**Generic QAPP Checklist, Version 2.0**

**Reviewed by: Adriane Borgias, WA Department of Ecology Date: 8/6/2015**

| **Element** | **Acceptable as written?**  **Y / N / NA** | **Comments** |
| --- | --- | --- |
| **1.0 Title Page, Table of Contents, and  Distribution List** |  |  |
| Title, author, organization | Y |  |
| Date prepared or revised | Y |  |
| Approval signatures of key individuals (Per element 5) | Y |  |
| Table of Contents | Y |  |
| Distribution List | Y |  |
|  |  |  |
| **2.0 Abstract** | N | Add 1-paragraph abstract stating 1) this is a continuation of work performed in 2014, 2) the 2014 QAPP (approved by Ecology and TF) and SAP are applicable, 3) with changes – changes to spatial and temporal extent, new rainfall rules, refined understanding of blank correction protocol, SOP for stream flow measurement. [OK-NO FURTHER ACTION] |
|  |  |  |
| **3.0 Background** |  | Typo on p. 6: “2105” should be “2015” [Also found in Table of Contents, p. 11. And p. 12.] |
| 3.1 Study area and surroundings | Y | p. 6 |
| 3.1.1 Logistical problems | N | Mention on p. 6 changes made to this QAPP to address logistical problems from last year (accurate stream flow measurements) and possible impacts from storm events. [OK-NO FURTHER ACTION] |
| 3.1.2 History of study area | NA | Included in approved 2014 QAPP |
| 3.1.3 Contaminants of concern | Y | p. 6-7 |
| 3.1.4 Results of previous studies | N | p. 6 Reference the recently-approved final report in the Introduction and include in references. [OK-NO FURTHER ACTION] |
| 3.1.5 Regulatory criteria or standards |  |  |
|  |  |  |
| **4.0 Project Description** |  |  |
| 4.1 Project goals | Y | Included in approved 2014 QAPP |
| 4.2 Project objectives | Y | p. 6 |
| 4.3 Information needed and sources | Y | Project objectives informed by 2014 sampling. |
| 4.4 Target population | NA |  |
| 4.5 Study boundaries | Y | p. 8 |
| 4.6 Tasks required | Y | p. 6 |
| 4.7 Practical constraints | Y | p. 6 |
| 4.8 Systematic planning process | NA | Included in approved 2014 QAPP |
|  |  |  |
| **5.0 Organization and Schedule** |  |  |
| 5.1 Key individuals and their responsibilities (E.g., project team, decision-makers, stake-holders, field and laboratory personnel) | N | Refer to or include Table 1 of 2014 QAPP and list any revisions, if needed. [OK-NO FURTHER ACTION] |
| 5.2 Special training and certifications | NA |  |
| 5.3 Organization chart | N | Refer to or include Figure 1 of 2014 QAPP and list any revisions, if needed. [OK-NO FURTHER ACTION] |
| 5.4 Project schedule | Y |  |
| 5.5 Limitations on schedule | Y |  |
| 5.6 Budget and funding | N | Add project budget similar to 1.3.6 of 2014 QAPP [OK-NO FURTHER ACTION] |
|  |  |  |
| **6.0 Quality Objectives** |  |  |
| 6.1 Decision Quality Objectives (DQOs) | NA | Data is not intended for regulatory decision making. |
| 6.2 Measurement Quality Objectives (MQOs) | Y | p. 10 |
| 6.2.1 Targets for Precision, Bias and Sensitivity | Y | p. 10 |
| 6.2.2 Targets for Comparability, Representativeness, and Completeness | N | Add reference to Section 1.4 of 2014 QAPP.  [OK-NO FURTHER ACTION] |
|  |  |  |
| **7.0 Sampling Process Design** |  |  |
| 7.1 Study Design |  |  |
| 7.1.1 Sampling location and frequency | Y | p. 8,11 |
| 7.1.2 Parameters to be determined | Y | p. 9 |
| 7.1.3 Field measurements | Y | p. 9 |
| 7.2 Maps or diagrams | Y | p. 8 |
| 7.3 Assumptions underlying design | NA | Included in approved 2014 QAPP |
| 7.4 Relation to objectives and site characteristics | N | Add to Table 1 or text the justification for the monitoring locations. [OK-NO FURTHER ACTION] |
| 7.5 Characteristics of existing data | N | Add short summary with information about Confidence Interval testing (Section 1.3.1 of QAPP) and results from 2014 Synoptic sampling. [OK-NO FURTHER ACTION] |
|  |  |  |
| **8.0 Sampling Procedures** |  |  |
