Organization	Assessment Unit ID or MLD ID	Assessment Unit Name or MLID Name	Public Comment: (Note: Some original public comments were split. If the full comment is needed for context, please refer to the original document).	Division of Water Quality Response
Moab Area Watershed Partnership	UT14030005-006_00	Mill Creek 2	The assessment unit contains two very different watersheds that are not hydraulically connected in the unit. I donâ€™t believe I need to explain the rationale for separating them to your experts in assessments. I believe the partnership only needs to point out the issue. We will say these two watersheds are distinctly different which is why the lower altitude sections of these watersheds have separate assessment units. It is a mistake to assess both these watersheds in one unit.	DWQ appreciates this suggestion to examine the current segment configuration for this assessment unit and will work with the local watershed coordinator to determine an appropriate resegmentation for the 2022 Integrated Report. Since this takes time, the resegmentation will not be completed for the combined 2018/2020 Integrated Report.
Moab Area Watershed Partnership	UT14030005-011_00	Pack Creek	Your map of this assessment unit has Pack Creek listed for Max Temperature, Total Dissolved Solids, Selenium, and E. coli. However, the map fails to indicate that a TMDL has been developed for Max Temperature and Total Dissolved Solids. That document is located on your website and only states Mill Creek, Grand County in the title. However, Pack Creek is a tributary to Mill Creek and the TMDL covers both watersheds.	The TMDL "Mill Creek, Grand County" addresses temperature and Total Dissolved Solids (TDS) impairments in Pack Creek. However, the TMDL was approved by the Environmental Protection Agency for temperature only, not TDS. As a result of this comment, the Pack Creek Assessment Unit was re- categorized as 4A, "Approved TMDL" for temperature. However, Pack Creek is still considered Not Supporting (Category 5) due to E. coli, selenium, and TDS impairments. Thank you for bringing this to DWQ's attention.
Moab Area Watershed Partnership	4958032	Castle Creek 1/4 mile above U 128 Xing	The assessment unit is listed for E. coli and Macroinvertebrates. We are questioning the listing of non-supporting for Macroinvertebrates. The assessment methodology states it is necessary to have two samples where o/e is less than .69 in order to list a stream as non-supporting. There has only been one sample collected. I believe this was listed as non-supporting prior to your newer assessment methods and was listed when non-support for macroinvertebrates was done with only one sample. We believe at this time it shouldnâ€™t be listed at all for any data associated with macroinvertebrates because there is only one sample. We are also concerned with the RIVPACS model for this stream section. The RIVPACS model doesnâ€™t take into consideration local naturally occurring variations in streams. This stream section and assessment unit has a site specific standard of 1,800 mg/l for Total Dissolved Solids because of naturally occurring conditions. The RIVPACS model is comparing it to streams that are not as saline and therefore the observed taxa at this site is naturally different from the expected reference sites in the RIVPACS model. In the summer of 2020 we requested another macroinvertebrate sample collection at this site. It was sampled this fall. Hopefully this effort will lead to a greater clarity in the streams support of a macroinvertebrate community	This comment refers to a listing that was made based on data and methods that preceded the combined 2018/2020 Integrated Report Assessment Methods. Despite listing based on prior methods, DWQ cannot delist a waterbody until additional information is collected and analyzed; the new sample referred to in this comment will be evaluated in the next Integrated Report cycle. This comment also calls for a site specific aquatic life criterion endpoint; the adoption of such an endpoint would require the development of site specific standards and require a change to water quality standards (UAC R317.2), which is out of scope for the Integrated Report. No changes were made as a result of this comment.
Moab Area Watershed Partnership	UT14030005-009_00	Castle Creek1	The Moab Area Watershed Partnership (MAWP) is a diverse group of stakeholders with a focus on water quality and quantity in the greater Moab area. It has come to our attention that several of the assessment units in the watersheds of our concern have been listed as a â€œlow priorityâ€ to receive a Total Maximum Daily Load (TMDL) plan for E. coli. We realize that UDWQâ€™s TMDL prioritization is based on DWQâ€™s Vision process that will likely not take place again until 2022; however, we have a large population of people recreating in our creeks and would like to stress how important it is for us to address E.coli issues in these populated areas in a timely manner. . With a TMDL in place, we can begin taking steps to address our E. coli issues through the TMDL framework. We are requesting that the TMDL priority be changed from low to high and will plan on providing feedback during the next â€œvisioningâ€ process to ensure that this change occurs. Below are listed the specific assessment units that are currently considered a â€œlowâ€ priority that we would like changed to a â€œhighâ€ priority in the future:	DWQ will consider a TMDL prioritization change from "low" to "high" for the E.coli impairments in the commentor's listed assessment units during our 2022 vision process for priortization of Utah's 303(d) list for TMDL Development. No changes to the TMDL status in the current report will be made at this time.

