Updates on the 303(d) Listing Methodology for 2020:

The 303(d) Listing Methodology workgroup met three times in late 2018 to discuss changes for the 2020 version of the 303(d) and Monitoring and Evaluation (M&E) Lists (Regulation 93). The 2020 version of the 303(d) Listing Methodology will be finalized by the Water Quality Control Commission during an administrative action hearing on March 11, 2019. The final version of the document will be available at the URL list below shortly after the hearing: https://www.colorado.gov/pacific/cdphe/surface-water-assessment.

The following items were revised:

Created guidance on how to apply attainment status when waterbodies are re-segmented.

- Background information:
  - Segmentation and portioning (see below) generated the most robust discussion during the revision process.
  - Segments are used to divide waterbodies where there are known changes to water uses, water chemistry or physical characteristics.
  - Initially, segments are large and decrease in size as additional information is gathered about water quality and environmental conditions in a given watershed.
  - Waterbodies are re-segmented regularly as additional information becomes available.
  - The original segment is referred to as the parent segment. Newly created segments are referred to as the child segments.
  - While the assessment process uses all readily available data, the assessment process focuses on each basin in a rotating schedule. A basin is the focal point of the assessment process prior to the rulemaking hearing for that basin. For example, the Upper Colorado, North Platte, and Lower Colorado River Basins were the focus of the 2018 assessment period to prepare for the rulemaking hearing in June 2019 and the hearing for 2020 303(d) and M&E lists, coming up in December 2019.
- The problem: There were not clear rules on how to assign the attainment status of the parent segment to the child segments. In some cases, 303(d) or M&E listing can trigger re-segmentation which exacerbates the problem.
- The fix: The child segments retain the attainment status of the parent segment until the attainment status is reassessed as part of the regularly scheduled 303(d) listing cycle (see table 3 of 303(d) Listing Methodology). If there is evidence to suggest the attainment status of a child segment should be changed, a third party may advance a proposal to do so during the Regulation 93 (303(d) and M&E Lists) hearing process, typically in the fall of odd numbered years. There are also guidelines for child segments with insufficient data (see page 13 of 303(d) Listing Methodology).
Created guidance on how to apply attainment status for a portion of a segment.

- Background information:
  o In some cases, impairment status may change within a segment. For example, a tributary delivers iron, which results in impairment of the secondary water supply standard downstream of the tributary. The 303(d) list can identify the downstream portion of the segment as impaired. This is called a listed portion or portion.
  o Portions have a separate identification number, called the assessment unit identifications (AUID).
  o AUIDs include a capital letter at the end of the segment ID. For example, COUCBL01-the Blue River from the source to the confluence with French Gulch, has a portion called COUCBL01_A.
  o After the segment number, lowercase letters refer to the segment and uppercase letters refer to the portion.
  o Child portions are created in two ways. First, they are created when additional information about attainment becomes available. For example, a segment was listed as impaired for sediment, but additional data indicates the impairment does not occur in all areas of the segment, which necessitates dividing the segment into child portions. Or second, when a segment or portion of a segment is listed as impaired or potentially impaired for a second parameter. For example, a segment was listed as impaired for sediment and additional data indicates a portion of the segment is also impaired for temperature. In this case a child portion would be created to indicate the portion of the segment that is impaired for both temperature and sediment.
  o The problem: There were not clear rules on how to assign attainment status to of the parent portion to the child portion. The problem becomes more common when there are multiple monitoring locations within a segment. Each location may have different assessment outcomes for various parameters and the 303(d) LM lacked guidance on how to assign multiple attainment statuses to each portion.
  o The fix: When a parent portion is split, the child portions retain the existing attainment status of the parent portion. The child portions may be assigned additional attainment statuses (see page 13 of 303(d) Listing Methodology). There are also guidelines for child portions with insufficient data.

The approach to assessing iron, manganese, and sulfate secondary water supply standards for segments with ambient based standards was revised to eliminate listing based on expected variation in water quality.

