

**tjclark2036@gmail.com**

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**To:** tjclark2036@gmail.com  
**Subject:** RE: Brown County Wastewater Master Plan and Watershed Study - Follow-Up

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**From:** tjclark2036@gmail.com <tjclark2036@gmail.com>  
**Sent:** Friday, April 14, 2023 11:06 AM  
**To:** 'Todd Trinkle' <TTrinkle@lochgroup.com>  
**Cc:** 'Brian Webb' <bw3bb@yahoo.com>; kmyers1984@yahoo.com; 'Sandy Higgins' <higginsoffice@yahoo.com>; 'Emily Nelson' <ENelson@lochgroup.com>; 'Sandy Bernard' <Sandy.Bernard@lochgroup.com>; 'Kayla Cotterman' <KCotterman@lochgroup.com>  
**Subject:** RE: Brown County Wastewater Master Plan and Watershed Study - Follow-Up

Todd,

Thank you. I appreciate your responses.

Tim

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**From:** Todd Trinkle <TTrinkle@lochgroup.com>  
**Sent:** Thursday, April 13, 2023 4:42 PM  
**To:** [tjclark2036@gmail.com](mailto:tjclark2036@gmail.com)  
**Cc:** 'Brian Webb' <bw3bb@yahoo.com>; kmyers1984@yahoo.com; 'Sandy Higgins' <higginsoffice@yahoo.com>; Emily Nelson <ENelson@lochgroup.com>; Sandy Bernard <Sandy.Bernard@lochgroup.com>; Kayla Cotterman <KCotterman@lochgroup.com>  
**Subject:** RE: Brown County Wastewater Master Plan and Watershed Study - Follow-Up

Hi Tim,

I tried to answer your questions to the best of my ability in red below. Thank you.



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## Todd Trinkle

Project Manager / Regulatory Specialist



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**From:** [tjclark2036@gmail.com](mailto:tjclark2036@gmail.com) <[tjclark2036@gmail.com](mailto:tjclark2036@gmail.com)>  
**Sent:** Thursday, April 13, 2023 3:06 PM  
**To:** Todd Trinkle <[TTrinkle@lochgroup.com](mailto:TTrinkle@lochgroup.com)>

Cc: 'Brian Webb' <[bw3bb@yahoo.com](mailto:bw3bb@yahoo.com)>; [kmyers1984@yahoo.com](mailto:kmyers1984@yahoo.com); 'Sandy Higgins' <[higginsoffice@yahoo.com](mailto:higginsoffice@yahoo.com)>

Subject: RE: Brown County Wastewater Master Plan and Watershed Study - Follow-Up

EXTERNAL

Hi Todd,

Just following up (questions below).

In addition, the BCRSD PER (see also appendix B), discusses water quality and e.coli but does not identify pastureland as the major source of E.coli, e.g., “Figure 33 details that pastureland loads more E.coli to Brown County streams than other sources under all modified septic failure modeling scenarios.” (pg 70 Watershed Study). **Pastureland does load significant *E. coli* to Brown County streams. Pasture land and livestock are not regulated at this time. Failing septic systems are also a significant source of *E. coli* as described in our Watershed Study and Strategic Plan. Discharges from septic systems are regulated.**

As I mentioned, the perception that has been created is that possible failing septic systems are the major cause of E.coli in the streams. **As stated earlier, septic systems are a major cause of *E. coli* in the stream not the major cause. Pastureland is another major cause.**

Just want to make sure I am interpreting things correctly,

Appreciate your help,

Tim

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From: [tjclark2036@gmail.com](mailto:tjclark2036@gmail.com) <[tjclark2036@gmail.com](mailto:tjclark2036@gmail.com)>

Sent: Thursday, April 6, 2023 3:33 PM

To: 'Todd Trinkle' <[TTrinkle@lochgroup.com](mailto:TTrinkle@lochgroup.com)>

Cc: 'Brian Webb' <[bw3bb@yahoo.com](mailto:bw3bb@yahoo.com)>; [kmyers1984@yahoo.com](mailto:kmyers1984@yahoo.com); 'Sandy Higgins' <[higginsoffice@yahoo.com](mailto:higginsoffice@yahoo.com)>

