STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

COMMUNITY PETITION OF UTILITIES \mathbf{OF}) **INDIANA.** INC. FOR **APPROVAL** OF (1) **EXPENDITURES** FOR CONSTRUCTION \mathbf{OF}) **ADDITIONS** AND **IMPROVEMENTS TO**) UTILITY) CAUSE NO. 45389 **PETITIONER'S** WASTEWATER PROPERTIES, AND (2) THE INCLUSION OF THE) VALUE OF SUCH NEW FACILITIES, INCLUDING) PLAN DEVELOPMENT AND IMPLEMENTATION) COSTS, IN PETITIONER'S RATE BASE IN FUTURE) CASES.)

PETITION FOR RECONSIDERATION AND/OR CLARIFICATION

Pursuant to 170 IAC 1-1.1-22(e), Community Utilities of Indiana, Inc. ("CUII" or "Petitioner") respectfully petitions the Commission to reconsider and/or clarify two statements in its May 5, 2021 Order (the Order) in this Cause relating to activities undertaken by CUII to address inflow and infiltration ("I&I"). Reconsideration or clarification is crucial because, while the record demonstrates that CUII has taken important steps to mitigate I&I, the Order concludes that these steps are not meaningful. Likewise, while the record demonstrates that CUII's I&I mitigation program contains every element (save one) identified by stakeholders, the Order concludes that the program is not sufficiently comprehensive. Thus, CUII respectfully believes reconsideration or clarification of two elements of the Order will provide the guidance necessary for CUII to continue to take important steps to remediate I&I and improve service to customers.

First, CUII respectfully requests the Commission reconsider and/or clarify its statement on page 13 that CUII has failed to comply with the Order in Cause No. 44724, which required CUII to "develop a comprehensive I&I program to decrease wastewater backups in homes and manhole overflows and to eliminate water inflow and ground water infiltration into Petitioner's wastewater collection system." The record shows CUII has engaged in activities to address (with one exception) all of the components of a comprehensive I&I program as identified by Lakes of the Four Seasons ("LOFS") witness Holden in LOFS' responses to CUII DR 1-3 (attached as Attachment 1 to this Petition). Furthermore, the record shows that a comprehensive I&I removal program consist of two parts (1) Assessment and (2) Corrective Action:

| Description | CUII Efforts | | | | |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| Smoke Testing | The entire collection system was smoke tested in 2018 and 2019. Dye water testing was conducted in 2019 to further investigate smoke testing suspected I&I locations. Carbonaro Direct at 19. | | | | |
| Wet Weather Inspections | CUII conducted flow monitoring in 2017 and 2018 to identify basins with the most I&I as a method of wet weather inspections. Carbonaro Direct at 18. However, CUII has not performed visual wet weather inspections due to the hazardous nature of such work. Carbonaro Rebuttal at 13-14. | | | | |
| Manhole Inspections | CUII inspects at least 10% of the manholes in the system every year, which includes 10% in 2018, 2019 and 2020 and has inspected all manholes within the past 10 years. Also, CUII engaged RJN Group to inspect manholes in 2018, and in 2018 RJN Group inspected a total of 142. Carbonaro Direct at 18. | | | | |
| Night flow isolation | CUII has not performed night flow isolation due to the hazardous nature of such work, which includes limited streetlights. | | | | |
| CCTV Inspections | 60% of the system was televised in 2015, with the remaining 40% televised in 2017. Lubertozzi Direct at 11. CUII cleans and televises approximately 10% of the system each year. In 2018, approximately 15,870 linear feet of gravity sewer was cleaned and televised. In 2019, approximately 16,596 linear feet of gravity sewer was cleaned and televised. In 2020, approximately 16,551 linear feet of gravity sewer was cleaned and televised. Carbonaro Direct at 17. | | | | |
| Private Home Inspections | CUII has inspected approximately 665 homes from 2017 to 2020 ¹ . Carbonaro Rebuttal at 8. | | | | |

ASSESSMENT

¹ CUII paused Private Home Inspections in March of 2020 due to the risk associated with the COVID-19 pandemic.

CORRECTIVE ACTION

| Description | Side | CUII Efforts |
|----------------------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sump Pump Removal | Private | While CUII does not control corrective actions on the private (customer) side, all known sump pump discharges have been corrected. Lubertozzi Direct, Attachment SML-2, p. 7. |
| Downspout Removal | Private | While CUII does not control corrective actions on the private (customer) side, CUII has notified customers of all known downspout issues. CUII has given away more than 300 rain barrels since 2017 to help redirect downspout flows. Lubertozzi Direct at 11. |
| Area Drain Removal | Private | While CUII does not control corrective actions on the private (customer) side, during Private Home Inspections CUII inspects the property for area drains. No customers with illegal area drains have been identified. Carbonaro Rebuttal, Attachment SC-R2, p. 3. |
| Lateral lining/replacement | Private | While CUII does not control corrective actions on the private (customer) side, CUII began inspecting customer laterals in 2019, with a goal of inspecting 10% of homes per year. Carbonaro Direct at 19. CUII's Private Home Inspection process also includes televising the customer owned lateral advising the customer and any defects that found. |
| Manhole Lining | Public | CUII has lined 153 manholes since 2015 (approximately 25% of all manholes in the system). Carbonaro Rebuttal, Attachment SC-R3. CUII lined a total of 55 manholes in July to August of 2019. These 55 manholes have a total of approximately 494.5 vertical feet. Lubertozzi Direct, Attachment SML-2, p. 5 of 14. |
| Manhole Casting raising/replacement | Public | Approximately 255 of the 605 total manholes have inflow dishes (also known as rain-stoppers). CUII installs and replaces these as needed or identified from inspections. These inflow dishes are used on manholes that may be subject to inflow, such as those constructed in ditches. Carbonaro Direct at 21. |
| Sewer Lining | Public | CUII has lined approximately 3,154 linear feet of sewer main in 2017 and 2018. Carbonaro Rebuttal, Attachment SC-R3. CUII planned to line 8,350 linear feet of sewer main in 2020. Carbonaro Rebuttal at 9. This lining addressed all known Level 4 and Level 5 defects. Carbonaro Rebuttal at 21. |
| Point repair/segment replacement | Public | CUII has completed point replacements/repairs of sewer main based on defects identified from sewer televising efforts. Carbonaro Direct at 20. CUII has repaired or |

| | | replaced 23 sections of sewer main since 2015. Carbonaro Rebuttal, Attachment SC-R3. |
|----------------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sanitary sewer/cross- connection elimination | Public | The entire collection system was smoke tested in 2018 and 2019. Dye water testing was conducted in 2019 to further investigate smoke testing suspected cross-connections. Carbonaro Direct at 19. |

