

1) WWTs
Based on Criteria of Net Mass Increase
Assimilative Capacity in River

Calculation No. 21-05-300-005
Rev P
9/17/2010

Please let me know if you

***** This e-mail, **proprietary and is intended** 3 addressed. Any sed on its contents, other -mail in error, please imions expressed in this e- tes (NU). E-me" es, and NU dis

| SR | RIVER DISCHARGE CONCENTRATION (1850 CFS) | Correction Multiplier (Hardness = 25) | Total Metals River Discharge Concentration (1850 CFS) | RIVER DISCHARGE CONCENTRATION (1890 CFS) | Correction Multiplier (Hardness = 25) | Total Metals River Discharge Concentration (1890 CFS) | RIVER DISCHARGE CONCENTRATION (7/15/2010) | Correction Multiplier (Hardness = 25) | Total Metals River Discharge Concentration (7/15/2010) |
|------------|--|---------------------------------------|---|--|---------------------------------------|---|---|---------------------------------------|--|
| 5008 | 9/17/2009 | 9/17/2009 | 9/17/2009 | 9/25/2009 | 9/25/2009 | 9/25/2009 | 7/15/2010 | 7/15/2010 | 7/15/2010 |
| 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 |
| 0.0412300 | 0.0412300 | 0.0412300 | 0.0412300 | 0.0353400 | 0.0353400 | 0.0353400 | 0.0402200 | 0.0402200 | 0.0392200 |
| 0.0000444 | 1.000 | 0.0000444 | 0.0000444 | 0.0000447 | 1.000 | 0.0000447 | 0.0000444 | 1.000 | 0.0000444 |
| 0.0003862 | 1.000 | 0.0003862 | 0.0003862 | 0.0003200 | 1.000 | 0.0003200 | 0.0003862 | 1.000 | 0.0003862 |
| 0.0000060 | 1.000 | 0.0000060 | 0.0000060 | 0.0000060 | 1.000 | 0.0000060 | 0.0000060 | 1.000 | 0.0000060 |
| 0.0000020 | 0.967 | 0.0000020 | 0.0000020 | 0.0000220 | 0.967 | 0.0000220 | 0.0000020 | 0.967 | 0.0000020 |
| 0.0000100 | 0.967 | 0.0000100 | 0.0000100 | 0.0000116 | 0.967 | 0.0000116 | 0.0000100 | 0.967 | 0.0000100 |
| 0.0000500 | 0.960 | 0.0000500 | 0.0000500 | 0.0000324 | 0.960 | 0.0000324 | 0.0000500 | 0.960 | 0.0000500 |
| 0.2000500 | 1.000 | 0.2000500 | 0.2000500 | 0.2900000 | 1.000 | 0.2900000 | 0.2000500 | 1.000 | 0.2000500 |
| 0.0001211 | 0.993 | 0.0001211 | 0.0001211 | 0.0001371 | 0.993 | 0.0001371 | 0.0001211 | 0.993 | 0.0001211 |
| 0.0251000 | 1.000 | 0.0251000 | 0.0251000 | 0.0240000 | 1.000 | 0.0240000 | 0.0251000 | 1.000 | 0.0251000 |
| 0.0000023 | 1.000 | 0.0000023 | 0.0000023 | 0.0000014 | 1.000 | 0.0000014 | 0.0000023 | 1.000 | 0.0000023 |
| 0.0003000 | 1.000 | 0.0003000 | 0.0003000 | 0.0003000 | 1.000 | 0.0003000 | 0.0003000 | 1.000 | 0.0003000 |
| 0.0005000 | 1.000 | 0.0005000 | 0.0005000 | 0.0005000 | 1.000 | 0.0005000 | 0.0005000 | 1.000 | 0.0005000 |
| 0.0000000 | 0.950 | 0.0000000 | 0.0000000 | 0.0000000 | 0.950 | 0.0000000 | 0.0000000 | 0.950 | 0.0000000 |
| 0.0000000 | 1.000 | 0.0000000 | 0.0000000 | 0.0000000 | 1.000 | 0.0000000 | 0.0000000 | 1.000 | 0.0000000 |
| 0.0000010 | 0.978 | 0.0000010 | 0.0000010 | 0.0000000 | 0.978 | 0.0000000 | 0.0000010 | 0.978 | 0.0000010 |
| 0.0028000 | 0.978 | 0.0028000 | 0.0028000 | 0.0010700 | 0.978 | 0.0010700 | 0.0028000 | 0.978 | 0.0028000 |
| 19.0000000 | 1.000 | 19.0000000 | 19.0000000 | 23.0000000 | 1.000 | 23.0000000 | 19.0000000 | 1.000 | 19.0000000 |
| 0.0000000 | 0.0000000 | 0.0000000 | 0.0000000 | 0.1400000 | 0.0000000 | 0.1400000 | 0.0000000 | 0.0000000 | 0.0000000 |
| 18.0000000 | 1.000 | 18.0000000 | 18.0000000 | 18.0000000 | 1.000 | 18.0000000 | 18.0000000 | 1.000 | 18.0000000 |
| 0.0700000 | 1.000 | 0.0700000 | 0.0700000 | 0.0700000 | 1.000 | 0.0700000 | 0.0700000 | 1.000 | 0.0700000 |