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Southeast Utah Health Department	UT1403005-004_00	Colorado River 4	The Southeast Utah Health Department has reviewed your 2018-2020 Draft Integrated report. We would like your assessment team to reconsider the not supporting assessment of its recreational beneficial use for the Colorado River from the confluence of the Dolores River to the Confluence of Mill Creek. Your assessment protocol states: â€œUntil the determination of impairment and the review of additional supporting information are completed by reviewers, parameter assessments at an individual monitoring location and results from multiple monitoring locations within the same AU are not summarized and combinedâ€. We respectfully request you review the additional supporting information on this assessment. We acknowledge that there are two samples of five in one season at one site that exceed the maximum standard for E. coli of 409 MPN. We would like you to consider the supporting information from the other site in this unit as well as the data from other years. If you look at the entire assessment unit, there are 20 samples taken from two sites during the time period used for this assessment. There are only 2 exceedances of the maximum standard which is equal to 10%, the limit for standard parameters. Other than the two samples that exceeded the maximum standard, none of the individual samples exceeded the geometric mean standard of 126 MPN. The geometric mean unit during this time period is 32.8 MPN. The geometric mean for the site that exceeded the maximum standard is 49.4 MPN and the geometric mean for the season in question if 76.4 MPN. All of these results are significantly less than your standard of 126 MPN. Furthermore, although we realize you wonâ€™t use this information according to your standard protocols, there hasnâ€™t been an exceedance of the maximum standard on this unit since 2018. We would like you to consider all this information and determine the assessment unit is supporting its recreational beneficial use. We also understand that there is variability of E. coli in surface waters, especially streams. Your agency is aware of that variability and your protocols for resampling are a result of that variability. We consider the two samples that exceeded the maximum standard to be exceptions due to the variability in the streams and believe the preponderance of data points to a river that supports its 2A beneficial use designation. Thank you for the opportunity to comment and the excellent work your agency performs in our area.	DWQ performs assessments at the monitoring location level, and uses assessments from all sites throughout the assessment unit to assign an assessment unit-level category. Because one site in the assessment unit was not supporting for E. coli, the assessment unit received the preliminary not supporting category. This was then reviewed by DWQ staff in the secondary review process to consider whether the impairment is appropriate. Our team determined that this impairment was made based on sound data and should be used to list Colorado River-4 (UT14030005-004_00). In future IR cycles, this assessment unit may be delisted for E. coli if current data and information show that the site is meeting water quality standards for E. coli.
EPA	UT16020101-014_00	Chalk Creek3-Coalville	Non-pollutant Habitat should show Category 4C.	DWQ added a (4C) to the category description of Non-Pollutant. ATTAINS contains this 4C Non-Pollutant Habitat documentation for UT16020101-014_00
EPA			Chapter 1 Assessment Methods Â· Update the links to the QAPP and SOP documents on Page 20. When clicking on a few of these links, a 404 Page Not Found Error is received.	Thank you for this comment. All links in the Combined 2018/2020 Integrated Report Assessment Methodology have been updated.
EPA			Chapter 2: Assessments Specific to Lakes, Reservoirs, and Ponds Â· On May 22, 2019, EPA issued recommendations for Recreational Water Quality Criteria and Swimming Advisories for Cyanotoxins. Based on the latest scientific information, EPA has established recommended water concentrations, at or below which protects public health, for the cyanotoxins microcystins (8 micrograms per liter) and cylindrospermopsin (15 micrograms per liter).1 The listing and assessment methodology, Table 15 lists the draft thresholds from 2016.	This comment refers to EPA 822-R-19-001, “Recommended Human Health Recreational Ambient Water Quality Criteria or Swimming Advisories for Microcystins and Cylindrospermopsin” which was issued in May 2019. However, EPA guidance for implementing these recommendations (EPA 823-D-19-002) was not issued in draft form until December 2019. The Utah combined 2018/2020 Integrated Report methods were finalized on May 20, 2019, yielding too little time to develop methods around criteria recommendations from EPA 822-R-19-001. This comment is out of scope of the Integrated Report because it refers to Assessment Methods; the current public comment period is held for the Report that contains the assessment results and the subsequent 303(d) list and 305(b) status, not the Assessment Methods. No changes were made as a result of this comment.