Subject: RE: Brown County Wastewater Master Plan and Watershed Study - Follow-Up

Hi Todd,

Thank you. Understand that “***E. coli* is found in human and animal waste.**” However, in the study, the comment was made: Executive Summary, pg iv:

Water quality sampling over the past 15 years reveals a problem with *E. coli* contamination in Brown County’s waterways. **The primary source of *E. coli* has been found to be from humans. Failing septic systems are likely contributors to waterway contamination in the county.**

**Humans are one source of *E. coli* contamination in Brown County waterways. The remaining contamination comes from other warm blooded animals.**

Is it more accurate to state that the “primary source of E.coli” in 5 of 22 samples “has been found to be from humans?” **Where the source of *E. coli* contamination could be determined, humans were a major contributor. In the sampling that took place, 5 of the 22 samples were mainly human sourced.**

Further, did the scope of the study include identifying how many failing or inadequate systems are contributing to the E.coli levels? **The watershed study did not determine the number of failing/inadequate septic systems as that would take a thorough investigation of each Brown County household.** The Pareto principles suggests that 80% of the problem (E.coli) can be due to 20% of the causes (failing systems).

On detection of pharmaceuticals, et.al., isn't this to be expected? **When pharmaceuticals are tested for they are typically found in both surface waters.** Why is this relevant? Pharmaceuticals are also found in wastewater when testing is done. **They can be considered another indicator of human contamination of surface water.** Are Septic systems capable of treating this type of waste? **No** How about WW plants? **WW plants provide a higher level of treatment than septic systems. Some WW plant processes limit discharge of pharmaceuticals and additional treatment can be added at WW plants to address more pharmaceuticals if required by permit based on contamination in downstream surface water.** Per IDEM and IDOH, there appears to be no standards related to good or bad. **Neither regulatory authority has passed regulation requiring treatment to limit discharge volumes of any pharmaceuticals.** The Brown County Democrat researched the topic

<https://bcdemocrat.com/2020/01/28/stream-sampling-wheres-the-contamination-coming-from-2/>

On Soils, why repeat the claims that our soils are inadequate for septic systems yet the state requires soil testing before a septic permit is granted? **Soil testing is done to determine the rate at which soil can accept and treat wastewater. It is also done to determine the depth of the soil layer that cannot accept or treat wastewater. Soils are considered inadequate because of the low amount of wastewater it can accept per square foot and shallow limiting layers.** Also, Presby's claim their system treat the waste water before it is released into the soils. And, Brown County has been pushing for Presby's for years. I did not see where the study addressed the Presby technology that counters the "bad soil" argument. **If the technology is approved by the IDOH then it can be used in Brown County. We did not get into specific technologies and their treatment capabilities as part of our work for BCRSD.**

Other comments in **"Blue"** below.

My concern is that for years concerning the Bean Blossom area, the perpetuated myth has been that failing septic systems are the major cause of E.Coli. Doesn't your study refute this claim? **Failing septic systems are a major source of E. coli contamination but not the only source and a septic system has to be failing to be a source of E. coli in surface water.**

Appreciate your feedback,

Tim

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**From:** Todd Trinkle <[TTrinkle@lochgroup.com](mailto:TTrinkle@lochgroup.com)>

**Sent:** Thursday, April 6, 2023 1:20 PM

**To:** [tjclark2036@gmail.com](mailto:tjclark2036@gmail.com)

**Cc:** Brian Webb <[bw3bb@yahoo.com](mailto:bw3bb@yahoo.com)>; [kmyers1984@yahoo.com](mailto:kmyers1984@yahoo.com); Sandy Higgins <[higginsoffice@yahoo.com](mailto:higginsoffice@yahoo.com)>

**Subject:** RE: Brown County Wastewater Master Plan and Watershed Study - Follow-Up

Hi Tim,

Our responses to your emails are below in red. Thank you.