Sum Row

19.50

| CHEMICAL NAME | RIVER DISCHARGE CONCENTRATION (AVERAGE OF VALUES LISTED FOR 4 SAMPLES) | RIVER DISCHARGE CONCENTRATION (DISSED) CORRECTED FOR FUTURE USE (CALCULATED BY N-DES) | MULTIPLIED FOR CORRECTING FROM DISSOLVED TOTAL CONCENTRATION | RIVER DISCHARGE CONCENTRATION (TOTAL) (DISSED) CORRECTED BY MULTIPLIER | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | |
|------------------|--|---|--|--|--|---------------------------------------|--|--|--|---------------------------------------|--|--|---------------------------------------|--|--|---------------------------------------|--|----------|
| | | | | | RIVER DISCHARGE CONCENTRATION (4800 CFS) | Correction Multiplier (Hardness = 25) | RIVER DISCHARGE CONCENTRATION (4800 CFS) | RIVER DISCHARGE CONCENTRATION (4800 CFS) | RIVER DISCHARGE CONCENTRATION (3500 CFS) | Correction Multiplier (Hardness = 25) | RIVER DISCHARGE CONCENTRATION (3500 CFS) | RIVER DISCHARGE CONCENTRATION (1850 CFS) | Correction Multiplier (Hardness = 25) | RIVER DISCHARGE CONCENTRATION (1850 CFS) | RIVER DISCHARGE CONCENTRATION (1590 CFS) | Correction Multiplier (Hardness = 25) | RIVER DISCHARGE CONCENTRATION (1590 CFS) | |
| AMMONIA | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| AMMONIUM | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| ARSENIC | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| BARIUM | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| BORON | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| BRINE | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| CHLORIDE | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| COBALT | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| COPPER | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| IRON | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| MANGANESE | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| MERCURY | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| NITRATE | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| NITRITE | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| SILICA | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| SILVER | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| ZINC | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| CHLORIDE (as Cl) | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| AMMONIA (as N) | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| AMMONIUM (as N) | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |