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EPA			Chapter 2: Assessments Specific to Lakes, Reservoirs, and Ponds DEQ identified â€œLakes Tier IIIâ€ as an impaired parameter for several assessment units. EPA does not consider â€œLakes Tier IIIâ€ as a parameter that causes impairment. EPA recommends that DEQ update all assessments with â€œLakes Tier IIIâ€ with an impairment parameter.	Lakes with Tier II listings in the draft combined 2018/2020 Integrated Report are now listed as "Eutrophication (tier II)" in the final report. These are identified as eutrophication in ATTAINS uploads. Tier II listings were previously identified in ATTAINS as cause unknown. Those have also been updated to eutrophication.
EPA			Chapter 3: Assessments Specific to Flowing Surface Waters of the State and Canals Â· EPA understands that Utah uses the 30-day average to assess whether the dissolved oxygen (DO) criterion is attained. EPA encourages Utah to compare exceedances observed using the 30-day average to other DO durations (i.e., 7-day average, daily minimum) to document that this approach is the most protective.	DWQ, other states, and EPA continue to evaluate and discuss appropriate assessment methods and criteria for the use of grab and high frequency dissolved oxygen data in assessments. DWQ will continue to evaluate the use of multiple dissolved oxygen criteria in the assessment process in the 2022 and future Integrated Reporting cycles. No changes to the dissolved oxygen assessments were made in response to this comment.
EPA			Individual Assessment Unit Comments EPA has identified several assessment units below where the information in the Chapter 2 and 3 Tables should be updated to reflect the same information in ATTAINS. At the same time, EPA recognizes that some discrepancies may not have been identified. EPA strongly recommends that UDEQ complete a thorough review of the draft 303(d) list (Category 5), as well as Category 4a assessment decisions to ensure that all Category 4a and Category 5 assessment decisions are accurately reflected in the Chapter 2 and 3 Tables, as well as in ATTAINS.	Thank you for catching these discrepancies. DWQ performed a cross-check between ATTAINS and the Chapter 2 and 3 tables, as well as verified all new listings and delistings.
EPA	UT16030002-004_00	Otter Creek-2	Non-pollutant Habitat should show Category 4C	DWQ added a (4C) to the category description of Non-Pollutant. ATTAINS contains this 4C Non-Pollutant Habitat documentation for UT16030002-004_00
EPA	UT14060005_003_00	Ninemile Creek	This assessment unit is in Category 4a in the table and shows 2020 under cycle first listed. Cycle first listed should either be removed or reflect the correct first cycle list year. The EPA approved TMDL in ATTAINS is under Action ID 68462, Upper Nine Mile Temperature TMDL. Also, it appears that this assessment unit should be in the delisting table showing a delisting reason of TMDL approved (Category 4a).	DWQ corrected the cycle first listed to 1998 to match the year the Assessment Unit and parameter were included in the 303(d) list, prior to the TMDL. This correction was also performed in ATTAINS. We also added it to the delisting table.
EPA	UT15010008-015_00	North Fork Virgin River-1	This assessment unit (AU) is in Category 4a for the AU / pollutant combination and shows 2020 under cycle first listed for E-coli. Cycle first listed should either be removed or reflect the correct first cycle list year. The approved TMDL in ATTAINS is under Action ID R8-UT-2018-01 Total Maximum Daily Load Assessment for E. coli, North Fork Virgin River Watershed. Also, it appears that this assessment unit should be in the delisting table showing a delisting reason of TMDL approved (Category 4a)	DWQ corrected the cycle first listed to 2014 to match the year the Assessment Unit and parameter were included on the 303(d) list, prior to the TMDL. This correction was also performed in ATTAINS. DWQ also added it to the delisting table.
