Appendix G – Response to Public Comments

Comments were received from:

(a) Oklahoma DEQ Staff (DEQ)
(b) Jeff Everett, OGE Energy Corp. (OGE)
(c) Derek Johnson, City of Oklahoma City (OKC)
(d) Brian Lewis, City of Tulsa (COT)

This key is used in the summary of comments below to identify the commenter. DEQ responses to comments are indicated in *italics*.

1. (DEQ) During review of data for TMDL development and transition to EPA's ATTAINS database, DEQ staff noticed the following waterbody assessments needing corrections:

   a) OK410210020140_00: Fish Consumption was "Not Supporting" with no cause of impairment listed. Lead should be added to causes.
   OK121300010050_00: Agriculture was "Not Supporting" with no cause of impairment listed. TDS should be to causes.
   OK520500010020_00: Fish Consumption was "Not Supporting" with no cause of impairment listed. Mercury should be added to causes.
   OK621100000010_00: Fish Consumption was "Not Supporting" with no cause of impairment listed. Assessment from OWRB shows "Fully Supporting" (4/1/2015). Should be changed to "Fully Supporting" and the delisting for lead should be removed. (There was no listing for lead in 2014. Lead delisting is for OK621100000010_10.)
   OK520700020060_00: Fish Consumption was "Not Supporting" with no cause of impairment listed. Mercury should be added to causes.
   OK520500020010_00: Agriculture was "Not Supporting" with no cause of impairment listed. Assessment from OCC shows "Fully Supporting" (4/14/2015). Agriculture should be changed to "Fully Supporting".
   OK310800020010_00: Fish and Wildlife Propagation (FWP) was "Not Supporting" with no cause of impairment listed. Assessment from OWRB shows Insufficient Information (4/1/2015). FWP should be changed to Insufficient Information.
   OK720500030020_00: Fish Consumption was "Not Supporting" with no cause of impairment listed. Mercury should be added to causes.

   b) TMDLs exist for the following 303(d) list waterbodies but were removed from the Assessment Database (ADB) during prior delistings:
   OK310810010090_10: Change chloride to 4a and add TMDL ID
   OK410300030010_10: Change Enterococcus to 4a and add TMDL ID
   OK410400030010_00: Change Enterococcus to 4a and add TMDL ID
   OK621000030010_00: Change turbidity to 4a and add TMDL ID

   c) There was an error in the *E. coli* geometric mean calculation for OK311310010010_00. The correct geometric mean is 106.8 cfu/100 ml. The listing for *E. coli* for this waterbody should be removed. (It was not listed in 2014; therefore, a delisting is not necessary.)

DEQ Response: *These changes have been made to the final version of the 2016 Integrated Report.*

2. (OGE) On the interactive map, Deep Fork River segment OK520710020060_00 was highlighted as impaired. However, it is not listed as impaired in Appendix C and can be found in Appendix D for delisting.

   DEQ Response: *OK520710020060_00 has been removed from the 303(d) GIS layer.*

3. (OKC) Data and assessments were sent to DEQ for the following waterbodies:

   a) Dry Creek (OK520610020070_00) should be delisted for oil and grease.

   b) Chisolm Creek (OK620910040100_00) should be split based on nitrate results from above the wastewater treatment facility.

   c) Perimeter Creek (OK520530000270_00) should be listed for dissolved oxygen and delisted for oil and grease.

   d) Elm Creek (OK520810000100_00) should be delisted for turbidity.

   DEQ Response: *We will take these assessments and associated data into consideration and assess the aforementioned waterbodies using all data for the 2018 cycle.*

4. (COT) What are the sample requirements to remove streams from the 303d list?
   a) Flat Rock Creek was 303d listed for benthics in 2012, removed in 2014, and re-listed in 2016. Are parts of the same data used in both the 2014 and 2016 reports?

      DEQ Response: *Yes.*

   b) If no data is collected in the meantime does the impairment simply remain on the list?

      DEQ Response: *Yes. Impairments cannot be removed from a waterbody due to a lack of new data. Impairments must remain until data is collected indicating that the waterbody is no longer impaired.*

   c) For example, if data was collected in the year 2000 and an impairment listed, but no data collected again until 2010, would the data from the year 2000 be included in the analysis to determine use support in 2010?

      DEQ Response: *Data used is collected in the five year period covered by the IR. For example, for the 2016 report, data collected from 4/1/2010 – 4/30/2015 was used. This means that some of the data will be used for more than one report, but not all. Macroinvertebrate data requires that a minimum of four samples is collected over two years. If data was collected in 2000 and not collected again until 2010, some*

data from older collections could be included to get four, but most likely, the agency that sampled would wait until the 2014 IR (4/1/2008-4/30-2013) to reevaluate the stream for benthics.