NOTE: BOLD = NON-DETECTED RESULT

315-8168

| CHEMICAL NAME | TREATMENT POND DISCHARGE CONCENTRATION (MAX OF REPORTED VALUES USED ON POND SAMPLES) | TREATMENT POND / EFFLUENT | TREATMENT POND / EFFLUENT | TREATMENT POND / EFFLUENT | TREATMENT POND / EFFLUENT | TREATMENT POND / EFFLUENT | TREATMENT POND / EFFLUENT | SPREADER POND WWP DISCHARGE CONCENTRATIONS | CHEMICAL NAME | CRITERIA USED | NEW HAMPSHIRE DES SURFACE WATER QUALITY REGULATIONS Table 700.1 (as provided by PSNH) |
|--------------------|--|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|--|--------------------|------------------------|---|
| AMMONIA (as N) | 0.500000 | 0.500000 | 452946 | 172407 | 2.000000 | 3.500000 | 18,000,000 | 350,000 | Ammonia (as N) | Fresh Water and Fish | 3.430000 10,000.00 |
| ARSENIC | 0.050000 | 0.110000 | 0.650000 | 0.140000 | 0.210000 | 0.260000 | 0.390000 | 2.0000 | ARSENIC | Fresh Chronic | 0.037000 |
| BARITUM | 0.001100 | 0.001118 | 0.001118 | 0.001118 | 0.001118 | 0.001118 | 0.001118 | 0.001118 | Barium | Water & Fish Ingestion | 0.002000 |
| BENZO(A)PYRENE | 0.001500 | 0.001500 | 0.001500 | 0.001500 | 0.001500 | 0.001500 | 0.001500 | 0.001500 | Benzo(a)pyrene | Fresh Chronic | 0.150000 |
| BENZO(A)ANTHRACENE | 0.000517 | 0.000517 | 0.000517 | 0.000517 | 0.000517 | 0.000517 | 0.000517 | 0.000517 | Benzo(a)anthracene | Fresh Chronic | 0.004000 |
| CHLORIDE | 0.000192 | 0.000192 | 0.000192 | 0.000192 | 0.000192 | 0.000192 | 0.000192 | 0.000192 | Chloride | Fresh Chronic | 0.024000 |
| CHROMIUM III | 0.001320 | 0.001320 | 0.001320 | 0.001320 | 0.001320 | 0.001320 | 0.001320 | 0.001320 | Chromium III | Fresh Chronic | 0.024000 |
| COPPER | 0.000200 | 0.000200 | 0.000200 | 0.000200 | 0.000200 | 0.000200 | 0.000200 | 0.000200 | Copper | Fresh Chronic | 0.020000 |
| LEAD | 0.000456 | 0.000456 | 0.000456 | 0.000456 | 0.000456 | 0.000456 | 0.000456 | 0.000456 | Lead | Fresh Chronic | 0.020000 |
| MANGANESE | 0.050000 | 0.050000 | 0.050000 | 0.050000 | 0.050000 | 0.050000 | 0.050000 | 0.050000 | Manganese | Water & Fish Ingestion | 0.020000 |
| MERCURY | 0.000034 | 0.000034 | 0.000034 | 0.000034 | 0.000034 | 0.000034 | 0.000034 | 0.000034 | Mercury | Water & Fish Ingestion | 0.000034 |
| NICKEL | 0.001900 | 0.001900 | 0.001900 | 0.001900 | 0.001900 | 0.001900 | 0.001900 | 0.001900 | Nickel | Fresh Chronic | 0.010000 |
| SILICA | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | Silica | Fresh Chronic | 0.010000 |
| SILVER | 0.000326 | 0.000326 | 0.000326 | 0.000326 | 0.000326 | 0.000326 | 0.000326 | 0.000326 | Silver | Fresh Chronic | 0.003000 |
| TOLUENE | 0.000111 | 0.000111 | 0.000111 | 0.000111 | 0.000111 | 0.000111 | 0.000111 | 0.000111 | Toluene | Water & Fish Ingestion | 0.001750 |
| ZINC | 0.019000 | 0.019000 | 0.019000 | 0.019000 | 0.019000 | 0.019000 | 0.019000 | 0.019000 | Zinc | Fresh Chronic | 0.039000 |
| CHLORIDE | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | Chloride | Fresh Chronic | 330,000.00 |
| AMMONIA (as N) | 0.500000 | 0.500000 | 452946 | 172407 | 2.000000 | 3.500000 | 18,000,000 | 350,000 | Ammonia (as N) | Fresh Chronic | 3.430000 10,000.00 |

Maximum and Minimum values for the 1997-2002 monitoring period (reporting to WWTSS as ammonia or nitrate, which were acceptable for meeting WQC at this location).

| MONITOR NAME | DISCHARGE CONCENTRATION (WATER SAMPLES) | DISCHARGE CONCENTRATION (DISCHARGE) FROM DISCHARGE CONCENTRATION | DISCHARGE CONCENTRATION (DISCHARGE) FROM DISCHARGE CONCENTRATION | DISCHARGE CONCENTRATION (DISCHARGE) FROM DISCHARGE CONCENTRATION | DISCHARGE CONCENTRATION (DISCHARGE) FROM DISCHARGE CONCENTRATION | DISCHARGE CONCENTRATION (DISCHARGE) FROM DISCHARGE CONCENTRATION | DISCHARGE CONCENTRATION (DISCHARGE) FROM DISCHARGE CONCENTRATION | DISCHARGE CONCENTRATION (DISCHARGE) FROM DISCHARGE CONCENTRATION | DISCHARGE CONCENTRATION (DISCHARGE) FROM DISCHARGE CONCENTRATION | DISCHARGE CONCENTRATION (DISCHARGE) FROM DISCHARGE CONCENTRATION |
|--------------|---|--|--|--|--|--|--|--|--|--|
| 7/1/20 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 7/15/20 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 7/29/20 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 8/12/20 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 8/26/20 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 9/9/20 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 9/23/20 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 10/7/20 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 10/21/20 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 11/4/20 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 11/18/20 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 12/2/20 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 12/16/20 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| 12/30/20 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |

Handwritten notes and signatures in the top left corner.

27-00-000-000 - Amendment A, MAX, and Astin (Page 2 of 12)

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