EPA	UT16010203-008_00	Spring Creek-Hyrum	This assessment unit (AU) is in Category 4a for the AU / pollutant combination and shows 2020 under cycle first listed for E-coli. Cycle first listed should either be removed or reflect the correct first cycle list year. The approved TMDL in ATTAINS is under Action ID 4012 Spring Creek TMDL	DWQ corrected the cycle first listed to 2002 to match the year the TMDL was approved. The TMDL specifies fecal coliform, however, we now collect E. coli samples in favor of fecal coliform. This correction was also performed in ATTAINS.

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EPA	UT UT16010202-009_00	Spring Creek-Lewiston	This assessment unit shows in Category 4a for the AU / pollutant combination (Minimum Dissolved Oxygen) and shows 2020 under cycle first listed. Cycle first listed should either be removed or reflect the correct first cycle list year. Under Assessments in ATTAINS, the pollutant Total Phosphorus shows in Category 4a; however, there is no Minimum Dissolved Oxygen pollutant. UDEQ needs to ensure that ATTAINS reflects the correct pollutants and assessment categories for this assessment unit.	DWQ corrected the cycle first listed to 1998 to match the year the exceedances were noted in the TMDL. Minimum Dissolved Oxygen has been included as a TMDL pollutant, and the cycle first listed in ATTAINS matches the IR table.
EPA	UT16010101-006_00	Bear River-4	This assessment unit (AU) is in Category 4a for the AU / pollutant combination and shows 2020 under cycle first listed for Minimum Dissolved Oxygen. Cycle first listed should either be removed or reflect the correct first cycle list year. The approved TMDL in ATTAINS is under Action ID 30887 Bear River-4 Bear River from Woodruff Creek to Utah-Wyoming Border TMDL	DWQ corrected the cycle first listed to 2000 to match the year the Assessment Unit and parameter were included in the 303(d) list, prior to the TMDL. This correction was also performed in ATTAINS.
Wasatch Front Water Quality Council			Preparation of the 303(d) list is a monumental task and I applaud DWQ's effort to assemble this important list of impaired waters. Similarly, it is important to disseminate and seek comments on the 305(b) methods chapter. However, it is difficult and time consuming to toggle back and forth to understand the assessment methods and the resultant decision to list a stream segment or lake. This has been particularly true in understanding how reference condition was identified for comparison of O/E in the Jordan River. In short, it is just about meaningless to comment on the 303(d) exclusively because virtually all comments would be, will be, or are related to the manner of performing assessments.	DWQ hosts 2 public comment periods for the Integrated Report. Early in the process, DWQ reviews and releases the Assessment Methodology for public comment because it guides how DWQ conducts the years worth of data processing and assessment. The second public comment period occurs at the end of the Integrated Report cycle and is held for the Report that contains the results and the 303(d) impairment list. During the second comment period, if a comment pertains to the assessment methodology instead of the results, DWQ considers the comment "out of scope" and will address it during the next reporting cycle that occurs 1 year later. However, DWQ will respond to a public comment if the comment is addressing a result as it relates to the assessment methodology. No changes were made as a result of this comment
Wasatch Front Water Quality Council			Jordan River: It is disappointing that after the many hours that many commenters spent in providing constructive written comments on the 303(b), that precious few were considered in order to improve assessment methods. In particular, the use of a single metric for determining whether the macroinvertebrate community is fully supporting is an unacceptable minimal use of available and more descriptive metrics that have wide-spread use in all other states, including those that include the O/E metric. The primary shortfall is that the simple O/E fraction doesn't provide a clue as the potential cause of a low score. For example, with the descriptors including average watershed values for things such as temperature, slope, precipitation, etc., there is no way to determine whether a fractional change in O/E is due to natural river continuum principles vs low DO, TDS, an unmeasured toxic, or simply being smothered by depositing material as a result of dewatering the channel.	This comment is out of scope of the Integrated Report because it refers to Assessment Methods; the current public comment period is held for the Report that contains the assessment results and the subsequent 303(d) list and 305(b) status, not Assessment Methods. DWQ provided responses to similar comments during the assessment methods comment period, which can be found in the 303(d) Assessment Methods Response to Public Comment documents in the current or previous IR cycles. No changes were made as a result of this comment.