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## Todd Trinkle

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**From:** [tjclark2036@gmail.com](mailto:tjclark2036@gmail.com) <[tjclark2036@gmail.com](mailto:tjclark2036@gmail.com)>

**Sent:** Wednesday, April 5, 2023 4:04 PM

**To:** Todd Trinkle <[TTrinkle@lochgroup.com](mailto:TTrinkle@lochgroup.com)>

**Subject:** RE: Brown County Wastewater Master Plan and Watershed Study - Follow-Up

EXTERNAL

Hi Todd,

Just following up – want to make sure I understand the definition of “human causes.” **Human causes are typically human waste. Human waste could be coming from inadequately treated wastewater – from wastewater treatment plants, septic systems, or homes without any treatment system. We would expect concentrations of *E. coli* from humans to be higher in areas of denser population, especially around lakes like Lake Lemon, Cordry/Sweetwater Lake, and Lake Lemon.**

Tim

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**From:** [tjclark2036@gmail.com](mailto:tjclark2036@gmail.com) <[tjclark2036@gmail.com](mailto:tjclark2036@gmail.com)>

**Sent:** Tuesday, March 28, 2023 8:28 PM

**To:** [TTrinkle@lochgroup.com](mailto:TTrinkle@lochgroup.com)

**Subject:** Brown County Wastewater Master Plan and Watershed Study

Hi Todd,

As a follow up to tonight’s meeting, I would like some clarification on water quality.

In the study, the comment was made: Executive Summary, pg iv:

Water quality sampling over the past 15 years reveals a problem with *E. coli* contamination in Brown County’s waterways. **The primary source of *E. coli* has been found to be from humans. Failing septic systems are likely contributors to waterway contamination in the county.**

In the **Watershed Study**, there were 22 total samples. Of the five (5) samples that tested high for human-caused *E.coli*, only two BB10, BB12, exceeded the state standard. (Figure 28, pg. 64.)

Figure 28 represents sampling done on a single day. Single grab samples have limitations. A geometric mean is a better representation of the presence of contamination. Refer to Figure 26 on page 58.

OK. Pg. 63. “Based on the results of these 5 samples, source tracking suggests that the primary source of E.coli for these sites is human origin.”

**Figure 33 (pg 70) details that pastureland loads more E.coli to Brown County streams than other sources under all modeled septic failure modeling scenarios.** Only if 100% of documented septic system failures are failing do they contribute a significant volume of E.coli to the entirety of Brown County.”

Of the 3 model scenarios completed in the watershed study, only the 100% model showed significant contribution of *E. coli*. As septic system failures approach 100%, they become a significant contributor to waterway contamination within Brown County. In all 5 samples where a source could be determined, not only was a human source identified but it was the **primary source**. Due to laboratory limitations the source was not determined for the other 17 samples, but this does not mean that those samples were free from human sources.

Ok, on the other “17 samples,” it is unknown if they were free from human sources?

Per the studies, “pastureland” not humans and failing septic systems, are the major source of E-coli.

They are a major source. Controlling *E. coli* from pastureland is very difficult and outside the jurisdiction of Brown County Regional Sewer District. The BCRSD can only address the significant contribution from human sources.

Are you associating “pastureland” as being from humans? If so, VERY misleading. Putting everyone in the county on sewers will not significantly reduce e.coli.

No. As explained in the presentation *E. coli* is found in human and animal waste.

Human waste could be coming from inadequately treated wastewater—from wastewater treatment plants, septic systems, or homes without any wastewater treatment system. We would expect concentrations of *E. coli* from humans to be higher in areas of denser population, especially around lakes like Lake Lemon, Cordry/Sweetwater Lake, and Lake Monroe. The BCRSD only has jurisdiction to address the significant contribution of *E. coli* from human sources. This does not preclude owners of pasturelands or other land uses from implementing control measures to also reduce *E. coli*.

Appreciate your clarification,

My post on the topic at the following.

<https://browncountyregionalsewerdistrict.wordpress.com/strategic-plan/>

Tim

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