- Background information:
  o Secondary water supply standards are applied to prevent issues with staining, taste, odor, etc.
  o Ambient based standards are applied to waters where 1) there was sufficient data from the segment as of the year 2000 and 2) the 85th percentile of that data is less stringent than the secondary water supply standards for iron, manganese, and sulfate.
Ambient based standards are common within the QQ area, but the availability of water quality data prior to the year 2000 sometimes limits the use of ambient based standards.

- The problem: Expected variation in water quality conditions created a cycle of listing and de-listing for segments where ambient based standards for iron, manganese, or sulfate are used to protect the secondary water supply standard.
- The fix: The value of the 95% lower confidence limit of the 85th percentile concentration will be used in the assessment to better accommodate expected natural variation in the data set. The assessment process is described on pages 33-35 and in Appendix B of the 2020 Listing Methodology.

**Adequate refuge clause for lakes and reservoirs.**

- Background information:
  - Adequate refuge is the concurrent attainment of applicable temperature and dissolved oxygen standards.
  - Water temperature and dissolved oxygen concentrations are strongly correlated, and aquatic life require both suitable temperatures and dissolved oxygen concentrations.
- The problem: In June 2016, the adequate refuge clause was removed from Regulation 31 because it’s addressed in the dissolved oxygen standards.
- The fix: Removed references to adequate refuge; see page 40 of 2020 303(d) Listing Methodology.

**Clarified guidance for macroinvertebrate sample collection methods (Hess method).**

- Background information:
  - Macroinvertebrates are aquatic insects and invertebrates that live in aquatic environments.
  - Macroinvertebrates are very sensitive to pollution. The community composition and abundance provide valuable information on the condition of a waterbody.
  - The aquatic life use policy (Policy 10-1) was adopted in 2010 and administratively extended in August 2017. Because updates and revisions to the policy were not made in recent years, the 303(d) listing methodology is the best venue to address issues related to macroinvertebrate sampling prior updating Policy 10-1, which is scheduled for August 2020.
- The problem: A lack of guidance on sub-sampling and compositing affects sample results, which in turn affects the attainment assessment.
- The fix: Appendix D was revised to include additional guidance about sub-sampling and compositing.
Regulations 33 and 37 Rulemaking Hearing:

**Hearing Schedule:** also provided on page 12 of the meeting packet

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Location</th>
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<tbody>
<tr>
<td>Proponent’s prehearing statement due</td>
<td>03/13/2019 5 pm</td>
<td>Additional information below.</td>
</tr>
<tr>
<td>Party status requests due</td>
<td>03/27/2019 5 pm</td>
<td>Additional information below.</td>
</tr>
<tr>
<td>Responsive prehearing statements due</td>
<td>04/17/2019 5 pm</td>
<td>Additional information below.</td>
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<tr>
<td>Rebuttal statements due</td>
<td>05/15/2019 5 pm</td>
<td>Additional information below.</td>
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<tr>
<td>Last date for submittal of motions</td>
<td>05/20/2019 by noon</td>
<td>Additional information below.</td>
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<tr>
<td>Notify commission office if participating in prehearing conference by phone or email</td>
<td>05/20/2019 by noon</td>
<td>Send email to <a href="mailto:cdphe.wqcc@state.co.us">cdphe.wqcc@state.co.us</a> with participant(s) name(s)</td>
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<tr>
<td>Prehearing Conference (mandatory for parties)</td>
<td>05/21/2019 9:30 am</td>
<td>Building C, 1st floor, Room C1A Department of Public Health and Environment 4300 Cherry Creek Drive South Denver, CO 80246  1 650-466-0971 PIN: 433 019#</td>
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<tr>
<td>Cutoff of negotiations</td>
<td>05/31/2019</td>
<td>NA</td>
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<tr>
<td>Division's consolidated proposals</td>
<td>06/05/2019</td>
<td>NA</td>
</tr>
<tr>
<td>Rulemaking Hearing</td>
<td>06/10/2019 10:00 am</td>
<td>Grand Junction City Hall Auditorium 250 North 5th Street Grand Junction, CO 81501</td>
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