Given these substantial efforts to address and reduce I&I, CUII respectfully requests the Commission reconsider the statement that CUII has failed to develop a comprehensive I&I program as directed by the 44724 Order or, alternatively, clarify the Order so as to provide CUII with guidance as to what additional elements need to be included to recognize CUII's I&I program as "comprehensive". Inclusion of additional factual findings or clarification of this statement is reasonable as a matter of public policy. Clear findings of fact are important because they not only enlighten the reviewing court as to the agency's reasoning process and allow a rational and informed basis for review. PSI Energy, Inc. v. Ind. Office of Util. Consumer Counselor, 764 N.E.2d 769, 773 (Ind. Ct. App. 2002); City of Evansville v. S. Ind. Gas & Elec. Co., 167 Ind. App. 472, 493-94, 339 N.E.2d 562, 576-77 (1975) (discussing requirement that Commission "illuminate its decision-making process with specific findings upon all material issues"); but they also ensure that stakeholders understand and can implement the Commission's decisions. See. L.S. Ayres & Co. v. Ind. Power & Light Co., 169 Ind. App. 652, 662, 351 N.E.2d 814, 822 (1976). ("The process of formulating basic findings on all material issues can also serve to aid the Commission in avoiding arbitrary or ill-considered action."). Put simply, reconsideration or clarification will enable CUII and other stakeholders to better understand the Commission's decision.

Second, CUII seeks reconsideration of the statement on page 15 of the Order that CUII "has made no meaningful attempt to date to achieve I&I removal as set forth in the 44724 Order". CUII respectfully requests the Commission reconsider or clarify its Order by recognizing the numerous actions CUII has taken with respect to I&I in an attempt to comply with the 44724 Order. CUII respectfully submits that the historical record will be served by a more complete inclusion of CUII's activities to date in the Commission's Order, consistent with the evidence in this Cause, as outlined below.

CUII presented substantial evidence in this Cause showing that, in response to the 44724 Order, CUII has undertaken a number of activities designed to achieve I&I removal. This evidence includes the information discussed above as well as the following:²

- Testimony detailing the efforts taken by CUII to date to mitigate sewer system overflows and basement backups, including sewer cleaning and televising work, manhole inspections, flow monitoring, smoke testing and dye studies, home inspection program, lateral televising, point replacements/repairs, sewer lining, manhole inflow dishes and lining, and other operational improvements. Carbonaro Direct at 16-22.
- Testimony identifying additional CUII efforts to resolve I&I, including town hall meetings, rain barrel giveaways, prohibited connection testing, hydraulic study of connection system, and projects to enhance treatment processes at the wastewater treatment plant ("WWTP") during excessive flow circumstances. Lubertozzi Direct at 11-12.
- 2019 Q4 Quarterly Report describing linear feet of mains cleaned and televised, number of manholes lined, engineering review of cleaning and televising data and 2019 smoke testing. Attachment SML-2 to Lubertozzi Direct, Page 5, Section 4.2.
- Testimony discussing CUII's I&I removal efforts and plans to continue its I&I reduction efforts in 2020 and 2021. Carbonaro Rebuttal at 7-9.
- Detailed information regarding I&I remediation efforts from 2015 to present. This uncontroverted evidence shows CUII has: repaired or replaced 23 sections of sewer main since 2015; lined approximately 3,154 linear feet of sewer main since 2017; lined 153 manholes since 2015 (approximately 25% of all manholes in the system); installed 255

² The referenced excerpts are included as <u>Attachment 2</u> to this Petition.

manhole inflow dishes (nearly one half of all manholes in the system). Response to OUCC DR 8-13 (provided as Attachment SC-R3 to Mr. Carbonaro's Rebuttal).

 Testimony during the hearing confirming that CUII has done a significant amount of work to address potential sources of I&I identified in the Strand Report. Tr. at C-12 through C-14; C-45 through C-48; D-32 through D-33; E-15 through E-18; F-31 through F-32.

While the Commission may weigh the evidence, it cannot refuse to consider competent, uncontradicted evidence and make reasoned findings upon it. *Hancock Rural Tel. Corp. v. Public Serv. Comm'n*, 137 Ind. App. 14, 201 N.E.2d 573, 588 n.1 (Ind. Ct. App. 1964) (en banc), *reh'g denied* 203 N.E.2d 204 (Ind. Ct. App. 1964). As noted above, substantial record evidence documents CUII's numerous efforts to address I&I and comply with the 44724 Order.

In conclusion, CUII believes the historical record will be better served if the Commission's Order is reconsidered and/or clarified with respect to CUII's efforts to comprehensively address I&I in its system, including the actions taken to develop an I&I program, to comply with the Commission's Order in Cause No. 44724, and to address I&I removal. Additional guidance from the Commission through reconsideration and/or clarification would also better allow CUII to understand the Commission's expectations going forward and better achieve the shared goal of improving service quality for CUII's customers.

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing was served this 25th day

of May, 2021, by email transmission, hand delivery or United States Mail, first class, postage

prepaid to:

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Community Utilities of Indiana, Inc. Cause No. 45389 Petition for Reconsideration Attachment 1 0Page 1 of 2



Figure 1 - Lift Station D (taken at street edge facing east)

- b: The observations are largely based on visual observation of the drainage associated with the individual residences that rely on sheet flow of surface drainage down driveway slopes and yards.
- c: Mr. Holden is not familiar with work done by LOFS to mitigate private side drainage or clearwater removal issues. See also the Response to Data Request 1-11.

<u>Request 1-3</u>: Reference p. 10 of Mr. Holden's testimony where he identifies that "CUII has not implemented a comprehensive I&I removal program". Please explain what Mr. Holden means by a "comprehensive I&I removal program" and provide a description of the expected components of a comprehensive I&I removal program.

Response:

A comprehensive I&I removal program would consist of two parts as follows.

- 1. Assessment:
 - a. Smoke testing
 - b. Wet weather inspections
 - c. Manhole inspections
 - d. Night flow isolation
 - e. CCTV inspections
 - f. Private home inspections
- 2. Corrective Action:
 - a. Private side
 - i. Sump pump removal
 - ii. Downspout removal

- iii. Area drain removal
- iv. Lateral lining/replacement
- b. Public side
 - i. Manhole lining
 - ii. Manhole casting raising/replacement
 - iii. Sewer lining
 - iv. Point repair/segment replacement
 - v. Sanitary sewer/cross connection elimination

For the comprehensive program to be successful, the time element is also important. In Mr. Holden's experience, communities that are successful in removing I&I across a collection system have a short time frame between identification and response. The combined effect is the identification of a problem and remediation of the problem that allows continued assessment on the impact of the corrective action.

<u>Request 1-4</u>: Reference p. 12 of Mr. Holden's testimony where he disagrees that 30% is the maximum amount of I&I removal likely.

