| W1060 | 1.9283000 | 177.55 | 29Oct2007, 13:40 | 0.64 |
| W1070 | 0.3167800 | 14.18 | 29Oct2007, 13:05 | 0.35 |
| W1080 | 18.7090000 | 1142.57 | 29Oct2007, 15:00 | 0.64 |
| W1090 | 19.0440000 | 811.76 | 29Oct2007, 15:40 | 0.52 |
| W1100 | 3.5546000 | 400.71 | 29Oct2007, 14:20 | 0.92 |
| W1110 | 6.0173000 | 593.65 | 29Oct2007, 14:55 | 0.93 |
| W1120 | 0.0424015 | 23.11 | 29Oct2007, 12:20 | 1.34 |

Project: Stoneycreek River Simulation Run: Run 10-yr
Volume Units: IN

| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| J168 | 3.9092000 | 605.80 | 29Oct2007, 14:10 | 1.18 |
| J171 | 38.2160400 | 3452.49 | 29Oct2007, 16:20 | 1.10 |
| J176 | 3.8288000 | 302.74 | 29Oct2007, 13:55 | 0.66 |
| J179 | 24.7155000 | 1686.34 | 29Oct2007, 15:20 | 0.80 |
| J182 | 9.9661000 | 1593.24 | 29Oct2007, 15:15 | 1.60 |
| J187 | 16.6090000 | 2451.77 | 29Oct2007, 16:10 | 1.74 |
| J192 | 26.6017844 | 4030.17 | 29Oct2007, 16:15 | 1.69 |
| J197 | 24.3644000 | 8021.64 | 29Oct2007, 13:20 | 1.50 |
| J200 | 59.7566044 | 5022.21 | 29Oct2007, 18:00 | 1.43 |
| J207 | 13.8675000 | 5752.99 | 29Oct2007, 12:50 | 1.57 |
| J212 | 94.8996044 | 7783.67 | 29Oct2007, 18:20 | 1.46 |
| J217 | 115.5490044 | 9326.56 | 29Oct2007, 18:25 | 1.47 |
| J222 | 22.3940000 | 2388.69 | 29Oct2007, 15:35 | 1.15 |
| J225 | 126.3875044 | 9866.88 | 29Oct2007, 18:25 | 1.46 |
| J230 | 28.4537015 | 3127.48 | 29Oct2007, 15:35 | 1.18 |

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| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| J239 | 43.7412800 | 3490.54 | 29Oct2007, 15:05 | 0.86 |
| J244 | 36.8165015 | 3800.42 | 290ct2007, 15:55 | 1.16 |
| J249 | 29.4239000 | 1788.67 | 29Oct2007, 17:00 | 0.94 |
| J252 | 68.8721560 | 5471.10 | 29Oct2007, 16:20 | 1.06 |
| J257 | 13.1739000 | 15.36 | 30Oct2007, 00:35 | 0.01 |
| J262 | 85.9936476 | 5336.48 | 290ct2007, 15:55 | 0.71 |
| J265 | 57.0895800 | 4288.15 | 290ct2007, 15:35 | 0.86 |
| J270 | 71.1585800 | 5344.35 | 29Oct2007, 15:40 | 0.86 |
| J273 | 88.3907560 | 7005.09 | 290ct2007, 17:25 | 1.09 |
| J282 | 244.4784520 | 13042.96 | 29Oct2007, 22:30 | 1.11 |
| J289 | 346.5263080 | 17870.44 | 29Oct2007, 21:55 | 1.10 |
| J294 | 20.4305000 | 3883.95 | 290ct2007, 14:20 | 1.64 |
| J299 | 387.3064080 | 19270.07 | 290ct2007, 21:55 | 1.16 |
| J302 | 33.9296000 | 6554.29 | 29Oct2007, 14:55 | 1.75 |
| J307 | 32.8777000 | 3029.36 | 29Oct2007, 15:55 | 1.09 |
| J314 | 401.3895080 | 19584.11 | 290ct2007, 22:10 | 1.17 |
| J321 | 49.3666400 | 3952.74 | 29Oct2007, 18:20 | 1.15 |
| J324 | 451.3185980 | 22074.30 | 29Oct2007, 21:30 | 1.17 |
| J329 | 466.7654980 | 22405.15 | 29Oct2007, 22:05 | 1.17 |
| JBen Creek DS | 49.5918500 | 3942.37 | 29Oct2007, 18:50 | 1.15 |
| JQuemah Creek DS | 99.2579476 | 2708.10 | 29Oct2007, 20:15 | 0.65 |


| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| JShade Creek DS | 97.5205560 | 7314.54 | 29Oct2007, 19:00 | 1.08 |
| JStony US-Ben Creek | 401.7267480 | 19590.68 | 29Oct2007, 22:15 | 1.17 |
| JStony US-Quemah Creek | 145.2205044 | 10518.87 | 29Oct2007, 22:45 | 1.42 |
| JStony US-Shade Creek | 249.0057520 | 13127.12 | 29Oct2007, 22:55 | 1.11 |
| JStony US-Wells Creek | 77.8336044 | 6609.08 | 29Oct2007, 18:45 | 1.46 |
| Lk Stonycreek | 25.2596200 | 1221.66 | 29Oct2007, 16:40 | 1.31 |
| NForkDam | 9.8185000 | 1143.96 | 29Oct2007, 14:35 | 1.00 |
| Outlet1 | 468.1926980 | 22425.41 | 29Oct2007, 22:30 | 1.17 |
| R100 | 32.8777000 | 3011.19 | 29Oct2007, 16:30 | 1.09 |
| R120 | 9.8185000 | 1120.51 | 29Oct2007, 15:40 | 1.00 |
| R1330 | 3.8288000 | 203.95 | 29Oct2007, 15:55 | 0.66 |
| R140 | 387.3064080 | 19261.02 | 29Oct2007, 22:10 | 1.16 |
| R1440 | 3.9092000 | 595.80 | 29Oct2007, 14:55 | 1.18 |
| R150 | 33.9296000 | 6485.67 | 29Oct2007, 15:35 | 1.75 |
| R1520 | 85.9936476 | 5335.55 | 29Oct2007, 16:00 | 0.71 |
| R1560 | 24.3644000 | 1185.67 | 29Oct2007, 16:45 | 1.30 |
| R160 | 20.4305000 | 3838.50 | 29Oct2007, 15:00 | 1.64 |
| R20 | 466.7654980 | 22396.01 | 29Oct2007, 22:30 | 1.17 |
| R200 | 346.5263080 | 17860.78 | 29Oct2007, 22:10 | 1.10 |
| R210 | 244.4784520 | 13035.39 | 29Oct2007, 22:55 | 1.11 |
| R220 | 88.3907560 | 6934.89 | 29Oct2007, 19:05 | 1.09 |


| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| R260 | 57.0895800 | 4278.96 | 290ct2007, 15:45 | 0.86 |
| R270 | 94.5898476 | 2587.78 | 290ct2007, 20:25 | 0.63 |
| R280 | 71.1585800 | 5333.39 | 290ct2007, 15:55 | 0.86 |
| R290 | 13.1739000 | 15.33 | 30Oct2007, 00:35 | 0.01 |
| R310 | 68.8721560 | 5423.11 | 290ct2007, 17:40 | 1.06 |
| R330 | 36.8165015 | 3799.28 | 29Oct2007, 16:00 | 1.16 |
| R340 | 29.4239000 | 1785.81 | 29Oct2007, 17:45 | 0.94 |
| R370 | 43.7412800 | 3469.36 | 29Oct2007, 15:35 | 0.86 |
| R390 | 24.7155000 | 1686.21 | 290ct2007, 15:25 | 0.80 |
| R410 | 126.3875044 | 9806.60 | 290ct2007, 23:10 | 1.44 |
| R420 | 28.4537015 | 3107.80 | 29Oct2007, 16:15 | 1.18 |
| R430 | 22.3940000 | 2380.48 | 29Oct2007, 15:55 | 1.15 |
| R480 | 115.5490044 | 9304.82 | 290ct2007, 19:50 | 1.47 |
| R50 | 49.3666400 | 3936.74 | 29Oct2007, 18:50 | 1.15 |
| R520 | 94.8996044 | 7765.44 | 29Oct2007, 19:00 | 1.46 |
| R560 | 13.8675000 | 5360.01 | 29Oct2007, 13:30 | 1.57 |
| R570 | 59.7566044 | 4983.38 | 29Oct2007, 19:15 | 1.42 |
| R580 | 25.2596200 | 779.05 | 30Oct2007, 02:10 | 1.09 |
| R60 | 451.3185980 | 22058.83 | 29Oct2007, 22:10 | 1.17 |
| R600 | 26.6017844 | 3963.04 | 29Oct2007, 18:05 | 1.69 |
| R610 | 16.6090000 | 2451.14 | 29Oct2007, 16:15 | 1.74 |


| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| R620 | 9.9661000 | 1577.04 | 29Oct2007, 16:15 | 1.60 |
| R80 | 401.3895080 | 19583.56 | 29Oct2007, 22:15 | 1.17 |
| R90 | 38.2160400 | 3381.84 | 29Oct2007, 18:30 | 1.10 |
| Reservoir-Indian Lake | 24.3644000 | 1185.69 | 29Oct2007, 16:45 | 1.30 |
| Reservoir-Lake Gloria | 3.8288000 | 205.29 | 29Oct2007, 15:15 | 0.66 |
| Reservoir-Lake Stonycreek | 25.2596200 | 779.05 | 30Oct2007, 02:05 | 1.09 |
| Reservoir-North Fork | 9.8185000 | 1143.96 | 29Oct2007, 14:35 | 1.00 |
| Reservoir-Quemahoning | 94.5898476 | 2588.19 | 29Oct2007, 20:15 | 0.63 |
| Reservoir-Stoughton Lake | 9.6825000 | 592.19 | 29Oct2007, 15:55 | 0.73 |
| W1000 | 7.2782000 | 14.77 | 30Oct2007, 00:30 | 0.01 |
| W1010 | 2.5590000 | 259.58 | 29Oct2007, 14:25 | 0.87 |
| W1020 | 0.0727545 | 23.87 | 29Oct2007, 12:20 | 0.86 |
| W1040 | 8.8149000 | 669.37 | 29Oct2007, 15:40 | 0.87 |
| W1050 | 6.4345000 | 880.99 | 29Oct2007, 14:30 | 1.16 |
| W1060 | 1.9283000 | 273.88 | 29Oct2007, 13:35 | 0.91 |
| W1070 | 0.3167800 | 31.42 | 29Oct2007, 12:55 | 0.58 |
| W1080 | 18.7090000 | 1833.21 | 29Oct2007, 14:50 | 0.95 |
| W1090 | 19.0440000 | 1364.73 | 29Oct2007, 15:25 | 0.80 |
| W1100 | 3.5546000 | 561.58 | 29Oct2007, 14:20 | 1.24 |
| W1110 | 6.0173000 | 836.45 | 290ct2007, 14:50 | 1.27 |
| W1120 | 0.0424015 | 30.53 | 29Oct2007, 12:20 | 1.74 |

Project: Stoneycreek River Simulation Run: Run 25-yr
Volume Units: IN

| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| J168 | 3.9092000 | 720.75 | 29Oct2007, 14:10 | 1.44 |
| J171 | 38.2160400 | 4091.51 | 29Oct2007, 15:20 | 1.34 |
| J176 | 3.8288000 | 407.79 | 29Oct2007, 15:35 | 1.19 |
| J179 | 24.7155000 | 2065.46 | 29Oct2007, 18:05 | 1.37 |
| J182 | 9.9661000 | 2202.26 | 29Oct2007, 15:15 | 2.19 |
| J187 | 16.6090000 | 3341.91 | 29Oct2007, 16:10 | 2.35 |
| J192 | 26.6017844 | 5521.49 | 29Oct2007, 16:10 | 2.29 |
| J197 | 24.3644000 | 11340.53 | 29Oct2007, 13:20 | 2.09 |
| J200 | 59.7566044 | 7044.10 | 29Oct2007, 18:00 | 1.99 |
| J207 | 13.8675000 | 8101.06 | 29Oct2007, 12:45 | 2.17 |
| J212 | 94.8996044 | 10823.08 | 29Oct2007, 18:20 | 2.03 |
| J217 | 115.5490044 | 12989.78 | 29Oct2007, 18:15 | 2.04 |
| J222 | 22.3940000 | 2691.24 | 29Oct2007, 15:40 | 1.35 |
| J225 | 126.3875044 | 13869.93 | 29Oct2007, 18:00 | 2.03 |
| J230 | 28.4537015 | 3573.38 | 29Oct2007, 15:35 | 1.38 |

[^0]| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| J239 | 43.7412800 | 4037.60 | 29Oct2007, 17:55 | 1.44 |
| J244 | 36.8165015 | 4481.00 | 29Oct2007, 15:30 | 1.36 |
| J249 | 29.4239000 | 1948.84 | 29Oct2007, 17:30 | 1.07 |
| J252 | 68.8721560 | 6237.24 | 29Oct2007, 16:00 | 1.22 |
| J257 | 13.1739000 | 1705.90 | 29Oct2007, 15:30 | 1.47 |
| J262 | 85.9936476 | 7239.56 | 29Oct2007, 19:05 | 1.44 |
| J265 | 57.0895800 | 5109.67 | 29Oct2007, 18:35 | 1.44 |
| J270 | 71.1585800 | 6291.79 | 29Oct2007, 19:00 | 1.44 |
| J273 | 88.3907560 | 8271.65 | 29Oct2007, 16:30 | 1.26 |
| J282 | 244.4784520 | 20987.63 | 29Oct2007, 21:45 | 1.75 |
| J289 | 346.5263080 | 25990.55 | 29Oct2007, 21:25 | 1.61 |
| J294 | 20.4305000 | 4289.41 | 29Oct2007, 14:20 | 1.83 |
| J299 | 387.3064080 | 27655.18 | 29Oct2007, 21:35 | 1.64 |
| J302 | 33.9296000 | 7411.83 | 29Oct2007, 14:45 | 1.97 |
| J307 | 32.8777000 | 3453.77 | 29Oct2007, 15:30 | 1.33 |
| J314 | 401.3895080 | 28046.29 | 29Oct2007, 21:55 | 1.63 |
| J321 | 49.3666400 | 5690.55 | 29Oct2007, 15:25 | 1.40 |
| J324 | 451.3185980 | 30113.37 | 29Oct2007, 21:50 | 1.61 |
| J329 | 466.7654980 | 30515.22 | 29Oct2007, 22:25 | 1.61 |
| JBen Creek DS | 49.5918500 | 5695.42 | 29Oct2007, 15:35 | 1.40 |
| JQuemah Creek DS | 99.2579476 | 6096.70 | 29Oct2007, 22:15 | 1.43 |


| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| JShade Creek DS | 97.5205560 | 8878.24 | 29Oct2007, 17:15 | 1.24 |
| JStony US-Ben Creek | 401.7267480 | 28051.47 | 29Oct2007, 22:00 | 1.63 |
| JStony US-Quemah Creek | 145.2205044 | 14948.92 | 29Oct2007, 21:30 | 1.97 |
| JStony US-Shade Creek | 249.0057520 | 21099.07 | 29Oct2007, 22:05 | 1.75 |
| JStony US-Wells Creek | 77.8336044 | 9204.29 | 29Oct2007, 18:45 | 2.03 |
| Lk Stonycreek | 25.2596200 | 1918.99 | 29Oct2007, 16:05 | 1.87 |
| NForkDam | 9.8185000 | 1328.94 | 29Oct2007, 14:40 | 1.21 |
| Outlet1 | 468.1926980 | 30532.49 | 29Oct2007, 22:50 | 1.61 |
| R100 | 32.8777000 | 3447.42 | 29Oct2007, 15:40 | 1.33 |
| R120 | 9.8185000 | 1325.02 | 29Oct2007, 14:55 | 1.21 |
| R1330 | 3.8288000 | 348.04 | 29Oct2007, 18:00 | 1.19 |
| R140 | 387.3064080 | 27637.67 | 29Oct2007, 22:00 | 1.63 |
| R1440 | 3.9092000 | 718.77 | 29Oct2007, 14:25 | 1.44 |
| R150 | 33.9296000 | 7373.88 | 29Oct2007, 15:05 | 1.97 |
| R1520 | 85.9936476 | 7239.32 | 29Oct2007, 19:05 | 1.44 |
| R1560 | 24.3644000 | 1865.86 | 29Oct2007, 16:15 | 1.86 |
| R160 | 20.4305000 | 4267.32 | 29Oct2007, 14:40 | 1.83 |
| R20 | 466.7654980 | 30496.66 | 290ct2007, 22:50 | 1.61 |
| R200 | 346.5263080 | 25972.44 | 29Oct2007, 21:45 | 1.60 |
| R210 | 244.4784520 | 20976.86 | 29Oct2007, 22:05 | 1.75 |
| R220 | 88.3907560 | 8229.86 | 290ct2007, 17:20 | 1.26 |


| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| R260 | 57.0895800 | 5100.64 | 29Oct2007, 19:05 | 1.44 |
| R270 | 94.5898476 | 5924.40 | 29Oct2007, 22:20 | 1.42 |
| R280 | 71.1585800 | 6280.81 | 29Oct2007, 19:25 | 1.44 |
| R290 | 13.1739000 | 1705.44 | 29Oct2007, 15:30 | 1.47 |
| R310 | 68.8721560 | 6209.86 | 29Oct2007, 16:40 | 1.22 |
| R330 | 36.8165015 | 4480.56 | 29Oct2007, 15:35 | 1.36 |
| R340 | 29.4239000 | 1946.93 | 29Oct2007, 17:45 | 1.07 |
| R370 | 43.7412800 | 4022.28 | 29Oct2007, 18:55 | 1.44 |
| R390 | 24.7155000 | 2064.86 | 29Oct2007, 18:10 | 1.37 |
| R410 | 126.3875044 | 13769.95 | 29Oct2007, 21:50 | 2.01 |
| R420 | 28.4537015 | 3561.69 | 29Oct2007, 15:55 | 1.38 |
| R430 | 22.3940000 | 2687.06 | 29Oct2007, 15:50 | 1.35 |
| R480 | 115.5490044 | 12968.16 | 29Oct2007, 19:20 | 2.04 |
| R50 | 49.3666400 | 5683.64 | 29Oct2007, 15:35 | 1.40 |
| R520 | 94.8996044 | 10799.08 | 29Oct2007, 18:50 | 2.02 |
| R560 | 13.8675000 | 7526.49 | 29Oct2007, 13:30 | 2.17 |
| R570 | 59.7566044 | 6991.09 | 29Oct2007, 19:15 | 1.98 |
| R580 | 25.2596200 | 1197.68 | 30Oct2007, 00:55 | 1.61 |
| R60 | 451.3185980 | 30082.36 | 29Oct2007, 22:25 | 1.61 |
| R600 | 26.6017844 | 5428.42 | 29Oct2007, 18:05 | 2.29 |
| R610 | 16.6090000 | 3341.25 | 29Oct2007, 16:10 | 2.35 |


| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| R620 | 9.9661000 | 2179.29 | 29Oct2007, 16:15 | 2.19 |
| R80 | 401.3895080 | 28042.70 | 290ct2007, 22:00 | 1.63 |
| R90 | 38.2160400 | 4079.39 | 29Oct2007, 15:50 | 1.34 |
| Reservoir-Indian Lake | 24.3644000 | 1865.88 | 29Oct2007, 16:10 | 1.86 |
| Reservoir-Lake Gloria | 3.8288000 | 351.74 | 29Oct2007, 16:45 | 1.19 |
| Reservoir-Lake Stonycreek | 25.2596200 | 1197.69 | 30Oct2007, 00:50 | 1.61 |
| Reservoir-North Fork | 9.8185000 | 1328.94 | 290ct2007, 14:40 | 1.21 |
| Reservoir-Quemahoning | 94.5898476 | 5925.60 | 29Oct2007, 22:10 | 1.42 |
| Reservoir-Stoughton Lake | 9.6825000 | 863.38 | 29Oct2007, 18:15 | 1.29 |
| W1000 | 7.2782000 | 1123.71 | 29Oct2007, 15:05 | 1.50 |
| W1010 | 2.5590000 | 265.97 | 29Oct2007, 14:35 | 0.97 |
| W1020 | 0.0727545 | 23.48 | 29Oct2007, 12:20 | 0.97 |
| W1040 | 8.8149000 | 698.74 | 29Oct2007, 15:55 | 0.96 |
| W1050 | 6.4345000 | 984.87 | 29Oct2007, 14:35 | 1.35 |
| W1060 | 1.9283000 | 280.33 | 29Oct2007, 13:40 | 1.02 |
| W1070 | 0.3167800 | 49.27 | 29Oct2007, 13:40 | 1.10 |
| W1080 | 18.7090000 | 1983.32 | 29Oct2007, 17:30 | 1.55 |
| W1090 | 19.0440000 | 1585.90 | 29Oct2007, 18:25 | 1.37 |
| W1100 | 3.5546000 | 773.99 | 29Oct2007, 14:15 | 1.68 |
| W1110 | 6.0173000 | 957.80 | 29Oct2007, 14:55 | 1.50 |
| W1120 | 0.0424015 | 37.49 | 29Oct2007, 12:20 | 2.12 |

Project: Stoneycreek River Simulation Run: Run 50-yr

## StonyHMS-100yr

Control Specifications: Control Porject
Compute Time: 07Dec2007, 12:30:13

## Volume Units: IN

| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| J168 | 3.9092000 | 773.66 | 29Oct2007, 14:15 | 1.60 |
| J171 | 38.2160400 | 4387.07 | 29Oct2007, 15:35 | 1.48 |
| J176 | 3.8288000 | 461.01 | 29Oct2007, 15:40 | 1.37 |
| J179 | 24.7155000 | 2385.77 | 29Oct2007, 18:00 | 1.59 |
| J182 | 9.9661000 | 2497.22 | 29Oct2007, 15:15 | 2.48 |
| J187 | 16.6090000 | 3822.26 | 29Oct2007, 16:10 | 2.68 |
| J192 | 26.6017844 | 6295.30 | 29Oct2007, 16:15 | 2.61 |
| J197 | 24.3644000 | 12326.77 | 29Oct2007, 13:20 | 2.28 |
| J200 | 59.7566044 | 8022.92 | 29Oct2007, 18:00 | 2.25 |
| J207 | 13.8675000 | 8866.35 | 29Oct2007, 12:50 | 2.38 |
| J212 | 94.8996044 | 12303.55 | 29Oct2007, 18:25 | 2.29 |
| J217 | 115.5490044 | 14786.29 | 29Oct2007, 18:15 | 2.30 |
| J222 | 22.3940000 | 3078.50 | 29Oct2007, 15:40 | 1.56 |
| J225 | 126.3875044 | 15710.42 | 29Oct2007, 17:55 | 2.29 |
| J230 | 28.4537015 | 4094.02 | 29Oct2007, 15:35 | 1.60 |

