**2016 Integrated Report (IR)**

**Call for Data: Data Quality Matrix**

**Data Validation Criteria for Water Quality Field Grab Sample Parameters**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Data Quality Grade Level** | **Assessment Program Data Uses** | **Quality Assurance Project Plan (QAPP)** | **Sampling Analysis Plan (SAP)** | **Calibration Documentation** | **Field Documentation** | **Flow Data** | **Water Temperature Methods** | **pH Methods** | **Dissolved Oxygen** |
| **Percent Saturation for Calibrated Meter** | **Concentration Methods for Calibrated Meter** |
| **A** | **No IR QAQC Flags:** 305(b) and 303(d) Assessment; Targeted Monitoring Planning | Approved QAPP | Approved SAP | Available for DWQ review if needed for all field parameters | Available for DWQ review if needed | Submitted or Available for DWQ review if needed | Checked against NISTA ≤ ± 0.1 ºCR ≤ 0.01 ºC | Calibrated pH ProbeA ≤ ± 0.2 S.U.R ≤ ± 0.01 S.U. | 0-200% mg/L: A ≤ ± 1% R≤0.1% | 0-8 mg/L: A ≤ ± 0.01mg/L > 8mg/L: A ≤ ± 0.02 mg/LR≤0.01 |
| **B** | **IR QAQC Flags may be populated and Best Professional Judgment may be used:** 305(b) and 303(d) Assessment; Targeted Monitoring Planning | Not Submitted | Approved SAP | Available for DWQ review if needed, for field parameters in question | Not Submitted | Not Submitted or Unavailable for DWQ review if needed | A ≤ ± 0.5 ºCR ≤ 0.05 ºC | Calibrated pH ProbeA ≤ ± 0.5 S.U.R ≤ ± 0.05 S.U. | 0-200% mg/L: A ≤ ± 2% R≤0.2% | 0-20 mg/L: A ≤ ± 0.1 mg/L R≤0.1 |
| **C** | Targeted Monitoring Planning Only | **--** | **--** | Available for DWQ review if needed, for field parameters in question | **--** | -- | A ≥ ± 0.5 ºCR ≥ 0.05 ºC | Any Method | -- | -- |
| **D** | Not used by the Assessment Program | Not Submitted | Not Submitted | Missing or Unavailable for DWQ review if needed | Missing or Unavailable for DWQ review if needed | Not Submitted | Not a calibrated meter, missing, or rejected data | Not a calibrated meter, missing, or rejected data | Not a calibrated meter, missing, or rejected data | Not a calibrated meter, missing, or rejected data |

**Data Validation Criteria for Water Quality Chemistry Grab Sample Parameters**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Data Quality Grade Level** | **Assessment Program Data Uses** | **Quality Assurance Project Plan (QAPP)** | **Sampling Analysis Plan (SAP)** | **Laboratory Method** | **Detection Limits** | **Lab Certification** | **QC Samples** | **Laboratory Comments** | **Field Documentation** | **Metals** | **Organics** | **Inorganics** |
| **A** | **No IR QAQC Flags:** 305(b) and 303(d) Assessment; Targeted Monitoring Planning | Approved Sampling QAPP | Approved SAP | Approved Methods | Submitted and Approved Limits by DWQ | Utah Bureau of Laboratory Improvement certification or NELAC | Available for DWQ review if needed | Acceptable Laboratory Comments Associated with a Sample | Available for DWQ review if needed | **Chronic:** Aluminum submitted Ca and Mg OR Lab Hardness and field pH; Cadmium, Chromium (III), Copper, Lead, Nickel, Silver, and Zinc submitted with Ca and Mg OR Lab Hardness | Pentachlorophenol submitted with field pH;  | Fluoride submitted with Temperature; Total Ammonia as N submitted with field pH and field Temperature |
| **B** | **IR QAQC Flags will be populated and Best Professional Judgement May Be Used:** 305(b) and 303(d) Assessment; Targeted Monitoring Planning | **--** | Approved SAP | Approved Methods | Submitted and Approved Limits by DWQ | Utah Bureau of Laboratory Improvement certification or NELAC | **--** | Approved Laboratory Comments Associated with a Sample | **--** | Chronic: Aluminum submitted without Ca, Mg, or Lab Hardness or field pH 750 ug/l will be applied; Cadmium, Chromium (III), Copper, Lead, Nickel, Silver, and Zinc submitted without Ca, Mg, or a Lab Hardness \* | Pentachlorophenol submitted without field pH;  | Fluoride submitted without Temperature; Total Ammonia as N submitted with field pH or field Temperature |
| **C** | Targeted Monitoring Planning Only | **--** | -- | Approved Methods | Submitted and Approved Limits by DWQ | Utah Bureau of Laboratory Improvement certification or NELAC | **--** | Approved Laboratory Comments Associated with a Sample | **--** | Chronic: Aluminum submitted without Ca, Mg, or Lab Hardness or field pH \* Cadmium, Chromium (III), Copper, Lead, Nickel, Silver, and Zinc submitted without Ca, Mg, or a Lab Hardness \* | Pentachlorophenol submitted without field pH | Fluoride submitted without Temperature; Total Ammonia as N submitted with field pH or field Temperature |
| **D** | Not used by the Assessment Program | **--** | **--** | Missing or Not Approved Methods by DWQ | Missing or Not Approved Limits by DWQ | **--** | **--** | Not Approved Laboratory Comments by DWQ | **--** | **--** | **--** | Total Ammonia as N submitted with neither field pH nor field Temperature |

**\* Please refer to Assessment Methodology for corrections due to missing values of hardness or pH.**