- a. Provide examples of systems that were successful in reducing I&I by greater than 30%.
- b. Provide any flow monitoring studies or engineering reports that quantified the I&I removal.
- c. Identify the type of stormwater drainage in those areas (e.g. ditch system, stormwater sewer system).
- d. Identify the age of the sanitary sewer systems that reduced I&I by greater than 30%.
- e. Provide the costs incurred by those systems to reduce I&I by greater than 30%.
- f. Provide the timeframe for those systems to reduce I&I by greater than 30%.
- g. For the past 10 years, please identify every I&I removal program on which Wessler Engineering has worked. For each, provide the percentage I&I reduction achieved, as well as the infrastructure improvement costs and time period for achieving such I&I reductions.

Response:

- a. SSES work is typically not approached on a percent removal basis, but instead approached on the basis of an effort to remediate an issue. Similar to the challenges faced by CUII for the LOFS system there are a number of communities that Mr. Holden identifies below as examples where I&I removal programs were successful in removal of I&I to a level that remediated basement backups and SSO events. Mr. Holden illustrates three communities that in his opinion have been successful in the identification and removal of clearwater to an extent similar if not greater than the LOFS situation. These are illustrated as follows.
 - 1. Community 1 After years of basement backups and SSO events, the Community implemented a SSES program to address clearwater in the sanitary sewer collection system. The corrective actions for the I&I removal included manhole rehabilitation, sewer lining, sanitary sewer realignment (replacement) and installation of revised storm sewers. The overall impact was the elimination of basement backup issues. While not specifically quantified, the overall reduction in clearwater in the system was significant enough that in the decade since its completion, the problem has not reoccurred.

| 7 8 | Q23. | PLEASE DESCRIBE HOW THE PROPOSED SIP WILL HELP MEET THE CLEAN WATER ACT REQUIREMENTS. |
|--------|------|---------------------------------------------------------------------------------------|
| 6 | | would continue to occur in the tributary areas to Lift Station D. |
| 5 | | If, on the other hand, the Company only completes the WWTP Expansion project, SSOs |
| 4 | | handle the future flow rates anticipated. |
| 3 | | issues with the WWTP would remain. The proposed WWTP Expansion is designed to |
| 2 | | that flows to the WWTP by gravity. The operational, condition, and permit compliances |
| 1 | | overloading of the WWTP influent structures would lead to SSOs in the tributary area |

9 A23. In the past several years, the IDEM has identified several NPDES permit violations

- 10 relating to the operation of the WWTP and the Collection System. More specifically, the
- 11 IDEM has identified NPDES permit violations relating to sanitary overflows, as well as
- 12 biochemical oxygen demand, total suspended solids, and ammonia limit exceedances.
- 13 The capital projects the Company is proposing in this Cause to improve the Collection
- 14 System and WWTP are also designed to address the NPDES permit violations and to help
- 15 ensure compliance with the federal Clean Water Act by limiting discharges to the
- 16 Kankakee River consistent with the NPDES permit limits.

17 EFFORTS TAKEN TO DATE TO MITIGATE SSOS AND BASEMENT BACKUPS

18 Q24. HAS THE COMPANY MADE EFFORTS TO INVESTIGATE AND STUDY THE 19 ISSUES WITH THE COLLECTION SYSTEM IN AN EFFORT TO RESOLVE 20 THE SSOS AND BASEMENT BACKUPS?

- 21 A24. Yes. The Company investigated the collection system using the following methods:
- Sewer cleaning and televising
- Manhole inspections
- Flow monitoring
- Smoke testing and dye studies

| 1 | | • Home inspections | | | | | | | |
|----------|------|----------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|
| 2 | | • Lateral televising | | | | | | | |
| 3 | | As discussed below, many of these efforts are ongoing. | | | | | | | |
| 4 5 | Q25. | PLEASE SUMMARIZE THE COMPANY'S SEWER CLEANING AND TELEVISING EFFORTS. | | | | | | | |
| 6 | A25. | The Company completed the following sewer cleaning and televising work in the last | | | | | | | |
| 7 | | five years. Previous orders (Cause No. 43128) issued by the Commission and internal | | | | | | | |
| 8 | | maintenance guidelines require the Company to clean and televise 10% of the sewer | | | | | | | |
| 9 | | system per year. | | | | | | | |
| 10 11 | | • 2015 – Approximately 86,101 linear feet of gravity sewer main were televised by RedZone Robotics | | | | | | | |
| 12 | | • 2015 – At least 2,167 linear feet (LF) of sewer main cleaned by Alex Metz Sewer | | | | | | | |
| 13 | | (Metz) based on invoice records. My statement later in my testimony that the | | | | | | | |
| 14 | | Company has cleaned and/or televised all sewer segments in the system in the | | | | | | | |
| 15 | | past five years remains true, whether or not the Metz work is included | | | | | | | |
| 16 | | • 2016 – Approximately 67,700 linear feet of gravity sewer main were televised by | | | | | | | |
| 17 | | RedZone Robotics | | | | | | | |
| 18 | | • 2016 – At least 6,447 LF of sewer main cleaned by Metz based on invoice records | | | | | | | |
| 19 | | • 2017 – Approximately 58,500 linear feet of gravity sewer main were cleaned and | | | | | | | |
| 20 | | televised by PipeView | | | | | | | |
| 21 | | • 2018 – Approximately 15,870 linear feet gravity sewer main were cleaned and | | | | | | | |
| 22 | | televised by AccuDig | | | | | | | |
| 23 | | • 2019 – Approximately 16,596 linear feet gravity sewer main were cleaned and | | | | | | | |
| 24 | | televised by AccuDig | | | | | | | |
| 25 | | • 2020 – Approximately 16,551 linear feet gravity sewer main were cleaned and | | | | | | | |
| 26 | | televised by AccuDig | | | | | | | |
| 27 | | All sewer mains televised were inspected in accordance with National Association of | | | | | | | |
| 28 | | Sewer Service Companies (NASSCO) standards. The videos and inspection reports are | | | | | | | |

reviewed by RHMG Engineers ("RHMG"). The Company performs additional sewer
 televising as needed to investigate smoke testing defects and other operational issues.

3 Q26. PLEASE SUMMARIZE THE COMPANY'S MANHOLE INSPECTION 4 EFFORTS.

5 A26. The Company inspects at least 10% of the manholes in the system every year. RJN Group
6 (RJN) inspected a total of 142 manholes in 2018. The Company has inspected all
7 manholes within the last ten years.

8 Q27. PLEASE DESCRIBE THE COMPANY'S FLOW MONITORING EFFORTS.

A27. The Company has completed two flow monitoring studies, a study of the collection
system in 2017-2018 by Strand Associates (Strand) and a study of select basins within the
collection system by RJN in 2018. These findings are described in the Twin Lakes
Metering and Modeling report, dated July 2018, prepared by Strand, provided as
<u>Attachment SC-10</u>, and referred to herein as the "Strand report", and the 2018 Sanitary
Sewer Evaluation Study (SSES) report, dated April 2019, prepared by RJN, provided as

16 The investigations in the Strand report included flow monitoring of the collection system and breaking the system down into basins. The Strand report also included 17 18 modeling of the collection system. The Strand report provided significant information, 19 including recommendations regarding which basins in the collection system the Company 20 should prioritize for I/I reduction and proposed improvements to the collection system. 21 The Strand report recommended implementation of a comprehensive I/I removal 22 program, which the Company has developed and the proposed improvements to the 23 collection system are discussed later in this testimony.