| 8.1 Field measurement and field sampling SOPs | Y | Included in approved 2014 SAP and new procedure added to Appendix A. |
| 8.2 Containers, preservation, holding times | Y | p. 12, Table 7 |
| 8.3 Invasive species evaluation | Y | Included in approved 2014 SAP |
| 8.5 Equipment decontamination | Y | Included in approved 2014 SAP |
| 8.6 Sample ID | Y | Included in approved 2014 SAP |
| 8.7 Chain-of-custody, if required | Y | Included in approved 2014 SAP |
| 8.8 Field log requirements | Y | Included in approved 2014 SAP |
| 8.9 Other activities | NA |  |
|  |  |  |
| **9.0 Measurement Methods** |  |  |
| 9.1 Field procedures/field analysis table | Y | p. 11, Table 5 |
| 9.2 Laboratory procedures table, including: | Y | p. 13, Table 8 |
| 9.2.1 Analytes | Y | p. 13, Table 8 |
| 9.2.2 Matrix | N | Add to Table 8 [OK-NO FURTHER ACTION] |
| 9.2.3 Number of samples | N | Add to Table 8 [OK-NO FURTHER ACTION] |
| 9.2.4 Expected range of results | Y | p. 13, Table 8 |
| 9.2.5 Analytical methods | Y | p. 13, Table 8 |
| 9.2.6 Sensitivity/method detection limit (MDL) | Y | p. 13, Table 8 |
| 9.3 Sample preparation method | NA | Included in approved 2014 QAPP |
| 9.4 Special method requirements | NA | Included in approved 2014 QAPP |
| 9.5 Lab(s) accredited for method(s) | NA | Included in approved 2014 QAPP |
|  |  |  |
| **10.0 Quality Control** |  |  |
| 10.1 Table of lab and field QC required | Y | p. 10 Tables 3 and 4 |
| 10.2 Corrective action | N | Please add corrective action section similar to 3.1.4 in approved 2014 QAPP. |
|  |  |  |
| **11.0 Data Management Procedures** |  |  |
| 11.1 Data recording/reporting requirements | NA | Included in approved 2014 QAPP |
| 11.2 Lab data package requirements | NA | Included in approved 2014 QAPP |
| 11.3 Electronic transfer requirements | NA | Included in approved 2014 QAPP |
| 11.4 Acceptance criteria for existing data | NA |  |
| 11.5 EIM/STORET data upload procedures | NA | Included in approved 2014 QAPP |
|  |  |  |
| **12.0 Audits and Reports** |  |  |
| 12.1 Audit number, frequency, type, and schedule | NA | Included in approved 2014 QAPP |
| 12.2 Responsible personnel | NA | Included in approved 2014 QAPP |
| 12.3 Frequency and distribution of reports | NA | Included in approved 2014 QAPP |
| 12.4 Responsibility for reports | NA | Included in approved 2014 QAPP |
|  |  |  |
| **13.0 Data Verification** |  |  |
| 13.1 Field data verification, requirements, and responsibilities | NA | Included in approved 2014 QAPP |
| 13.2 Lab data verification | NA | Included in approved 2014 QAPP |
| 13.3 Validation requirements, if necessary | NA | Included in approved 2014 QAPP |
|  |  |  |
| **14.0 Data Quality (Usability) Assessment** |  |  |
| 14.1 Process for determining whether project objectives have been met | NA | Included in approved 2014 QAPP |
| 14.2 Data analysis and presentation methods | NA | Included in approved 2014 QAPP |
| 14.3 Treatment of non-detects | NA | Included in approved 2014 QAPP |
| 14.4 Sampling design evaluation | NA | Included in approved 2014 QAPP |
| 14.5 Documentation of assessment | NA | Included in approved 2014 QAPP |
|  |  |  |
| **15.0 References** | N | Add reference to the final 2014 Synoptic Sampling report |
|  |  |  |
| **16.0 Figures** | Y |  |
|  |  |  |
| **17.0 Tables** |  |  |
| Table 1 Measurement Quality Objectives | Y | p. 10, Tables 3 and 4 |
| Table 2 Sample Containers, Preservation and Holding Times | Y | p. 12, Table 7 |
| Table 3 Measurement Methods (Laboratory) | Y | p. 13, Table 8 |
| Table 4 QC Samples, Types and Frequency | N | Add Table with number of samples and QC samples per location. [OK-NO FURTHER ACTION] |
|  |  |  |
| **18.0 Appendices** |  |  |
| Appendix A | Y | Flow measurement procedure |
| Appendix B – Glossary, Acronyms, and  Abbreviations | NA |  |
| Quality Assurance Glossary | NA |  |
| Glossary – General Terms | NA |  |
| Acronyms and Abbreviations | NA |  |
| Units of Measure | NA |  |