**Instructions**

1. Save a copy of this tool for each new permit
2. **Select State:** NH
3. **Design Flow:** 13.0 MGD — Note: 1 cfs = 0.646 MGD
4. **Upstream 7Q10 Flow:** 339.2 MGD — *For freshwater discharges only
5. **Dilution Factor** — *Update manually for marine discharges (Note: Dilution ratio of 10:1 = DF of 11)
6. **Salinity (ppt)** — *Marine discharges only (downstream)
7. **Salmonids?** Present — *Freshwater discharges only
8. **Early life stages?** Present — *Freshwater discharges only (impacts 1999 chronic criteria for MA)
9. **Discharge to:** Stream/River — *Freshwater discharges only (impacts Gold Book TP criteria)
9. **Insert Current Effluent Limits (use mg/L); leave blank if no limit**
10. **Insert Effluent and Ambient data (use mg/L, no dates necessary)**
11. **Change any cells with non-detects (i.e., < #.##) to "0"**
12. **Delete any text within the data (i.e., "NODI" or similar)**
13. **Do NOT drag and drop data within the tables below!**
14. **Move on to next Tab (Freshwater or Marine)**

**For entering total phosphorus data, use average monthly data from April 1st thru October 31st**
**For entering Ammonia data, seasons are as follows:**
For MA: Warm weather (April 1 - October 31); Cold weather (November 1 - March 31)
For NH: Warm weather (May 1 - October 31); Cold weather (November 1 - April 30)

**Downstream Hardness:** #NUM! mg/L — Note: if below 20 mg/L in NH, spreadsheet will use default of 20 mg/L

**Current Effluent Limits**

| | Aluminum mg/L | Cadmium mg/L | Copper mg/L | Lead mg/L | Nickel mg/L | Zinc mg/L | Ammonia (Warm) mg/L | Ammonia (Cold) mg/L | Phosphorus mg/L |
|---|---|---|---|---|---|---|---|---|---|
| Acute | | | | | | | | | |
| Chronic | | | | | | | | | |