1 The 2018 SSES report included flow monitoring, manhole inspections, lateral 2 televising, and smoke testing of the basins previously identified as highest priority in the 3 Strand report. The flow monitoring in the 2018 SSES report was used to correlate defects 4 identified in the collection system with excess flow identified in each basin. One basin 5 was used as a control basin. The proposed rehabilitation and improvements identified in 6 the 2018 SSES report are discussed later in this testimony.

7 Q28. PLEASE SUMMARIZE THE SMOKE TESTING AND DYE STUDIES THE 8 COMPANY HAS UNDERTAKEN.

A28. The entire collection system was smoke tested in 2018 and 2019. The 2018 SSES study
performed by RJN includes smoke testing of the four basins identified by the Strand
report as the highest priority. RJN prepared the 2019 SSES report, dated February 28,
2020, provided as <u>Attachment SC-12</u>, which included smoke testing the remainder of the
collection system and dye testing of smoke testing defects identified in 2018 and 2019.
Additional follow-up investigations, including sewer main televising and manhole
inspections, were conducted following review of the smoke testing data.

16

Q29. PLEASE DESCRIBE THE COMPANY'S HOME INSPECTION PROGRAM.

17 A29. In 2017, the Company initiated a home inspection program to identify prohibited 18 connections, including downspouts, sump pumps, and foundation drains, connected to the 19 sanitary sewer. A total of 81 and 179 homes were inspected in 2017 and 2018, 20 respectively. On July 31, 2018, the Commission approved 30-Day filing No. 50120, 21 allowing the Company to revise the Sewer Rules, Regulations and Conditions of Service 22 to allow enforcement of prohibited connections removal. A total of 405 homes were 23 inspected in 2019. In 2019, the Company also began televising customer laterals. The 24 goal of the program is to inspect 10% of homes per year. The goal of inspecting 10% of homes per year was set after reviewing current staffing levels and availability to complete
 the home inspections. The Company has enforced removal of prohibited connections
 throughout the inspections process.

4 Q30. PLEASE SUMMARIZE THE COMPANY'S LATERAL TELEVISING EFFORTS.

A30. The 2018 SSES report included televising laterals in one of the high priority basins. A
total of 90 laterals were televised in 2018. The lateral televising identified defects,
including cracks, fractures, root, offset joints, and other issues, on the Company-owned
and customer-owned portions of the laterals. The Company identified laterals that were
determined to be abandoned or capped. The Company attempts to televise customer
laterals during the home inspection process. The Company plans to televise laterals prior
to sewer main lining during the 2020 sewer main lining project.

Q31. WHAT OTHER EFFORTS HAS THE COMPANY MADE TO IMPROVE THE WASTEWATER COLLECTION SYSTEM?

- 14 A31. The Company has developed a comprehensive approach of identifying defects and 15 rehabilitating, repairing, or replacing components of the collection system as necessary to 16 improve the condition of the collection system and reduce I/I. The approach for each 17 portion of the collection system is explained below. These efforts are ongoing.
- 18 replacements/repairs --The • Point Company has completed point 19 replacements/repairs of sewer main based on defects identified from sewer 20 Company generally decides televising efforts. The between point 21 replacement/repair and sewer lining based upon several factors, including 22 viability to line, depth of sewer, segment length, and presence of other defects in 23 the segment.

- Sewer lining -- A total of 2,929 linear feet of sewer main was lined in 2018. The
 sewer lining was completed following review of the sewer televising data by
 RHMG. The Company plans to line an additional 5,620 linear feet of sewer main
 in 2020. The Company also plans to televise laterals of the sewer main segments
 to be lined to identify if any laterals are capped or abandoned and can be sealed
 and identify defects in laterals.
- Manhole inflow dishes Approximately 255 of the 605 total manholes have
 inflow dishes (also known as rain-stoppers). The Company installs and replaces
 these as needed or identified from inspections. These inflow dishes are used on
 manholes that may be subject to inflow, such as those constructed in ditches.
- Manhole lining -- Since 2013, the Company has lined approximately 146
 manholes of the 605 total manholes in the collection system. These manholes
 were selected for lining following manhole inspections. SpectraTech has
 completed a majority of the manhole lining rehabilitation for the Company.
 SpectraTech's product is comprised of silicone modified polyurea and a
 polyurethane/polymeric blend foam, designed to eliminate leaks and corrosion in
 the manholes. SpectraTech provides a ten-year warranty.
- Home inspections/notices -- The Company has implemented a home inspection
 program to eliminate prohibited connections that introduce inflow to the
 collection system. Since 2017, the Company has removed prohibited connections
 at approximately 37 homes. The Company continues to pursue enforcement of
 known violations and prohibited connections.

| 1 • | Operational improvements The Company has made operational |
|-----|-----------------------------------------------------------------------------------|
| 2 | improvements to the collection system to reduce SSOs. For example, prior to |
| 3 | 2017, the Company used additional portable pumps at Lift Station D during |
| 4 | extreme precipitation events to relieve tributary sewers to Lift Station D. While |
| 5 | this practice could relieve manhole overflows in the tributary sewers to Lift |
| 6 | Station D, particularly at Manholes 329, 465, and 466, SSOs could be caused by |
| 7 | overloading the gravity sewer receiving flow from the additional pumps at Lift |
| 8 | Station D. An example of this occurred on August 15, 2016. The Company has |
| 9 | discontinued this practice, however, additional improvements are needed to |
| 10 | address surcharging of the Lift Station D tributary sewers. As described later in |
| 11 | this testimony, the proposed improvements will address surcharging of the Lift |
| 12 | Station D tributary sewers without potentially causing SSOs in other areas. |

Q32. IN YOUR OPINION, ARE THE WWTP EXPANSION AND COLLECTION SYSTEM IMPROVEMENTS DESCRIBED BELOW NECESSARY IN ORDER FOR THE COMPANY TO CONTINUE TO PROVIDE SAFE AND DEPENDABLE WASTEWATER SERVICE TO CUSTOMERS?

A32. Yes. While the efforts taken to date have resulted in a reduction of SSOs and basement
backups, both the collection system improvement project described below and the
WWTP expansion are necessary in order for the Company to provide safe and reliable
service to customers over the long-term.

21 COLLECTIONS SYSTEM IMPROVEMENTS AND ALTERNATIVES CONSIDERED

Q33. PLEASE EXPLAIN THE SCOPE OF THE PROPOSED COLLECTION SYSTEM IMPROVEMENTS PROJECT.