[^1]| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| J239 | 43.7412800 | 4677.40 | 29Oct2007, 17:55 | 1.68 |
| J244 | 36.8165015 | 5133.40 | 29Oct2007, 15:35 | 1.57 |
| J249 | 29.4239000 | 2199.83 | 29Oct2007, 17:30 | 1.22 |
| J252 | 68.8721560 | 7092.54 | 29Oct2007, 16:00 | 1.41 |
| J257 | 13.1739000 | 1965.27 | 29Oct2007, 15:35 | 1.71 |
| J262 | 85.9936476 | 8391.38 | 29Oct2007, 19:10 | 1.68 |
| J265 | 57.0895800 | 5917.22 | 29Oct2007, 18:40 | 1.67 |
| J270 | 71.1585800 | 7287.21 | 29Oct2007, 19:00 | 1.68 |
| J273 | 88.3907560 | 9443.34 | 29Oct2007, 16:35 | 1.46 |
| J282 | 244.4784520 | 24183.37 | 29Oct2007, 21:35 | 2.00 |
| J289 | 346.5263080 | 29771.04 | 29Oct2007, 21:40 | 1.84 |
| J294 | 20.4305000 | 4842.25 | 29Oct2007, 14:20 | 2.09 |
| J299 | 387.3064080 | 31486.09 | 29Oct2007, 22:25 | 1.88 |
| J302 | 33.9296000 | 8695.48 | 29Oct2007, 14:45 | 2.33 |
| J307 | 32.8777000 | 3710.88 | 29Oct2007, 15:40 | 1.47 |
| J314 | 401.3895080 | 31874.79 | 29Oct2007, 23:15 | 1.87 |
| J321 | 49.3666400 | 6005.36 | 29Oct2007, 15:45 | 1.56 |
| J324 | 451.3185980 | 33882.56 | 29Oct2007, 23:20 | 1.84 |
| J329 | 466.7654980 | 34259.18 | 30Oct2007, 00:45 | 1.86 |
| JBen Creek DS | 49.5918500 | 6011.61 | 29Oct2007, 15:55 | 1.56 |
| JQuemah Creek DS | 99.2579476 | 7238.08 | 29Oct2007, 22:10 | 1.68 |


| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| JShade Creek DS | 97.5205560 | 10136.48 | 29Oct2007, 17:15 | 1.44 |
| JStony US-Ben Creek | 401.7267480 | 31876.85 | 29Oct2007, 23:30 | 1.87 |
| JStony US-Quemah Creek | 145.2205044 | 17042.14 | 29Oct2007, 21:10 | 2.23 |
| JStony US-Shade Creek | 249.0057520 | 24301.08 | 29Oct2007, 22:30 | 2.00 |
| JStony US-Wells Creek | 77.8336044 | 10477.07 | 29Oct2007, 18:45 | 2.29 |
| Lk Stonycreek | 25.2596200 | 2104.10 | 29Oct2007, 16:15 | 2.05 |
| NForkDam | 9.8185000 | 1383.13 | 29Oct2007, 14:45 | 1.32 |
| Outlet1 | 468.1926980 | 34202.21 | 30Oct2007, 01:45 | 1.86 |
| R100 | 32.8777000 | 3706.98 | 29Oct2007, 15:55 | 1.47 |
| R120 | 9.8185000 | 1376.42 | 29Oct2007, 15:05 | 1.32 |
| R1330 | 3.8288000 | 409.00 | 29Oct2007, 17:50 | 1.37 |
| R140 | 387.3064080 | 31437.58 | 29Oct2007, 23:20 | 1.88 |
| R1440 | 3.9092000 | 770.68 | 29Oct2007, 14:30 | 1.60 |
| R150 | 33.9296000 | 8653.57 | 29Oct2007, 15:00 | 2.33 |
| R1520 | 85.9936476 | 8391.43 | 29Oct2007, 19:10 | 1.68 |
| R1560 | 24.3644000 | 2044.88 | 29Oct2007, 16:25 | 2.04 |
| R160 | 20.4305000 | 4817.60 | 29Oct2007, 14:40 | 2.09 |
| R20 | 466.7654980 | 34197.45 | 30Oct2007, 01:45 | 1.85 |
| R200 | 346.5263080 | 29722.85 | 29Oct2007, 22:35 | 1.83 |
| R210 | 244.4784520 | 24157.72 | 29Oct2007, 22:30 | 2.00 |
| R220 | 88.3907560 | 9396.38 | 29Oct2007, 17:25 | 1.46 |


| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| R260 | 57.0895800 | 5905.70 | 29Oct2007, 19:10 | 1.67 |
| R270 | 94.5898476 | 7030.65 | 29Oct2007, 22:15 | 1.66 |
| R280 | 71.1585800 | 7274.37 | 29Oct2007, 19:30 | 1.68 |
| R290 | 13.1739000 | 1965.25 | 29Oct2007, 15:35 | 1.71 |
| R310 | 68.8721560 | 7062.15 | 29Oct2007, 16:40 | 1.41 |
| R330 | 36.8165015 | 5132.07 | 29Oct2007, 15:35 | 1.57 |
| R340 | 29.4239000 | 2197.19 | 29Oct2007, 17:55 | 1.22 |
| R370 | 43.7412800 | 4658.03 | 29Oct2007, 18:55 | 1.68 |
| R390 | 24.7155000 | 2384.39 | 29Oct2007, 18:10 | 1.59 |
| R410 | 126.3875044 | 15627.13 | 29Oct2007, 21:40 | 2.27 |
| R420 | 28.4537015 | 4082.24 | 29Oct2007, 15:55 | 1.60 |
| R430 | 22.3940000 | 3073.95 | 29Oct2007, 15:55 | 1.56 |
| R480 | 115.5490044 | 14755.46 | 29Oct2007, 19:20 | 2.30 |
| R50 | 49.3666400 | 5998.80 | 29Oct2007, 15:55 | 1.56 |
| R520 | 94.8996044 | 12281.53 | 29Oct2007, 18:50 | 2.28 |
| R560 | 13.8675000 | 8252.84 | 29Oct2007, 13:30 | 2.38 |
| R570 | 59.7566044 | 7961.14 | 29Oct2007, 19:20 | 2.23 |
| R580 | 25.2596200 | 1346.81 | 30Oct2007, 00:50 | 1.78 |
| R60 | 451.3185980 | 33797.46 | 30Oct2007, 00:50 | 1.83 |
| R600 | 26.6017844 | 6189.19 | 29Oct2007, 18:05 | 2.61 |
| R610 | 16.6090000 | 3821.02 | 29Oct2007, 16:10 | 2.68 |

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| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| R620 | 9.9661000 | 2471.54 | 29Oct2007, 16:15 | 2.48 |
| R80 | 401.3895080 | 31867.18 | 29Oct2007, 23:30 | 1.87 |
| R90 | 38.2160400 | 4368.38 | 29Oct2007, 16:15 | 1.48 |
| Reservoir-Indian Lake | 24.3644000 | 2044.85 | 29Oct2007, 16:20 | 2.04 |
| Reservoir-Lake Gloria | 3.8288000 | 417.62 | 29Oct2007, 16:40 | 1.37 |
| Reservoir-Lake Stonycreek | 25.2596200 | 1346.81 | 30Oct2007, 00:50 | 1.78 |
| Reservoir-North Fork | 9.8185000 | 1383.13 | 29Oct2007, 14:45 | 1.32 |
| Reservoir-Quemahoning | 94.5898476 | 7031.90 | 29Oct2007, 22:00 | 1.66 |
| Reservoir-Stoughton Lake | 9.6825000 | 996.18 | 29Oct2007, 18:15 | 1.50 |
| W1000 | 7.2782000 | 1295.02 | 29Oct2007, 15:05 | 1.75 |
| W1010 | 2.5590000 | 291.27 | 29Oct2007, 14:40 | 1.10 |
| W1020 | 0.0727545 | 23.64 | 29Oct2007, 12:25 | 1.09 |
| W1040 | 8.8149000 | 772.63 | 29Oct2007, 16:00 | 1.10 |
| W1050 | 6.4345000 | 1122.61 | 29Oct2007, 14:40 | 1.57 |
| W1060 | 1.9283000 | 306.42 | 29Oct2007, 13:45 | 1.17 |
| W1070 | 0.3167800 | 54.49 | 29Oct2007, 13:45 | 1.26 |
| W1080 | 18.7090000 | 2299.56 | 29Oct2007, 17:35 | 1.81 |
| W1090 | 19.0440000 | 1827.03 | 29Oct2007, 18:30 | 1.59 |
| W1100 | 3.5546000 | 843.64 | 29Oct2007, 14:20 | 1.88 |
| W1110 | 6.0173000 | 1102.95 | 29Oct2007, 14:55 | 1.75 |
| W1120 | 0.0424015 | 44.34 | 29Oct2007, 12:20 | 2.49 |

Project: Stoneycreek River Simulation Run: Run 100-yr

## StonyHMS-100yr

 Met 100-yrCompute Time: 07Jan2008, 11:29:05 Control Specifications: Control Porject

## Volume Units: IN

| Hydrologic <br> Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| J168 | 3.9092000 | 1100.10 | 29Oct2007, 14:10 | 2.15 |
| J171 | 38.2160400 | 6263.32 | 29Oct2007, 15:35 | 2.02 |
| J176 | 3.8288000 | 669.31 | 29Oct2007, 15:30 | 1.89 |
| J179 | 24.7155000 | 3336.16 | 29Oct2007, 17:50 | 2.14 |
| J182 | 9.9661000 | 3152.71 | 29Oct2007, 15:15 | 3.10 |
| J187 | 16.6090000 | 4768.18 | 29Oct2007, 16:10 | 3.32 |
| J192 | 26.6017844 | 7887.71 | 29Oct2007, 16:10 | 3.24 |
| J197 | 24.3644000 | 15947.20 | 29Oct2007, 13:20 | 2.89 |
| J200 | 59.7566044 | 10251.35 | 29Oct2007, 18:00 | 2.85 |
| J207 | 13.8675000 | 11412.95 | 29Oct2007, 12:45 | 3.01 |
| J212 | 94.8996044 | 15623.37 | 29Oct2007, 18:20 | 2.89 |
| J217 | 115.5490044 | 18714.11 | 29Oct2007, 18:15 | 2.91 |
| J222 | 22.3940000 | 4341.72 | 29Oct2007, 15:35 | 2.11 |
| J225 | 126.3875044 | 19949.35 | 29Oct2007, 17:55 | 2.89 |
| J230 | 28.4537015 | 5744.96 | 29Oct2007, 15:30 | 2.15 |

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| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| J239 | 43.7412800 | 6448.19 | 29Oct2007, 17:45 | 2.24 |
| J244 | 36.8165015 | 7215.89 | 29Oct2007, 15:30 | 2.12 |
| J249 | 29.4239000 | 3207.26 | 29Oct2007, 17:25 | 1.71 |
| J252 | 68.8721560 | 10130.28 | 29Oct2007, 15:55 | 1.93 |
| J257 | 13.1739000 | 2718.47 | 29Oct2007, 15:25 | 2.28 |
| J262 | 85.9936476 | 11527.46 | 29Oct2007, 19:00 | 2.24 |
| J265 | 57.0895800 | 8174.21 | 29Oct2007, 18:25 | 2.23 |
| J270 | 71.1585800 | 10041.77 | 29Oct2007, 18:50 | 2.24 |
| J273 | 88.3907560 | 13359.93 | 29Oct2007, 16:25 | 1.98 |
| J282 | 244.4784520 | 31747.54 | 29Oct2007, 21:15 | 2.59 |
| J289 | 346.5263080 | 39329.53 | 29Oct2007, 21:30 | 2.41 |
| J294 | 20.4305000 | 6313.19 | 29Oct2007, 14:20 | 2.67 |
| J299 | 387.3064080 | 41459.05 | 29Oct2007, 22:15 | 2.45 |
| J302 | 33.9296000 | 11116.00 | 29Oct2007, 14:40 | 2.94 |
| J307 | 32.8777000 | 5357.44 | 29Oct2007, 15:30 | 2.00 |
| J314 | 401.3895080 | 41932.82 | 29Oct2007, 23:05 | 2.44 |
| J321 | 49.3666400 | 8443.34 | 29Oct2007, 15:35 | 2.11 |
| J324 | 451.3185980 | 44537.64 | 29Oct2007, 23:10 | 2.41 |
| J329 | 466.7654980 | 44992.45 | 30Oct2007, 00:35 | 2.42 |
| JBen Creek DS | 49.5918500 | 8450.54 | 29Oct2007, 15:45 | 2.11 |
| JQuemah Creek DS | 99.2579476 | 10160.62 | 29Oct2007, 21:40 | 2.24 |


| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| JShade Creek DS | 97.5205560 | 14345.68 | 29Oct2007, 17:10 | 1.96 |
| JStony US-Ben Creek | 401.7267480 | 41932.30 | 29Oct2007, 23:20 | 2.44 |
| JStony US-Quemah Creek | 145.2205044 | 21644.19 | 29Oct2007, 21:05 | 2.82 |
| JStony US-Shade Creek | 249.0057520 | 31880.06 | 29Oct2007, 22:15 | 2.58 |
| JStony US-Wells Creek | 77.8336044 | 13323.50 | 29Oct2007, 18:45 | 2.90 |
| Lk Stonycreek | 25.2596200 | 2926.98 | 29Oct2007, 15:55 | 2.65 |
| NForkDam | 9.8185000 | 2002.69 | 29Oct2007, 14:55 | 1.83 |
| Outlet1 | 468.1926980 | 44920.50 | 30Oct2007, 01:30 | 2.42 |
| R100 | 32.8777000 | 5338.56 | 29Oct2007, 15:45 | 2.00 |
| R120 | 9.8185000 | 2000.52 | 29Oct2007, 15:15 | 1.83 |
| R1330 | 3.8288000 | 627.06 | 29Oct2007, 17:25 | 1.89 |
| R140 | 387.3064080 | 41393.12 | 29Oct2007, 23:05 | 2.44 |
| R1440 | 3.9092000 | 1094.61 | 29Oct2007, 14:25 | 2.15 |
| R150 | 33.9296000 | 11065.44 | 29Oct2007, 15:00 | 2.94 |
| R1520 | 85.9936476 | 11527.90 | 29Oct2007, 19:00 | 2.24 |
| R1560 | 24.3644000 | 2848.85 | 29Oct2007, 16:00 | 2.64 |
| R160 | 20.4305000 | 6281.62 | 29Oct2007, 14:40 | 2.67 |
| R20 | 466.7654980 | 44911.38 | 30Oct2007, 01:30 | 2.42 |
| R200 | 346.5263080 | 39260.97 | 29Oct2007, 22:20 | 2.40 |
| R210 | 244.4784520 | 31702.87 | 29Oct2007, 22:15 | 2.58 |
| R220 | 88.3907560 | 13289.09 | 29Oct2007, 17:15 | 1.98 |


| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| R260 | 57.0895800 | 8157.60 | 29Oct2007, 18:55 | 2.23 |
| R270 | 94.5898476 | 9886.49 | 29Oct2007, 21:45 | 2.22 |
| R280 | 71.1585800 | 10022.28 | 29Oct2007, 19:20 | 2.24 |
| R290 | 13.1739000 | 2717.90 | 29Oct2007, 15:30 | 2.28 |
| R310 | 68.8721560 | 10084.72 | 29Oct2007, 16:35 | 1.93 |
| R330 | 36.8165015 | 7215.22 | 29Oct2007, 15:30 | 2.12 |
| R340 | 29.4239000 | 3206.29 | 29Oct2007, 17:40 | 1.71 |
| R370 | 43.7412800 | 6425.15 | 29Oct2007, 18:40 | 2.24 |
| R390 | 24.7155000 | 3334.11 | 29Oct2007, 17:55 | 2.14 |
| R410 | 126.3875044 | 19819.81 | 29Oct2007, 21:30 | 2.86 |
| R420 | 28.4537015 | 5728.38 | 29Oct2007, 15:50 | 2.15 |
| R430 | 22.3940000 | 4334.17 | 29Oct2007, 15:45 | 2.11 |
| R480 | 115.5490044 | 18678.19 | 29Oct2007, 19:20 | 2.90 |
| R50 | 49.3666400 | 8433.72 | 29Oct2007, 15:50 | 2.11 |
| R520 | 94.8996044 | 15592.56 | 29Oct2007, 18:50 | 2.88 |
| R560 | 13.8675000 | 10605.46 | 29Oct2007, 13:30 | 3.01 |
| R570 | 59.7566044 | 10176.12 | 29Oct2007, 19:15 | 2.83 |
| R580 | 25.2596200 | 1833.09 | 29Oct2007, 23:50 | 2.35 |
| R60 | 451.3185980 | 44423.39 | 30Oct2007, 00:35 | 2.40 |
| R600 | 26.6017844 | 7753.56 | 29Oct2007, 18:05 | 3.24 |
| R610 | 16.6090000 | 4767.25 | 29Oct2007, 16:10 | 3.32 |


| Hydrologic Element | Drainage Area (MI2) | Peak Discharge (CFS) | Time of Peak | Volume (IN) |
| :---: | :---: | :---: | :---: | :---: |
| R620 | 9.9661000 | 3119.58 | 29Oct2007, 16:15 | 3.10 |
| R80 | 401.3895080 | 41920.52 | 29Oct2007, 23:20 | 2.44 |
| R90 | 38.2160400 | 6232.87 | 29Oct2007, 16:15 | 2.02 |
| Reservoir-Indian Lake | 24.3644000 | 2848.78 | 29Oct2007, 16:00 | 2.64 |
| Reservoir-Lake Gloria | 3.8288000 | 636.92 | 29Oct2007, 16:15 | 1.89 |
| Reservoir-Lake Stonycreek | 25.2596200 | 1833.08 | 29Oct2007, 23:50 | 2.35 |
| Reservoir-North Fork | 9.8185000 | 2002.69 | 29Oct2007, 14:55 | 1.83 |
| Reservoir-Quemahoning | 94.5898476 | 9888.55 | 29Oct2007, 21:35 | 2.22 |
| Reservoir-Stoughton Lake | 9.6825000 | 1405.55 | 29Oct2007, 18:00 | 2.04 |
| W1000 | 7.2782000 | 1791.48 | 29Oct2007, 15:00 | 2.32 |
| W1010 | 2.5590000 | 452.37 | 29Oct2007, 14:30 | 1.57 |
| W1020 | 0.0727545 | 40.21 | 29Oct2007, 12:20 | 1.56 |
| W1040 | 8.8149000 | 1177.22 | 29Oct2007, 15:50 | 1.57 |
| W1050 | 6.4345000 | 1597.84 | 29Oct2007, 14:30 | 2.12 |
| W1060 | 1.9283000 | 477.09 | 29Oct2007, 13:35 | 1.65 |
| W1070 | 0.3167800 | 83.05 | 29Oct2007, 13:40 | 1.76 |
| W1080 | 18.7090000 | 3119.99 | 29Oct2007, 17:25 | 2.38 |
| W1090 | 19.0440000 | 2528.32 | 29Oct2007, 18:20 | 2.14 |
| W1100 | 3.5546000 | 1136.04 | 29Oct2007, 14:15 | 2.45 |
| W1110 | 6.0173000 | 1528.87 | 29Oct2007, 14:50 | 2.32 |
| W1120 | 0.0424015 | 57.08 | 29Oct2007, 12:20 | 3.14 |

