

**Compilation of questions based upon Early Stakeholder Outreach comments**

## Group A, Principles and derivation of the TIC

– scoring questions, data requirements, sorting out causes of biological impairment, etc.

## Group B, Application of the TIC assessment outcome

– relative to TMDLs / 303d listings, the target N and P concentrations for TMDLs, NPDES limits (initial technology levels and lower WQBELs), compliance time lines, reasonable potential, site specific criteria , etc.

## Group C, Adaptive management and policy questions

– the pace, stringency and mechanisms to phase in degrees of regulation and innovative NPS techniques, water quality trading questions, habitat management, etc.

**Group A - Principles and derivation of the TIC**

1. How will credible data be used in the metric?
2. Where in relation to a discharge within the waterbody will TIC scores be determined? (one mile downstream, 3 miles downstream, some average value)
3. What time period and what data will be used (i.e., the past year, the past five years, average, worst-case scenario, best-case scenario)
4. How will multiple data values for each component of the TIC be used?
5. What if one or two biocriteria are in attainment but the others are not?
6. How will TIC scores be calculated and how will they be applied for multiple point sources to the same waterbody?
7. What if there is no data for one of the TIC metric factors?
8. What if there is insufficient data to develop a TIC score?
9. How much data is needed to develop a TIC score? What is the minimum amount of data necessary to calculate each of the Tic metrics?
10. How will areas in partial biological attainment be addressed?
11. Should a TIC score be calculated in biocriteria are in attainment?
12. Why are biocriteria values in the range of non-significant departure only given one-half of the applicable TIC score?
13. How will it be determined that nutrients are the actually cause of impairment in a water body?
14. How will nutrient standards be applied in situations where there are other stressors preventing the attainment of aquatic life criteria?
15. How will nutrient standards be applied in situations where there are other stressors preventing the attainment of aquatic life criteria?
16. Why are biocriteria values in the range of non-significant departure only given one-half of the applicable TIC score? Should non-significant departure be three quarters of the full attainment

value? Or should the biocriteria metric value be determined based on the historic trend of biocriteria values?

17. How will situations be handled where data are lacking; will default scoring values be applied?
18. What steps can be taken to ensure data are not missing? Is there a need to increase Ohio EPA sampling capacity? Should sampling by the permit holder be considered?
19. Dissolved Reactive Phosphorus is a key parameter associated with water quality problems in western Lake Erie. Why has Ohio EPA used total phosphorus in the TIC?
20. How are factors of ecoregion, stream size and tiered aquatic life uses incorporated into the TIC?
21. How were the TIC metric concentration values for phosphorus and nitrogen established? Should they vary by ecoregion?
22. Imposition of nutrient limits if other stressors are more proximate; keeping primacy of bio-criteria as arbiter of impairment.
23. Is the Invertebrate Community Index (biocriteria) a good biological component for use in the TIC?
24. How was the weighting of scores for TIC components established?
25. How much field testing of the scoring system has been done?
26. What are the data quality standards for field assessments?
27. What are the sampling protocols relative to the temporal, spatial and quantity of samples required for each TIC component?
28. How will situations of new or expanded sources of nutrients be evaluated? Is it possible to use models to forecast future TIC conditions?
29. When will the TIC be used to trigger the Dissolved Inorganic Nitrogen in-stream target value and subsequent TMDLs / WQBELs?
30. Can the TIC be broadened to include mussel species?
31. What is the range of stream sizes that can be evaluated with the TIC?
32. How are streams with the Modified Warmwater Habitat aquatic life use evaluated? How are downstream segments with higher aquatic life uses protected?

#### **Group B, Application of the TIC assessment outcome**

1. What reasonable potential process will be used?
2. How will the determination that a point source is a substantial contributing cause to the nutrient problems be made?
3. How will situations where point source nutrient reductions are not expected to significantly reduce the nutrient loading to a water body be addressed?
4. How will the TIC score be used to develop permit limits, TMDLs, WQBELs, etc?
5. How will relative source contribution be accounted for in the development of NPDES permit limits?
6. Will seasonal/annual NPDES permit limits be used?
7. How will nutrient limits currently in place be addressed?

8. How will loading targets be allocated among point and nonpoint sources?
9. How will criteria and WQBELs be applied to very small point sources? How will these sources perform TIC assessments during the periods between NPDES issuance dates?
10. Will TIC scores in the “acceptable” range be used to (automatically?) remove nutrients from the 303(d) list for the waterbody? What happens to the TMDL (and associated NPDES permit limits) previously prepared for a segment fitting this description?
11. What is the expected impact of TIC on urban storm water runoff, MS4 permits and general storm water permits?
12. Has Ohio EPA considered WERF Final Report “Modeling Guidance for Developing Site-Specific Nutrient Goals” relative to assessing near and far-field effects?
13. How will permit limits be expressed (30-day average, harmonic mean, seasonal, annual)?
14. Is there an option for site or waterbody-specific criteria? How would this be implemented?
15. What documentation will be prepared regarding how a TIC score will be used to develop a WQBEL?
16. What are modeling protocols that will be applied to translate the nutrient target values into TMDLs and WQBELs?

#### **Group C, Adaptive management and policy questions**

TIC generated in-stream nutrient target values (TP set at 0.3 mg/l, 0.16 mg/l or 0.06 mg/l; DIN 3.0 mg/l) will result in some POTWs having WQBEL numbers are that at or near the limit of treatment technology.

1. Are the interim limits of 1.0 mg/L TP and 10 mg/L DIN appropriate?
2. Is there additional flexibility regarding the length of time the interim limits would be in place?
3. What does Ohio EPA mean by adaptive management in the context of imposing nutrient limits on POTWs?
4. How will adaptive management be incorporated into the nutrient program?
5. How will water quality trading be used in the nutrient program?
6. How will nutrient reduction activities already undertaken by point sources be accounted for?
7. How will the amount of time it takes for the effects of nutrient reduction measures to occur be accounted for?
8. What if two permit cycles show clear water quality improvement trend but the stream has not achieved full attainment of the aquatic life use?
9. How will the associated (to nutrient reduction) water quality improvements be tracked?
10. How will the rules accommodate the implementation of effective alternatives to nutrient permit limits?
11. How will downward trends in nutrient levels (and/or upward trends in biocriteria scores) that have not yet met the goals be addressed?
12. How will the financial implications of meeting nutrient targets be addressed/accounted for?
13. How will we satisfy the requirement to ensure downstream uses are protected?

14. Should very low WQBEL numbers be enforced on POTWs in situations where NPS loads dominate the stream segment and continue to do in spite of efforts to curb NPS loads? What options exist in this situation?
15. What procedures will be followed (modeling / permitting) for situations without any available biological survey data (no TIC results available)?
16. What content belongs in administrative rule language vs. operational guidelines?
17. What is the correct balance enforcing TIC application consistently through explicit rule language vs. allowing an adequate degree of flexibility?