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Wasatch Front Water Quality Council			Jordan River: As opposed to other measured parameters or constituents which are considered true stressors, phosphorus, by itself is not a stressor and has no direct effect on macroinvertebrates or fish. Rather, because it is also an essential nutrient for all members of the food web, there are minimal requirements to sustain life and because phosphorus exhibits varying effects at higher concentrations, due to other variables such as substrate stability, turbidity, its concentration relative to N and C, etc., it is impossible to designate where beneficial concentrations are exceeded (appropriate criteria) without site-specific studies to understand the influence of these many covariables. As a prime example, it has been indisputably demonstrated that excessive SOD, resulting from settling allochthonous organic matter, as a result of vast dewatering of the channel, is responsible for low DO in the Jordan River rather than the more popular link between P, excessive algal production and subsequent DO sags due to algal decomposition. Therefore, this number has little interpretive value for TMDL development or restoration effort without a thorough evaluation of other covariables. This is particularly the case for the Jordan River. Moreover, the development of a theoretical reference condition for the Jordan River is simply guesswork, which, to this day, has not been thoroughly vetted by peer review or local or other experts. In these days when transparency is the mantra, to develop and use a singular and obscure metric to make such important and potentially very expensive decisions is inappropriate. As with efforts for transparency with recent projects such as the Utah Lake Water Quality Study, I suggest that DWQ follow suit and re-establish a TAC to open up for review the O/E metric and to evaluate other usable metrics and particularly for valley streams.	This comment is out of scope of the Integrated Report because it refers to Assessment Methods; the current public comment period is held for the Report that contains the assessment results and the subsequent 303(d) list and 305(b) status, not Assessment Methods. DWQ provided responses to similar comments during the assessment methods comment period, which can be found in the 303(d) Assessment Methods Response to Public Comment documents in the current or previous IR cycles. Additionally, attribution of impairment sources are not part of the Integrated Report decision process, those questions are investigated during the Total Maximum Daily Load development process. No changes were made as a result of this comment.
Wasatch Front Water Quality Council			Many streams statewide are being added to the 303(d) list. It appears to me that this is likely due to the change in DWQ's assessment method to reduce the sampling requirement to measurement of only two exceedances of a total of 4 samples – regardless of timing or frequency of sampling. This can lead to biased sampling or even the use of outlier data. I suggest that DWQ return to performing a minimum of 10 samples and determining whether 2 or more samples exceed the criteria. This will reduce the likelihood of using outlier data and add more credibility to the data set before additional time and money is spent on TMDL development.	This comment pertains to our 303(d) assessment methods and is out of scope for the Draft combined 2018/2020 Integrated Report.
Wasatch Front Water Quality Council			Jordan River: Please explain why the Jordan River from Little Cottonwood Creek to 7800 South was impaired for macroinvertebrates while the segment from 7800 South to 14600 South was fully supporting (e.g. the stream gradient is steeper and the substrate is generally larger and more stable in reaches that are closer to the Narrows.	This comment appears to be based on a misread of Integrated Report results by the commenter. The Jordan River from Little Cottonwood Creek to 7800 South (AU UT16020204-005_00) was not determined as not attaining aquatic life uses for macroinvertebrates. The segment from 7800 South to 14600 South (AU UT16020204-006_00) was determined to be not supporting aquatic life uses for macroinvertebrates. No changes were made as a result of this comment.
Wasatch Front Water Quality Council			Jordan River: please explain why the segment from North Temple to 2100 South is impaired for total P when numeric nutrient criteria do not exist for any stream segments except headwater segments. In fact, in consideration of the information discussed above, no segments in the Jordan River should be listed for phosphorus.	Jordan River-3 (UT16020204-003_00) was first listed for Total Phosphorus in the 2008 Integrated Report. At that time, assessment units exceeding the total phosphorus indicator criterion required further study to determine how total phosphorus was having an impact on aquatic life. Jordan River-3 was also listed for macroinvertebrates in 2008, indicating that excess phosphorus was having a negative impact on the waterbody. EPA approved this 303(d) list in 2012. No changes were made as a result of this comment.