## C. OBSTRUCTION CAPACITY SUMMARY FORMS (FORM B)






| Watershed: Completed by: Checked by: Date(s): | Stonycreek |  |  |  |  |  | Box Culverts Calculation Sheet |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{aligned} & \text { D= Diam } \\ & \text { HT }=\text { Hei } \end{aligned}$ | eter |  | CMP = Corrugated Metal Pipe <br> CPP = Corrugated Polyethylene Pipe |  | ID No Space |
|  |  |  | $\begin{gathered} \text { Area } \\ \text { (SQ. FT) } \end{gathered}$ | $\begin{gathered} \text { Nos. } \\ \text { of? } \end{gathered}$ | Type |  | Opening |  |  |  |  |  |  |  | $\mathrm{W}=$ Wid pW Pi | th |  | BCCMP = Bituminous Coated Corrugated Metal Pipe |  |  |
|  | Owner or Address | Capacity |  |  |  |  |  |  | hape |  |  | Measurements |  |  |  |  |  |  | notes |  |
| Map ID. |  |  |  |  | $\begin{aligned} & \text { Part of } \\ & \text { Bridge? } \end{aligned}$ | $\begin{gathered} \text { Culvert } \\ \hline \text { Purpose } \\ \hline \end{gathered}$ | Culvert |  |  | Bridge |  | ${ }_{\text {(ti) }}$ | ${ }_{\text {(ti) }}$ | $\begin{array}{\|l\|} \hline \text { HT } \\ \hline(t) 1{ }^{\prime} \\ \hline \end{array}$ | w <br> (tr) <br> 6.0 <br> 10 | ${ }_{\text {PW }}^{\text {P/ti) }}$ | $\begin{gathered} \text { skew } \\ \text { angle } \end{gathered}$ |  |  |  |
| \# |  |  |  |  |  |  | $\square$ | 0 | 0 |  | $\square$ |  |  |  |  |  |  |  |  |  |
| SCR122 | ${ }^{601}$ Pen Pen Dot | 173 |  |  |  |  |  |  |  |  | X | 0 |  |  |  |  |  | $\frac{\text { material }}{\text { RCP cement HW } 16 \text { ' wide } 6 \text { ' high }}$ | little water |  |
| SCR126 | Creek Penn Dot 403 | 310,405 | 5,355 | 4 | $\times$ |  |  |  |  |  | x |  |  | 42.0 | 127.5 | 3.5 | 30.0 | msty-concrete | bridge goes overc creek and railroad | SCR126 |
| SCR127 | Penn Dot 403 | ${ }^{857}$ | ${ }^{63}$ | $\frac{1}{2}$ |  | road | x |  |  |  |  | 6 |  | 7.0 | 9.0 |  |  | Concrete Mssy HW 9 ' high |  | SeCR127 |
| SCR128 | Penn Dot 403 | ${ }^{19,748}$ | ${ }_{1,071}^{10}$ | 2 | x |  |  |  |  |  | x |  |  | 17.0 | 63.0 | 3.5 |  | Concrete HW -2 ${ }^{\text {1 high }}$ | EWW-21' Wide W-SW | SCR128 |
| SCR130 | Roadroad Bridge adiacent to | 1,757 | 210 | 1 | x |  |  |  |  |  | x |  |  | 14.0 | 15.0 |  |  | Msry No WWs No SWs |  | SCR130 |
| SCR135 | Bridge | 10,119 | 1,600 | 1 | x |  |  |  |  |  | x |  |  | 8.0 | 200.0 | 6.0 |  | Msry | Bridge has road undereath it | SCR135 |
|  | Hooversville Borough Twp | 15,337 | 990 | 2 | X |  |  |  |  |  | X |  |  | 12.0 | 82.5 | 4.0 |  | Concrete | $75 \%$ flow of water going under east end of bridge | ${ }^{\text {SCRC136 }}$ |
| SCR139 | Penndot 403 South, Hoverssville | 741 | ${ }^{130}$ | 1 |  | road | x |  |  |  |  |  |  | 6.5 | 20.0 |  |  | concrete, water flowing well 2 wws - $^{6}$ each | nt culvert spweing mine water in to the stream betore running under | SCR139 |
| SCR140 | Hooversville | 635 | ${ }^{121}$ | 1 | X |  |  |  |  |  | x |  |  | 5.5 | 22.0 |  |  | Mssy- bridge build on steel wioth supporting msry | 2 wws-17 ${ }^{\text {P }}$ each-msry | SCR140 |
| SCR142 | Penn dot 403 Hooversville | ${ }^{139}$ | ${ }^{29}$ | 1 |  | road | X |  |  |  |  |  |  | 4.5 | 6.5 |  |  | concrete HW 6 ' high | 2 WWs $6^{6} \mathrm{NWW}$ W mostly buried by till. Steam is low | SCR142 |
| SCR143 | Hooversville | 394 | 72 | 1 |  | road | x |  |  |  |  |  |  | 6.0 | 12.0 |  |  | Concrete 2 low angle WWs 6 'each |  | SCR143 |
| SCR145 | Private | 1,316 | 208 | 1 | X |  |  |  |  |  | ${ }_{\text {x }}$ |  |  | 8.0 | 26.0 |  |  | Built out of wood over old bridge |  | SCR145 |
| SCR146 | RR near Hooversville | 42,000 | 2,100 | 2 |  |  |  |  |  |  |  |  |  | 20.0 | 105.0 | 4.0 | 45.0 | Msy/concrete 2 SW's 12each | 95\% of water Ilows under north end | SCR146 |
| SCR153 |  | 592 538 | 108 91 | 1 | + |  |  |  |  |  | X |  |  | ${ }_{6}^{6.0}$ | $\stackrel{18.0}{13.0}$ |  |  | $\frac{\text { Concreete } 2 \text { wws-10 each hW } 8.5 \text { high }}{\text { Concrete }}$ | Bridge falling apar, old | SCR153 |
| SCR155 | Railirad Along | 32 | 10 | 1 |  | railroad | x |  |  |  |  |  |  | 2.0 | 5.0 |  |  | Concrete | Pond Discharge and stream combine under railroad culvert | SCR155 |
| SCR158 | Shade Twp Railirad Bridge | 1,224 | 165 | 1 | $\times$ |  |  |  |  |  | ${ }^{\mathrm{X}}$ |  |  | 11.0 | 15.0 |  |  | MSRY Holds up site built of used and steel AMD |  | SCR158 |
| SCR159 | Paint Twp Railroad Bridge | 70 | 26 | 1 | X |  |  |  |  |  | x |  |  | 1.5 | 17.0 |  |  | MSAY holds up side, builto of wood and steel |  | SCR159 |
| SCR160 | ${ }^{\text {t }}$ Twp Culvert Running under raill | 634 | ${ }^{95}$ | 1 |  | railroad | ${ }^{\text {x }}$ |  |  |  |  |  |  | 9.0 | 10.5 |  |  | Concrete 2 WWS-16 each HW-12 ${ }^{\text {r }}$ 'igh | Stream is clear waterfall (manmade) in front of culvert | SCR160 |
| SCR161 | Conemaugh Twp Rairoad culver | ${ }^{93}$ | 24 | 1 |  | railroad | X |  |  |  |  |  |  | 3.0 | 8.0 |  |  | Concrete ESW-7Wide WSW-4Wide | HW.5 high | SCR161 |
| SCR162 | Conemaugh Twp Reilrod | ${ }^{30,053}$ | 3,360 | 1 | x |  |  |  |  |  | x |  |  | 16.0 | 210.0 | 8.0 | 60.0 | Msry holds up concrete structure-built of wood and steel | American Bridge Co. 19162 WWs -30 ${ }^{\circ}$ each | SCR162 |
| SCR163 | running over | 7,902,532 | 35,700 | 7 | $x$ | high wall |  |  |  |  | x |  |  | 200.0 | 178.5 | 10.0 |  | Concrete over RR and Storycreek | ight estimated Pier to Pier 200 7 Piers end piers -100 away from bs | SCR163 |
| SCR165 | company (out of order) Trie Hill | 1,214 | 192 | 1 | x | road |  |  |  |  | x |  |  | 8.0 | 4.0 |  |  | Concrete W SW - $15^{\prime}$ | Flowing well | SCR165 |
| SCR166 | Stoystown | 20,227 | 987 | 2 | x |  |  |  |  |  | x |  |  | 21.0 | 47.0 | 3.0 |  | solid cement 2 WW $25^{\prime}$ each | 80\% WWs under east end of pier | SCR166 |
| SCR167 | Rt 30 Stoystown | 5,011 | 374 | $\frac{2}{2}$ | x |  |  |  |  |  | x |  |  | 9.0 | 41.5 | 3.0 |  | solid cement HW 13 2 2 WWs $15{ }^{\text {e each }}$ | all the creek WWs under east end pier falling apart | SCR167 |
| SCR168 | Stoystown | 7,179 | 968 | 1 | + |  |  |  |  |  | X |  |  | 11.0 | 88.0 |  |  | Iron'wood bridge msry WW 24 each | built in 1887 stills looks good | ${ }^{\text {SCRR168 }}$ |
| SCR170 | 403 Stoystown over stonycreek | 27,038 | $\stackrel{1,387}{ }$ | 2 | + |  |  |  |  |  | x |  |  | 19.0 | 73.0 | 3.0 |  | Steel bridge with cement WW N SW $25^{\prime}$ ' WW $^{\text {W }} 30^{\prime}$ | old, but solid | SCR170 |
| SCR171 | Penn Dot 281 | ${ }^{2,733}$ | ${ }^{231}$ | 2 | + |  |  |  |  |  | X |  |  | 7.0 | 33.0 | 3.0 | $\stackrel{450}{45}$ |  | HW cement breaking up | SCR171 |
| ${ }_{\text {SCR172 }}$ | Quemahoning Twp | $\stackrel{6,363}{\text {, }}$ | $\begin{array}{r}858 \\ \hline 58 \\ \hline\end{array}$ | 1 | ¢ |  |  |  |  |  | ${ }^{\mathrm{x}} \mathrm{x}$ |  |  | ${ }^{11.0}$ | 78.0 |  | $\stackrel{45.0}{450}$ | solid concrete $\mathrm{HWW} 15^{\circ} \mathrm{E}$ WW $18^{\circ} \mathrm{W}$ WW $9^{\prime}$ | majority of flow runs under E end | ${ }_{\text {SCR172 }}$ |
| $\begin{aligned} & \text { SCR174 } \\ & \text { SCR175 } \end{aligned}$ | $\frac{\text { Quemahoning Twp }}{\text { Private } 2 \text { House }}$ | 3,960 <br> 1,038 | 560 <br> 182 | $\frac{1}{1}$ | $\frac{\mathrm{x}}{\mathrm{X}}$ |  |  |  |  |  | ${ }^{\text {x }}$ |  |  | $\stackrel{10.0}{6.5}$ | ${ }^{56.0}$ |  | 45.0 | $\frac{\text { solid concrete HW } 14^{\prime} \text { W WW } 18^{\prime} \text { E SW } 18^{\prime}}{\text { concreteliron } \text { WW } 5^{\prime} \text { each }}$ | stream channel upstream has a lot of vegetation over it | SCR174 SCR175 |
| SCR181 | Conemaugh Twp Railroad | 3,704 | 380 | 1 |  | railroad | x |  |  |  |  |  |  | 19.0 | 20.0 |  |  | Masonry 2 SWs, $25^{\prime}$ each HW-21' high | looks fine | SCR181 |
| SCR182 | Railroad | 1,562 | ${ }^{20}$ | 2 |  | railroad | x |  |  |  |  | 60 |  | 5.0 | 4.0 | 6.0 |  | MSRY-S WW-20' Wide HW $15^{5}$ high/288 wide | All water going under south side | SCR182 |
| SCR183 | Pennot 403 | 2,121 | ${ }^{300}$ |  | x |  |  |  |  |  | X |  |  | 10.0 | 30.0 |  |  | Concrete 2 WWS $14{ }^{\text {a each }}$ HW 13 high | Large boulders on both sides of stream | SCR183 |
| SCR184 | Shade Twp | $\stackrel{2,354}{ }$ | 311 50 | 1 | x |  |  |  |  |  | x |  |  |  | ${ }^{27.0}$ |  |  | Concretel builit over bricks WWW 20. Wide HW $15.5{ }^{\text {a }}$ ' high | ESW 15 'wide | SCR184 |
| SCR185 | Shade Twp | ${ }^{235}$ | 50 | 1 |  | road | x |  |  |  |  |  |  | 4.5 | $\frac{11.0}{315}$ |  |  | Concrete 2 WWs $11^{\circ}$ Each HW 6 ' high | Looks fairly new, constructed well | SCRR185 |
| SCR190 | Shade Twp | 1,746 <br> 19172 | $\stackrel{268}{65}$ | 4 | X |  |  |  |  |  | X |  |  | 8.5 <br> 15 | 31.5 |  |  | Msy S WW $11^{2}$ NWW $9^{\text {c }}$ Wooden bridge build on I beams | ns heavil rusted, plants coming oft, beams loose, bridge in bad con | SCR190 |
| SCR193 SCR200 | $\xrightarrow{\text { Penn Dot } 403}$ RR Shade Twp | 19,172 3,897 | ${ }^{662}$ | $\stackrel{4}{2}$ | x <br> $\times$ | RR |  |  |  |  | x <br> x |  |  | 10.5 15.0 | 63.0 15.0 | ${ }^{3.0}$ | 45.0 |  |  | SCR193 |
| SCR201 | Railroad bridge | 17,173 | 1.920 | 1 | $\times$ |  |  |  |  |  | x |  |  |  | 120.0 |  |  | each |  |  |
| SCR202 | Railroad bridge | 3,960 | 560 | 1 | X |  |  |  |  |  | X |  |  | 10.0 | 56.0 |  | 45.0 | Concrete built of Wood and steel E WW 16. Wide WSW 8 ' wide | Ws buirt out or Mssy brige has steel archs old but still ooks goed | SCR201 |
| SCR203 | Railirad bridge | 4,242 | 572 | 1 | x |  |  |  |  |  | X |  |  | 11.0 | 52.0 |  |  | mssy holds up sides | good | SCR203 |
| SCR204 | RR | 418 | 80 |  | X |  |  |  |  |  | X |  |  | 5.5 | 14.5 |  | 60.0 | cement holds up sides, steel top | good | SCR204 |
| SCR205 | RR | 5,660 | 702 | 1 | X |  |  |  |  |  | X |  |  | 13.0 | 54.0 |  | 15.0 | Concrete holds up bridge SW $60^{\circ}$ | Water hits sW beiore running under bridge | SCR205 |
| SCR206 | $\frac{\mathrm{RR}}{\text { RR }}$ | $\xrightarrow{248}$ | $\stackrel{42}{273}$ | 1 |  | RR | x |  |  |  | ${ }^{\text {x }}$ |  |  | ${ }^{7} 7.0$ | $\stackrel{6.0}{42.0}$ |  |  |  | Water runs along WW betore going under culvert | SCR206 SCR207 |
| SCR208 | ${ }_{\text {RR }}$ | $\stackrel{2}{2}$ | 285 | 1 | x |  |  |  |  |  | x |  |  | 10.0 | 28.5 |  |  | Bridge Abutments made of msy and concrete | Flowing well | SCR208 |
| SCR212 | (Krings) | 42,000 | 2,100 | 2 | $\times$ |  |  |  |  |  | x |  |  | 20.0 | 105.0 |  |  | Concrete Steel beamed bridge | most water flowing in north end of bridge bridge built in 1936 | SCR212 |
| SCR213 | Railrad | 132 | 32 | 1 |  | RR | x |  |  |  |  |  |  | 3.5 | 9.0 |  |  | Concrete HW 5.5 ' 'igh 2 SWs extend 25 'to highway culvert | Nothing really flowing in creek | SCR213 |
| SCR214 | Railroad Bridge Fermale | 45,079 | 1,680 | ${ }^{3}$ |  |  |  |  |  |  | x |  |  | 16.0 | 105.0 | 6.0 |  | Concrete base bridge buill out of steel and wood. |  | SCR214 |
| SCR215 | ${ }_{\text {PennDot Eisenhower BLVD. }}^{\text {Abandonded Rairoad Bridge }}$ | 45,000 <br> 24,93 | $\xrightarrow{2,250} 1.450$ | $\frac{2}{2}$ |  |  |  |  |  |  | $\frac{\mathrm{x}}{\mathrm{x}}$ |  |  | 20.0 14.5 | $\stackrel{112.5}{100.0}$ | 4.0 10.0 | 30.0 | $\frac{\text { concrerete base bridge built out of steel }}{\text { Buit on concrete foundation wood and steel }}$ | Built by Bethlehem Steel Co. 1923 Bridge is old and Deterirating | $\frac{\text { SCR215 }}{\text { SCR216 }}$ |
| SCR224 | RR Richland Twp | 105 | 27 | 1 |  | RR | x |  |  |  |  | 0 |  | 3.0 | 9.0 |  |  | concrete HW 6 ' high 2 SWW 4 each | east SW cracked $\sim 1 / 2$ washed away | SCR224 |
| SCR225 | RR Richland Twp | 4,192 | 520 | 1 |  | RR | X |  |  |  |  | 0 |  | 13.0 | 40.0 |  | 45.0 | Steel l beams, steel top, NWW 14 S WW12' | W extends from S WW another $266^{\prime}$ creek hits NWW then goes und | SCR225 |
| SCR226 | Penn Dot Frankkin street | ${ }^{59,943}$ | 5,472 | 1 | X |  |  |  |  |  | x |  |  | 24.0 | 228.0 |  |  | Concrete E WW $16 \cdot$ W SW 24 | Steel beamed bridge | SCR226 |
| SCR40 | Geistown | 105 | 27 | 1 |  | road | x |  |  |  |  |  |  | 3.0 | 9.0 |  |  | mssy HW 4 ' high | wooden sidewals go on for 1000 of feet | SCR40 |
| ${ }_{\text {SCR41 }}$ | $\frac{\text { Geistown }}{\text { PENNDOT }}$ | $\stackrel{456}{919}$ | $\stackrel{77}{150}$ | 1 |  | $\xrightarrow{\text { road }}$ read | ¢ |  |  |  |  | 0 |  | 7.0 | 11.0 |  |  | solid cement HW $9.55^{\text {c }}$ Cement botom | Cement SW run about $80^{\prime}$ Ong $5^{\text {W }}$ WW on end of SW | SCR41 |
| SCR45 | Conemaug ${ }^{\text {Twp }}$ | $\stackrel{\text { 1,305 }}{ }$ | ${ }^{176}$ | 1 | $\times$ | road |  |  |  |  | x |  |  | 7.5 11.0 | $\stackrel{20.0}{16.0}$ |  |  |  |  |  |
| SCR47 | Conemaugh Twp | 849 <br> 873 | ${ }^{144}$ | 1 | X |  |  |  |  |  | x |  |  | 7.0 | 20.5 |  | 45.0 | msty-concrete H W-12 $2^{2}$ N-WW-4 | SWW-9 9 very Small Wateratal Under bridge | SCR47 |
| SCR48 SCP449 | ${ }_{\text {Private }}$ | 373 <br> 580 | ${ }_{98}^{63}$ | 1 | + |  |  |  |  |  | X <br> $\times$ <br> $\times$ |  |  | 7.0 | $\stackrel{9.0}{14}$ |  |  | (E) WW-17 Wide (W)-10. Wwide-buried | Wooden Bridge | ${ }^{\text {SCR48 }}$ |
| ${ }_{\text {SCR468 }}$ | ${ }^{\text {Privale }}$ | ${ }_{300}^{500}$ | ${ }^{98}$ | 1 | X | road | x |  |  |  | ${ }^{\text {x }}$ |  |  | 5.0 | ${ }_{12}^{12.0}$ |  |  |  | Flowing well | ${ }^{\text {SCR49 }}$ SCR68 |
| SCR69 | Private | 213 | 43 | 1 | X |  |  |  |  |  | X |  |  | 5.0 | 8.5 |  |  | Concrete SSW-8. ${ }^{\text {NWW-8 }}$ |  | SCR69 |
| SCR70 SCR73 | ${ }_{\text {Conemaugh }}$ Conp | 400 109 | 80 15 | 1 |  | ${ }_{\substack{\text { road } \\ \text { road }}}$ | X X |  |  |  |  | 1.5 |  | 5.0 3.0 | 16.0 |  | 45.0 | Concrete E(SWW-7wide HW-7High | W(WW)-14' Wide Water hits WW Before Going under Bridge | ${ }^{\text {SCR7\% }}$ SCR73 |
| SCR74 | PENNDOT 403 | 550 | ${ }_{110}$ | 1 | X |  |  |  |  |  | x |  |  | 5.0 | 2.0 |  | 45.0 | Concrete-SWW-12' wide, SW 8 high | N -SW-8.8 Buried | SCR74 |
| ${ }_{\text {SCR75 }}$ | PENNDOT 403 | ${ }^{559}$ | ${ }^{102}$ | 1 |  | road | x |  |  |  |  |  |  | 6.0 | $\stackrel{17.0}{110}$ |  | 30.0 | NSW-13's ${ }^{\text {S WWW-15' }}$ | rocks and blocks hold wo sides | ${ }^{\text {SCR775 }}$ |
| SCR79 | Private | ${ }_{394}$ | ${ }^{66}$ | 1 | X |  |  |  |  |  | X |  |  | 6.0 | ${ }^{12.0}$ |  |  | Concrete 2 WWS $8^{\text {e each }}$ HW10' | rocks and blocks hold up sides | ${ }_{\text {SCR79 }}$ |
| SCR80 | Private | 607 | 96 | 1 | X |  |  |  |  |  | X |  |  | 8.0 | 12.0 |  |  | Concrete-2 WWs 5 ' high each |  | SCR80 |














## Box Culvert / Box Bridge Capacity Calculation Sheet

Watershed: $\quad$ Stonycreek
$\begin{aligned} & \text { Completed by: } \\ & \text { Checked by: }\end{aligned}$
Checked by:
Date(s): $\quad$ NOTE: Different parameters assigned to CMP and RCP culverts in capacity colum


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Elipitical Culverts Calculation Sheet

$\begin{array}{ll}\text { H = iament } & \text { CMP }=\text { Corrugated Metal Pipe } \\ \text { HT }=\text { Height } & \text { CPP }=\text { Corrugated Polyethylene Pipe }\end{array}$
$\mathrm{W}=$ Wioth $\quad \mathrm{BCCMP}=$ Bituminous Coated Corrugated Metal Pipe
Date(s): NOTE: Different parameters assigned to CMP and RCP culverts in capacity column



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necked by: Date(s):



## D. <br> DATA COLLECTION FORMS (FORMS A, C - J, O)




| 0 |  | FORM D - PROPOSED FLOOD CONTROL PROJECT |  |  |  |  |  |  |  | SHEET $\qquad$ OF $\qquad$ 1 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WATERSH <br> Name: Municipality County: | D STonccer <br> alername Boro AMar | FORM COMPLETED BY <br> Name: <br> Telephone: $\qquad$ <br> Date: |  |  | TYPICAL TYPES OF FLOOD CO <br> Channel Excavation / Widening <br> Channel Realignment <br> Rock Riprap |  |  |  |  | NTROL PROJECTS <br> Levee <br> Gabions <br> Pipe Channel |  | Dams <br> Floodwall Concrete Lining |
| For County Use: |  |  |  |  |  |  |  |  |  |  |  |  |
| Map ID No. | Type of Flood Control Project | $\begin{aligned} & \text { Stu } \\ & \hline \mathrm{YES} \end{aligned}$ <br> Prelim. | Phase | No | Year Constr. Planned | Projected Compltn. Date | $\begin{gathered} \text { Expected } \\ \text { Life } \\ \text { Yrs. } \\ \hline \end{gathered}$ | Design <br> Frequency <br> Yrs. | Flood Discharge C.F.S | Map <br> ID No. <br> Form A* | Owner Name, Address, and Phone |  |
| D- | HGRE ARE No Proposed Fioud somae: provers |  |  |  |  |  |  |  |  |  |  |  |
| D- |  |  |  |  |  |  |  |  |  |  |  |  |
| D- |  |  |  |  |  |  |  |  |  |  |  |  |
| D- |  |  |  |  |  |  |  |  |  |  |  |  |
| D- |  |  |  |  |  |  |  |  |  |  |  |  |
| D- |  |  |  |  |  |  |  |  |  |  |  |  |
| D- |  |  |  |  |  |  |  |  |  |  |  |  |

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JF $\qquad$ -

--n-m-n | 1 |
| :--- |

## $\xrightarrow{2}$

4-3

## $-$

$\qquad$ OF $\qquad$

Diagram each system on the appropriate map. Establish map points to show changes in system elements,
 pipe size, or pipe direction. (If unknown. outline the system extent.) Complete this form only where specific
 information on construction is available. Use a separate form for each system. Identify the points within a
system consecutively (ex. G-1,G-2,G-3). Start the first point in each additional system 20 numbers higher

| $\begin{gathered} \text { Map I.D. } \\ \text { No. } \\ \hline \end{gathered}$ |  | System's Elements (x) |  |  | Measurements * |  |  |  | Material | Year Constr. | Design Data <br> Available | Contact Person Name and Phone | Name of FinalOwnership andMaintenance Responsibility |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Pipe | Channel / Swale |  |  |  |  |  |  |  |
| From | To |  |  |  | Pipe | Open Channel | Swale | D |  |  |  |  |  | TW | B | Depth |
| G- | G- |  Borra: |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |

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$\qquad$




# UPPER YODER TOWNSHIP SUPERVISORS 

Cambria County
302 Elim Street
Johnstown, PA 15905
(814) $255-5243$

Fax (814) 255-1805

\author{

Mr. Kob Piper, Director <br> Cambria County Conservation District <br> 401 Candlelight Drive <br> Suite 221 <br> Ebensburg, PA 15931 <br> | Subject: | Stonycreek River Act 167 Stormwater |
| :--- | :--- |
|  | Management Plan |
|  | Phase I-Scope of Study |

}

Dear Robs:
Attached, please find one copy of Form A - Stormwater Problem Areas and one "marked-up" copy of Sheet No. UYT-ZM-1, Zoning Map. This information is submitted for your use in completing the subject project. Upper Yoder Township could provide the attached map in digital form along with Township wide aerial mapping in digital form.

Please contact this office if you have any questions or require additional clarification or information to complete your project. My email address is: kmesko@charter.net

Sincerely,

UPPER YODER TOWNSHIP


Kenneth A. Mesko, P.E.
Township Engineer

| FORM A - STORM WATER PROBLEM AREAS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WATERSHED <br> Name:Sronkcekk Rivie <br> Municipality: Ppen Tonen Tw County: <br> Camera |  | FORM COMPLETED BY <br>  |  |  |  |  | Before Filling Out Form, See Instructions On Back |  |  |  |  |  |  |  |  |  |
|  |  | For County Use: |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
| MAP NO. * | A-1 | A-2 |  | A-4 | A-5 |  | A-7 | A-8 | A- | A- | A- | A- | A- | A- | A- | A- |
| Types of Storm Water Problems |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Flooding | $\checkmark$ | $\checkmark$ |  | $\checkmark$ | $\checkmark$ |  | $\checkmark$ |  |  |  |  |  |  |  |  |  |
| Accelerated Erosion |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sedimentation |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Landslide |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Groundwater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Water Pollution |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Other (Explain) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cause (s) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Storm Water Volume | 1 | $\checkmark$ | $\checkmark$ | $\checkmark$ | - | $\checkmark$ | $\cdots$ |  |  |  |  |  |  |  |  |  |
| Storm Water Velocity | 2 | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\cdots$ | $\checkmark$ |  |  |  |  |  |  |  |  |  |  |
| Storm Water Direction | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |  |  |  |  |
| Water Obstruction |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Other (Explain) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Frequency |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Year Most Recent Occurred |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Year First Known Occurred |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Regularity |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| More Than 1 Year |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less Than 1 Year | $\checkmark$ | $\sim$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |  |  |  |
| Only During Agnes |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Duration (If Applicable) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Less Than 1 Day | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |  |  |  |
| 1 Day + (Enter Days) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Property Damage |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Loss of Life/Vital Services |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Private | $\checkmark$ | $\checkmark$ | $\checkmark$ | $\checkmark$ | 2 | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |  |  |  |
| More Than One Owner |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Types of Properties |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Number of Properties |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Solutions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Suggested |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Formally Proposed |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| * Include Map ID No. if found on any other form listing proposed facilities. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EXPLAINATION LINE(S) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1) Fipm Not cinnsivt |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Begin with A. 1 as the first map number to identify the first' storm water problem area. llustrate the defined problem on the watershed map provided, and identify it with its map number.

For each storm water problem area within your municipality, enter the map identification number at the head of the column. Describe the probtem by placing a check ( 4 in the appropriate blocks of the column under this map identification number.

When an additional explanation is required, write the line number(s) used in the column marked "Explanation Line No. (s)".Example 1, 2-3, etc. :


## Definitions

## Storm Water Problem Area

An area that defines the farthest extent of a storm water problem, including any area that experiences property damage, inundation, accelerated erosion, surface water pollution, groundwater pollution, landslides, or any other problem as a result of storm water runoff.

## Groundwater

Water in the ground below the water table: '-
Accelerated Erosion
The removal of the surface of the land through the combined action of man's acivities and the natural processes at a rate greater than would occur because of the natural process alone.

## Sedimentation

The process by which soil or other surface materials, transported by surface water, is deposited on stream bottoms.
Water Obstruction
Any dike, bridge, culvert, wall, wingwall, filt, pier, wharf, embankment, abutment, or other structure located in, along, across, or projecting into any watercourse, floodway, or body of water.

EXPLANATION LINES (continued)


## Terry Ostrowski

From: Robb Piper [piper@co.cambria.pa.us]
Sent: Monday, July 07, 2003 10:20 AM
To: Terry Ostrowski
Subject: Re: Berlin Boro - Stonycreek
Just got a call from Stoystown and they have no problems, please count them in the response tally for the scope of study

From: Terry Ostrowski -----
From: Terry Ostrowski
To: Robb Piper (piper@co.cambria.pa.us)
Sent: Thursday, June 26, 2003 2:47 PM
Subject: Berlin Boro - Stonycreek
Robb;
FYI.
Kerry Claycomb from Berlin Boro, Somerset Co. contact me and will be sending their problem area information directly to our office.

Terry

| WATERSHED |  | FORM COMPLETED BYName: Greg WalkerTelephone: $\frac{814-267-3212}{\text { Duvist } 192005}$Date: |  |  |  |  | Before Filling Out Form, See Instructions On Back$\qquad$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name:  <br> Municipality:  <br> County: $\frac{\text { Gres Wolker }}{\text { Stonyereek TuP }}$ |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| MAP NO. * | A-1 | A- 2 | A- 3 | A- | A- | A- | A- | A- | A- | A. | A- | A- |
| Types of Storm Water Problems |  |  |  |  |  |  |  |  |  |  |  |  |
| Flooding | $\stackrel{ }{2}$ | - | $\sim$ |  |  |  |  |  |  |  |  |  |
| Accelerated Erosion |  |  |  |  |  |  |  |  |  |  |  |  |
| Sedimentation | $\ldots$ | $\sim$ | $\sim$ |  |  |  |  |  |  |  |  |  |
| Landslide |  |  |  |  |  |  |  |  |  |  |  |  |
| Groundwater |  |  |  |  |  |  |  |  |  |  |  |  |
| Water Pollution |  |  |  |  |  |  |  |  |  |  |  |  |
| Other (Explain) |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) | 5 | $\sim$ | $\sim$ |  |  |  |  |  |  |  |  |  |
| Cause. (s) |  |  |  |  |  |  |  |  |  |  |  |  |
| Storm Water Volume |  |  |  |  |  |  |  |  |  |  |  |  |
| Storm Water Velocity |  |  |  |  |  |  |  |  |  |  |  |  |
| Storm Water Direction |  |  |  |  |  |  |  |  |  |  |  |  |
| Water Obstruction | 17 | $\stackrel{ }{2}$ | $\sim$ |  |  |  |  |  |  |  |  |  |
| Other (Explain) |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) |  |  |  |  |  |  |  |  |  |  |  |  |
| Frequency |  |  |  |  |  |  |  |  |  |  |  |  |
| Year Most Recent Occurred |  |  |  |  |  |  |  |  |  |  |  |  |
| Year First Known Occurred |  |  |  |  |  |  |  |  |  |  |  |  |
| Regularity |  |  |  |  |  |  |  |  |  |  |  |  |
| More Than 1 Year | $\sim$ | - | $\sim$ |  |  |  |  |  |  |  |  |  |
| Less Than 1 Year |  |  |  |  |  |  |  |  |  |  |  |  |
| Only During Agnes |  |  |  |  |  |  |  |  |  |  |  |  |
| Duration (If Applicable) |  |  |  |  |  |  |  |  |  |  |  |  |
| Less Than 1 Day |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 Day + (Enter Days) | 5 | 2 | 2 |  |  |  |  |  |  |  |  |  |
| Property Damage |  |  |  |  |  |  |  |  |  |  |  |  |
| Loss of Life/ Nital Services |  |  |  |  |  |  |  |  |  |  |  |  |
| Private |  |  |  |  |  |  |  |  |  |  |  |  |
| More Than One Owner |  |  |  |  |  |  |  |  |  |  |  |  |
| Types of Properties |  |  |  |  |  |  |  |  |  |  |  |  |
| Number of Properties |  |  |  |  |  |  |  |  |  |  |  |  |
| Public (List Types) |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) |  |  |  |  |  |  |  |  |  |  |  |  |
| Solutions |  |  |  |  |  |  |  |  |  |  |  |  |
| Suggested |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) |  |  |  |  |  |  |  |  |  |  |  |  |
| Formally Proposed |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) |  | for | lis | g.pror |  | cill |  |  |  |  |  |  |

A-1 - Swamp Hollow Road TR-509. This road is located at the headwaters of the stonycreek river. This road experiences constant flooding in the spring of the year. Water Swells to a depth of 12 inchs on approximately one tenth of a mile of this roadway. Beaver Dams, sediment and thick growth seem to have completely clogged the main streambed. Average times this road floods is approximately 12 times per year. This continuously wash road material such as gravel from the raid bed and causes sedimentation in the streambed.

