

**Ohio EPA Response to Comments
Draft Biological and Water Quality Report – Raccoon Creek Watershed
2016**

The Draft Raccoon Creek Watershed Biological and Water Quality Report was made available for stakeholder review and comment from January 6, 2020 to February 6, 2020. The Agency received comments from Midwest Biodiversity Institute (MBI), and the Raccoon Creek Partnership (RCP).

The comments are summarized and grouped into categories with the name of the commenter following the comment in parenthesis.

Typographic Concerns

Comment 1: Page 85/Figure 22: The Figures and Caption are separated from each other on pages 85 and 86. (MBI)

Response 1: Corrected. Thank you.

Comment 2: Page 31 – should be “extracts” not exacts (RCP)

Response 2: Corrected. Thank you.

Comment 3: “Peirce” should be Pierce and “steam” should be stream. (RCP)

Response 3: Corrected. Thank you.

Comment 4: Page 74 – The Waterloo Aquatic Education Center doesn’t exist anymore (we (RCP) no longer have that building). Might want to change this to “adj. Waterloo Wildlife Area, dst bridge”? (RCP)

Response 4: Revised. Thank you.

Comment 5: Page 99 – This report hasn’t been annual since 2016. The 2018 report was just completed. And in the future, the report will MOST LIKELY be once every 4 years (a result of reduced monitoring frequency). I would suggest changing this to “Ohio University compiles a Non-point Source (NPS)....” (RCP)

Response 5: Revised. Thank you.

Overall/General Comments

Comment 6: A comment letter was received from the Midwest Biodiversity Institute (MBI). In general, the report indicated support for Ohio EPA’s comprehensive assessment program and encouraged its continuation.

Response 6: Thank you for your support of the water quality assessment process employed by the Ohio EPA.

Comment 7: MBI included a comment related to use of the Area of Degradation Value (ADV) and Area of Attainment Value (AAV) to illustrate trends. (Midwest Biodiversity Institute).

Response 7: Ohio EPA does not currently use those values for evaluation and inclusion in water quality reports.

Comment 8: MBI indicated that it would be useful to provide electronic access to the data generated during this study. (Midwest Biodiversity Institute)

Response 8: Biological, habitat, and chemistry data for the survey were available for download on the Agency website alongside the draft TSD <https://epa.ohio.gov/dsw/wq>. These data will also be posted with the final TSD on the web page. Due to the large file size, continuous (sonde) data are still only available upon request.

Comment 9: Table 27 – WQS Use Designations – this table usually appears at the front of the report and doing this implicitly emphasizes the central importance of accounting for use designations is objective #1 of these assessments thus we urge that it be moved forward in the report. It is a bit difficult for the casual reader to find and it will be the documentation for a future rulemaking. Also, among states Ohio is but one of perhaps 3 that routinely resolve use designation issues ahead of making an impairment decision and that should be stated in both the fact sheet and the report as well, especially with the impending chaos posed by the new WOTUS rule. Ohio should do everything possible to prevent a return to what most states now experience where a “faulty” impairment decision leads to a messy process of trying to resolve WQS issues after the fact. (MBI)

Response 9: Ohio EPA appreciates your recommendation. The first paragraph of the Executive Summary does outline that Ohio EPA evaluates each waterway to determine the appropriate beneficial use designations and determine if the assigned uses are appropriate and are meeting the goals of the federal Clean Water Act. Additionally, Ohio EPA is actively involved in evaluating the revised Navigable Waters of the United States rule.

Comment 10: Page 113 – Public Drinking Water. Only Wellston PWS is mentioned. Is that the only in the watershed? (RCP)