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Wasatch Front Water Quality Council			Jordan River: I thought that DWQ had agreed to site-specific temperature criteria or was adopting warm-water temperature criteria in segments 5 and 6 because of misclassification and the inherent dewatering of the channel. Please clarify.	As described in Chapter of 1 of the Integrated Report, assessments are based on R317-2, Standards of Quality for Waters of the State. The current aquatic life use for these segements of the Jordan River is Class 3A cold water aquatic life (R317-2-13.5). Changes to the standards are beyond the scope of the Integrated Report. A change from cold water aquatic life to warm water aquatic life for these segments was adopted by the Utah Water Quality Board at the December, 2020 meeting and is currently being reviewed by the EPA. If EPA approves the change, future assessments will be based on the warm water criteria.
OreoHelix Ecological			Jordan River: Macroinvertebrate impairment occurred for all Jordan River (JR) AUs, except AU-8. Macroinvertebrates in the Jordan River weren't assessed since 2008 or 2010 - ten to twelve years ago. Impairment could have and has likely gotten worse. In Chapter 3, there is no description of which macroinvertebrate taxa were absent (i.e., observed minus expected). Based on my more than ten years conducting macroinvertebrate research on the Jordan River and more than 40 years throughout the western U.S., I conclude that the measure of macroinvertebrate impairment that DWQ uses, the single metric RIVPACs, provides very little useful information. This deficiency is my major concern, that DWQ does not adequately evaluate macroinvertebrate assemblage health or impairment and that listing of rivers and streams in UT as impaired, fully supporting, or other classifications in Chapter 3 for macroinvertebrates, using only one metric, is suspect.	This comment is out of scope of the Integrated Report because it refers to Assessment Methods; the current public comment period is held for the Report that contains the assessment results and the subsequent 303(d) list and 305(b) status, not Assessment Methods. DWQ provided responses to similar comments during the assessment methods comment period, which can be found in the 303(d) Assessment Methods Response to Public Comment documents in the current or previous IR cycles. No changes were made as a result of this comment.
OreoHelix Ecological			Jordan River: DWQ lists specific chemistry impairments such as easily quantified chemistry variables including zinc, copper, cadmium, E. coli, TDS, DO, etc. in the Jordan River but only one metric for macroinvertebrates even though there are likely more than forty easily identified common taxa whose ecologies and sensitivities are fairly well understood. Without more information, concerned citizens cannot hope to evaluate DWQ's listings of macroinvertebrate impairments, especially as they poorly correlate with other concurrent types of impairments listed in Chapter 3. There appears to be no additional information available on macroinvertebrate impairment and no link to the data in Chapter 3 to verify DWQ assumptions and conclusions.	This comment is out of scope of the Integrated Report because it refers to Assessment Methods; the current public comment period is held for the Report that contains the assessment results and the subsequent 303(d) list and 305(b) status, not Assessment Methods. DWQ provided responses to similar comments during the assessment methods comment period, which can be found in the 303(d) Assessment Methods Response to Public Comment documents in the current or previous IR cycles. Additionally, attribution of impairment sources is not part of the Integrated Report decision process, those questions are investigated during the Total Maximum Daily Load development process. No changes were made as a result of this comment.
OreoHelix Ecological			Jordan River:None of the streams and rivers in Chapter 3 were listed as impaired for physical impairments, one of the three 'legs' in CWA definition of ecological integrity. Can we assume that DWQ does not measure and report any physical metrics for Utah's flowing waters? If so, why not? These measures are not difficult to obtain or evaluate. Or should we assume, that none of Utah's waters are physically impaired. I know this not to be the case. Obviously, macroinvertebrate impairment is related to physical impairment. To ignore physical measures, particularly in the Jordan River, is a gross oversight by DWQ and needs to be remedied as soon as possible. We all understand the transition from severe embeddedness, to severe bedload instability, to severe deposition are critical impairments to the River and the great majority of the River suffers from one or more of these conditions – causing macroinvertebrate impairment.	This comment is out of scope of the Integrated Report because it refers to Assessment Methods; the current public comment period is held for the Report that contains the assessment results and the subsequent 303(d) list and 305(b) status, not Assessment Methods. UDWQ provided responses to similar comments during the assessment methods comment period, which can be found in the 303(d) Assessment Methods Response to Public Comment documents in the current or previous IR cycles. No changes were made as a result of this comment.