**Effluent Data**

| | Hardness mg/L | Date | Copper Long (2008-2019) mg/L | Copper Short (2015-2019) mg/L | Date | Nickel mg/L | Zinc mg/L | Ammonia (Warm) mg/L | Ammonia (Cold) mg/L | Phosphorus mg/L |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | 2008-03-31 | 0.01 | 0. | 2015-03-31 | | | | | |
| 2 | | 2008-06-30 | 0.01 | 0. | 2015-06-30 | | | | | |
| 3 | | 2008-09-30 | 0.01 | 0.01 | 2015-09-30 | | | | | |
| 4 | | 2008-12-31 | 0. | 0. | 2015-12-31 | | | | | |
| 5 | | 2009-03-31 | 0. | 0.01 | 2016-03-31 | | | | | |
| 6 | | 2009-06-30 | 0.01 | 0.01 | 2016-06-30 | | | | | |
| 7 | | 2009-09-30 | 0.01 | 0.01 | 2016-09-30 | | | | | |
| 8 | | 2009-12-31 | 0.02 | 0.01 | 2016-12-31 | | | | | |
| 9 | | 2010-03-31 | 0.03 | 0. | 2017-03-31 | | | | | |
| 10 | | 2010-06-30 | 0. | 0. | 2017-06-30 | | | | | |
| 11 | | 2010-09-30 | 0.01 | 0.01 | 2017-09-30 | | | | | |
| 12 | | 2010-12-31 | 0.01 | 0.01 | 2017-12-31 | | | | | |
| 13 | | 2011-03-31 | 0.01 | 0.002 | 2018-03-31 | | | | | |
| 14 | | 2011-06-30 | 0.03 | 0.002 | 2018-06-30 | | | | | |
| 15 | | 2011-09-30 | 0.02 | 0.004 | 2018-09-30 | | | | | |
| 16 | | 2011-12-31 | 0.01 | 0.004 | 2018-12-31 | | | | | |
| 17 | | 2012-03-31 | 0. | 0.002 | 2019-03-31 | | | | | |
| 18 | | 2012-06-30 | 0.02 | 0.002 | 2019-06-30 | | | | | |
| 19 | | 2012-09-30 | 0.01 | 0.002 | 2019-09-30 | | | | | |
| 20 | | 2012-12-31 | 0.01 | 0.004 | 2019-12-31 | | | | | |
| 21 | | 2013-03-31 | 0 | | | | | | | |
| 22 | | 2013-06-30 | 0.02 | | | | | | | |
| 23 | | 2013-09-30 | 0.03 | | | | | | | |
| 24 | | 2013-12-31 | 0.02 | | | | | | | |
| 25 | | 2014-03-31 | 0.002 | | | | | | | |
| 26 | | 2014-06-30 | 0.01 | | | | | | | |
| 27 | | 2014-09-30 | 0.01 | | | | | | | |
| 28 | | 2014-12-31 | 0.01 | | | | | | | |
| 29 | | 2015-03-31 | 0 | | | | | | | |
| 30 | | 2015-06-30 | 0 | | | | | | | |
| 31 | | 2015-09-30 | 0.01 | | | | | | | |
| 32 | | 2015-12-31 | 0 | | | | | | | |
| 33 | | 2016-03-31 | 0.01 | | | | | | | |
| 34 | | 2016-06-30 | 0.01 | | | | | | | |
| 35 | | 2016-09-30 | 0.01 | | | | | | | |
| 36 | | 2016-12-31 | 0.01 | | | | | | | |
| 37 | | 2017-03-31 | 0 | | | | | | | |
| 38 | | 2017-06-30 | 0 | | | | | | | |
| 39 | | 2017-09-30 | 0.01 | | | | | | | |
| 40 | | 2017-12-31 | 0.01 | | | | | | | |
| 41 | | 2018-03-31 | 0.002 | | | | | | | |
| 42 | | 2018-06-30 | 0.002 | | | | | | | |
| 43 | | 2018-09-30 | 0.004 | | | | | | | |
| 44 | | 2018-12-31 | 0.004 | | | | | | | |
| 45 | | 2019-03-31 | 0.002 | | | | | | | |
| 46 | | 2019-06-30 | 0.002 | | | | | | | |
| 47 | | 2019-09-30 | 0.002 | | | | | | | |
| 48 | | 2019-12-31 | 0.004 | | | | | | | |
| 95th | N/A | | 0.0000 | 0.0290 | 0.0148 | 0.0000 | 0.0000 | 0.0000 | 0.0 | 0.0 | 0.000 |
| Max | N/A | | 0. | 0.03 | 0.01 | 0. | 0. | 0. | 0. | 0. | 0. |

**Ambient Data**

| | Hardness mg/L | pH S.U. | Aluminum mg/L | Copper mg/L | Copper mg/L | Lead mg/L | Nickel mg/L | Zinc mg/L | Ammonia (Warm) mg/L | Ammonia (Cold) mg/L | Phosphorus mg/L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | 0.00056 | 0.00056 | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |
| 14 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 16 | | | | | | | | | | | |
| 17 | | | | | | | | | | | |
| 18 | | | | | | | | | | | |
| 19 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
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| 32 | | | | | | | | | | | |
| 33 | | | | | | | | | | | |
| 34 | | | | | | | | | | | |
| 35 | | | | | | | | | | | |
| 36 | | | | | | | | | | | |
| 37 | | | | | | | | | | | |
| 38 | | | | | | | | | | | |
| 39 | | | | | | | | | | | |
| 40 | | | | | | | | | | | |
| 41 | | | | | | | | | | | |
| 42 | | | | | | | | | | | |
| 43 | | | | | | | | | | | |
| 44 | | | | | | | | | | | |
| 45 | | | | | | | | | | | |
| 46 | | | | | | | | | | | |
| 47 | | | | | | | | | | | |
| 48 | | | | | | | | | | | |
| Median | #NUM! | #NUM! | 0 | 0.00056 | 0.00056 | 0 | 0 | 0 | 0 | 0 | 0 |