- 24 A33. The proposed Collection System Improvements project includes upgrading Lift Station B
- and C with increased capacity, constructing a new Lift Station D with increased capacity,

| 1 | A21. | Yes. The SIP is described in various quarterly reports and compliance filings submitted to | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
| 2 | | the Commission in Cause No. 44724. As I will discuss in further detail below, the | | | | | |
| 3 | | Commission and stakeholders have been kept apprised at every step of the process, | | | | | |
| 4 | | including the issuance of requests for proposals. | | | | | |
| 5 | Q22. | Is the SIP designed to meet the objectives set forth in the Commission Order in Cause | | | | | |
| 6 | | No. 44724? | | | | | |
| 7 | A22. | Yes. The Commission found the SIP should be designed to ensure the Company makes | | | | | |
| 8 | | improvements and achieve the following three goals ("Three Key Aspects"): (a) decrease | | | | | |
| 9 | | total incidences of wastewater backups in homes, (b) decrease total incidences of manhole | | | | | |
| 10 | | overflows, and (c) decrease total complaints of discoloration of drinking water. The SIP | | | | | |
| 11 | | for the wastewater system is designed to achieve the first two goals. | | | | | |
| 12 | Q23. | In addition to the SIP proposed in this proceeding, what efforts has CUII undertaken | | | | | |
| | | | | | | | |
| 13 | | to resolve the issues? | | | | | |
| 13 14 | A23. | to resolve the issues? The Company has taken multiple steps to reduce I&I. In the past several years, the efforts | | | | | |
| 13 14 15 | A23. | to resolve the issues? The Company has taken multiple steps to reduce I&I. In the past several years, the efforts undertaken by CUII have been more aggressive. In 2017, CUII initiated a comprehensive | | | | | |
| 13 14 15 16 | A23. | to resolve the issues? The Company has taken multiple steps to reduce I&I. In the past several years, the efforts undertaken by CUII have been more aggressive. In 2017, CUII initiated a comprehensive effort within the sanitary sewer system to address wastewater backups in homes and SSOs, | | | | | |
| 13 14 15 16 17 | A23. | to resolve the issues? The Company has taken multiple steps to reduce I&I. In the past several years, the efforts undertaken by CUII have been more aggressive. In 2017, CUII initiated a comprehensive effort within the sanitary sewer system to address wastewater backups in homes and SSOs, which included: | | | | | |
| 13 14 15 16 17 18 19 | A23. | to resolve the issues? The Company has taken multiple steps to reduce I&I. In the past several years, the efforts undertaken by CUII have been more aggressive. In 2017, CUII initiated a comprehensive effort within the sanitary sewer system to address wastewater backups in homes and SSOs, which included: • Townhall Meetings – held on May 25, 2017 and October 26, 2017, the latter of which was attended by approximately 100 customers; | | | | | |
| 13 14 15 16 17 18 19 20 21 | A23. | to resolve the issues? The Company has taken multiple steps to reduce I&I. In the past several years, the efforts undertaken by CUII have been more aggressive. In 2017, CUII initiated a comprehensive effort within the sanitary sewer system to address wastewater backups in homes and SSOs, which included: Townhall Meetings – held on May 25, 2017 and October 26, 2017, the latter of which was attended by approximately 100 customers; Rain Barrel Giveaways – to redirect downspout flows, with more than 300 given away; | | | | | |
| 13 14 15 16 17 18 19 20 21 22 23 | A23. | to resolve the issues? The Company has taken multiple steps to reduce I&I. In the past several years, the efforts undertaken by CUII have been more aggressive. In 2017, CUII initiated a comprehensive effort within the sanitary sewer system to address wastewater backups in homes and SSOs, which included: Townhall Meetings – held on May 25, 2017 and October 26, 2017, the latter of which was attended by approximately 100 customers; Rain Barrel Giveaways – to redirect downspout flows, with more than 300 given away; Clean and Televise Collection System – with 60% televised in 2015 and 40% | | | | | |
| 13 14 15 16 17 18 19 20 21 22 23 24 25 | A23. | to resolve the issues? The Company has taken multiple steps to reduce I&I. In the past several years, the efforts undertaken by CUII have been more aggressive. In 2017, CUII initiated a comprehensive effort within the sanitary sewer system to address wastewater backups in homes and SSOs, which included: Townhall Meetings – held on May 25, 2017 and October 26, 2017, the latter of which was attended by approximately 100 customers; Rain Barrel Giveaways – to redirect downspout flows, with more than 300 given away; Clean and Televise Collection System – with 60% televised in 2015 and 40% televised in 2017; Sewer Lining and Replacement – replacement of 16 sections of main in 2017 and 2018; | | | | | |

| 1 | | • Prohibited Connection Testing – through smoking sewer lines; |
|--------|------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | | • Home Inspections – to eliminate prohibited connections; |
| 3 4 | | • Hydraulic Study of Collection System – flow testing of entire system over most of 2017 using eighteen flow monitors and two rain gauges; and |
| 5 6 | | • Excessive Flow Projects – to enhance treatment processes at the WWTP in excessive flow circumstances. |
| 7 | Q24. | Are there issues CUII must address aside from collection system issues? |
| 8 | A24. | Yes. As further described by CUII witness Carbonaro, a majority of the facilities at the |
| 9 | | WWTP are at the end of their service life or do not have capacity for existing conditions. |
| 10 | | IDEM issued a Sewer Ban Early Warning, which indicates that the WWTP has reached or |
| 11 | | is approaching 90% of its hydraulic or organic design capacity. During high influent flow |
| 12 | | periods, the incoming gravity sewers can surcharge, leading to wastewater backups in |
| 13 | | homes and manhole overflows. |
| 14 | Q25. | Have the capacity issues at the WWTP caused issues in recent years? |
| 15 | A25. | Yes. Due to rain events in February of 2018, CUII had to use trash pumps to divert flows |
| 16 | | from the storage basins, which were within two inches from overflowing, as shown below. |
| 17 | | However, in six of the last twelve months, the WWTP operated at 100% capacity or greater. |

18



4.1.3 Water distribution

The work to be completed on WTP #1 (as described in Section 4.1.2) will also include improvements to the distribution system.

System flushing and valve exercising was completed in late October 2019.

All of the hydrants in the water system were inspected by a professional hydrant inspection/repair contractor, Rogers Hydrant Service, between June 3rd, 2019 and June 6th, 2019. Repairs to hydrants were completed in October 2019.

Watermain and service lines were replaced in the Bush Hill Court, Westwind Court, and Marlinspike cul-de-sacs between September and October 2019. All asphalt and landscaping restoration was completed between October and November 2019. The landscaping restoration will be revisited in Spring 2020 to ensure acceptable growth and quality.