A-2 Batterer Bridge Road - TR -539. A portion of this road his flooding during more heavy romstorms caused by beaver dimes that backup the drainage of cuaterbunoff. The dams cause backups of sedimentation and causes heap vesitation growth in the streambed.
A. 3 Piney Run Road $T R-726$ A portion of this road has flooding during heavy rainstorms caused by beaver dams. This area is upstream from the Battier Bridge Rod. Heavy vegitation growth is also in the streambed
$N / A$



* Enter the storm water problem area's Map ID No., if the proposed project will solve or reduce any/all of an identified drainage problem.
N/A

$\qquad$ OF $\qquad$

$\qquad$ OF $\qquad$


[^4]$\qquad$ OF $\qquad$

| WATERSHED <br> Name: Municipality: County: $\qquad$ |  |  | FORM CO <br> Name: <br> Telephone: Date: | LETED |  | INSTRUCTIONS <br> On the map for proposed storm water collection systems, diagram each proposed systern. Indicate a map point to show changes in system elements, pipe size, pipe direction and conneclion |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | On the map for proposed storm water collection systems, diagram each proposed system. Indicate a map point to show changes in system elements, pipe size, pipe direction and connections to existing systems. For proposed addilions to existing systems. dagram only the additions and their connection point into the existing system. Complete a separate form for each oroposed. new system and one for each existing system having one or more proposed additions. Idenlify the points within a system conseculively (ex. H-1, H-2, H-3). Start the first point in each addilional system 20 numbers higher (if $\mathrm{H}-3$ ends one system, begin the next with $\mathrm{H}-23$ ). Be sure to show the point where proposed additions connect into existing systems, using the map point number from the existing system form and map. See Sample Diagrams and Form on Reverse. |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| $\begin{gathered} \text { Map I.D. } \\ \text { No. } \\ \hline \end{gathered}$ |  | System's Elements (x) |  |  |  | Measurements * |  |  | Material | $\begin{gathered} \text { Map I.D. } \\ \text { Nos. }{ }^{* *} \\ \text { Form A } \end{gathered}$ | Proposed Const. Dates |  | Design Data Avail. | $\begin{gathered} \text { Contact Person } \\ \text { Name and } \\ \text { Phone } \\ \hline \end{gathered}$ | Name of FinalOwnership andMaintenance Responsibility |
|  |  | Open Channel / Swale |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| From | To |  |  |  | Pipe | Open Channel | Swale | TW |  |  | B | Depth |  |  |  | Start | End |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| H- | H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  | ; |  |  |  |  |  |  |  |  |  |  |  |  |





Examannownes

1) A-1 FLOQOING FROM RIVER ALSO OUERFLOWING SEWER SYSTEM 2) A-2 STRCAQ SEDIMENTATLON ACCUMULATING AT DEBRES BASINS

Begin with A. 1 as the first map number to identify the first' storm water problem area. llustrate the defined problem on the watershed map provided, and identify it with its map number

For each storm water problem area within your municipality, enter the map identification number at the head of the column. Describe the problem by placing a check ( 4 in the appropriate blocks of the column under this map identification number.

When an additional explanation is required, write the line number(s) used in the column marked "Explanation Line No. (s)". Example 1, 2-3, etc. :

If storm water problem occurred during and after Agnes, describe the frequency of the problem after Agnes.
explanation lines to list the types of public property damages ,e.g.roadways, hospitals etc.

Enter the line no. (s) used to list the map ID no. (s) for the proposed facilities.

## Definitions

## Storm Water Problem Area

An area that defines the farthest extent of a storm water problem, including any area that experiences property damage, inundation, accelerated erosion surface water pollution, groundwater pollution, landslides, or any other problem as a result of storm water runoff.

## Groundwater

Water in the ground below the water table: -

## Accelerated Erosion

The removal of the surface of the land through the combined action of man's activities and the natura processes at a rate greater than would occur because of the natural process alone.

## Sedimentation

The process by which soil or other surface materials, transported by surface water, is deposited on stream bottoms.

## Water Obstruction

Any dike, bridge, culvert, wall, wingwall, fil, pier wharf, embankment, abutment, or other structure located in, along, across, or projecting into any watercourse, floodway, or body of water.

EXPLANATION LINES (continued)


Mr. Robb Piper<br>Cambria County Conservation District<br>401 Candlelight Drive, Suite 221<br>Ebensburg, PA 15931

Transmittal
Stonycreek River Stormwater Plan Southmont Borough, Cambria County

Dear Mr. Piper:
In accordance with your request for information, enclosed is the stormwater forms packet from Southmont Borough, Cambria County.

Sincerely yours,
Paul C. Rizzo Associates, Inc.


Watershed/Land Use Planner
MWL/RJF/ljr
Enclosure
AUG 192005
pc: Southmont Borough Supervisors





Begin with A． 1 as the first map number to identify the first＇storm water problem area．Illustrate the defined problem on the watershed map provided，and identify it with its map number．

For each storm water problem area within your municipality，enter the map identification number at the head of the column．Describe the problem by placing a check（ 4 in the appropriate blocks of the column under this map identification number．

When an additional explanation is required，write the line number（s）used in the column marked＂Explanation Line No． （s）＂．Example $1,2-3$ ，etc．


Enter the line no．（s）

## Definitions

## Storm Water Problem Area

An area that defines the farthest extent of a storm water problem，inclucing any area that experiences property damage，inundation，accelerated erosion， surface water poliution，groundwater pollution， landslides，or any other problem as a result of stom water runoff．

## Groundwater

Water in the ground below the water table．－
Accelerated Erosion
The removal of the surface of the land through the combined action of man＇s activities and the natura processes at a rate greater than would occur because of the natural process alone．

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The process by which soil or other surface materials，transported by surface water，is deposited on stream bottoms．

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Any dike，bridge，culvert，wall，wingwall，filt，pier wharf，embankment，abutment，or other structure located in，along，across，or projecting into any watercourse，floodway，or body of water．

EXPLANATION LINES（continued）



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[^5]
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* See measurement key on reverse side.
$\qquad$ OF $\qquad$

| WATERSHED <br> Name: Cheney Ron Municipality: Southmont Bore County: $\qquad$ Cambria |  |  | FORM COMPLETED BY <br> Name: <br> Telephone: $\qquad$ Mark WiLazzair $84536-6767$ |  |  | INSTRUCTIONS <br> On the map for proposed stom water collection systems, diagram each proposed system. Indicate a map point to show changes in system elements, pipe size, pipe direction and connections to existing systems. For proposed additions to existing systems. diagram only the additions and their connection point into the existing system. Complete a separate form for each proposed. new system and one for each existing system having one or more proposed additions. fienlify the points within a system consecutively (ex. H-1, H-2, H-3). Stant the firsl point in each additional system 20 numbers higher (if $\mathrm{H}-3$ ends one system, begin the next with $\mathrm{H}-23$ ). Be sure to show the point where proposed additions connect into existing systerns. using the map point number from the existing system form and map. See Sample Diagrams and Form on Reverse. |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} \text { Map I.D. } \\ \text { No. } \end{gathered}$ |  | System's Elements (x) |  |  | Pipe | Measurements* |  |  | Material | Map I.D. <br> Nos.** <br> Form A | ProposedConst. Dates |  | Design Data Avail. | $\begin{gathered} \text { Contact Person } \\ \text { Name and } \\ \text { Phone } \\ \hline \end{gathered}$ | $\qquad$ <br> Name <br> Ownership and Maintenance Responsibility |
|  |  | Open Channel / Swale |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| From | To |  |  |  | Pipe | Open Channel | Swale | D |  |  | TW | B |  |  |  | Depth | Start | End |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | $\mathrm{H}-$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H. | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  | ; |  |  |  |  |  |  |  |  |  |  |  |  |

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| $\begin{aligned} & \text { ED } \\ & \text { STONYCREEK } \\ & : \text { SOMERSET TWP } \\ & \text { SOMERSET CO. } \end{aligned}$ |  | FORM COMPLETED BY <br> Name: J. BTANCOTTI <br> Telephone: 814-445-4675 <br> Date: 6/30/01 |  |  |  |  | Before Filling Out Form, See Instructions On Back <br> For County Use: |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
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| MAP NO. * | A-1 | A-2 | A- | A. | A- | A- | A. | A- | A- | A. | A- | A- |
| Types of Storm Water Problems |  |  |  |  |  |  |  |  |  |  |  |  |
| Flooding | $r$ | $\bigcirc$ |  |  |  |  |  |  |  |  |  |  |
| Accelerated Erosion |  |  |  |  |  |  |  |  |  |  |  |  |
| Sedimentation | $\checkmark$ | $\gamma$ |  |  |  |  |  |  |  |  |  |  |
| Landslide |  |  |  |  |  |  |  |  |  |  |  |  |
| Groundwater |  |  |  |  |  |  |  |  |  |  |  |  |
| Water Pollution |  |  |  |  |  |  |  |  |  |  |  |  |
| Other (Explain) |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) |  |  |  |  |  |  |  |  |  |  |  |  |
| Cause (s) |  |  |  |  |  |  |  |  |  |  |  |  |
| Storm Water Volume |  |  |  |  |  |  |  |  |  |  |  |  |
| Storm Water V Velocity |  |  |  |  |  |  |  |  |  |  |  |  |
| Storm Water Direction |  |  |  |  |  |  |  |  |  |  |  |  |
| Water Obstruction |  |  |  |  |  |  |  |  |  |  |  |  |
| Other (Explain) |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |  |  |  |  |
| Frequency |  |  |  |  |  |  |  |  |  |  |  |  |
| Year Most Recent Occurred | 2004 | 2004 |  |  |  |  |  |  |  |  |  |  |
| Year First Known Occurred |  |  |  |  |  |  |  |  |  |  |  |  |
| Reqularity |  |  |  |  |  |  |  |  |  |  |  |  |
| More Than 1 Year | $\gamma$ | $\checkmark$ |  |  |  |  |  |  |  |  |  |  |
| Less Than 1 Year |  |  |  |  |  |  |  |  |  |  |  |  |
| Only During Agnes |  |  |  |  |  |  |  |  |  |  |  |  |
| Duration (If Applicable) |  |  |  |  |  |  |  |  |  |  |  |  |
| Less Than 1 Day |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 Day + (Enter Days) +1 | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |  |  |  |  |
| Property Damage |  |  |  |  |  |  |  |  |  |  |  |  |
| Loss of Life/vital Services |  |  |  |  |  |  |  |  |  |  |  |  |
| Private | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |  |  |  |  |
| More Than One Owner |  |  |  |  |  |  |  |  |  |  |  |  |
| Types of Properties |  |  |  |  |  |  |  |  |  |  |  |  |
| Number of Properties |  |  |  |  |  |  |  |  |  |  |  |  |
| Public (List Types) |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) |  |  |  |  |  |  |  |  |  |  |  |  |
| Solutions |  |  |  |  |  |  |  |  |  |  |  |  |
| Suggested | $\checkmark$ | $\checkmark$ |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) |  |  |  |  |  |  |  |  |  |  |  |  |
| Formally Proposed |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) |  |  |  |  |  |  |  |  |  |  |  |  |

Begin with A. 1 as the first map number to identify the first' storm water problem area. Illustrate the defined problem on the watershed map provided, and identify it with its map number.

For each storm water problem area within your municipality, enter the map identification number at the head of the column. Describe the problem by placing a check ( 4 in the appropriate blocks of the column under this map identification number.

When an additional explanation is required, write the line number(s) used in the column marked "Explanation Line No. (s) ${ }^{n}$. Example 1, 2-3, etc.


Enter the line no. (s) -
used to list the map $1 D$ no. (s) for the proposed facilities.

## Definitions

## Storm Water Problem Area

An area that defines the farthest extent of a storm water problem, including any area that experiences property damage, inundation, accelerated erosion, surface water pollution, groundwater pollution, landslides, or any other probiem as a result of storm water runoff.

## Groundwater

Water in the ground below the water table. .-

## Accelerated Erosion

The removal of the surface of the land through the combined action of man's activities and the natural processes at a rate greater than would occur because of the natural process alone.

## Sedimentation

The process by which soil or other surface materials, transported by surface water, is deposited on stream bottoms.

## Water Obstruction

Any dike, bridge, culvert, wall, wingwall, 解, pier, wharf, embankment, abutment, or other structure located in, along, across, or projecting into any watercourse, floodway, or body of water.



Begin with A. 1 as the first map number to identify the first' storm water problem area. lifustrate the defined problem on the watershed map provided, and identify it with its map number.

For each storm water problem area within your municipality, enter the map identification number at the head of the column. Describe the problem by placing a check ( 4 in the appropriate blocks of the column under this map identification number.

When an additional explanation is required, write the line number(s) used in the column marked "Explanation Line No. (s)'. Example 1, 2-3, etc.

If storm water problem occurred during and after Agnes, describe the frequency of the problem after Agnes.


Enter the line no. (s) used to list the map 10 no. (s) for the proposed facilities.

## Definitions

## Storm Water Problem Area

An area that defines the farthest extent of a storm water problem, including any area that experiences property damage, inundation, accelerated erosion, surface water pollution, groundwater pollution, landslides, or any other problem as a result of storm water runoff.

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SAMPLE DIAGRAM FOR SYSTEM TWO

SAMPLE FORM (System One Only)



Outline known areas where construction exists but construction data is unavailable.
$\qquad$
OF
$\qquad$

| WATERSHEDName: STONYCREEKMunicipality: SOMERSET TWPCounty: $\mathrm{SOMERSET} \mathrm{CO}$. |  |  | FORM COMPLETED BY <br> Name: J. BIANCOTTI Telephone: $\frac{814-445-4675}{8 / 12 / 05}$ Date: |  |  | INSTRUCTIONS <br> On the map for proposed storm water collection sysiems, diagram each proposed systert. Indicate a map point to show changes in system elements, pipe size. pipe direction and connections to existing systems. For proposed additions to existing systems, diagrem onty the additions and their connection point into the existing system. Complete a separate form for each proposed. new system and one for each existing system having one or more proposed addilions. Identify the points wilhin a system conseculively (ex. H- $\uparrow, \mathrm{H}-2, \mathrm{H}-3$ ). Slarl the first point in each additional system 20 numbers higher (if $\mathrm{H}-3$ ends one system, begin the next with $\mathrm{H}-23$ ). Be sure to show the point where proposed addilions connect into existing systems, using the map point number from the existing system form and map. See Sample Diagrams and Form on Reverse. |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
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| $\begin{gathered} \text { Map I.D. } \\ \text { No. } \\ \hline \end{gathered}$ |  | System's Elements (x) |  |  | $\frac{\text { Pipe }}{\mathrm{D}}$ | Measurements * |  |  | Material | $\begin{gathered} \text { Map I.D. } \\ \text { Nos.** } \\ \text { Form A } \\ \hline \end{gathered}$ | Proposed Const. Dates |  | Design <br> Data <br> Avaii. | $\begin{gathered} \hline \text { Contact Person } \\ \text { Name and } \\ \text { Phone } \\ \hline \end{gathered}$ | Name of Final <br> Ownership and <br> Maintenance Responsibility |
|  |  |  | anne |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| From | To |  |  |  | Pipe | Open Channe! | Swale | TW |  |  | B | Depth |  |  |  | Start | End |
| H- | H- | NONE- | DOES NOT | APPLY |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\mathrm{H}_{-}$ | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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[^8]
## SAMPLE DIAGRAMS





ADDITION TO EXISTING SYSTEM

SAMPLE FORM (New System Only)





Begin with A. 1 as the first map number to identify the first' storm water problem area. Illustrate the defined problem on the watershed map provided, and identify it with its map number.

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When an additional explanation is required, write the line number(s) used in the column marked "Explanation Line No. (s)". Example 1, 2-3, etc. =


## Definitions

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Water Obstruction
Any dike, bridge, culvert, wall, wingwall, fill, pier wharf, embankment, abutment, or other structure located in, along, across, or projecting into any watercourse, floodway, or body of water.


October 12, 2005

Cambria County Conservation District
401 Candlelight Drive, Suite 221

Ebensburg, PA 15931
ATTN: Kob Piper

## STONYCREEK ACT 167 PLAN

STORMWATER MANAGEMENT
Dear Robby,
On behalf of Paint Township, we have completed the forms for the Stormwater Management Plan received at the Phase II Meeting on June 22, 2005. The completed forms are enclosed with this memo as well as a map of the areas contributing to the Stonycreek Watershed.

If you have any questions or concerns, please contact us at (814) 445-6551.

THE EADS GROUP, INC. (Somerset)


By: Jeffrey S. Haynal, E.I.T.
cc: File \# 6036-G-01, w/ enc.
Paint Township, w/ enc.
Pat Mulcahy
Central File81 Baltimore St. Suite 600 (814) 944-5035 (814) 443 -2748 Fax




* Enter the storm water problem area's Map ID No., if the proposed project will solve or reduce any / all of an identified drainage problem.







October 12, 2005


ATTN: Rob Piper
STONYCREEK ACT 167 PLAN
STORMWATER MANAGEMENT
Dear Rob,
On behalf of Paint Borough, we have completed the forms for the Stormwater Management Plan received at the Phase II Meeting on June 22, 2005. The completed forms are enclosed with this memo as well as a map of the areas contributing to the Stonycreek Watershed.

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THE EADS GROUP, INC. (Somerset)


By: Jeffrey S. Haynal, E.I.T.
cc: File \# 6035-S-02, w/ enc.
Paint Borough, w/ enc.
Pat Mulcahy
Central File



| 0 |  | FORM D - PROPOSED FLOOD CONTROL PROJECT |  |  |  |  |  |  | SHEET 3 OF 16 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WATERSHED |  | FORM COMPLETED BY <br> Name: DENNIS Berkey <br> Telephone: $\qquad$ Date: $8-17-2005$ |  |  | TYPICAL TYPES OF FLOOD CONTROL PROJECTS |  |  |  |  |  |  |
| Name: <br> Municipality County: | STONYCRESK Pand BaRoubli Somenset |  |  |  | Channel Excavation / Widening Channel Realignment Rock Riprap |  |  |  |  | Levee <br> Gabions <br> Pipe Chan | Dams <br> Floodwall Concrete Lining |
| For County Use: |  |  |  |  |  |  |  |  |  |  |  |
| Map ID No. | Type of Flood Control Project | Study Phase Begun |  |  | Year Constr. Planned | Projected Compltn. Date | Expected <br> Life <br> Yrs. | Design Flood |  |  | Owner Name, Adoress, and Phone |
|  |  | YE |  | N0 |  |  |  | Frequency Yrs. | Discharge C.F.S. |  |  |
|  |  | Prelim. | Final |  |  |  |  |  |  |  |  |
| D- / | PIPE CHANNEL |  |  | x | 2006 | 2006 | 100 | 50 | 75 | $A-4$ | UAKNOWN AT THIS TIME |
| D-2 | PPE CHANNEL |  |  | $x$ | 2006 | 2006 | 100 | 50 | 12 | $A-5$ | PAINT BOROUGH PROPERTY CSK RAILROAD |
| D-3 | PIPE CHANNEL |  |  | $x$ | 2006 | 2006 | 100 | 55 | 12 |  | Fint Borgongh Frrall Sas Company |
| D- |  |  |  |  |  |  |  |  |  |  |  |
| D- |  |  |  |  |  |  |  |  |  |  |  |
| D- |  |  |  |  |  |  |  |  |  |  |  |
| D- |  |  |  |  |  |  |  |  |  |  |  |

* Enter the storm water problem area's Map ID No., if the proposed project will solve or reduce any / all of an identified drainage problem.




[^9]$\qquad$ OF $\qquad$

Name: STONYCREEK Name: DENNIS B=RKEY Municipality: /ANT BorsubH
$\qquad$ DENNIS BERKEY Diagram each system on the appropriate map. Establish map points to show changes in system elements pipe size, or pipe direction. (If unknown, outline the system extent.) Complete this form only where specific County: Somerset Date: 8-17-2005 information on construction is available. Use a separate form for each system. Identify the points within a

| County: SOMERSET |  |  | Date: | 8-17-2005 |  | For example, G-3 ends one system, so G-23 begins the next. See Sample Diagrams \& Form on Reverse. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Map I.D. No. |  | System's Elements ( x ) |  |  | Measurements * |  |  |  | Material | Year Constr | Design Data Available | Contact Person <br> Name and Phone | Name of FinalOwnership andMaintenance Responsibility |
|  |  | Pipe | Channel / Swale |  |  |  |  |  |  |  |
| From | To |  |  |  | Pipe | Open Channel | Swale | D |  |  |  |  |  | TW | B | Depth |
| G- $Q$ | G-P | $\checkmark$ | Open |  | $18^{\prime \prime}$ |  |  |  | CPP | 1977 |  | $\begin{aligned} & \text { Dennes Berkey } \\ & 814-467-6904 \end{aligned}$ | PaIMT Eorougit |
| G- 23 | G- Q-P | $\checkmark$ |  |  | $12^{\prime \prime}$ |  |  |  | CPP |  |  | 1 | [ |
| G- 24 | G-0-P | $\checkmark$ |  |  | $12^{\prime \prime}$ |  |  |  | CPP |  |  |  |  |
| G. $P$ | G- 0 | 1 |  |  | 18" |  |  |  | CPP |  |  |  |  |
| G-22 | G- $D$ | $\checkmark$ |  |  | $12^{\prime \prime}$ |  |  |  | CPP |  |  |  |  |
| G- 0 | G- $N$ | $\checkmark$ |  |  | $18^{\prime \prime}$ |  |  |  | CPP |  |  |  |  |
| G- 21 | G- $0-N$ | $\checkmark$ |  |  | $12^{\prime \prime}$ |  |  |  | CPP |  |  |  |  |
| G- $N$ | G. M | $\checkmark$ |  |  | $18^{\prime \prime}$ |  |  |  | CPP |  |  |  |  |
| G- 18 | G- $1-m$ | $\checkmark$ |  |  | $12^{\prime \prime}$ |  |  |  | CPP |  |  |  |  |
| G- 19 | G-小㐋 | $\checkmark$ |  |  | $12^{\prime \prime}$ |  |  |  | CPP |  |  |  |  |
| G- M | G- L | $\checkmark$ |  |  | $18^{\prime \prime}$ |  |  |  | CPP |  |  |  |  |
| G- 17 | G-mbl | $\checkmark$ |  |  | $12^{\prime \prime}$ |  |  |  | CPP |  |  |  |  |
| G-16 | G-M-L | $\checkmark$ |  |  | $12^{\prime \prime}$ |  |  |  | CPP |  |  |  |  |
| G- 15 | G- $M$ M-L | $\checkmark$ |  |  | $12^{\prime \prime}$ |  |  |  | CPP | 12 |  | 17 | 12 |
| G- 6 | G- K | $\checkmark$ | ; |  | $24^{\prime \prime}$ |  |  |  | RCCP | $1$ |  | 1 | $V$ |

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[^11]$\qquad$ OF $\qquad$
WATERSHED
Name: STWYCREEK
Municipality: IfINT BoRtubH

FORM COMPLETED BY

## INSTRUCTIONS

Diagram each system on the appropriate map. Establish map points to show changes in system elements, Municipality: RINT BorbuGH Name: DENNIS BERKEY pipe size, or pipe direction. (If unknown, outline the system extent.) Complete this form only where specific

County: Someraset Telephone: $814-467-6904$ information on construction is available. Use a separate form for each system. Identify the points within a

| Map I.D. <br> No. |  | System's Elements ( x ) |  |  | Measurements* |  |  |  | Material | Year Constr. | Design Data Available | Contact Person <br> Name and Phone | Name of FinalOwnership andMaintenance Responsibility |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Pipe | Channel / Swale |  |  |  |  |  |  |  |
| From | To |  |  |  | Pipe | Open Channel | Swale | D |  |  |  |  |  | TW | B | Depth |
| G- 5 | G-E | $\checkmark$ |  |  | $12^{\prime \prime}$ |  |  |  | $C P$ | 1997 |  | DaNANS LSERKEY $814-467-6904$ | PANT Boroublt |
| G- E | G- D | $\checkmark$ |  |  | $15^{\prime \prime}$ |  |  |  | CP\% |  |  |  |  |
| G- 3 | G- D | $\checkmark$ |  |  | $12^{\prime \prime}$ |  |  |  | $\triangle P P$ |  |  |  |  |
| G- 4 | G- $D$ | $\checkmark$ |  |  | $12^{\prime \prime}$ |  |  |  | CPP |  |  |  |  |
| G- $D$ | G- C | $\checkmark$ |  |  | $15^{\prime \prime}$ |  |  |  | $\triangle P P$ |  |  |  |  |
| G- F | G-C | $\checkmark$ |  |  | $12^{\prime \prime}$ |  |  |  | $C P P$ |  |  |  |  |
| G- 42 | G-C | 1 |  |  | $12^{\prime \prime}$ |  |  |  | CPp |  |  |  |  |
| Q- C | G. B | $\checkmark$ |  |  | $24^{\prime \prime}$ |  |  |  | RCCP | 5 |  | H | 5 |
| G-8 | G-END | $\checkmark$ |  |  | $36^{\prime \prime}$ |  |  |  | RCCP | $V$ |  | $\sqrt{7}$ |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  | * |  |
| G- | G- |  | ; |  |  |  |  |  |  |  |  |  |  |

[^12]


* See measurement key on reverse side.