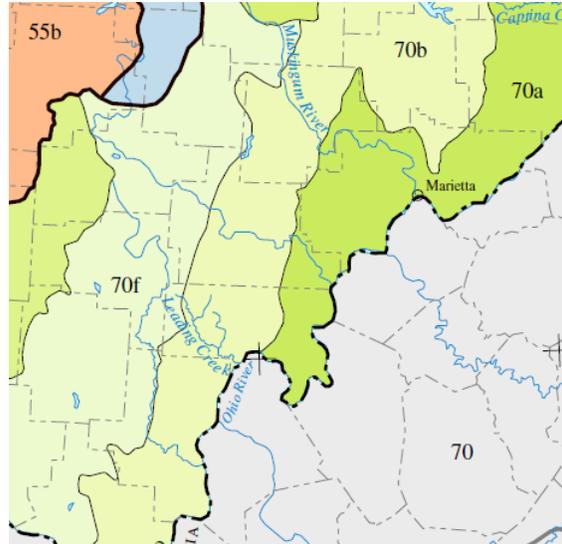
Response 10: Wellston is the only surface water drinking water supply within the study area (page 114 of the TSD). Groundwater PWS are not evaluated for the purposes of this stream survey.

There are 2 ground water protection areas within Raccoon Creek watershed study area – McArthur and Wellston. Wellston is both a groundwater and surface water system.

Comments related to Study Area and Maps

Comment 11: The map and the attainment table located up front in the report provide a good summary of the aquatic life status of the watershed, but it would be useful to have the Level IV subcoregion boundaries shown on the map. The Level IV subregions are meaningful in terms of AMD vs. non-acidic mine drainage. (MBI)

Response 11: Ohio EPA did not include the subcoregions on the attainment map (now Figure 3) because both subcoregions 70f and 70b have coal deposits and the possibility of associated acidic mine drainage. While 70b does contain some limestone, the deposits are not significant enough to allow for non-acidic mine drainage formation or buffering of AMD. Figure 8 shows the bedrock geology that contributes to the prevalence of AMD within Raccoon Creek watershed.



Comment 12: Page 27/Study Area: With the large numbers of survey streams and sites, it would be helpful to include one basin map (white or plain background) with sampling streams labeled. (MBI)

Response 12: Thank you for the suggestion. We created a new map (Figure 2) that includes the names of the streams.

Comment 13: Figure 9/page 34: It would be very helpful to see the mined areas detailed in Figure 9 laid over the Land Use map in Figure 6 (page 27). It would be of interest to see what the current land uses are for these previously disturbed areas. (Understand that this would probably would have been done if it was only a simple task). (MBI)

Response 13: This could possibly work on a smaller HUC 12 scale but as an overall basin wide map, it's difficult to discern any level of detail so we did not include this as a figure.

Comment 14: Page 2 of the fact sheet – On this page the drainage area is listed as 681 square miles, on page 3 the DA is listed at 683.5 square miles (which is the DA that we always use). Also, from this page, the headwaters begin in southern Hocking County, but the confluence of East and West Branch is in northern Vinton County. (RCP)

Response 14: Ohio EPA agrees. The DA is 683.5, the TSD contains the correct analysis.

Comments related to Aquatic Life Use

Comment 15: Table 1/page 3 Attainment Table: The existing and recommended LRW ALU designation for the East Branch Raccoon Creek is of concern. Many former LRW segments due to AMD have been changed to WWH even though biological attainment was not evident (i.e., Sunday Creek, Monday Creek) both because positive trends were observed and a WWH designation provided a better standing for groups pursuing local reclamation projects. The definition of the LRW use is: *“- these are waters that have been the subject of a use attainability analysis and have been found to lack the potential for any resemblance of any other aquatic life habitat as determined by the biological 3745-1-07 4 criteria in table 7-1 of this rule. The use attainability analysis must demonstrate that the extant fauna is substantially degraded and that the potential for recovery of any other aquatic life habitat is realistically precluded due to natural background conditions or irretrievable human induced conditions.”*

For example, the fish assemblage includes 13 species including Least Brook Lamprey, Longear Sunfish, Spotted Bass, and three darter species suggesting the stream is closer to WWH than to LRW. This is a significant recovery from 1995 when the site had no fish. Data from the 2010- 2011 at RM 2.3 had similar IBI scores to 2016 and that suggests a sustained pattern of recovery and evidence that WWH is not *“realistically precluded”*. Retaining the LRW designation is not appropriate for the following additional reasons:

1. The stream now easily exceeds the minimum LRW criteria and has the potential for WWH in the lower reaches at least.
2. Biological performance currently meets “MWH – mine drainage affected” criteria at the most downstream site with the macroinvertebrates marginally meeting WWH.
3. Habitat quality at both sites is in the good to exceptional range (i.e., QHEIs in the 70s at both sites).
4. Unlike LRW designated Pierce Run and Rockcamp Run, no exceedances of AMD related chemical parameters are listed for the East Branch (Table 4/page 40-42).
5. The Fish Group 3 - Other Headwaters site grouping (see page 94) includes the East Branch at RM 2.1 (15.3 sq. mi.). The text describes impacts primarily associated with excessive sand bed load, but not AMD.
6. LRW was originally assigned due to persistent AMD in the extreme headwaters. The impairment remains largely unaddressed because post-1972 mining activity does not qualify for AML Reclamation funds (Page 97- Table 19). However, the opportunity to access other funding could be deterred by keeping the LRW designation.

7. **At a minimum, a split designation between LRW the very headwaters and WWH for the lower East Branch is recommended although we favor WWH being applied to the entire stream. (MBI)**

Response 15: Ohio EPA discussed this issue with the Raccoon Creek Partnership, Ohio University and Ohio DNR and agree that reclamation projects in the East Branch have improved water quality. As a result, Ohio EPA has recommended WWH and included this justification in the recommendation section: *Reclamation projects in the East Branch of Raccoon Creek have significantly improved the biological community. No fish were found in the East Branch of Raccoon Creek during the 1995 survey but after reclamation projects began in 2008, a total of nineteen species of fish have been found. The macroinvertebrate community has also improved from 21 taxa in 1995 to 34 taxa in 2016. While the East Branch of Raccoon Creek is not fully meeting the WWH ALU, exceptional habitat scores (QHEI mean = 73), improved biological community and ongoing reclamation and maintenance projects by the Raccoon Creek Partnership warrant a recommendation from LRW to WWH ALU.*

Comment 16: Another issue with the Attainment Table is the only occasional notation of AQL uses. Past tables have noted the existing ones as well – perhaps adding this to the Table caption would be sufficient. (MBI)

Response 16: There are two versions of the attainment table in the report. In the executive summary, Table 2 is organized by HUC 12 and will either list the existing use designation or have recommended after the aquatic life use if there is a new recommendation. This is done for the general public. Table 13 in the Aquatic Life Use Discussion is the more traditional attainment table organized by river mile and includes the existing and/or recommended use designation in the headers for the streams.

Comments related to mine drainage and treatment

Comment 17: Starting on page 1 Executive Summary and throughout report – The Carbondale Doser is referred to as a limestone doser, it’s actually a calcium oxide doser.

Response 17: Corrected, thank you.

Comment 18: Page 32 – never mentions the Rice Hocking mining company? Also, again lime doser should be calcium oxide doser. And this is another picky thing that probably doesn’t matter. On this page and throughout it has Raccoon Creek Watershed Partnership (RCP). Raccoon Creek Partnership (RCP) 501(c)3 non-profit wasn’t officially formed until 2007. Before then the group was the Raccoon Creek Improvement Committee, Raccoon Creek Watershed Partnership, and probably several names I don’t even know. To make it easy, I

**would just say Raccoon Creek partners...but, really, I don't think it matters!
(RCP)**

Response 18: Information about the Rice Hocking mining company was added, and limestone was corrected to calcium oxide doser. In the executive summary, we updated information about RCP as follows: *The Raccoon Creek Partnership (RCP) is a member based nonprofit 501(c)(3) organization formed in 2007 to improve and protect the water quality in the Raccoon Creek watershed. RCP (and former iterations of the watershed group which began in the 1980s) have completed nineteen projects to treat mine drainage in the upper and middle section of the watershed.*

Comment 19: Page 96 – Office of Surface Mining is also a major funder of AMD/AML projects with their WCAP (Watershed Cooperative Agreement Program) grants. (RCP)

Response 19: Corrected, thank you.

Comments related to sources of impairment

Comment 20: In Table 1 - “Natural Sources” is listed as a source of impairment, but “Natural Sources” is not ever explained anywhere. Most of the causes are explained starting on page 14 Mechanisms for Water Quality Impairment. (RCP)

Response 20: The attainment table now includes language to explain natural sources as low flow conditions or wetland.

End of Response to Comments