Design engineering for the 2020-2021 watermain replacement was initiated in August 2019. Commonwealth Engineers (Commonwealth) was selected as the engineering firm for the project. Watermain replacement will be designed for Tremont Lane, Westover Drive, and Ravenwood Drive. The locations were selected by identifying areas with watermain breaks and coordinating with LOFS on paving schedule. The Preliminary (50%) Design meeting was held on December 10, 2019. The Final Design meeting was held on January 9, 2020. Construction bids are expected on February 20, 2020. Two years of watermain replacement were designed simultaneously to reduce engineering costs associated with surveying, specifications development, and other common tasks. The two years of projects will be bid as two base bids to potentially reduce construction costs as well.

4.1.4 Water storage

There are no updates regarding water storage for the Q4 2019 Quarterly Report.

4.2. <u>Wastewater system</u>

In July 2018, the Indiana Department of Environmental Management (IDEM) issued two warning letters: (1) the excess inflow and infiltration in wastewater collection system, and (2) limited capacity at the WWTP. CUII is taking action to address these concerns as explained below.

4.2.1 Wastewater collection

Sewer Cleaning and Televising

The sewer cleaning and televising for 2019 was completed in April 2019 by Accu-Dig. A total of 17,536 linear feet (10.8%) of the sewer system was cleaned and televised. CUII intends to retain Accu-Dig for sewer cleaning and televising services into 2020.

Sewer Capital Improvement Plan

The 2019 Sewer Capital Improvement Project (SCIP) work included manhole lining. The manhole reconditioning work was performed based upon RJN's 2018 Sanitary Sewer Evaluation Study report.

SpectraTech lined a total of 55 manholes in July to August 2019. The 55 manholes have a total of approximately 494.5 vertical feet (VF).

Community Utilities of Indiana, Inc. Cause No. 45389 Petition for Reconsideration Attachment 2 Page 11 of 32

The 2020 Sewer Capital Improvement Project (SCIP) work will include sewer lining and manhole lining. The recommended sewer and manhole reconditioning work will be performed based upon engineering review of the sewer cleaning and televising data (RHMG) and the 2019 smoke testing.

CUII identified approximately 4,300 linear feet (LF) of sewer with Level 5 defects to be lined. However, CUII was unable to find favorable pricing in 2019 from contractors due to the low quantity of sewer to be lined in this project. CUII plans to combine lining of all Level 4 and Level 5 defects in one project in 2020. CUII also plans to have the selected contractor televise the laterals ahead of lining to identify laterals that do not need to be reinstated and provide inspections of laterals. Bidding is expected in January – February 2020.

Inflow and Infiltration Study

RJN was engaged for the second phase of the sanitary sewer evaluation. The second phase included smoke testing, dyed water flooding, dye tracing, and preparation of a summary report. Approximately 128,248 linear feet of sewer was smoke tested in September to October 2019, which included the remainder of the system not smoke tested in 2018. RJN and CUII took care to smoke test only during acceptable, dry conditions. Following review of additional information, including sewer televising video and pictures, four dye water tracing locations (downspouts and an area/driveway drain) were identified from the smoke testing. The dyewater tracing was completed in November 2019. The draft of the final report is expected by the end of January 2020. The results of the report will be used to guide home inspections and sewer rehabilitation work through 2020.

Collection System Improvements – Phase 1

The Collection System Improvements – Phase 1 includes upgrading Lift Station B, C, and D, replacing the forcemain from Lift Station C to the receiving manhole, and installing two new forcemains from Lift Station B to Lift Station D and Lift Station D to the Wastewater Treatment Plant. RHMG Engineers (RHMG) was selected as the design engineer. The EOPC is provided as an attachment. Alternate 1 is comprised of all open-cut construction, while Alternate 2 is a combination of open-cut and horizontal direction drilled construction.

The Final Design meeting was held on January 6, 2020. Permitting will be initiated in February 2020. Bidding is expected in late February 2020 with bids due in late March 2020.

CUII is working with LOFS on easement agreements for the rehabilitation/expansion of Lift Station B along West Lake Shore Drive, rehabilitation/expansion of Lift Station C along Kingsway Drive, construction of the new Lift Station D along West Lake Shore Drive, and construction of the forcemain between South Lake Shore Drive and 123rd Avenue.

The Collection System Improvements – Phase 1 project is intended to reduce the frequency of Sanitary Sewer Overflows (SSOs) and basement backups in the areas CUII has identified as most susceptible to those events. The proposed improvements to Lift Station B, C, and D were identified as the most cost-effective to resolve the issues identified from flow monitoring and review of operational data. The Twin Lakes Metering and Modeling report, prepared by Strand Associates, dated July 2018 (provided with the Q2 2018 System Improvement Plan), identified that greater than a 60% reduction in Inflow/Infiltration (I/I) to eliminate the need for conveyance improvements. Strand also identified in the report that the likely maximum achievable I/I reduction with a comprehensive I/I removal program is 30%. Therefore, conveyance improvements are necessary to reduce the frequency of SSOs and basement backups. CUII

Community Utilities of Indiana, Inc. Cause No. 45389 Petition for Reconsideration Attachment 2 Page 12 of 32

has proposed to complete collection system improvements in three phases, as previously described in several reports, most recently the RHMG Sanitary Sewer System Improvements report, dated July 25, 2019 (and provided with the Q3 2019 Quarterly Report). The phased approach allows CUII to address the most immediate issues (primarily tributary areas to Lift Station B, C, and D) first. CUII can continue I/I reduction efforts in the interim then determine the necessity and exact scope of Phase 2 and Phase 3.

Home Inspections

Through 2019, CUII sent a total of 416 notices to customers to schedule home inspections. As of the end of December 2019, a total of 405 home inspections have been inspected or partially inspected. 'Partially inspected' typically indicates that CUII staff was unable to televise the customer's entire lateral, either due to access issues or obstructions in the pipe. Not all homes sent notices were inspected because 10 are vacant and one was destroyed in a fire. A map of inspections, inspection results, and identified deficiencies through the end of December 2019 is provided as an attachment. The deficiencies identified included lateral defects, unknown patio drain discharge, unknown downspout discharges, and inaccessible sewer laterals.

All known sump pump discharges have been corrected. A total of 20 other known issues (13 lateral issues, six unknown downspout discharges, and one unknown patio drain discharges) remain. These customers were notified in mid-January 2020.

CUII plans to inspect 400 homes in 2020. The first batch of notices will be sent in late February 2020 with inspections starting in March 2020.

4.2.2 Wastewater treatment

Design of the Wastewater Treatment Plant (WWTP) Expansion project began in January 2019 and has continued with monthly progress meetings with Baxter & Woodman, the selected design engineer. Final design is expected in February 2020, followed by permitting. The 90% Design Meeting is scheduled for February 18, 2020. The project is expected to go out to bid on March 10, 2020 with bids due on April 17, 2020.