SYstem

| System 4 |  |  | FORM G - EXISTING STORM WATER COLLECTION SYSTEMS |  |  |  |  |  |  |  |  | SHEET $\qquad$ OF $\qquad$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WATERSHED <br> Name: STONYREEK <br> Municipality: RFANT BorduGH <br> County: SomerseT |  |  | FORM COMPLETED BY <br> Name: DENNIS BERKEY Telephone: 814-467-6904 Date: 8-17-2005 |  |  | INSTRUCTIONS <br> Diagram each system on the appropriate map. Establish map points to show changes in system elements, pipe size, or pipe direction. (If unknown, outline the system extent.) Complete this form only where specific information on construction is available. Use a separate form for each system. Identify the points within a system consecutively (ex. G-1,G-2,G-3). Start the first point in each additional system 20 numbers higher. For example, G-3 ends one system, so G-23 begins the next. See Sample Diagrams \& Form on Reverse. |  |  |  |  |  |  |  |
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| Map I.D. No. |  | System's Elements ( x ) |  |  | Measurements* |  |  |  | Material | Year Constr | Design Data Available | Contact Person <br> Name and Phone | Name of Final <br> Ownership and <br> Maintenance Responsibility |
|  |  | $\frac{\text { Pipe }}{0}$ | Channel / Swale |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| From | To |  | Pipe | Open Channe! | Swale | TW | B | Depth |  |  |  |  |  |
| G- 114 | G- 115 | 4 |  |  | $8^{\prime \prime}$ |  |  |  | CFP | 1999 |  | DENNIS REREMy $814-467-6904$ | Fraty \%roubif |
| G- 115 | ¢ C-y | $\checkmark$ |  |  | $8^{\prime \prime}$ |  |  |  | cpp | 1997 |  | $\downarrow$ | $\sqrt{1}$ |
| G- | G. |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G. | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G. |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G. |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G. |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G. |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G. |  |  |  |  |  |  |  |  |  |  |  |  |
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| G- | G- |  | \% |  |  |  |  |  |  |  |  |  |  |






Begin with A. 1 as the first map number to identify the first' storm water problem area. Illustrate the defined problem on the watershed map provided, and identify it with its map number.

For each storm water problem area within your municipality, enter the map identification number at the head of the column. Describe the problem by placing a check ( 4 in the appropriate blocks of the column under this map identification number.
When an additional explanation is required, write the line number(s) used in the column marked "Explanation Line No. (s)". Example 1, 2-3, etc.


Enter the line no. (s)

## Definitions

Storm Water Problem Area
An area that defines the farthest extent of a storm water problem, including any area that experiences property damage, inundation, accelerated erosion, surface water pollution, groundwater polisution, landslides, or any other problem as a result of storm water runoff.

## Groundwater

Water in the ground below the water table: -

## Accelerated Erosion

The removal of the surface of the land through the combined action of man's activities and the natural processes at a rate greater than would occur because of the natural process alone.

## Sedimentation

The process by which soil or other surface materials, transported by surface water, is deposited on stream bottoms.

## Water Obstruction

Any dike, bridge, culvert, wall, wingwall, fill, pier, used to list the map ID no. ( $s$ ) for the proposed facilities. wharf, embankment, abutment, or other structure located in, along, across, or projecting into any watercourse, floodway, or body of water.

EXPLANATION LINES (continued)


Mr. Rob Piper<br>Cambria County Conservation District<br>401 Candlelight Drive, Suite 221<br>Ebensburg, PA 15931

Transmittal
Stonycreek River Stormwater Plan
Lower Yoder Township, Cambria County
Dear Mr. Piper:
In accordance with your request for information, enclosed is the stormwater forms packet from Lower Yoder Township, Cambria County.

Sincerely yours,

## Paul C. Rizzo Associates, Inc.



Mark W. Lazzari
Watershed/Land Use Planner
MWL/RJF/ljr
Enclosure
pc: Lower Yoder Township Supervisors


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Enter the line no. ( s ) used to list the map ID no. ( $s$ ) for the proposed facilities.

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* Enter the storm water problem area's Map ID No., if the proposed project will solve or reduce any / all of an identified drainage problem.
$\qquad$


|  |  |  | FORM G - EXISTING STORM WATER COLLECTION SYSTEMS |  |  |  |  |  |  |  | SHEET $\qquad$ OF $\qquad$ 1 |  |  |
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| WATERS <br> Name: Municipa County: | SHED <br> Litte <br> lity: Lo <br> Cam | $\frac{\text { Creek }}{2 d e r t}$ | FORM COMPLETED BY <br> Name: $\qquad$ MarkW.Laz2ari $814-536-6767$ |  |  | INSTRUCTIONS <br> Diagram each system on the appropriate map. Establish map points to show changes in system elements, pipe size, or pipe direction. (If unknown, outline the system extent.) Complete this form only where specific information on construction is available. Use a separate form for each system. Identify the points within a system consecutively (ex. G-1,G-2,G-3). Start the first point in each additional system 20 numbers higher. For example, G-3 ends one system, so G-23 begins the next. See Sample Diagrams \& Form on Reverse. |  |  |  |  |  |  |  |
| $\begin{gathered} \text { Map I.D. } \\ \text { No. } \\ \hline \end{gathered}$ |  | System's Elements ( x ) |  |  | Measurements * |  |  |  | Material | Year Constr. | Design Data Available | Contact Person Name and Phone | Name of FinalOwnership andMaintenance Responsibility |
| From | To | Pipe | Open Channel | Swale | $\frac{\text { Pipe }}{\text { D }}$ | TW | B | Depth |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
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$\square$ $\mathrm{OF} \quad 1$

| WATERSHED <br> Name: $\qquad$ Lithe mill Creek Municipality: Lower Vodortul) County: $\qquad$ Cambria |  |  | FORM COMPLETED BY <br> Name: <br> Telephone: Date: $\qquad$ |  |  | INSTRUCTIONS <br> On the map for proposed storm water collection systems, diagran each proposed system. Indicate a map point to show changes in system elements, pipe size, pipe direction and connections to existing systems. For proposed additions to existing systems. diagram only the additions and their connection point into the existing system Complete a separate form for each proposed. new system and one for each existing system having one or more proposed additions. Identify the points wilhin a system consecutively (ex, H-1, H-2, H-3). Start the first point in each additonal system 20 numbers higher (if $\mathrm{H}-3$ ends one system, begin the next with $\mathrm{H}-23$ ). Be sure to show the point where proposed additions connect into existing systems, using the map poinl number from the existing system form and map. See Sample Diagrams and Form on Reverse. |  |  |  |  |  |  |  |  |  |
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| $\begin{gathered} \text { Map I.D. } \\ \text { No. } \\ \hline \end{gathered}$ |  | System's Elements ( x ) |  |  | Measurements* |  |  |  | Material | $\begin{gathered} \text { Map I.D. } \\ \text { Nos.** } \\ \text { Form A } \end{gathered}$ | Proposed Const. Dates |  | Design Data Avail. | $\begin{gathered} \text { Contact Person } \\ \text { Name and } \\ \text { Phone } \\ \hline \end{gathered}$ | Name of FinalOwnership andMaintenance Responsibility |
|  |  | Pipe | Open Channel / Swale |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| From | To |  |  |  | Pipe | Open Channel | Swale | D |  |  | TW | 8 |  |  |  | Depth | Start | End |
| $\mathrm{H}-$ | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  | $\Lambda$ |  |  |  |  |  |  |  |  |  |
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[^13]




A-1 - Washes Two Vital Roads out And Exposes A main to a Gas hines out when it washes the Roads out-Rias Ra \& Bluebird springs Rd.
A. 2 Uegitation Grotuth Changes water Directions

A-2 wastes main ROAd out for ABout $1 / 4$ or A Mile. Always Floods out The 2 Homes Basements and washes Road out. Shamis Rod.

A-4 Township iskidges


| 0 |  | FORM D - PROPOSED FLOOD CONTROL PROJECT |  |  |  |  |  |  | SHEET $\quad$ OF |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WATERSHED |  | FORM CO <br> Name: <br> Telephone: <br> Date: | LETE |  | TYPICAL TYPES OF FLOOD CONTROL PROJECTS |  |  |  |  |  |  |  |
| Name: |  |  |  |  | Channel Excavation / Widening Channel Realignment Rock Riprap |  |  |  | Levee <br> Gabions <br> Pipe Channel |  |  | Dams <br> Floodwall Concrete Lining |
| Municipality |  |  |  |  |  |  |  |  |  |  |  |  |
| County: |  |  |  |  |  |  |  |  |  |  |  |  |
| For County Use: |  |  |  |  |  |  |  |  |  |  |  |  |
| Map ID No. | Type of Flood Control Project | Study Phase Begun |  |  | Year Constr. Planned | Projected <br> Compltn. <br> Date | $\begin{gathered} \text { Expected } \\ \text { Life } \\ \text { Yrs. } \\ \hline \end{gathered}$ | Design Flood |  | Map ID No. <br> Form A* | Owner Name, Address, and Phone |  |
|  |  | YES |  | NO |  |  |  | Frequency | Discharge |  |  |  |  |
|  |  | Prelim. | Final |  |  |  |  | Yrs. | C.F.S. |  |  |  |  |
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* Enter the storm water problem area's Map ID No., if the proposed project will solve or reduce any/all of an identified drainage problem.





SAMPLE DIAGRAM FOR SYSTEM TWO


Outline known areas where construction exist but construction data is unavailable.
$\qquad$ OF $\qquad$

| WATERSHED <br> Name: Municipality: County: $\qquad$ |  |  | FORM CO <br> Name: <br> Telephone: Date: | LETED |  | INSTRUCTIONS <br> On the map for proposed storm water collection systems, diagrans each proposed system. Indicate a map poinl to show changes in system elements, pipe size, pipe direction and connections to existing systems. For proposed additions to existing systems. diagram only the additions and their connection point into the existing system. Complete a separate form fot each broposed. new system and one for each existing system having one or more proposed anditions. Identify the points within a system consecutively (ex. $\mathrm{H}-1, \mathrm{H}-2, \mathrm{H}-3$ ). Start the first point in each additionai system 20 numbers higher \{if $\mathrm{H}-3$ ends one system, begin the next with $\mathrm{H}-23$ \}. Be sure to show the point where proposed additions connect into existing systerns, using the map point number from the existing system form and map. See Sample Diagrams and Form on Reverse. |  |  |  |  |  |  |  |  |  |
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| Map I.D. No. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | System's Elements (x) |  |  | $\begin{gathered} \hline \text { Pipe } \\ \hline D \\ \hline \end{gathered}$ | Measurements * |  |  | Material | Map I.D. Nos.** Form A | Proposed Const. Dates |  | Design <br> Data <br> Avail. | $\begin{gathered} \text { Contact Person } \\ \text { Name and } \\ \text { Phone } \\ \hline \end{gathered}$ | Name of FinalOwnership andMaintenance Responsibility |
|  |  |  | anne | vale |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| From | To |  |  |  | Pipe | Open Channel | Swale | TW |  |  | B | Depth |  |  |  | Start | End |
| H | H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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[^14]
## sample diagrams




ADOITION TO EXISTING SVSYEM

SAMPLE FORM (New System Onty)


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Mr. Robb Piper<br>Cambria County Conservation District<br>401 Candlelight Drive, Suite 221<br>Ebensburg, PA 15931

Transmittal
Stonycreek River Stormwater Plan City of Johnstown, Cambria County

Dear Mr. Piper:
In accordance with your request for information, enclosed is the stommater forms packet from the City of Johnstown, Cambria County.

Sincerely yours,
Paul C. Rizzo Associates, Inc.

Mark W. Lazzari


Watershed/Land Use Planner
MWL/RJF/ljr
Enclosure
pc: City Manager, Jeffry Silka
Director of Public Works, Darby Sprincz OF 1

WATERSHED

| $\begin{array}{l}\text { Name: } \\ \text { Municipality: } \\ \text { County: }\end{array}$ |
| :--- |
| MAP NO. * | Types of Storm Water Problems Flooding

Accelerated Erosion
Sedimentation
Landslide
Groundwater
Water Pollution
Other (Explain)
Explanation Line No. (On Back)
Cause (s)
Storm Water Volume
Storm Water Velocity
Storm Water Direction
Water Obstruction
Other (Explain)
Explanation Line No. (On Back)

| Frequency |
| :--- |
| Year Most Recent Occurred |
| Year Firs Kew |

Year First Known Occurred
Regularity
More Than 1 Year
Less Than 1 Year
Only During Agnes
Duration (If Applicable)
Less Than 1 Day
1 Day + (Enter Days)
Property Damage
Loss of Life/Vital Services
Private
More Than One Owner
Types of Properties
Number of Properties
Public (List Types)
Explanation Line No. (On Back)

## Solutions

Suggested
Explanation Line No. (On Back)
Formally Proposed
Explanation Line No. (On Back)

* Include Map ID No. if found on any other form listing proposed facilities.


| 0 |  | FORM D - PROPOSED FLOOD CONTROL PROJECT |  |  |  |  |  |  |  | SHEET ___ OF |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WATERSHED <br> Name: Stonycreek <br> Municipality: City of Johnstam County: Combria |  | FORM COMPLETED BY |  |  | TYPICAL TYPES OF <br> Channel Excavation / Widening Channel Realignment Rock Riprap |  |  |  | FLOOD CONTROL PROJE <br> Levee <br> Gabions Pipe Channel |  |  | Dams <br> Floodwall Concrete Lining |
| For County Use: |  |  |  |  | YearConstr.Planned | Projected Compltn. Date | $\begin{array}{\|c} \hline \text { Expected } \\ \text { Life } \\ \text { Yrs. } \\ \hline \end{array}$ |  |  | Map <br> ID No. <br> Form $\mathrm{A}^{*}$ |  | Name, Address, and Phone |
| Map ID No. | Type of Flood Control Project | $\frac{\text { Stu }}{\text { YES }}$ | y Phase | NO |  |  |  | Frequency Yrs. | $\begin{gathered} \text { Discharge } \\ \text { C.F.S. } \end{gathered}$ |  |  |  |
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$\qquad$ OF $\qquad$


$\qquad$ OF $\qquad$

| WATERSHED <br> Name: $\qquad$ Stonycrale Municipality: Giy of Jochetora County: $\qquad$ |  |  | FORM COMPLETED BY |  |  | INSTRUCTIONS <br> On the map for proposed storm water collection systems, diagram each proposed system. Indicate a map point to show changes in system elements, pipe size, pipe direction and connections to existing systems. For proposed addilions to existing systems. diagram only the addilions and their connection point into the existing system. Complete a separate form for each proposed, new system and one for each existing system having one or more proposed additions. Identify the points wilhin a system consecutively (ex. H-1, H-2, H-3). Starl the first point in each additional system 20 numbers higher (if $\mathrm{H}-3$ ends one system, begin the next with $\mathrm{H}-23$ ). Be sure to show the point where proposed additions connect inlo existing systems, using the map point number from the existing system form and map. See Sample Diagrams and Form on Reverse. |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} \text { Map I.D. } \\ \text { No. } \\ \hline \end{gathered}$ |  | System's Elements (x) |  |  | Pipe | Measurements * |  |  | Material | $\begin{gathered} \text { Map I.D. } \\ \text { Nos. }{ }^{* *} \\ \text { Form A } \\ \hline \end{gathered}$ | Proposed Const. Dates |  | Design <br> Data <br> Avail. | $\begin{gathered} \text { Contact Person } \\ \text { Name and } \\ \text { Phone } \\ \hline \end{gathered}$ | Name of FinalOwnership andMaintenance Responsibility |
|  |  | Open Channel/ Swale |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| From | To |  |  |  | Pipe | Open Channe! | Swale | D |  |  | TW | B |  |  |  | Depth | Start | End |
| H | $\mathrm{H}-$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H - | H- |  | : |  |  |  |  |  |  |  |  |  |  |  |  |









# City of Johnstown, Existing Flood Control and Storm Water Control Facilities 

## WWW. Johnstownflood Protection.Com



October 26, 2005
Borton Lawson Engineering 6814 Chrisphalt Drive, Suite 200
Bath, Pennsylvania 18014-8503

Attn: Mr. Paul A. DeBerry, P.E.

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BORTONL OONLEHIGG VALLEY OFFICE
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PROJECTNO.
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## STONYCREEK ACT 167 PLAN REQUESTED INFORMATION FOR JENNERSTOWN BOROUGH, SOMERSET COUNTY

Dear Mr. DeBerry:
On behalf of our client, Jennerstown Borough, we are submitting information requested at the June 22, 2005 Stonycreek Act 167 Plan meeting.

If you have any questions please call.

The EADS Group, Inc. (Somerset)

by: Ben Faas
enclosures
cc: Jennerstown Borough
Cambria County Conservation District
File No. $4400-\mathrm{G}-01$, w/enc.
C-file
FORM DESCRIPTION SUMMARY


| Form | Symbol | Description | Types of Examples | Sources of Information |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $A$ |  | Stormwater Problem Areas | Flooding, Drainage, Erosion/Sedimentation | Existing studies or reports, Township Documentation, Personal memory, Township engineer | $N / A$ |
| $B$ | $\bigcirc$ | Obstructions | Bridges. Culverts, Fill, Structures | Owner or structure, township files, subdivision applications, roadmaster, township engineer | $N / A$ |
| C | $\Delta$ | Existing Flood Control Projects | Channel excavation, rip rap, floodwalls, etc. | Township records, township engineer, owner of facilitiy | \%n |
| $D$ | $\Leftrightarrow$ | Proposed Flood Control Projects | Channel excavation, rip rap. floodwalls, etc. | Township records, township engineer, owner of facilitiy | $N / 4$ |
| $E$ |  | Existing Stormwater Control Facilities | Detention basins, recharge basins, rooftop stroage | Subdivision files, township engineer, owner of facility | $i$ |
| $F$ | $\rangle$ | Proposed Stormwater Control Facilities | Detention basins, recharge basins, rooftop stroage | Subdivision files, township engineer, owner of facility | / |
| $G$ |  | Existing Stormwater Collection Systems | Storm sewers, manmade channels, diversions | Existing plans, township engineer, owner of system | 4 |
| H | $0$ | Proposed Stormwater Collection Systems | Storm sewers, manmade channels, diversions | Existing plans, township engineer, owner of system | $M / 4$ |
| 1 | $\square$ | Present \& Projected Development in Flood Hazard Areas | Subdivision / site plans | Flood Insurance Studies, Subdivision / Site Plans, General knowledge, Township engineer, Private flood studies | $N A$ |
| $J$ | $W$ | Water Quality Problem Areas | Construction sites, agriculture | Municipalities, Conservation District | 14 |





| FORM G - EXISTING STORM WATER COLLECTION SYSTEMS |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WATERSHED <br> Name: $\qquad$ <br> Municipality: JiENNEESTowN <br> County: $\qquad$ Someteser |  |  | FORM COMPLETED BY <br> Name: Telephone: THE EADS GROUF $(814) 445-6551$ $\qquad$ |  |  | INSTRUCTIONS <br> Diagram each system on the appropriate map. Establish map points to show changes in system elements, pipe size, or pipe direction. (If unknown, outline the system extent.) Complete this form only where specific information on construction is available. Use a separate form for each system. Identify the points within a system consecutively (ex. G-1,G-2,G-3). Start the first point in each additional system 20 numbers higher. For example, G-3 ends one system, so G-23 begins the next. See Sample Diagrams \& Form on Reverse. |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} \text { Map I.D. } \\ \text { No. } \\ \hline \end{gathered}$ |  | System's Elements ( x ) |  |  | Measurements* |  |  |  | Material | Year Constr. | Design Data Available | Contact Person Name and Phone | Name of Final.Ownership andMaintenance Responsibility |
|  |  | $\begin{gathered} \hline \text { Pipe } \\ \hline D \end{gathered}$ | Channel/ Swale |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| From | To |  | Pipe | Open Channe! | Swale | TW | B | Depth |  |  |  |  |  |
| G- 1 | $\begin{gathered} \text { DAy } \\ \text { G-light } \end{gathered}$ |  |  |  | $15^{\prime \prime} C_{1} P_{1} P_{1}$ |  |  |  | CPP |  |  |  |  |
| G- 2 | DAY <br> G-light |  |  |  | $4^{\prime \prime} \mathrm{PV} \mathrm{C}$ |  |  |  | PVC |  |  |  |  |
| G-3 | $\text { DAY/ } \mathrm{G} \text { Iight }$ |  |  |  | $12^{\prime \prime}$ C.MP. |  |  |  | $C M P$ |  |  |  |  |
| G-4 | G- 5 |  |  |  | $12^{\prime \prime} P_{1} V_{1} C$ |  |  |  | $P \vee C$ |  |  |  |  |
| G- 5 | G- 6 |  |  |  | $12^{\prime \prime} \cos c$ |  |  |  | CONC |  |  |  |  |
| G-6 | G-7 |  |  |  | $16^{\prime \prime}$ C.P.P. |  |  |  | CPP |  |  |  |  |
| G- 7 | G- 8 |  |  |  | $16^{\prime \prime} C_{1} P$ P |  |  |  | CPP |  |  |  |  |
| G- 8 | G- 9 |  |  |  | $16^{\prime \prime}$ PIVC. |  |  |  | $P V C^{\prime}$ |  |  |  |  |
| G- 10 | G- // |  |  |  | $18^{\prime \prime} \mathrm{CONC}$. |  |  |  | Conc |  |  |  |  |
| G- // | G- 12 |  |  |  | 18" Conte. |  |  |  | CONC |  |  |  |  |
| G- / 2 | $\begin{aligned} & \text { DAY } \\ & \text { G-light } \end{aligned}$ |  |  |  | $18^{\prime \prime}$ Conc. |  |  |  | Conc |  |  |  |  |
| G-13 | G- 14 |  |  |  | $12^{\prime \prime} \mathrm{C}, \mathrm{M}, \mathrm{P}$ |  |  |  | CMP |  |  |  |  |
| G- 14 | G-15 |  |  |  | $12^{\prime \prime} \mathrm{CmP}$ |  |  |  | $C M P$ |  |  |  |  |
| G- 15 | G- 16 |  |  |  | $18^{\prime \prime} \mathrm{CPP.P}$ |  |  |  | $\angle P$ |  |  | : |  |
| G- 16 | G. 17 |  | \% |  | $18^{\prime \prime} \mathrm{CONC}$ |  |  |  | CONC. |  |  |  |  |



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A-1 Acosta 1 - House in flood Plain
Watter, Dotanges ist floon No Busement.
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Az. Jewnia -Fsulton arat.
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ynads. Eirosiow and flooding Rodel waly.
more stok doains weeled by tup form wottr on stat read 6 ol vata fiartfow mitrachernges with stater 130 .
A-3 Community ANK HREA Fendton
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NOt ARHACHb/s
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$\qquad$ OF $\qquad$ -


| FORM G - EXISTING STORM WATER COLLECTION SYSTEMS |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WATERSHED |  |  | FORM COMPLETED BY |  |  | INSTRUCTIONS <br> Diagram each system on the appropriate map. Establish map points to show changes in system elements, pipe size, or pipe direction. (If unknown, outline the system extent.) Complete this form only where specific information on construction is available. Use a separate form for each system. Identify the points within a system consecutively (ex. G-1,G-2,G-3). Start the first point in each additional system 20 numbers higher. For example, G-3 ends one system, so G-23 begins the next. See Sample Diagrams \& Form on Reverse. |  |  |  |  |  |  |  |
| Name: |  |  | Name: Telephone: Date: |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| County: |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Map I.D. No. |  | System's Elements (x) |  |  | Measurements * |  |  |  | Material | Year Constr. | Design Data Available | Contact Person <br> Name and Phone | Name of FinalOwnership andMaintenance Responsibility |
|  |  |  | Channel / Swale |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| From | To |  | Pipe | Open Channel | Swale | TW | B | Depth |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  | * |  |
| G- | G- |  | ; |  |  |  |  |  |  |  |  |  |  |

$\qquad$ OF $\qquad$

| WATERSHED <br> Name: Municipality: County: $\qquad$ |  |  | FORM CON <br> Name: <br> Telephone: Date: | LETED |  | INSTRUCTIONS <br> On the map for proposed storm water collection systems, diagram each proposed systerr. Indicate a map point to show changes in system elements, pipe size, pipe direction and connections |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  <br>  <br>  <br>  poinl number from the existing system form and map. See Sample Diagrams and Form on Reverse. |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} \text { Map I.D. } \\ \text { No. } \\ \hline \end{gathered}$ |  | System's Elements (x) |  |  | $\begin{gathered} \hline \text { Pipe } \\ \hline \text { D } \\ \hline \end{gathered}$ | Measurements * |  |  | Material | $\begin{gathered} \text { Map I.D. } \\ \text { Nos.** } \\ \text { Form A } \\ \hline \end{gathered}$ | ProposedConst. Dates |  | $\begin{gathered} \text { Design } \\ \text { Data } \\ \text { Avail. } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { Contact Person } \\ \text { Name and } \\ \text { Phone } \\ \hline \end{gathered}$ | Name of Final Ownership and Maintenance Responsibility |
|  |  | Open Channel/ Swale |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| From | To |  |  |  | Pipe | Open Channel | Swale | TW |  |  | B | Depth |  |  |  | Start | End |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| $\mathrm{H}-$ | H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H. | H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  | ; |  |  |  |  |  |  |  |  |  |  |  |  |


$\qquad$ OF $\qquad$
WATERSHED
FORM COMPLETED BY
Name: $\qquad$ Name:
Municipality: County: Telephone: $\qquad$
SITE Types of Water Quality Problems High Community Tolerence High Temperature High Turbidity Hydrocarbon Pollution Low Community Diversity Low Dissolved Oxygen Low pH Nutrient Enrichment Poor Habitat
Other/Explanation Line No.
Potential Cause(s)

Agriculture
Construction Site
Erosion
Lake Discharge
STP Outfall
Other/Explanation Line No.
Frequency
Year Most Recent Occurence
Year First Known Occurence
Source of Information
BWA Streamwatch
County Water Quality Study
Driveby
UCCD Complaint Investigation
Other/Explanation Line No.

| J | $\mathrm{J}-$ | J | $\mathrm{J}-$ | $\mathrm{J}-$ | J | J | J | J | J | J |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| J |  |  |  |  |  |  |  |  |  |  |

EXPLANATION LINES

| 1 |
| :---: |
| 2 |
| 3 |
| 4 |
| 5 |
| 6 |
| 7 |
| 8 |
| 9 |
| 10 |



EXPLAINATIONLINE(S)


Begin with A. 1 as the first map number to identify the first' storm water problem area. Bustrate the defined problem on the watershed map provided, and identify it with its map number.