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OreoHelix Ecological			Mill Creek3-SL City, American Fork, Current -Goshen AUs as just a few examples were classified as 'no evidence of impairment' or 'fully supporting', however native mussels that once thrived are apparently extinct in these units. Mussels and other mollusks are extremely important keystone species in the Wasatch Front drainages and their loss has major ecosystem function impacts. Again, the reason DWQ misdiagnosed these AUs and likely others was because of reliance on RIVPAC models that only use > 50% probability of capture. This is a sad state of affairs in my opinion. Utah Division of Wildlife Resources has begun an excellent effort to monitor aquatic mollusks in UT and may have been hindered in their efforts by their sibling organization that for the last few decades failed to manage or even monitor this important taxonomic group. Thankfully UDWR has now taken the lead monitoring Utah's native mollusks. DWQ should follow their lead.	The assessments for Mill Creek, American Fork Creek, and Current Creek were conducted consistent with the assessment methods presented in Chapter 1 of the Draft Integrated Report. The biological assessment methods are not intended to be exhaustive and do not currently explicitly include for instance, fish, algae, water column invertebrates or native mollusks. Comments on the assessment methods should be submitted during the public comment periods specifically for the assessment methods.
OreoHelix Ecological			In Chapter 3 there were no specific fish metrics and in Chapter 2 the Lakes and Reservoirs chapter there were no biological metrics, fish or macroinvertebrates, even though DWQ designated beneficial uses are fisheries centric. I recommend DWQ consult with UDWR fisheries biologists on a regular basis to determine if a lake or reservoir is providing a sustainable fishery and subsequently fully supporting DWQ's mandate	This comment is out of scope of the Integrated Report because it refers to Assessment Methods; the current public comment period is held for the Report that contains the assessment results and the subsequent 303(d) list and 305(b) status, not Assessment Methods. No changes were made as a result of this comment.
OreoHelix Ecological			DWQ listed Green River-1 AU as 'Fully Supporting' and Green River-2 AU as 'Not Supporting' but only for selenium. Neither AU's were listed for temperature, DO, or macroinvertebrates. These units are completely impacted by the Flaming Gorge dam-reservoir. The natural ecological condition (integrity) of these units was far from what conditions are now due to the dam. These units were much warmer, had lower DO, and a macroinvertebrate assemblage unique to large, silt and sand laden SW desert river ecosystems that are some of the most endangered in the U.S and once supported now threatened and endangered endemic fish species.	This comment requests a site specific aquatic life criterion endpoint specific to hydrologic modification; the adoption of such an endpoint would require the development of site specific standards and require a change to water quality standards (UAC R317.2), which is out of scope for the Integrated Report. US EPA provides the States flexibility to investigate and adopt these criteria. However, compared to other needs, this is a low ranking priority for Utah. No changes were made as a result of this comment.
OreoHelix Ecological			Green River: The beneficial use designation is misappropriation for upper Green River and is a clear case of modern humanistic, socially desirable, anthropomorphic, magisterial, fantasy-based bias that all rivers should be clear, clean, and cold and filled with trout (i.e., cold water fisheries beneficial use). This designation flies in the face of all river ecologists attempts at preserving native river ecosystems and seriously violates the ecological integrity clause of the Clean Water Act, i.e., "maintain and improve the physical, chemical, and biological integrity" of its waters. DWQ obviously is not interested in protecting natural conditions but caters to current societal recreational and economic desires. I understand, I enjoy fly fishing the upper Green River myself but as a river ecologist I understand the need to protect the integrity of what few remaining free flowing large desert river ecosystems we have	As described in Chapter of 1 of the Integrated Report, assessments are based on R317-2, Standards of Quality for Waters of the State. The current aquatic life uses for Green River specificied in R317-2-13.1.b were correctly assessed. Changes to the standards are beyond the scope of the Integrated Report. Recommendations for standards changes are accepted during the Triennial Reviews of the Water Quality Standards. The next Triennial Review is scheduled for 2023. More information regarding standards is available by contacting Chris Bittner, Standards Coordinator, at cbittner@utah.gov.