5. (COT) What determines the issuance of a unique stream segment ID and name? Twin Hills Creek (aka Fry Ditch Creek) has an unnamed tributary that is 1.3 miles long. However, Brookhollow Creek is roughly 4 miles long, has roadside creek name signage, and does not have a stream segment ID. In the same vein, some WBID segments are dozens of miles long while other watersheds are much smaller, and have multiple WBID's.

   DEQ Response: *WBIDs are assigned at the request of another agency or another section of ODEQ. Some waterbody segments may be divided further if there is a discharger or a significant difference of stream characteristics. For more information about WBID assignment, see Appendix A of the Integrated Report and Appendix A of Chapter 45 http://www.owrb.ok.gov/rules/pdf/current/Ch45.pdf.*

6. (COT) Who checks that data collected is valid? An unnamed tributary of Twin Hills Creek OK120420010025_00 and an Unnamed trib of Little Joe Creek OK120420010340_00 are 303d listed for fish and/or benthics. The Twin Hills tributary has a watershed of 0.3 mi. sq. and Little Joe Creek's watershed is 0.5 sq. mi. and neither in our opinion contain enough flow to ever attain the beneficial use for biological criteria.

   DEQ Response: *OK120420010340_00 was sampled for fish and benthic macroinvertebrates by the Oklahoma Conservation Commission (OCC) in 2007. We cannot delist until we receive new data. OCC sampled for fish bioassessment on OK120420010025_00 in 2013 and found it to be impaired. There were a total of 329 fish collected.*

   Sampling depends on whether or not those watersheds are perennial during normal seasons. OCC would not sample a recently dry stream for benthic macroinvertebrates – or if they did, they would flag that sample as possibly unrepresentative. If the streams usually have water, they should also have benthic macroinvertebrates. They may or may not have fish, but if there is water, there will usually be fish.

7. (COT) Where is the exact Ecoregion boundary?

   DEQ Response: *The Cross Timbers/Central Irregular Plains boundary lies basically along the N/S portion of the Arkansas River in Tulsa. Sites to the East are CIP; sites to the West are CT. OCC looks at the site location and the drainage of the watershed to come up with an ecoregion for the site location and an ecoregion for the water being evaluated. A map of ecoregions is available in the CPP http://www.deq.state.ok.us/wqdnew/305b_303d/Final%20CPP.pdf. (Cross Timbers is the same as COTP.)*

8. (COT) If ecoregions determine stream segment ID, where is the boundary? Most streams in the City of Tulsa have similar TDS readings, but because of the segment ID some are impaired while the others are well within limits.

DEQ Response: *Standards for TDS are located in Appendix F of Chapter 45. The values presented are specific to the 6-digit waterbody segment. The 6-digit segment IDs correlate to the first six digits of the WBID.*

9. (COT) What is the average of all samples Cross Timbers vs Central Irregular Plains and what is the seasonal variation lumped by Summer (April – Sept) vs Winter (Oct – March) by ecoregion?

DEQ Response: *High quality streams have been identified over the years across each ecoregion. Their results are averaged to come up with the reference conditions. OCC is still using data from the original analysis, but are in the process of looking at updating that information. In general, the agricultural beneficial use is attained with respect to TDS if no sample is greater than 700 mg/L. OCC's most recent work using data from the entire year indicates the following:*

CT ecoregion:

TotDisSolids (mg/L)	
Mean	197.481
Standard Error	7.353
Median	195.000
Mode	126.000
Standard Deviation	61.518
Sample Variance	3784.411
Kurtosis	-0.331
Skewness	0.296
Range	285.000
Minimum	71.000
Maximum	356.000
Sum	13823.700
Count	70.000
Mean + 2*StdDev	320.517
Mean + StdDev	258.999
StdDev * 2	123.035
Mean - StdDev	135.964
Mean - 2*StdDev	74.446

CIP ecoregion:

TotDisSolids (mg/L)	
Mean	288.364
Standard Error	20.331
Median	224.000
Mode	209.000
Standard Deviation	182.976

Sample Variance	33480.291
Kurtosis	5.542
Skewness	2.191
Range	1053.000
Minimum	10.000
Maximum	1063.000
Sum	23357.500
Count	81.000
Mean Plus 2	654.317
Mean Plus 1	471.340
Std Dev *2	365.952
Mean Minus 1	105.388
Mean Minus 2	-77.588