For each storm water problem area within your municipality, enter the map identification number at the head of the column. Describe the problem by placing a check ( 4 in the appropriate blocks of the column under this map identification number.

When an additional explanation is required, write the line number(s) used in the column marked "Explanation Line No. (s)". Example 1, 2-3, etc.


Enter the line no. (s) used to list the map ID no. (s) for the proposed facilities.

## Definitions

## Storm Water Problem Area

An area that defines the farthest extent of a storm water problem, including any area that experiences property damage, inundation, accelerated erosion, surface water pollution, groundwater poltution, landslides, or any other problem as a resulk of storm water runoff.

## Groundwater

Water in the ground below the water table: -

## Accelerated Erosion

The removal of the surface of the fand through the combined action of man's activities and the natura processes at a rate greater than would occur because of the natural process alone.

## Sedimentation

The process by which soil or other surface materials, transported by surface water, is deposited on stream bottoms.

## Water Obstruction

Any dike, bridge, culvert, wall, wingwall, fill, pier wharf, embankment, abutment, or other structure located in, along, across, or projecting into any watercourse, floodway, or body of water.

EXPLANATION LINES (continued)



Begin with A. 1 as the first map number to identify the first' storm water problem area. Illustrate the defined problem on the watershed map provided, and identify it with its map number.

For each storm water problem area within your municipality, enter the map identification number at the head of the column. Describe the problem by placing a check ( 4 in the appropriate blocks of the column under this map identification
number.

When an additional explanation is required, write the line number(s) used in the column marked "Explanation Line No. (s)".Example 1, 2-3, etc.

If storm water problem occurred during and
after Agnes, describe the
frequency of the problem after Agnes.

Use the explanation fines to list the types of public property damages ,e.g.roadways, hospitals, etc.

Enter the line no. (s)


## Definitions

## Storm Water Problem Area

An area that defines the farthest extent of a storm water problem, including any area that experiences property damage, inundation, accelerated erosion, surface water pollution, groundwater pollution, landslides, or any other problem as a resuit of stom; water runoff.

## Groundwater

Water in the ground below the water table: .-

## Acceterated Erosion

The removal of the surface of the land through the comblned action of man's activities and the natural processes at a rate greater than would occur because of the natural process alone.

## Sedimentation

The process by which soll or other surface materials, transported by surface water, is deposited on stream bottoms.

## Water Obstruction

Any dike, bridge, culvert, wall, wingwall, fili, pier no. (s) for the proposed facilities. wharf, embankment, abutment, or other structure located in, along, across, or projecting into any watercourse, floodway, or body of water.

EXPLANATION LINES (continued)

| A1 |  |
| :---: | :---: |
| A2 | working on a solution to redirect the area of sedimentation for |
|  | removal and cleanout every 5 years. |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

FORM DESCRIPTION SUMMARY
ACT 167 WATERSHED STORMWATER MANAGEMENT PLAN

| Form | Symbol | Description | Types of Examples | Sources of Information |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $A$ |  | Stormwater Problem Areas | Flooding, Drainage, Erosion/Sedimentation | Existing studies or reports, Township Documentation, Personal memory, Township engineer |  |
| $B$ | $\bigcirc$ | Obstructions | Bridges. Culverts, Fill, Structures | Owner or structure, township files, subdivision applications, roadmaster, township engineer |  |
| C | $\Delta$ | Existing Flood Control Projects | Channel excavation, rip rap, floodwalls, etc. | Township records, township engineer, owner of facilitiy |  |
| D | $0$ | Proposed Flood Control Projects | Channel excavation, rip rap, floodwalls, etc. | Township records, township engineer, owner of facilitiy |  |
| $E$ |  | Existing Stormwater Control Facilities | Detention basins, recharge basins, rooftop stroage | Subdivision files, township engineer, owner of facility |  |
| $F$ |  | Proposed Stormwater Control Facilities | Detention basins, recharge basins, rooftop stroage | Subdivision files, township engineer, owner of facility |  |
| $G$ |  | Existing Stormwater Collection Systems | Storm sewers, manmade channels, diversions | Existing plans, township engineer, owner of system |  |
| $H$ | (2) | Proposed Stormwater Collection Systems | Storm sewers, manmade channels, diversions | Existing plans, township engineer, owner of system |  |
| 1 |  | Present \& Projected Development in Flood Hazard Areas | Subdivision / site plans | Fiood Insurance Studies, Subdivision / Site Plans, General knowledge, Township engineer, Private flood studies |  |
| $J$ | $\sum_{5}$ | Water Quality Problem Areas | Construction sites, agriculture | Municipalities, Conservation District |  |




| FORM E-EXISTING STORM WATER CONTROL FACILITIES |  |  |  |  | SHEET 1 OF 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| WATERSHE |  | FORM COMPLETED BY |  | Definition of Storm Water Control Facility A natural / man-made device or structure specifically designed and / or utilized to reduce the rate and / or volume of storm water runoff from a site or sites. |  |
| Name: | Stonycreek River | Name: <br> Telephone: <br> Date: | $\begin{aligned} & \text { Robert T. Pyle } \\ & \frac{814-754-8387}{\text { Auqust } 9,2005} \end{aligned}$ |  |  |
| Municipality: | Indian Lake Borough |  |  |  |  |
| County: | Somerset |  |  |  |  |
| For County Use: |  |  |  |  |  |
| Map ID No. | Type of Storm Water Control Facility | Year Built | Contact Person |  |  |
| E- 1 | The Dam | 1962 | Harry Huzsek | 1301 Causeway Dr., 814-754-81建1 |  |
| E |  |  |  |  |  |
| E- |  |  |  |  |  |
| E- |  |  |  |  |  |
| E. |  |  |  |  |  |
| E- |  |  |  |  |  |
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| TYPICAL TYPES OF STORM WATER CONTROL FACILITIES |  |  |  |  |  |
| Detention / Retention Basin Roof-Top Storage <br> Natural Pond or Wetiand Serni-Pervious Paving |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Parking Lot Pondling |  | Infilitration D | (Seepage/Recharge Basin | und Tank) |  |


| WATERSHED |  | FORM COMPLETED BY |  |  | DEFINITION |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name: Municipality: County: | Stonycreek River | Name: Telephone: Date: | Robert T. Pyle |  | A natural / man-made device or structure specifically designed and / or utilized to reduce the rate and / or volume of storm water runoff from a site or sites. |  |  |
|  | Indian Lake Borough |  | August 9, 2005 |  |  |  |  |
|  | Somerset |  |  |  |  |  |  |
| For County Use: |  |  |  |  |  |  |  |
| Map ID No. | Type of Storm Water Control Facility |  | Proposed Constr. Dates |  | Map No. Form $\mathrm{A}^{*}$ | Contact Person <br> Name, Address and Phone | Comments |
|  |  |  | Start | End |  |  |  |
| F- 1 | Raising Dam by 4 feet |  | 2008 |  | A1 | Indian Lake Borough, Harry Huzsek 1301 Causeway Dr. 814-754-8161 | The flood plain around the dam will raise |
| F- |  |  |  |  |  |  | to an elevation of 1196 feet. This will put approximately 100 homes on the flood |
| F- |  |  |  |  |  |  | plain. The DEP is requiring the dam to be capt with 4 feet of concrete. Will |
| F- |  |  |  |  |  |  | FEMA notify the home owners and cover the houses with insurance. |
| F- |  |  |  |  |  |  |  |
| F- |  |  |  |  |  |  |  |
| F- |  |  |  |  |  |  |  |
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| F- |  |  |  |  |  |  |  |
| F- |  |  |  |  |  |  |  |
| * Enter the s | orm water problem area's Map | No., if the prop TYPICAL TY | oposed pi TPES OF | will sol <br> RM WA | r reduce <br> R CONTR | / all of an identified drainage problem. L FACILITIES |  |
| Detention / R | tention Basin |  |  |  |  | Roof-Top Storage |  |
| Natural Pond | or Wetland |  |  |  |  | Semi-Pervious Paving |  |
|  | ondling |  |  |  |  | Infiltration Device (Seepa | Recharge Basin or Underground Tank) |


|  |  |  | FORM G - EXISTING STORM WATER COLLECTION SYSTEMS |  |  |  |  |  |  |  |  | SHEET 1 OF |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WATERSHEDName: Stonycreek RiverMunicipality: Indian Lake BoCounty: Somerset |  |  | FORM COMPLETED BYName:$\frac{\text { Robert T. Pyle }}{\text { Ielephone: }} \frac{814-754-8387}{\text { Date: }}$Auqust 9,2005 |  |  | INSTRUCTIONS <br> Diagram each system on the appropriate map. Establish map points to show changes in system elements, pipe size, or pipe direction. (If unknown, outline the system extent.) Complete this form only where specific information on construction is available. Use a separate form for each system. Identify the points within a system consecutively (ex. G-1,G-2,G-3). Start the first point in each additional system 20 numbers higher. For example, G-3 ends one system, so G-23 begins the next. See Sample Diagrams \& Form on Reverse. |  |  |  |  |  |  |  |
| $\begin{gathered} \text { Map I.D. } \\ \text { No. } \end{gathered}$ |  | System's Elements (x) |  |  | Measurements * |  |  |  | Material | Year Constr. | Design Data Available | Contact Person Name and Phone | Name of Final.Ownership andMaintenance Responsibility |
|  |  | Pipe | Open Channel | Swale | D | TW | B | Depth |  |  |  |  |  |
| G- | G- | N/A |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
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| G- | G- |  |  |  |  |  |  |  |  |  |  | \% |  |
| G- | G- |  | ; |  |  |  |  |  |  |  |  |  |  |




SAMPLE DIAGRAM FOR EYSTEM TWO

| SAMPLE FORM (System One Onty) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
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| 3 |  |  |  |  |  |  |  | - | $\cdots$ | T | - | $\pm$ | I | $\therefore$ |  | $\cdots$ |
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| C) $\square_{0}$ |  |  |  | $\cdots$ |  |  |  | - | m | - | -mon maxe |  | - $\sim$ - |
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| $\cdots$ |  |  |  | $\cdots$ |  |  |  | - |  | $\cdots$ | \%ounmm |  | -ame |
| $\bigcirc$ |  |  |  | $\cdots$ |  |  |  | ${ }^{*}$ | "m | ${ }^{-}$ | -man max |  | -4, |
| $\cdots$ |  |  |  |  |  |  |  | $\square$ |  | ${ }_{m}$ | Hamment |  |  |
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| $\bigcirc \cdot$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
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Name: Stonycreek RivelName: $\begin{array}{ll}\text { Municipality: Indian Lake } & \text { Telephone: } \\ \text { County: Somerset } & \text { Date: }\end{array}$

Robert T. Pyle 814-754-8387 August 9, 2005

On the map for proposed storm water collection systems, diagran each proposed system. Indicate a map point to show changes in system elements, pipe size, pipe direciion and cornnections to existing systems. For proposed additions to existing systems. diagram only the additions and their connecion point inte the existing system. Complete a separate form for each proposed.

new system and one tor each existing system having one or more proposed addilions. Identify the points viithin a system conseculively (ex. $\mathrm{H}-1, \mathrm{H}-2, \mathrm{H}-3$ ). Start the first point in each
additional system 20 numbers higher (if H -3 ends one system, begin the nexi wilh H -23). Be sure to sh


* See measurement key on reverse side. ** Enter the storm water problem areas' Map I.D. Nos., if proposed project will solve or reduce any/ail of the drainage problems.


## SAMPLE DIAGRAMS

| Measurement |
| :--- |
| Key <br> a Diameter <br> TW $=$ Top Width <br> $B=$ Bottom Width |




ADDITION TO EXISting SYSTEM

SAMPLE FORM (New System Only)





Begin with A. 1 as the first map number to identify the first' storm water problem area. Illustrate the defined problem on the watershed map provided, and identify it with its map number.

For each storm water problem area within your municipality, enter the map identification number at the head of the column. Describe the problem by placing a check ( 4 in the appropriate blocks of the column under this map identification number.

When an additiona! explanation is required, write the line number(s) used in the column marked "Explanation Line No (s) ${ }^{n}$. Example 1, 2-3, etc.


## Definitions

## Storm Water Problem Area

An area that defines the farthest extent of a storm water problem, including any area that experiences property damage, inundation, accelerated erosion, surface water pollution, groundwater pollution, andslides, or any other problem as a resuit of storm water runoff.

## Groundwater

Water in the ground below the water table. -

## Accelerated Erosion

The removal of the surface of the land through the combined action of man's activities and the natural processes at a rate greater than would occur because of the natural process alone.

## Sedimentation

The process by which soil or other surface materials, transported by surface water, is deposited on materials, transp
stream bottoms.

## Water Obstruction

Any dike, bridge, culvert, wall, wingwall, fill, pier, wharf, embankment, abutment, or other structure located in, along, across, or projecting into any watercourse, floodway, or body of water.


# BOROUGH OF FERNDALE 

109 STATION STREET
JOHNSTOWN, PA 15905
PHONE: 814-288-1771 FAX: 814-288-5910

## Memorandum

## To: ROBB PIPER

From: BEVERLY
Subject: DOCUMENTS

Date: JULY 12, 2005
DEAR MR. PIPER
YOU WILL FIND ENCLOSED OUR COMPLETED DOCUMENTS PER YOUR REQUEST.

YOU MAY CALL BRIAN AT 814-288-0472 IF THERE ARE ANY QUESTIONS. NORMAL HOURS ARE 7:00 A.M. -11:30 A.M .- 12:30 P.M. - 3:00 P.M., MONDAY THROUGH FRIDAY.

SINCERELY


BEVERLY E. ROTH
ENCLOSURE

| WATERSHED | FORI | FORM COMPLETED BY <br> Name: BRIAN MGATEER <br> Telephone:824-288-0472 <br> Date: $\quad 3-1.05$ |  |  |  |  | Before Filling Out Form, See Instructions On Back |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name: <br> Municipality: County: | ORO |  |  |  |  |  | For County Use: |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| MAP NO. * | A- 1 | A-2 | A-3 | A-4 | A-5 | A- | A- | A- | A- | A- | A- | A- |
| Types of Storm Water Problems |  |  |  |  |  |  |  |  |  |  |  |  |
| Flooding |  |  |  |  |  |  |  |  |  |  |  |  |
| Accelerated Erosion |  |  |  |  |  |  |  |  |  |  |  |  |
| Sedimentation |  |  |  |  |  |  |  |  |  |  |  |  |
| Landslide |  |  |  |  |  |  |  |  |  |  |  |  |
| Groundwater |  |  |  |  |  |  |  |  |  |  |  |  |
| Water Pollution |  |  |  |  |  |  |  |  |  |  |  |  |
| Other (Explain) |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) |  |  |  |  |  |  |  |  |  |  |  |  |
| Cause (s) |  |  |  |  |  |  |  |  |  |  |  |  |
| Storm Water Volume |  |  |  |  |  |  |  |  |  |  |  |  |
| Storm Water Velocity |  |  |  |  |  |  |  |  |  |  |  |  |
| Storm Water Direction |  |  |  |  |  |  |  |  |  |  |  |  |
| Water Obstruction |  |  |  |  |  |  |  |  |  |  |  |  |
| Other (Explain) |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) | 1 |  |  |  |  |  |  |  |  |  |  |  |
| Frequency |  |  |  |  |  |  |  |  |  |  |  |  |
| Year Most Recent Occurred | 2005 |  |  |  |  |  |  |  |  |  |  |  |
| Year First Known Occurred | ? |  |  |  |  |  |  |  |  |  |  |  |
| Reqularity |  |  |  |  |  |  |  |  |  |  |  |  |
| More Than 1 Year |  |  |  |  |  |  |  |  |  |  |  |  |
| Less Than 1 Year |  |  |  |  |  |  |  |  |  |  |  |  |
| Only During Agnes |  |  |  |  |  |  |  |  |  |  |  |  |
| Duration (If Applicable) |  |  |  |  |  |  |  |  |  |  |  |  |
| Less Than 1 Day |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 Day + (Enter Days) |  | $\checkmark$ |  |  |  |  |  |  |  |  |  |  |
| Property Damage |  |  |  |  |  |  |  |  |  |  |  |  |
| Loss of Life/Vital Services |  |  |  |  |  |  |  |  |  |  |  |  |
| Private |  |  |  |  |  |  |  |  |  |  |  |  |
| More Than One Owner |  |  |  |  |  |  |  |  |  |  |  |  |
| Types of Properties |  |  |  |  |  |  |  |  |  |  |  |  |
| Number of Properties |  |  |  |  |  |  |  |  |  |  |  |  |
| Public (List Types) |  |  | $\checkmark$ |  |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) |  |  |  |  |  |  |  |  |  |  |  |  |
| Solutions |  |  |  |  |  |  |  |  |  |  |  |  |
| Suggested |  |  |  | $v$ |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) |  |  |  |  |  |  |  |  |  |  |  |  |
| Formally Proposed |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | $\checkmark$ |  |  |  |  |  |  |  |
| *xplanation Line No. (On Back) |  | fo | m list |  | osed | 相 |  |  |  |  |  |  |

A-1. "Basin" draining over hillside
A-2 WHENEVER IT RAINS
al Road closed periodically
A-4 PIPE IT OVER THE HILL TO AN EXISTING BASIN
A. 5 STATE MET with US 6-24-0.5 CONCERNINS ThIS PRObLEM - NO SOLUTTON AS VET.

Begin with A. 1 as the first map number to identify the first' storm water problem area. Illustrate the defined problem on the watershed map provided, and identify it with its map number.

For each storm water problem area within your municipality, enter the map identification number at the head of the column. Describe the problem by placing a check ( 4 in the appropriate blocks of the column under this map identification number.

When an additional explanation is required, write the line number(s) used in the column marked "Explanation Line No. (s)".Example 1, 2-3, etc.


## Definitions

## Storm Water Problem Area

An area that defines the farthest extent of a stom water problem, including any area that experiences property damage, inundation, accelerated erosion, surface water pollution, groundwater pollution landsfides, or any other problem as a resulk of storm water runoff.

## Groundwater

Water in the ground below the water table. .

## Accelerated Erosion

The removal of the surface of the tand through the combined action of man's activities and the natura processes at a rate greater than would occur because of the natural process alone.

## Sedimentation

The process by which soil or other surface materials, transported by surface water, is deposited on stream bottoms.

## Water Obstruction

Any dike, bridge, culvert, wall, wingwall, fill, pier, wharf, embankment, abutment, or other structure located in, along, across, or projecting into any watercourse, flaodway, or body of water



RATE:
$\qquad$



[^16]


* Enter the storm water problem area's Map ID No., if the proposed project will solve or reduce any / all of an identified drainage problem.

| ل FORM E-EXISTING STORM WATER CONTROL FACILITIES |  |  |  |  | SHEET 1 OF 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| WATERSHED <br> Name: <br> Municipality: <br> County: <br> CAHBRIA $\qquad$ FERNOAALE MORO |  | FORM COMPLETED BYName:Telephone: $\frac{B R 1 A N M \frac{14 T E E R}{814-288-0422}}{1-1-05}$Date: |  | Definition of Storm Water Control Facility A natural / man-made device or structure specifically designed and / or utilized to reduce the rate and / or volume of storm water runoff from a site or sites. |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| For County Use: |  |  |  |  |  |
| Map ID No. | Type of Storm Water Control Facility | Year Built | Contact Person | Address and Phone | Comments |
| E- 1 | BASIN TO BASIN | 2004 | BRIAN M $C$ CTEER | 109 STATION ST. | CLOSEX SYSTEM |
| E- 2 | BASIN TO GABION | 2004 | BRIAN M M ATEER | TohNSTowN, $A_{A} 15905$ | APE TG dISBURSEMENT |
| E- |  |  |  |  |  |
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| E- |  |  |  |  |  |
| TYPICAL TYPES OF STORM WATER CONTROL FACILITIES |  |  |  |  |  |
| Detention / R | etention Basin | Roof-Top Stor |  |  |  |
| Natural Pond | or Wetland | Semi-Pervious | Paving |  |  |
| Parking Lot $P$ | ndling | Infiltration Dev | ce (Seepage /Recharge Basin or Undergr | und Tank) |  |







August 12, 2005
Project No. 00-2266.31
Mr. Nob PiperCambria County Conservation District
401 Candlelight Drive, Suite 221
Ebensburg, PA 15931
Transmittal
Transmittal
Stonycreek River Stormwater Plan
Stonycreek River Stormwater Plan Dale Borough, Cambria County Dale Borough, Cambria County
Dear Mr. Piper:

In accordance with your request for information, enclosed is the stormwater forms packet from Dale Borough, Cambria County.