**Instructions**

1. **If any limit is based on Backsliding or Anti-Backsliding, permit writer to confirm case-by-case whether exceptions apply**
2. **Remove highlighting after any backsliding issues have been resolved**
3. **Select entire table with footnotes, copy into Appendix B template**
4. **Use Explanation of Limits table to briefly describe each limit in the Fact Sheet (incorporate limits into Draft Permit)**

| Pollutant | $Q_s$ | $C_s$ [1] | $Q_e$ | $C_e$ [2] | | $Q_d$ | $C_d$ | | Criteria * 0.9 | | Reasonable Potential | | Limits | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | cfs | mg/L | cfs | Acute (mg/L) | Chronic (mg/L) | cfs | Acute (mg/L) | Chronic (mg/L) | Acute (mg/L) | Chronic (mg/L) | $C_d$ & $C_r$ > Acute Criteria | $C_d$ & $C_r$ > Chronic Criteria | Acute (mg/L) | Chronic (mg/L) |
| Ammonia (Warm) | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | #NUM! | #NUM! | #NUM! | #NUM! | #NUM! | #NUM! |
| Ammonia (Cold) | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | #NUM! | #NUM! | #NUM! | #NUM! | #NUM! | #NUM! |
| Phosphorus | | 0.00 | | N/A | 0.00 | | N/A | 0.00 | N/A | 0.090 | N/A | N | N/A | N/A |
| | | µg/L | | µg/L | µg/L | | µg/L | µg/L | µg/L | µg/L | | | µg/L | µg/L |
| Aluminum | ##### | 0.0 | 20.17 | 0.0 | 0.0 | 545.17 | 0.0 | 0.0 | 675 | 78.3 | N | N | N/A | N/A |
| Copper (2008-2019) | | 0.6 | | 29.0 | 29.0 | | 1.6 | 1.6 | 3.2 | 2.4 | N | N | N/A | N/A |
| Copper (2015-2019) | | 0.6 | | 14.8 | 14.8 | | 1.1 | 1.1 | 3.2 | 2.4 | N | N | N/A | N/A |
| Lead | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | #NUM! | #NUM! | #NUM! | #NUM! | #NUM! | #NUM! |
| Nickel | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | #NUM! | #NUM! | #NUM! | #NUM! | #NUM! | #NUM! |
| Zinc | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | #NUM! | #NUM! | #NUM! | #NUM! | #NUM! | #NUM! |

| Explanation of Limits | |
|---|---|
| **Acute** | **Chronic** |
| #NUM! | #NUM! |
| #NUM! | #NUM! |
| N/A | No Limit |
| -- | -- |
| No Limit | No Limit |
| No Limit | No Limit |
| No Limit | No Limit |
| #NUM! | #NUM! |
| #NUM! | #NUM! |
| #NUM! | #NUM! |

[1] Median concentration for the receiving water just upstream of the facility's discharge taken from the WET testing data during the review period (see Appendix A).
[2] Values represent the 95th percentile (for n ≥ 10) or maximum (for n < 10) concentrations from the DMR data and/or WET testing data during the review period (see Appendix A). If the metal already has a limit (for either acute or chronic conditions), the value represents the existing limit.

**No Limit**: No existing limit and no RP for a new limit
**New Limit**: Limit established in this permit issuance
**Same Limit**: Limit carried forward from previous permit (either no change to criteria or no change to WQS calc)
**More Stringent**: limit must be more stringent than before to meet WQS
**Anti-backsliding Applies**: Less stringent limit meets WQS but discharge is achieving existing limit so existing limit carried forward
**Backsliding Allowed**: Less stringent limit meets WQS and discharge is not achieving existing limit so limit able to be less stringent [See exception E @ 40 CFR § 122.44(l)(2)(i)(E)]

Note: If backsliding is allowed, new limit is **most stringent** of either recent performance (95th) or new WQS calc. To determine which one it is, you can compare the limit to the 95th at bottom of 1st tab.

| Freshwater Ammonia | | MA | | NH | |
|---|---|---|---|---|---|
| | | 1999 Criteria | | 2013 Criteria | |
| Season | Temp °C | Acute mg/L | Chronic mg/L | Acute mg/L | Chronic mg/L |
| Warm Weather | 25 | #NUM! | #NUM! | #NUM! | #NUM! |
| Cold Weather | 5 | #NUM! | #NUM! | #NUM! | #NUM! |

Update if not using default temps