OreoHelix Ecological			I tallied the impaired rivers and streams vs. total AUs reported in Chapter 3 and found that 39% of rivers and streams in UT were listed as 'impaired', which was even more than rivers and streams with 'insufficient data', 'partially supporting', and by far greater than 'fully supporting'. In all, I tallied 88% of the rivers and streams in UT as combined impaired, partially supporting, and insufficient data. Only 9% of our rivers and streams (AUs) were designated 'fully supporting', although I have no reason to believe that these few rivers and streams are truly fully supporting DWQ designated beneficial uses or ecological integrity as outlined in the Clean Water Act. There are just too many discrepancies and inconsistencies in Chapters 2 and 3 in the latest Integrated Report.	Without more details on the nature of the issues raised and the changes requested, DWQ cannot address the comment.

Organization	Assessment Unit ID or MLD ID	Assessment Unit Name or MLID Name	Public Comment: (Note: Some original public comments were split. If the full comment is needed for context, please refer to the original document).	Division of Water Quality Response
Salt Lake City Public Utilities	UT16020204-010_00	City Creek-2	The DRAFT Integrated Report lists City Creek Assessment Unit 2 (City Creek-2) Assessment Unit ID UT16020204-010_00 as impaired for Cadmium for Beneficial Use Class 3A- Protected for cold water species of game fish and other cold water aquatic life. The assessment date range for this listing was 2008 through 2013. During the assessment range, one Cadmium sample collected on Octob er 15, 2008 triggered this listing. Since the sample from October 15, 2008, all subsequent samples and data have been Non-Detect or below the standard. Due to the continued Non-Detect results over the past 12 years, we request the delisting of the Cadmium impairment for City Creek-2 (UT160 20 204-0 10_ 00).	The DRAFT 2018/2020 IR lists the class 3A aquatic life use for City Creek-2 AU (UT16020204-010_00) as impaired for Cadmium (Cd). A public comment identified supplemental information potentially showing the assessment unit to be meeting Cd criteria. Class 3A Cd criteria are for the dissolved fraction and are hardness dependent, with higher hardness resulting in higher calculated criteria. The supplemental data provided by the commenter was only available in the total fraction and did not include hardness and were therefore not used in the preliminary assessment process, resulting in the existing Cd listing being carried to the 2018/2020 Draft IR. Upon further review of supplemental information, DWQ agrees with the commenter that the AU is meeting all applicable Cd criteria. The lowest applicable Cd criterion in this AU is the class 3A aquatic life use chronic criterion. This criterion is 0.72 ug/L assuming a hardness of 100 mg/L. The minimum observed hardness in this AU is 180 mg/L, meaning the lowest applicable Cd criterion would never be less than 0.72 ug/L. The total Cd concentrations provided in the supplemental dataset are all below the 0.72 chronic Cd criterion or non-detect values with a detection limit (0.50 ug/L) below the criterion during the 2018/2020 IR period of record. Dissolved Cd concentrations in these samples would be lower than total concentrations and therefore must also be below the lowest applicable criterion. Therefore this AU is meeting applicable Cd criteria and the class 3A Cd listing has been delisted in the final 2018/2020 IR.
Utah Division of Water Quality	UT16020204-001_01	Jordan River-1	The Jordan River-1 (UT16020204-001) copper impairment originated from a site called North Canyon Creek in Legacy Nature Preserve (4990987). It is impaired for its Aquatic Life uses 3B (warm water) and 3D (waterfowl, waterbirds) use. Three samples (out of 12) exceeded the hardness-dependent acute and chronic criteria, collected on 4/26/2011, 7/17/2012, and 10/23/2012. Because greater than 2 samples exceeded the criteria, the site was listed, which caused the AU to be listed. However, the Jordan River-1 assessment unit has been split, such that site 4990987 now occurs in the North Canyon Creek (UT16020204-001_02) assessment unit. That site is still impaired for copper, but the Jordan River-1 AU (UT16020204-001_01) shows full support in the remaining sites in 2018/2020. An internal request was made to delist the Jordan River-1 AU for copper this cycle.	Jordan River-1 (UT16020204-001_00) was split into Jordan River-1 (UT16020204-001_01) and North Canyon Creek (UT16020204-001_02). The copper impairment occurs in North Canyon Creek at site 4990987. Data from sites within Jordan River-1 show that this assessment unit is not impaired for copper. As such, DWQ delisted UT16020204-001_01 for copper, and listed UT16020204-001_02 for copper.