## Sincerely yours,

## Paul C. Rizzo Associates, Inc.



MWL/RJF/ljr
Enclosure
pc: Dale Borough Supervisors

| WATERSHED |  | FORM COMPLETED BYName:MarkW. Lazzari <br> Telephone: $814-536-6767$ |  |  |  |  | Before Filling Out Form, See Instructions On Back |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name: <br> Municipality: <br> County: Solomon Run <br> Dale Boro <br> Dambria | Soloman RunDale BoroCambria |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | For County Use: |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| MAP NO. * | A- | A- | A- | A- | A- | A- | A- | A- | A- | A- | A- | A- |
| Types of Storm Water Problems |  |  |  |  |  |  |  |  |  |  |  |  |
| Flooding |  |  |  |  |  |  |  |  |  |  |  |  |
| Accelerated Erosion |  |  |  |  |  |  |  |  |  |  |  |  |
| Sedimentation |  |  |  |  |  |  |  |  |  |  |  |  |
| Landslide |  |  |  |  |  |  |  |  |  |  |  |  |
| Groundwater |  |  |  |  | 1 |  |  |  |  |  |  |  |
| Water Pollution |  |  |  |  | , |  |  |  |  |  |  |  |
| Other (Explain) |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) |  |  |  |  |  |  |  |  |  |  |  |  |
| Cause (s) |  |  |  |  |  |  |  |  |  |  |  |  |
| Storm Water Volume |  |  |  | - |  |  |  |  |  |  |  |  |
| Storm Water Velocity |  |  |  | F |  |  |  |  |  |  |  |  |
| Storm Water Direction |  |  |  |  |  |  |  |  |  |  |  |  |
| Water Obstruction |  |  |  |  |  |  |  |  |  |  |  |  |
| Other (Explain) |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) |  |  |  |  |  |  |  |  |  |  |  |  |
| Frequency |  |  |  |  |  |  |  |  |  |  |  |  |
| Year Most Recent Occurred |  |  |  |  |  |  |  |  |  |  |  |  |
| Year First Known Occurred |  |  |  |  |  |  |  |  |  |  |  |  |
| Reqularity |  |  |  |  |  |  |  |  |  |  |  |  |
| More Than 1 Year |  |  |  |  |  |  |  |  |  |  |  |  |
| Less Than 1 Year |  |  |  |  |  |  |  |  |  |  |  |  |
| Only During Agnes |  |  |  |  |  |  |  |  |  |  |  |  |
| Duration (If Applicable) |  |  |  |  |  |  |  |  |  |  |  |  |
| Less Than 1 Day |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 Day + (Enter Days) |  |  |  |  |  |  |  |  |  |  |  |  |
| Property Damage |  |  |  |  |  |  |  |  |  |  |  |  |
| Loss of Life/Nital Services |  |  |  |  |  |  |  |  |  |  |  |  |
| Private |  |  |  |  |  |  |  |  |  |  |  |  |
| More Than One Owner |  |  |  |  |  |  |  |  |  |  |  |  |
| Types of Properties |  |  |  |  |  |  |  |  |  |  |  |  |
| Number of Properties |  |  |  |  |  |  |  |  |  |  |  |  |
| Public (List Types) |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) |  |  |  |  |  |  |  |  |  |  |  |  |
| Solutions |  |  |  |  |  |  |  |  |  |  |  |  |
| Suggested |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) |  |  |  |  |  |  |  |  |  |  |  |  |
| Formally Proposed |  |  |  |  |  |  |  |  |  |  |  |  |
| Explanation Line No. (On Back) |  |  |  |  |  |  |  |  |  |  |  |  |
| * Include Map ID No. if found |  | form |  |  | ed | , |  |  |  |  |  |  |





[^17]

$\square$ 1 OF 1

| WATERSHED <br> Name: Solomon Run Municipality: Dale Boro County: $\qquad$ |  |  | FORM COMPLETED BY <br> Name: <br> Telephone: $\qquad$ $\frac{\text { MarkW.Lazzar }}{814-536-6767}$ Date: |  | INSTRUCTIONS <br> Diagram each system on the appropriate map. Establish map points to show changes in system elements, pipe size, or pipe direction. (If unknown, outline the system extent.) Complete this form only where specific information on construction is available. Use a separate form for each system. Identify the points within a system consecutively (ex. G-1,G-2,G-3). Start the first point in each additional system 20 numbers higher. For example, G-3 ends one system, so G-23 begins the next. See Sample Diagrams \& Form on Reverse. |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Map I.D. No. |  | System's Elements ( x ) |  |  | Measurements * |  |  | Material | Year Constr | Design Data Available | Contact Person Name and Phone | Name of Final <br> Ownership and <br> Maintenance Responsibility |
|  |  | Channel/ Swale |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| From | To |  |  |  | Pipe | Open Channel | Swale |  |  |  |  |  | TW | B | Depth |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  | 1 | 1 |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |
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| G- | G- |  |  |  |  |  |  |  |  |  |  |  |
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| G- | G- |  | ; |  |  |  |  |  |  |  |  |  |


| WATERSHED <br> Name: <br> - Solomon Run Municipality: Dale Boro County: $\qquad$ Cambria |  |  | FORM COMPLETED BY <br> Name: MarkW.Lazzari Telephone: $814-536-6767$ Date: |  |  | INSTRUCTIONS <br> On the map for proposed storm water collection systems, diagram each proposed systern. Indicate a map point to show changes in system etements, pipe size, pipe direction and connections to existing systems. For proposed additions to existing systems, diagram only the additions and their connection point into the existing system. Complete a separate form tor each proposed. now system and one for each existing system having one or more proposed additions. fdentify the points within a system consecutively \{ex. H-1, H-2, H-3). Start the first point in each additional system 20 numbers higher (if $\mathrm{H}-3$ ends one syslem, begin the next with $\mathrm{H}-23$ ). Be sure to show the point where proposed additions connect into existing systems, using the map point number from the existing system form and map. See Sample Diagrams and Form on Reverse. |  |  |  |  |  |  |  |  |  |
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| $\begin{gathered} \text { Map I.D. } \\ \text { No. } \\ \hline \end{gathered}$ |  | System's Elements (x) |  |  | Measurements* |  |  |  | Material | $\begin{gathered} \text { Map I.D. } \\ \text { Nos. }{ }^{* \star} \\ \text { Form A } \end{gathered}$ | Proposed Const. Dates |  | Design Data Avail. | Contact Person Name and Phone | Name of Final Ownership and Maintenance Responsibility |
|  |  |  | Open Channel / Swale |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| From | To |  | Pipe | Open Channel | Swale | TW | B | Depth |  |  | Start | End |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  | ; |  |  |  |  |  |  |  |  |  |  |  |  |




## Memorandum

## To: WPAC Committee Member

From: Kob Piper, Cambria County Conservation District
Date: May 28, 2003
Subject: Stonycreek River Stormwater Problem Areas

Dear WPAC Committee Member;
As part of the Phase I, Scope of Study, for the Stonycreek River Watershed ACT 167 Stormwater Management Plan, each municipality is asked to supply information related to stormwater problems within their municipality for the study watersheds. This information will be utilized in the Scope of Study to assist in describing stormwater problems within the watershed. Attached you will find Form A, Stormwater Problem Areas, a map of the portion of your municipality which lies within the study watershed area, and instruction on how to fill out this form. Please use this material to locate and describe the problem areas within your municipality which relate to these watersheds and return these forms to the Cambria County Conservation District, 401 Candlelight Drive, Suite 221, Ebensburg, PA 15931 NO LATER THAN JUNE 18, 2003. Should you have any questions on how to fill out this form, please feel free to contact Terry Ostrowski of Borton-Lawson Engineering at (570)821-1994, ext. 241. Your assistance is greatly appreciated.

Sincerely;
Kob Piper, Director
Cambria County Conservation District

## HOW TO FILL OUT FORM

## GENERAL

The form in this packet is intended to document existing stormwater related issues within the municipality. A map has been provided along with the data collection form that is to be used to locate the features described in the forms. Each feature on the map should be identified with a symbol (shown in upper left corner of form) and an identification number (i.e. A-1, A-2, etc) which matches the number of the area being described on the form.

## FORM A, STORMWATER PROBLEM AREAS

- The intent of this form is to identify any problem areas (areas that flood frequently such as stream banks, roads, any landslides or turbidy problems), for that part of you municipality that is in the Stonycreek River Watershed. For some of you that may just be several streets, for others that may be the entire municipality.
- For the (Map No., A-, A-) line you will identify your problem sites by numbering them, starting with \#1, so if you have 3 problem sites you should put 1, 2 and 3 like this: A-1, A-2, A-3.
- Once you number the problem area, check $(\sqrt{ })$ the information in that column that applies to the problem area so that:

| Map No. | A-1 | A- | A- |
| :--- | :--- | :--- | :--- |
| Types of Stormwater Problems |  |  |  |
|  | $\sqrt{n}$ |  |  |
| Flooding | $\sqrt{n}$ |  |  |
| Accelerated Erosion |  |  |  |
| Sedimentation | $\sqrt{2}$ |  | etc. |

The above example indicates that problem area A-1 has flooding and landslide problems.

- Locate the problem areas on the attached map by putting a dot with A-1 next to it. Continue for all sites you identified. If there are no problem areas in your municipality put not applicable and go to the next form.


Begin with A. 1 as the first map number to identify the first' storm water problem area. Hustrate the defined problem on the watershed map provided, and identify it with its map number.

For each storm water problem area within your municipality, enter the map identification number af the head of the column. Describe the problem by placing a check ( 4 in the appropriate blocks of the column under this map identification number.

When an additional explanation is required, write the line number(s) used in the column marked "Explanation Line No. (s)'.Example 1, 2-3, etc.

If storm water problem occurred during and after Agnes, describe the frequency of the problem after Agnes.

Use the explanation lines to list the types of public property damages ,e.g.roatways, hospitals, etc.

Enter the fine no. (s) used to list the map 10 no. (s) for the proposed facilities.

## Definitions

Storm Water Problem Area
An area that defines the farthest extent of a storm water problem, including any area that experiences property damage, inundation, accelerated erosion, surface water polution, groundwater pollution, landstides, or any other problem as a result of storm water runoff.

## Groundwater

Water in the ground below the water table. - -

## Accelerated Erosion

The removal of the surface of the land through the combined action of man's activities and the natural processes at a rate greater than would occur because of the natural process alone.

## Sedimentation

The process by which soil or other surface materials, transported by surface water, is deposited on stream bottoms.

## Water Obstruction

Any dike, bridge, culvert, wall, wingwall, fill, pier, wharf, embankment, abutment, or other structure located in, along, across, or projecting into any watercourse, floodway, or body of water.


August 18, 2005

Cambria County Conservation District
401 Candlelight Drive, Suite 221
Ebensburg, PA 15931
ATTN: Kob Piper
STONYCREEK ACT 167 PLAN
STORMWATER MANAGEMENT
Dear Rib,
On behalf of the Conemaugh Township Supervisors of Cambria County, we have completed the forms for the Stormwater Management Plan received at the Phase II Meeting on June 22, 2005. The completed forms are enclosed with this memo as well as a map of the portion of Conemaugh Township contributing to the Stonycreek Watershed.

If you have any questions or concerns, please contact us at (814) 445-6551.

THE EADS GROUP, INC. (Somerset)


By: Jeffrey S. Haynal, E.I.T.
cc: File \# 2001-G-01
Central File
John Peschock, Steve Sewalk

[^18] (814) 944-5035


Begin with A. 1 as the first map number to identify the first' storm water problem area. Hlustrate the defined problem on the watershed map provided, and identify it with its map number.

For each storm water problem area within your municipality, enter the map identification number at the head of the column. Describe the problem by placing a check (4 in the appropriate blocks of the column under this map identification number.

When an additional explanation is required, write the line number(s) used in the column marked "Explanation Line No. (s)". Example 1, 2-3, etc.


Enter the line no. (s) used to list the map iD no. (s) for the proposed facilities.

## Definitions

## Storm Water Problem Area

An area that defines the farthest extent of a storm water problem, including any area that experiences property damage, inundation, accelerated erosion, surface water poliution, groundwater pollution, landslides, or any other problem as a result of stom water runoff.

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[^19]





| $2$ | FORM J - WATER QUALITY PROBLEM AREAS |  |  |  |  |  |  | SHEET 10 OF |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WATERSHED |  |  |  | FORM COMPLETED BY |  |  |  |  |  |  |  |  |
| Name: STONYCR | Stanycreek |  |  | Name: <br> Telephone: Date: |  | Sear /hyMal |  |  |  |  |  |  |
| Municipality: CONEMAMSAL | CONEMAUGH TWP. |  |  |  |  | 814-44'5-6551 |  |  |  |  |  |  |
| County: CAMBRIA | CAmBRIA |  |  |  |  | $8 / 17 / 05$ |  |  |  |  |  |  |
| SITE | J- | J- | J- | J- | J- | J- | J- | J. | J. | J- | J- | J. |
| Types of Water Quality Problems |  |  |  |  |  |  |  |  |  |  |  |  |
| High Community Tolerence |  |  |  |  |  |  |  |  |  |  |  |  |
| High Temperature |  |  |  |  |  |  |  |  |  |  |  |  |
| High Turbidity |  |  |  |  |  |  |  |  |  |  |  |  |
| Hydrocarbon Pollution |  |  |  |  |  |  |  |  |  |  |  |  |
| Low Community Diversity |  |  |  |  |  |  |  |  |  |  |  |  |
| Low Dissolved Oxygen |  |  |  |  |  |  |  |  |  |  |  |  |
| Low pH |  |  |  |  |  |  |  |  |  |  |  |  |
| Nutrient Enrichment |  |  |  |  |  |  |  |  |  |  |  |  |
| Poor Habitat |  |  |  |  |  |  |  |  |  |  |  |  |
| Other/Explanation Line No. |  |  |  |  |  |  |  |  |  |  |  |  |
| Potential Causels) |  |  |  |  |  |  |  |  |  |  |  |  |
| Agriculture |  |  |  |  |  |  |  |  |  |  |  |  |
| Construction Site |  |  |  |  |  |  |  |  |  |  |  |  |
| Erosion |  |  |  |  |  |  |  |  |  |  |  |  |
| Lake Discharge |  |  |  |  |  |  |  |  |  |  |  |  |
| STP Outfall |  |  |  |  |  |  |  |  |  |  |  |  |
| Other/EXplanation Line No. |  |  |  |  |  |  |  |  |  |  |  |  |
| Frequency |  |  |  |  |  |  |  |  |  |  |  |  |
| Year Most Recent Occurence |  |  |  |  |  |  |  |  |  |  |  |  |
| Year First Known Occurence |  |  |  |  |  |  |  |  |  |  |  |  |
| Source of Information |  |  |  |  |  |  |  |  |  |  |  |  |
| BWA Streamwatch |  |  |  |  |  |  |  |  |  |  |  |  |
| County Water Quality Study |  |  |  |  |  |  |  |  |  |  |  |  |
| Driveby |  |  |  |  |  |  |  |  |  |  |  |  |
| UCCD Complaint Investigation |  |  |  |  |  |  |  |  |  |  |  |  |
| Other/Explanation Line No. |  |  |  |  |  |  |  |  |  |  |  |  |
|  | EXPLANATIONLINES |  |  |  |  |  |  |  |  |  |  |  |  |
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| 2 |  | - | ar | Po | \% | \% |  |  |  |  |  |  |
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## BOROUGH OF BOSWELL

331 Center Street
Boswell, PA 15531

Telephone: 814-629-6121
Fax: 814-629-6121

June 11, 2003

Terence J. Ostrowski, P.E.
613 Baltimore Drive, Suite 300
Wilkes-Barre, PA 18702-7903

RE: Storm Water Problems

Dear Mr. Ostrowski,
We received a copy of your form on storm water problems within our municipality from Cambria-Somerset Council of Governments. We are presently doing a study in our borough and it is being done by Sean Isgan, CME Engineering, 165 East Union St., Somerset, PA 15501, telephone 814-443-3344. You can contact him for the information you need for our borough.

If you have any questions, please call the above number. I am in the office, Wednesdays, 9:00 to 10:00 AM each week.

Thank you for your consideration of this matter.

Sincerely,
BOROUGH OF BOSWELL


Connie Knopsnyder
Borough Secretary



Begin with A. 1 as the first map number to identify the first' storm water problem area. Illustrate the defined problem on the watershed map provided, and identify it with its map number.

For each storm water problem area within your municipality, enter the map identification number at the head of the column. Describe the problem by placing a check ( 4 in the appropriate blocks of the column under this map identification number.

When an additional explanation is required, write the line number(s) used in the column marked "Explanation Line No. (s)". Example 1, 2-3, etc.


Enter the line no. (s) used to list the map ID
no. (s) for the proposed facilities.

## Definitions

## Storm Water Problem Area

An area that defines the farthest extent of a storm water problem, including any area that experiences property damage, inundation, accelerated erosion, surface water pollution, groundwater pollution, landslides, or any other problem as a result of storm water runoff.

## Groundwater

Water in the ground below the water table.

## Accelerated Erosion

The removal of the surface of the land through the combined action of man's activities and the natural processes at a rate greater than would occur because of the natural process alone.

## Sedimentation

The process by which soil or other surface materials, transported by surface water, is deposited on stream bottoms.

## Water Obstruction

Any dike, bridge, culvert, wall, wingwall, fill, pier, wharf, embankment, abutment, or other structure located in, along, across, or projecting into any watercourse, floodway, or body of water.

EXPLANATION LINES (continued)

| 1 | $48^{\prime \prime}$ STORMSEWER OUTFALS INTO WETLAND AREA WITH LITTLE GRADE. SEDIMENTATION HAS |
| :---: | :---: |
|  | REDUCED CAPACITY OF THE PIPE \& OUTEALL CHANNEL. SIORM WATER PRODULED FROM |
|  | SIGNIFICANT RAINENENTS (EX. TVAN Y FRANCES U 2004) CAN NOT BE PROPERLY |
|  | CONVEYED WITIC RESULTS IN ELOODING. |
| 2. | SEDIMENT OBTRUCTS THE PIPE + QUTFALL AREA. ROAD CINDERS NECESSARY FOR WINTER |
|  | MAINTENANCE ESPECIALLY FOR PENNDOT RDADWAYS WITH IN THE BOROUGH (BROADWAY, MAIN- |
|  | + DIAMOND STS.) CONTRIBUTE TO SEDIMENTATION AT THE OUTFALL. FLOODING THEN OCCURS |
|  | DURING LARGE STORM EVENTS BECAUSE STORMWATER VOLLIME TOO MULH FOR AVAILAELE CAPAL |
| 3 | FLOODING IS RESIDENTIAL BASEMENT FLOODING WITHIN THE LOW LYING STEWART ST |
|  | + SWALLOW ST AREAS. |
|  |  |
| 4 | ADDING A 24" HDPE STORMSEWER TO SOUTH SIDE OF STEUART ST WHICH WILL OUTLET TO |
|  | PROPOSED 36" HDP STORMSEWER TO PARALLEL THE EXITING 48"SS ALONG WILSON DRIVE |



Begin with A. 1 as the first map number to identify the first' stom water problem area. Illustrate the defined problem on the watershed map provided, and identify it with its map number.

For each storm water problem area within your municipality, enter the map identification number af the head of the column. Describe the problem by placing a check ( 4 in the appropriate blocks of the column under this map identification number.
When an additional explanation is required, write the line number(s) used in the column marked "Explanation Line No. (s)'.Example 1, 2-3, etc.

## Definitions

## Storm Water Problem Area

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## Accelerated Erosion

The removal of the surface of the land through the combined action of man's activities and the natural processes at a rate greater than would occur because of the natural process alone.

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EXPLANATION LINES (continued)



# The Borough of Berlin <br> 700 North Street <br> Berlin, Somerset County, Penusylvania 15530 

## FAX TRANSMITTAL


LUslude Map 10 No if found onany other form listing pronosed facillties.

2)
(3)
$\frac{4}{5}$
$\frac{6}{7}$
$\frac{7}{8}$



* Enter the storm water problem area's Map ID No., if the proposed project will solve or reduce any / all of an identified drainage problem.

| FORM E-EXISTING STORM WATER CONTROL FACILITIES |  |  |  |  | SHEET _ 1 OF 1 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| WATERSHED |  | FORM COMPLETED BY |  | Definition of Storm Water Control Facility <br> A natural / man-made device or structure specifically designed and / or utilized to reduce the rate and / or volume of storm water runoff from a site or sites. |  |
| Name:Municipality:County: |  | Name: <br> Telephone: Date: | $\begin{aligned} & \text { JEANNE M. JOHNSON } \\ & \frac{(814) 267-4929}{07-25-05} \end{aligned}$ |  |  |
| For County Use: |  |  |  |  |  |
| Map ID No. | Type of Storm Water Control Facility | Year Built | Contact Person | Address and Phone | Comments |
| E- 1 | DETENTION/RETENSION BASIN | 1999 | Berlin Alliance Church | 725 N.BROADWAY, BETRLN 267-4663 | EXCELLENT STAND OF CATTALG |
| E- |  |  |  |  |  |
| E- |  |  |  |  |  |
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| E- |  |  |  |  |  |
| TYPICAL TYPES OF STORM WATER CONTROL FACILIT <br> Detention / Retention Basin <br> Natural Pond or Wetland <br> Parking Lot Pondling |  | TIES <br> Roof-Top St <br> Semi-Pervio <br> Infiltration D | ge | d Tank) |  |




* See measurement key on reverse side.


[^20]


$\qquad$

Name: STONYCREEK RIVER Name: JEANNE M. JOHNSON Municipality: BERLIN BOROWGH Telephone: $\frac{(814) 267-4929}{}$

Diagram each system on the appropriate map. Establish map points to show changes in system elements LIN BOROWGH T Date: 08-11-05 $\qquad$

| $\begin{gathered} \text { Map I.D. } \\ \text { No. } \\ \hline \end{gathered}$ |  | System's Elements (x) |  |  | Measurements * |  |  |  | Material | Year Constr. | Design Data Available | Contact Person Name and Phone | Name of FinalOwnership andMaintenance Responsibility |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Pipe | Channel / Swale |  |  |  |  |  |  |  |
| From | To |  |  |  | Pipe | Open Channe! | Swale | D |  |  |  |  |  | TW | B | Depth |
| G-213 | g- 214 |  | $x$ |  |  | $18^{1}$ | 11 | $3^{\prime}$ | ROCK | 2005 | YES | R.P. FOGLE ENGRG $\text { (814) } 267-4929$ | BERLIN BOROUGH |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  | ; |  |  |  |  |  |  |  |  |  |  |

[^21]

[^22]Diagram each system on the appropriate map. Establish map points to show changes in system elements,

## FORM COMPLETED BY

INSTRUCTIONS
$\qquad$
$\qquad$ 7

Name: STONYCREEK RIVER Name: Municipality: BERLIN BORD County: SOMERSET Date: pipe size, or pipe direction. (If unknown, outline the system extent.) Complete this form only where specific

| $\begin{gathered} \text { Map I.D. } \\ \text { No. } \end{gathered}$ |  | System's Elements (x) |  |  | Measurements * |  |  |  | Material | Year Constr. | Design Data Available | Contact Person <br> Name and Phone | Name of FinalOwnership andMaintenance Responsibility |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Pipe |  | el / |  |  |  |  |  |  |
| From | To |  |  |  | Pipe | Open Channe! | Swale | D |  |  |  |  |  | TW | B | Depth |
| G- 1 | G- 2 | X |  |  | $8^{\prime \prime}$ |  |  |  | CPT | $\approx 1978$ | ? | $\begin{aligned} & \text { KEIRRY CLAY COMB } \rightarrow \\ & 267- \end{aligned}$ | BERLIN BOROUGH |
| G- 2 | G- 24 | $x$ |  |  | $12^{11}$ |  |  |  | RCP | 11 | ? | 11 | " 1 |
| G-3 | G-6 | $\chi$ |  |  | $8^{\prime \prime}$ |  |  |  | CLAY | $\approx 1930$ | NONE KNOWN | " | " " |
| G-4a | G- 4 | $X$ |  |  | $8^{\prime \prime}$ |  |  |  | Clay | 11 | /' | $\prime$ | 11 |
| G- 4 | G- 5 | $x$ |  |  | $8^{\prime \prime}$ |  |  |  | CLAY | " | 11 | 1 | 111 |
| G- 5 | G- 7 | X |  |  | $10^{\prime \prime}$ |  |  |  | CLAY | 4 | 11 | 11 | 111 |
| G- 6 | G- 7 | X |  |  | 8" |  |  |  | 1 | 11 | 11 | 4 | ハ |
| G- 7 | G- 8 | $x$ |  |  | $15^{\prime \prime}$ |  |  |  | HDPE | UNKNOWN | /1 | 11 | い |
| G- 8 | G- 9 | $\chi$ |  |  | $15^{\prime \prime}$ |  |  |  | 11 | " | 1970's | 11 | 111 |
| G- 9 | G- 10 | $X$ |  |  | $15^{\prime \prime}$ |  |  |  | 11 | 11 | 19\%0's | 11 | $11 /$ |
| G-11 | G-G12 | $\chi$ |  |  | $8^{\prime \prime}$ |  |  |  | CLAY | 1. | $1 /$ | 11 | 11 , |
| G- 12 | G- 10 | $\chi$ |  |  | 11 |  |  |  | " | 4 | 11 | * | 11 |
| G- 13 | G- 14 | $x$ |  |  | $6^{\prime \prime}$ |  |  |  | PVC | 11 | 11 | 1 | 11 |
| G- 15 | G- 16 | $\chi$ |  |  | $6^{\prime \prime}$ |  |  |  | PVC | / | 11 | 11 | 1 M |
| G- 18 | G-17 | $X$ | ; |  | 1 |  |  |  | , | 1, | 11 | 1 | 1111 |

[^23]

MAPSHEET H/STREET
$5 /$ NORTH ST
$5 /$ NORTH ST
5/ NORTH ST

11
5/STENART ST $5 /$ STEWART ST (W) $5 /$ WILSON ST.
s $4 /$ WASHINGTON 4.5 / WASH. $5 /$ MEADOW ST 11 5/NORTH ST

See measurement key on reverse side.

| FORM G - EXISTING STORM WATER COLLECTION SYSTEMS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WATERSHED |  |  | FORM COMPLETED BY |  |  | INSTRUCTIONS <br> Diagram each system on the appropriate map. Establish map points to show changes in system elements, pipe size, or pipe direction. (If unknown, outline the system extent.) Complete this form only where specific information on construction is available. Use a separate form for each system. Identify the points within a system consecutively (ex. G-1,G-2,G-3) Start the first point in each additional system 20 numbers higher For example, G-3 ends one system, so G-23 begins the next. See Sample Diagrams \& Form on Reverse. |  |  |  |  |  |  |  |  |
| Name: STCNYCREEK RIVERMunicipality: BERLIN BOROWGHCounty: SOMERSET |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} \hline \text { Map I.D. } \\ \text { No. } \\ \hline \end{gathered}$ |  | System's Elements (x) |  |  | Measurements * |  |  |  | Material | Year Constr | Design Data Available | Contact Person Name and Phone | Name of Final Ownership and Maintenance Responsibility | MAPSHEET \# Street |
|  |  | Pipe |  | el $/$ |  |  |  |  |  |  |  |  |
| From | To |  |  |  | Pipe | Open Channel | Swale | D |  |  |  |  |  | TW | B | Depth |  |
| G-54 | G- 53 | $X$ |  |  | $8^{\prime \prime}$ |  |  |  | CLAY | $\begin{aligned} & \text { ORIG1' } \\ & 1930 \text { 's } \end{aligned}$ | UNKNOWN | KERRY CLAYCOMB $(814) 267-3837$ | Berlin Borough | \#4 BROADWAY |
| G- 53 | G- 52 | X |  |  | い |  |  |  | " | 1. | 4 | 4 | " |  |
| G- 56 | G- 55 | X |  |  | $6^{\prime \prime}$ |  |  |  | PVC | UNHNOWN | " | 1 | " | $H_{A} /$ NORTH ST |
| G- 55 | G- 52 | $\chi$ |  |  | $8^{\prime \prime}$ |  |  |  | Clay | 11 | " | 1. | 1 |  |
| G- 52 | G- 51 | X |  |  | $8^{\prime \prime}$ |  |  |  | 1 | 1930 's | 4 | 11 | 1 |  |
| G- 51 | G- 50 | $\chi$ |  |  | " |  |  |  | 11 | 4 | " | い | 1, |  |
| G- 50 | G-49 | $\chi$ |  |  | $8^{\prime \prime}$ |  |  |  | $R C P$ | 11 | 11 | $\cdots$ | / |  |
| G- 49 | G- 48 | X |  |  | 11 |  |  |  | CLAY | 11 | 1 | 11 | 11 |  |
| G-48 | G. 47 | X |  |  | 11 |  |  |  | PVC | 1.1 | 11 | 11 | 11 |  |
| G- 47 | G- 46 | $X$ |  |  | $10^{\prime \prime}$ |  |  |  | Clay | 11 | 11 | 1 | $1 /$ | \#44 4 /NORTHST |
| G- 46 | G- 45 | X |  |  | 8" |  |  |  | Cllay | " | $1 /$ | " | 11 | ${ }^{\#} 5 / \text { NORTH ST }$ |
| G- 45 | G- 44 | X |  |  | 11 |  |  |  | PVC | 11 | 11 | 1, | 11 | 11 |
| G. 44 | G- 43 | $\chi$ |  |  | $10^{11}$ |  |  |  | clay | 11 | 11 | 11 | 11 | 11 |
| G- 43 | G- 42 | $X$ |  |  | $12^{\prime \prime}$ |  |  |  | 1. | 4 | 1 | ${ }^{\prime \prime}$ | " | 11 |
| -42b | G- $42 a$ | $X$ | : |  | $12^{\prime \prime}$ |  |  |  | Clay | 11 | ! | 1 | " | \#5/6THAVE |



[^24]$\qquad$

Diagram each system on the appropriate map. Establish map points to show changes in system elements

Name: STCNYCREEK RIVER Name: JEANNE M. JOHNSON Municipality: BERLIN BOROWGH Telephone: (814) 267-4929 $08-11-05$ $\qquad$ pipe size, or pipe direction. (If unknown. outline the system extent.) Complete this form only where specific County: SOMERSET Date 08-11-05
 system consecutively (ex. G-1,G-2,G-3) Start the first point in each additional system 20 numbers highe

| $\begin{gathered} \text { Map I.D. } \\ \text { No. } \end{gathered}$ |  | System's Elements (x) |  |  | Measurements * |  |  |  | Material | Year <br> Constr. | Design Data Available | Contact Person Name and Phone | Name of FinalOwnership andMaintenance Responsibility | MAP\#/ STREET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Pipe | Channel / Swale |  |  |  |  |  |  |  |  |
| From | To |  |  |  | Pipe | Open Channel | Swale | D |  |  |  |  |  |  | TW | B | Depth |
| VG-84 | G-83 | $X$ |  |  | $12^{\prime \prime}$ |  |  |  | CLAY | 1930's | UNENOWN |  | BERLIN BOROUGH | H4/FLETCHER |
| G- 83 | G- 80 | X |  |  | 11 |  |  |  | 11 | 1 | 1 |  | 1, | !' |
| G- 80 | G- 79 |  |  |  | 11 |  |  |  | 4 | 11 | 1 |  | 4 | 11 |
| 1)-79 | G- 78 | X |  |  | 11 |  |  |  | 11 | ' | L, |  | 1, | 11 |
| G-89 | G- 88 | $\chi$ |  |  | $12^{\prime \prime}$ |  |  |  | 11 | $\cdots$ | 11 |  | 1/ | 1 |
| G- 88 | G- 87 | $X$ |  |  | 11 |  |  |  | SDR 35 | UnkNown | $1 /$ |  | " | ', |
| G- 87 | G-86 | X |  |  | 4 |  |  |  | CLAY | / | 4 |  | " | " |
| G- 86 | G-85 | $X$ |  |  | 11 |  |  |  | RCP | 11 | 11 |  | 4 |  |
| G-85 | G- 81 |  |  |  | 11 |  |  |  | Clay | 11 | 3 |  | 4 | 1 |
| G-82 | G- 81 |  |  |  | 6" |  |  |  | PVC | 2000 | No |  | 11 | 11 |
| G- 81 | G- 80 | X |  |  | $12^{\prime \prime}$ |  |  |  | CLAY | 1930 's | UNKNOWN |  | $\cdots$ | 4 |
| g- 80 | G- 79 | X |  |  | 11 |  |  |  | 11 | 11 | // |  | 11 | $\$ 4 / 5 T^{H} A V E$ |
| g. 79 | G-78 |  |  |  | 11 |  |  |  | RCP | $\begin{aligned} & \text { SOME } \\ & 2001 \end{aligned}$ | " |  | ハ | 11 |
| G. 92 | G- 90 | X |  |  | $8^{\prime \prime}$ |  |  |  | CLAY | 1930's | $!$ |  | 4 | $\begin{aligned} & \text { \#8 SOUTHST } \\ & { }_{5} \text { S. } \end{aligned}$ |
| g. 93 | G- 91 | X | : |  | $8^{\prime \prime}$ |  |  |  | CLLAY | 11 | " |  | 11 | $11 / 1$ |

* See measurement key on reverse side.

INSTRUCTIONS
Diagram each system on the appropriate map. Establish map points to show changes in system elements, pipe size, or pipe direction. (If unknown, outline the system extent.) Complete this form only where specific
 Date: information on construction is available. Use a separate form for each system. Identify the points within a

| County: SOMERSET |  |  | Date: 08-11-05 |  |  | For example, G-3 ends one system, so G-23 begins the next. See Sample Diagrams \& Form on Reverse. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { Map I.D. } \\ \text { No. } \\ \hline \end{gathered}$ |  | System's Elements (x) |  |  | Measurements * |  |  |  | Material | Year Constr. | Design <br> Data <br> Available | Contact Person Name and Phone | Name of FinalOwnership andMaintenance Responsibility |
|  |  | Pipe | Channel / Swale |  |  |  |  |  |  |  |
| From | To |  |  |  | Pipe | Open Channel | Swale | D |  |  |  |  |  | TW | B | Depth |
| G-91 | g-75 | X |  |  | $8^{\prime \prime}$ |  |  |  | CLAY/PVC | UNKNOWN | Unknown |  | BERLIN Borough |
| G-77 | G-76 | X |  |  | 11 |  |  |  | $\begin{aligned} & \text { CLAY } \\ & P V E \end{aligned}$ | $1($ | ', |  | 11 |
| G-76 | G- 75 | X |  |  | $1 /$ |  |  |  | 4 | 11 | 11 |  | 11 |
| G-75 | G- 74 | X |  |  | 4 |  |  |  | PVC | SOME $2003$ | $\downarrow$ |  | $u$ |
| G-74 | G-72 |  | $\begin{gathered} \text { SUBSURFACE } \\ X \\ \hline \end{gathered}$ |  |  | $3{ }^{\prime}$ | $3^{\prime}$ | $3^{\prime}$ | ROCK/BRICK | $\approx 1918$ | No |  | 11 |
| G-73 | g- 72 | $X$ |  |  | 8" |  |  |  | PVC | $? 1970^{\text {\% }}$ | UNKNown |  | $n$ |
| G-72 | G- 71 |  | $\begin{gathered} \text { SUBSURFACS } \\ X \\ \hline \end{gathered}$ |  |  | $3^{\prime}$ | $3^{\prime}$ | $3^{\prime}$ | ROCK/BRICK | $\approx 1918$ | NO |  | 11 |
| G- 71 | G- 70 |  | 11 |  |  | 4 | 11 | '' | 4 | 4 | $1)$ |  | 11 |
| G- 70 | G- 58 |  | 11 |  |  | 1 | - | 1 | 11 | $v$ | 11 |  | 11 |
| G-58 | G- 57 |  | 11 |  |  | い | 1 | 11 | 11 | 11 | 11 |  | 11 |
| G-57 | G-42a | $X$ |  |  | $36^{\prime \prime}$ |  |  |  | RCP | 1960-1970 | UNKNOWN | kerry claycomb | 11 |
| G- $42 a$ | G-39 | $X$ |  |  | 11 |  |  |  | 11 | 11 | 1 , | 11 | 11 |
| G-39 | g- 38 | X |  |  | 4 |  |  |  | 11 | 11 | り | 11 | $1)$ |
| G- 38 | G- 35 |  |  |  | 11 |  |  |  | 1 | 11 | ', | 11 | 11 |
| G- 35 | G-32 | $X$ | : |  | 11 |  |  |  | 11 | 11 | 11 | 4 | 4 |



[^25]
$\qquad$
$\qquad$to exsting systems. for proposed additions to existing systems, diagram only the additions and their connection point into the existing system Complete a separate form for each pronosed
mew system and one for each existing system having one or more proposed additions Idenitify ine points wilhin a system consecutively (ex $\mathrm{H}-1, \mathrm{H}-\mathrm{Z}, \mathrm{H}-3$ ). Slar the first point in each
$$
08-11-05
$$
.
Municipality: BERLIN BGRO Telephone: $\frac{\frac{814)}{(86-11-05}-4929}{}$
$\qquad$
point number from the existing system form and map. See Sample Diagrams and Form on Reverse


| FORM H - PROPOSED STORM WATER COLLECTION SYSTEMS SHEET _ O _ _ _ _ _ _ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | MAPH/STKEET <br> \#6/School GROUNAS <br> '/ <br> $1 /$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WATERSHED <br> Name: $\qquad$ SIONUIREES RIVETS Municipality: BERLIN BURO County: SOMERSET $\qquad$ |  |  | FORM COMPLETED BY <br> Name: Telephone IEINNE M. Jhinson $\frac{(814) 267-4929}{18-11-05}$ |  |  | INSTRUCTIONS <br> On the map for proposed storm water collection systems, diagram each proposed system. Indicate a map point to show changes in system elements, pipe size, pipe direction and connections to existing systems. For proposed additions to existing systems. diagram only the additions and their connection point into the existing system Complete a separate form for each oronosed new system and one for each existing system having one or more proposed additions Identify the points within a system consecutively (ex H-1, H-2. H-3). Start the first point in each additional system 20 numbers higher (if $\mathrm{H}-3$ ends one system, begin the nexi with $\mathrm{H}-23$ ). Be sure to show the point where proposed additions connect into existing systems, using the map point number from the existing system form and map. See Sample Diagrams and Form on Reverse. |  |  |  |  |  |  |  |  |  |  |
|  | $\begin{aligned} & \text { ap I.D. } \\ & \text { No. } \\ & \hline \end{aligned}$ | System's Elements (x) |  |  | Measurements** |  |  | vale | Material | $\begin{array}{\|c\|} \hline \text { Map I.D. } \\ \text { Nos.** } \\ \text { Form A } \\ \hline \end{array}$ | Proposed Const. Dates |  | Design Data Avail. | Contact Person Name and Phone | Name of Final Ownership and Maintenance Responsibility |  |
| From <br> H. 29 | \|c|c| | Pipe $X$ | Open Channel | Swale | $12^{\prime \prime}$ | TW | B | Depth | HDPE | Form A NEW BLDGCONST. | $\begin{aligned} & \text { Start } \\ & \hline 07 / 05 \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { End } \\ \hline 10 / 05 \end{array}$ | Avail. | Phone <br> HAYES LARGE ARCH. $(814) 946-0451$ | Maintenance Responsibility Berlin bros valley SCHOOL |  |
| H. 30 | $\mathrm{H}-31$ | $X$ |  |  | 1.511 |  |  |  | 11 | $1 /$ | ' 1 | $1 /$ | '' | 1, | , |  |
| H-31 | H. 32 | X |  |  | $u$ |  |  |  | $1 /$ | 1, | ', | 11 | ', | h | '/ |  |
| H-32 |  |  |  |  | 11 |  |  |  |  |  |  |  |  | 1/ | $1 /$ |  |
| H-33 | $\mathrm{H}^{-} \mathrm{G}-121$ |  |  |  | 11 |  |  |  | V | // | $1 /$ | // | ' | " | /1 |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\mathrm{H}-$ | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H- |  |  |  |  |  |  |  |  |  |  | ; |  |  |  |  |
| H- | H- |  | : |  |  |  |  |  |  |  |  |  |  |  |  |  |




FORM DESCRIPTION SUMMARY
ACT 167 WATERSHED STORMWATER MANAGEMENT PLAN

| Form | Symbol | Description | Types of Examples | Sources of Information |
| :---: | :---: | :---: | :---: | :---: |
| A |  | Stormwater Problem Areas | Flooding, Drainage, Erosion/Sedimentation | Existing studies or reports, Township Documentation, Personal memory, Township engineer |
| $B$ | $\bigcirc$ | Obstructions | Bridges. Culverts, Fill, Structures | $\begin{aligned} & \text { Owner or structure, } \\ & \text { township files, } \\ & \text { subdivision } \\ & \text { applications, } \\ & \text { readmaster, township } \\ & \text { engineer } \\ & \hline \end{aligned}$ |
| C | $\triangle$ | Existing Flood Control Projects NO | Channel excavation, rip. rap, floodwalls, etc. | Township records, township engineer, owner of facilitiy |
| D | 0 | Proposed Flood Control Projects $\quad 10$ | Channel excavation, rip. rap, floodwalls, etc. | Township records, township engineer, owner of facilitiy |
| $E$ | $\Delta$ | Existing Stormwater Control Facilities $\sqrt{ } \mathrm{O}$ | Detention basins, recharge basins, rooftop stroage | Subdivision files, township engineer, owner of facility |
| $F$ | $\langle$ | Proposed Stormwater Control Facilities | Detention basins, recharge basins, rooftop stroage | Subdivision files, township engineer, owner of facility |
| $G$ | $\square$ | Existing Stormwater Collection Systems $l^{\text {a }}$ | Storm sewers, manmade channels, diversions | Existing plans, township engineer, owner of system |
| H | $0$ | Proposed Stormwater Collection Systems | Storm sewers, manmade channels, diversions | Existing plans, township engineer, owner of system |
| \| |  | Present \& Projected Development in Flood Hazard Areas | Subdivision / site plans | Flood Insurance Studies, Subdivision / Site Plans, General knowledge, Township engineer, Private flood studies |
| $J$ | $\underset{W}{W}$ | Water Quality Problem Areas $\quad 10$ | Construction sites, agriculture | Municipalities, Conservation District |

Begin with A. 1 as the first map number to identify the first' storm water problem area. Illustrate the defined problem on the watershed map provided, and identify it with its map number.

For each storm water problem area within your municipality, enter the map identification number at the head of the column. Describe the problem by placing a check ( 4 in the appropriate blocks of the column under this map identification number.

When an additional explanation is required, write the line number(s) used in the column marked "Explanation Line No. (s) ${ }^{3}$. Example 1, 2-3, etc.

If storm water problem occurred during and after Agnes, describe the frequency of the problem after Agnes.


Use the explanation lines to list the types of public property damages ,e.g.roadways, hospitals, etc.

Enter the line no. (s)

used to list the map iD no. (s) for the proposed facilities.

## Definitions

## Storm Water Problem Area

An area that defines the farthest extent of a storm water problem, including any area that experiences property damage, inundation, accelerated erosion. surface water poliution, groundwater pollution, landslides, or any other probiem as a result of storm water runoff.

## Groundwater

Water in the ground below the water table. ..

## Accelerated Erosion

The removal of the surface of the land through the combined action of man's activities and the natural processes at a rate greater than would occur because of the natural process alone.

## Sedimentation

The process by which soil or other surface materials, transported by surface water, is deposited on stream bottoms.

## Water Obstruction

Any dike, bridge, culvert, wall, wingwall, fil, pier, wharf, embankment, abutment, or other structure located in, along, across, or projecting into any watercourse, floodway, or body of water.




EXPLAINATION LINE(S)

1) $\pm 2$ - Co ad way damige w over flow goting in to town
2) Plact uater courso hack to godmode instead of man maDE

3) 
4) 
5) 
6) 
7) 

Begin with A. 1 as the first map number to identify the first' storm water problem area. Illustrate the defined problem on the watershed map provided, and identify it with its map number.

For each storm water problem area within your municipality, enter the map identification number at the head of the column. Describe the problem by placing a check ( 4 in the appropriate blocks of the column under this map identification number.

When an additional explanation is required, write the line number(s) used in the column marked "Explanation Line No. (5)". Example 1, 2-3, etc

If storm water problem occurred during and after Agnes, describe the frequency of the problem after Agnes.
se the explanation lines to list the types of public property damages ,e.g.roadways, hospitals, etc.

Enter the line no. (s) used to list the map ID no. (s) for the proposed facilities.

## Definitions

## Storm Water Problem Area

An area that defines the farthest extent of a storm water problem, including any area that experiences property damage, inundation, accelerated erosion, suriace water poliution, groundwater pollution, landslides, or any other problem as a resulk of storm water runoff.

## Groundwater

Water in the ground below the water table: -

## Accelerated Erosion

The removal of the surface of the land through the combined action of man's activities and the natural processes at a rate greater than would occur because of the natural process alome.

## Sedimentation

The process by which soil or other surface materials, transported by surface water, is deposited on stream bottoms.

## Water Obstruction

Any dike, bridge, culvert, wall, wingwall, fil, pier, wharf, embankment, abutment, or other structure located in, along, across, or projecting into any watercourse, floodway, or body of water.




* Enter the storm water problem area's Map ID No., if the proposed project will solve or reduce any / all of an identified drainage problem.


| $\square$ |  |  | FORM G - EXISTING STORM WATER COLLECTION SYSTEMS |  |  |  |  |  |  |  | SHEET ___ OF |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| WATERSHED <br> Name: Municipality: County: $\qquad$ |  |  | FORM COMPLETED BY <br> Name: <br> Telephone: $\qquad$ <br> Date: $\qquad$ |  |  | INSTRUCTIONS <br> Diagram each system on the appropriate map. Establish map points to show changes in system elements, pipe size, or pipe direction. (If unknown, outline the system extent.) Complete this form only where specific information on construction is available. Use a separate form for each system. Identify the points within a system consecutively (ex. G-1,G-2,G-3). Start the first point in each additional system 20 numbers higher. For example, G-3 ends one system, so G-23 begins the next. See Sample Diagrams \& Form on Reverse. |  |  |  |  |  |  |  |
| $\begin{gathered} \text { Map I.D. } \\ \text { No. } \\ \hline \end{gathered}$ |  | System's Elements (x) |  |  | Measurements* |  |  |  | Material | Year Constr. | Design Data Available | Contact Person Name and Phone | Name of Final Ownership and Maintenance Responsibility |
| From | To | Pipe | Open Channel | Swale | D | TW | B | Depth |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  |  |  |  |  |  |  |  |  |  |  |  |
| G- | G- |  | ; |  |  |  |  |  |  |  |  |  |  |

[^26]


SAMPLE DIAGRAM FOR SYSTEM TWO


$\qquad$
$\qquad$

| WATERSHED <br> Name: Municipality: County: $\qquad$ |  |  | FORM CO <br> Name: <br> Telephone: Date: | LETED |  | INSTRUCTIONS <br> On the map for proposed storm water collection systems, diagram each proposed syslem. Indicate a map point to show changes in system elements, pipe size, pipe direction and connections to existing systems. For proposed additions to existing systerns, diagram only the additions and their conneclion point into the existing system. Complete a separate form for each proposed. new system and one for each existing system having one or more proposed additions tdentify the points within a system conseculively (ex. H-1, H-2. H-3). Start the first point in each additional system 20 numbers higher (if $\mathrm{H}-3$ ends one system, begin the nexl with $\mathrm{H}-23$ ). Be sure to show the point where proposed additions connect into existing systems. using the map point number from the existing system form and map. See Sample Diagrams and Form on Reverse. |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Map I.D. <br> No. |  | System's Elements ( x ) |  |  | $\begin{gathered} \hline \text { Pipe } \\ \hline \text { D } \end{gathered}$ | Measurements * |  |  | Material | $\begin{gathered} \text { Map I.D. } \\ \text { Nos. }{ }^{* *} \\ \text { Form A } \\ \hline \end{gathered}$ | Proposed Const. Dates |  | Design Data Avail. | Contact Person Name and Phone | Name of FinalOwnership andMaintenance Responsibility |
|  |  | Op | anne | ale |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| From | To |  |  |  | Pipe | Open Channel | Swale | TW |  |  | B | Depth |  |  |  | Start | End |
| H- | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H- | H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\mathrm{H}-$ | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| H | H- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| H- | H- |  | ; |  |  |  |  |  |  |  |  |  |  |  |  |

[^27]
## SAMple diagrams

|  | $\begin{gathered} \text { Measurement } \\ \text { Key } \end{gathered}$ |
| :---: | :---: |
|  | $0 *$ Diameter <br> $T W=$ Top Width <br> $B=$ Bottom Width |



ADDITION TO EXISTING SYSYEM

NIA




[^0]:    Page 1

[^1]:    Page 1

[^2]:    * Enter the storm water problem area's Map ID No., if the proposed project will solve or reduce any / all of an identified drainage problem

[^3]:    * See measurement key on reverse side.

[^4]:    See measurement key on reverse side.

[^5]:    Enter the storm water problem area's Map ID No., if the proposed project will solve or reduce any / all of an identified drainage problem.

[^6]:    * See measurement key on reverse side. ${ }^{* *}$ Enter the storm water problem areas' Map I.D. Nos., if proposed project will solve or reduce any/all of the drainage problems.

[^7]:    * Enter the storm water problem area's Map ID No., if the proposed project will solve or reduce any / all of an identified drainage problem.

[^8]:    ${ }^{*}$ See measurement key on reverse side. ${ }^{* *}$ Enter the storm water problem areas' Map I.D. Nos., if proposed project will solve or reduce any/all of the drainage problems.

[^9]:    See measurement key on reverse side.

[^10]:    * See measurement key on reverse side

[^11]:    * See measurement key on reverse side.

[^12]:    See measurement key on reverse side.

[^13]:    * See measurement key on reverse side. ** Enter the storm water problem areas' Map I.D. Nos., if proposed project will solve or reduce any/all of the drainage problems.

[^14]:    * See measurement key on reverse side. ** Enter the storm water problem areas' Map I.D. Nos., if proposed project will solve or reduce any/all of the drainage problems.

[^15]:    * See measurement key on reverse side.

[^16]:    explaination liners

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    2) 
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    TOTAL P. $D 1$

[^17]:    * Enter the storm water problem area's Map ID No., if the proposed project will solve or reduce any / all of an identified drainage problem.

[^18]:    Somserv/Jeff H/CTS-Cam/Act 167 Cover Letter

[^19]:    * Enter the storm water problem area's Map ID No., if the proposed project will solve or reduce any/all of an identified drainage problem.

[^20]:    * See measurement key on reverse side.

[^21]:    See measurement key on reverse side.

[^22]:    * See measurement key on reverse side.

[^23]:    * See measurement key on reverse side.

[^24]:    * See measurement key on reverse side.

[^25]:    * See measurement key on reverse side.

[^26]:    * See measurement key on reverse side

[^27]:    * See measurement key on reverse side. ${ }^{* *}$ Enter the storm water problem areas' Map 1.D. Nos., if proposed project will solve or reduce any/all of the drainage problems.