On October 25, 2019 CUII was advised by the LOFS that the LOFS and the OUCC had 'grave concerns' concerning the WWTP Expansion Project and the Collection System Improvement Project. This revelation was surprising to CUII, as CUII previously advised both the LOFS and OUCC, via Quarterly Reports and Technical Conferences, that final designs were planned for January of 2020 for the Expansion Project and final designs were planned for November of 2019 for the Collection Systems Improvements Project. In an effort to further collaborate and to address these newly raised concerns, CUII met with the LOFS and OUCC on November 20, 2019 to discuss these concerns expressed by the LOFS and OUCC regarding the WWTP Expansion project. Prior to the November 20th meeting LOFS sent following data request:

- The materials transmitted this week reference work proposed by CUII based on work conducted by several engineering firms listed below. Please identify the amount CUII has paid to date to each firm listed below in connection with the corresponding work and what amount, if any, CUII expects will need to be paid to the engineering firm in the future in connection with the proposed projects.
 - a) Commonwealth (Basis of Design report prepared July 2018)
 - b) Baxter & Woodman (amounts outside of amounts reflected in contract provided)
 - c) RJN (April 2019 report)

Community Utilities of Indiana, Inc. Cause No. 45389 Petition for Reconsideration Attachment 2 Page 13 of 32

removed the excessive I/I, and recommended that the Commission order CUII develop,
 complete and implement the previously ordered comprehensive I/I program.

3 **O13.** WHAT IS YOUR **OVERALL** RESPONSE TO MR. PARKS' 4 RECOMMENDATIONS REGARDING THE COLLECTION **SYSTEM** 5 **EXPANSION PROJECT?**

6 A13. The Company believes that the proposed CSEP is prudent and appropriately timed. The 7 Company has implemented a comprehensive I&I reduction program, however, engineering 8 studies have shown that even an optimistic reduction in I&I is not sufficient to eliminate 9 the need for the proposed conveyance improvements. Due to challenges within the 10 community including the type of stormwater drainage (primarily ditches and culverts, as 11 identified by the Company) and the topography (as identified by LOFS), I&I reduction in 12 this community is particularly challenging. The cost of reducing I&I is likely greater than 13 the cost of the proposed improvements, and reducing I&I alone is unlikely to be successful. 14 The OUCC did not provide alternatives that resolve the issues at a lower cost. The OUCC 15 also did not identify examples of any systems that have achieved what they propose the 16 Company can achieve, and did not identify the costs or time to achieve the necessary I&I 17 reduction. I believe that most of Mr. Parks' criticisms of the engineering studies completed 18 by the Company to develop its plans to improve the collection system and resolve SSOs 19 are unfounded, and that the proposed CSEP is the optimal choice to resolve the recurrent 20 SSOs.

21 Q14. HAS THE COMPANY IMPLEMENTED A COMPREHENSIVE I/I PROGRAM?

A14. Yes. In the Final Order of Cause No. 44724, the Commission ordered the Company to
 implement a comprehensive I/I program, which included eliminating improperly installed

Community Utilities of Indiana, Inc. Cause No. 45389 Petition for Reconsideration Attachment 2 Page 14 of 32

1 residential sump pumps, roof downspouts, and illegally connected drains, and to decrease 2 infiltration of groundwater into the wastewater system through leaky joints, cracked 3 pipelines, and deteriorated manholes. As explained in my Direct Testimony, the Company 4 has taken action to reduce I/I in the sanitary sewer system. The Company also provides 5 updates on its progress in the Quarterly Reports, particularly the performance metrics. To 6 eliminate improperly installed residential sump pumps, roof downspouts, and illegally 7 connected drains, the Company implemented the home inspection program in 2017. The 8 Company has inspected approximately 665 homes from 2017 to present. The Company has 9 also initiated programs to educate customers on the need to eliminate entrance of rainwater 10 into the collection system (fliers and other material provided as Attachment SC-R1). In the 11 Company's Response to OUCC DR 4-1 and 4-2 (provided as Attachment SC-R2), the 12 Company has identified and corrected 12 improperly installed sump pumps. No roof 13 downspouts or other drains have been definitively observed to directly connect to the 14 collection system. The Company has identified 18 laterals with defects from the home 15 inspection process. As explained in my Direct Testimony, the Company has conducted 16 significant investigation of the collection system including sewer televising, manhole 17 inspections, flow monitoring, smoke testing and dye studies, and lateral televising.

18 Q15. WHAT ACTION HAS THE COMPANY TAKEN TO DECREASE INFILTRATION

19

OF GROUNDWATER INTO THE WASTEWATER SYSTEM THROUGH LEAKY

- 20 JOINTS, CRACKED PIPELINES, AND DETERIORATED MANHOLES?
- A15. As identified in the Company's Response to OUCC DR 8-13 (provided as Attachment
 SC-R3) and in my Direct Testimony, the Company has completed a range of repairs to the
 collection system. The Company has repaired or replaced 23 sections of sewer main since

2 2015. The Company has lined approximately 3,154 linear feet (LF) of sewer main since 2 2017. Defects for sewer repair, replacement, and lining were primarily identified from 3 sewer televising. The Company has lined approximately 153 manholes since 2015, 4 equivalent to approximately one quarter of all manholes in the system. Manhole defects 5 were identified from smoke testing and manhole inspections. The Company has installed 6 approximately 255 manhole inflow dishes, nearly one half of the total manholes in the 7 system.

8 Q16. DOES THE COMPANY PLAN TO CONTINUE THE I/I REDUCTION EFFORTS?

9 A16. Yes. The Company will continue efforts to reduce I/I. The Company plans to line
approximately 8,350 LF of sewer main in 2020. Cleaning and televising of 10% of the
sewers per year will continue each year. The Company will continue manhole inspections
and follow-up with any necessary remediation in 2021. The home inspection program has
been suspended due to COVID-19, however, the Company will continue the program when
it is safe to proceed.

15 Q17. DO YOU AGREE WITH MR. PARKS' STATEMENT (AT 2) THAT THE

16 COMPANY HAS ASSUMED IT CANNOT REMOVE ANY OF THE I/I?

17 A17. No, the Company has not assumed it cannot remove any I/I. As explained in my Direct 18 Testimony (at 25), the Strand report (Attachment SC-10 with my Direct Testimony) 19 identified that I/I would need to be reduced by greater than 60% to reduce the need for the 20 proposed improvements. The Strand report also noted that the effectiveness of an I/I 21 removal program is uncertain and the maximum I/I reduction from the most robust I/I 22 removal program would be 30%. An I/I removal program alone will not be enough to 23 alleviate the conveyance issues within the collection system. While the Company continues

Data Request OUCC DR 8 - 13

For the period from January 1, 2015 to the present please provide the following for each year:

- a. Annual operations expense for sewer main cleaning
- b. Annual operations expense for sewer main televising
- c. Number of sewer obstructions that were removed (not associated with the annual sewer cleaning and televising program)
- d. Number of damage claims filed for sewage back-ups into customers properties
- e. Total amount paid each year for damage claims filed by customers for property damage caused by sewage back-ups.
- f. Number of sewer main replacement projects
- g. Feet of sewer mains replaced
- h. Annual capitalized cost for sewer main replacements
- i. Feet of sewer mains lined each year
- j. Annual capitalized cost for sewer main lining
- k. Number of manholes inspected
- 1. Number of manholes replaced
- m. Number of manholes lined
- n. Annual capitalized cost for lining manholes
- o. Number of manholes grouted
- p. Annual capitalized cost for manhole grouting
- q. Number of manholes raised
- r. Annual capitalized cost for manhole raising
- s. Feet of sewer main smoke tested
- t. Annual operations expense for sewer main smoke testing

Objection:

Response:

Responses to each item are provided in Attachment to OUCC DR 8-13.

a. The Company does not maintain separate operating expense accounts for types of sewer rodding activity (cleaning and televising), instead maintaining a singular account for all sewer rodding. A summary of annual sewer rodding activity is below for all completed calendar years 2015 through present:

| _ | 2015 | 2016 | 2017 | 2018 | 2019 |
|----------------------|-----------------|--------------|-----------------------|--------------|-----------------------|
| Annual Sewer Rodding | | | | | |
| Expense | \$ 82,881.00 | \$ 66,812.25 | \$ 30 <i>,</i> 005.25 | \$ 63,724.30 | \$ 86 <i>,</i> 693.26 |

- b. Please refer to our response to 8-13a. The Company does not maintain separate operating expense accounts for cleaning and televising.
- c. The Company does not maintain a list of sewer obstructions removed. The Company generally performs this work on an emergency basis.
- d. The Company does not maintain this information internally. The Company is contacting the insurance companies providing coverage during these periods to collect this information. The information will be provided in a supplemental response.
- e. The Company does not maintain this information internally. The Company is contacting the insurance companies providing coverage during these periods to collect this information. The information will be provided in a supplemental response.
- f. Information regarding sewer replacements was provided in Response to LOFS DR 1-3. The Company did not perform any capital projects for sewer main replacement. The number provided in Attachment to OUCC DR 8-13 refers to the number of sewer main replacement sections.
- g. Information regarding sewer replacements was provided in Response to LOFS DR 1-3.
- h. The amount provided in Attachment to OUCC DR 8-13 only includes the direct cost for the contractor to perform the sewer repair. The amount for site restoration, capitalized time, IDC, or any other costs are not included here. The Company does not maintain records for each individual sewer repair and the associated costs.
- i. See Attachment to OUCC DR 8-13.
- j. See Attachment to OUCC DR 8-13. The amount provided is the direct cost for lining.
- k. See Attachment to OUCC DR 8-13.
- I. See Attachment to OUCC DR 8-13.
- m. See Attachment to OUCC DR 8-13.
- n. The amount provided in Attachment to OUCC DR 8-13 is the direct cost for lining and/or engineering. Capitalized time is not specifically coded to sewer lining.
- o. See Attachment to OUCC DR 8-13.
- p. See Attachment to OUCC DR 8-13.
- q. The Company does not keep specific records of manholes raised. The Company searched emails and invoices to identify any previous manholes raised.
- r. See Attachment to OUCC DR 8-13.
- s. See Attachment to OUCC DR 8-13.
- t. The approximate amounts paid for smoke testing are provided in Attachment to OUCC DR 8-13. The project in 2018 included several components (flow monitoring, lateral televising, smoke testing, manhole inspections). The exact cost of the smoke testing cannot be fully removed from the cost of the project management and report preparation. The amount paid directly for smoke testing is provided in Attachment to OUCC DR 8-13. The project in 2019 was primarily smoke testing with some dye tracing/testing. The amount paid for the entire project was \$120,098.46. \$1,200 was designed for dye tracing.

1 basin labeled M, as in Mary, 7. 2 Do you see that? 3 A Yes. 4 O Okay, and just for the Commission's information, when 5 we talk in these tables about basins, what are those? 6 Are those just like areas or sections of the 7 system? 8 A Yes. 9 Those were established in the Strand report, and 10 basically, just breaking the system into more manageable 11 areas, say certain homes go to a certain area --12 0 Okay. 13 A -- if that makes sense. 14 Q Yes. 15 So if we look at Table 23 here, and we see this 16 is the "Quantification Table for Each Type of Defect 17 (Basin M7)", and you see the total -- at the very bottom, 18 "Total Identified I/I: 118,512" -- and I assume that's 19 gallons per day; is that correct? 20 A Yes. Have all of those defects been remedied? 21 0 22 A To go down the line here, we've done a significant 23 amount of manhole lining in this area to address the 24 manhole defects. 25 The mainline --

1 Q I'm sorry to interrupt. I'm really trying to be 2 cognizant of time. I really want to make this as concise 3 as I can, and of course your counsel is welcome to expand, 4 but really rather than going through each one, if we looked 5 at just the bottom line, have all the defects been 6 remedied? That's really all my question is.

7 A I think it deserves a longer answer.

8 I would say manholes have almost entirely been 9 remedied. We performed follow-up work on the mainline. We 10 have lining planned this year for where defects were found. 11 Again, the laterals, they're a challenge that we've already 12 discussed, and the driveway drain, we did dye testing and 13 identified that that was a lateral issue.

14 Q So I take the answer to be no, not all of these 15 defects have been remedied; is that correct?

16 A Right; most but not all.

17 Q Thank you.

18 Let's move down now to Page 41, Table 24, the 19 same question.

20 You see at the bottom total I&I identified as 21 86,544.

Have all of these defects been remedied?A The same answer.

I need to look into the particulars, but most but 25 not all.

Okay. Next is Page 42, and that's Table 25, and, 1 Q 2 again, this one relates to a total I&I identified of 3 84,220. The question is: Have all of these defects been 4 5 remedied? 6 A The same answer. 7 I need to look into the particulars, but most but 8 not all. And then, finally, Table 26 which appears on Page 43, 9 Q 10 the amount of I&I identified is 54,720. Have all of these defects been remedied? 11 12 A The same answer; most but not all. Okay, and is it your testimony that for those defects 13 0 14 that have not been remedied, that none of that is 15 clearwater that's entering? 16 A I think there's a misunderstanding of clearwater 17 entry. 18 Again, I understand that to refer to water 19 directly into a manhole or a sump pump or downspout. 20 So most of these defects, for example, the 21 manhole inspections and mainline tv and laterals, I would 22 not call those clearwater entry. Those are more 23 infiltration. I want to ask you a little bit about flow monitors. I 24 O 25 think you've testified or I've seen in the discovery that

1 possibility for defects in the system increases? 2 A Yes. And those defects, then, can present as being points 30 4 for infiltration; isn't that correct? 5 A Yes. 6 Q Okay, and we can say I&I in general would be a 7 potential as the system ages and the defects increase. 8 So we talked a little bit about the televising 9 programs that Community has used. Now, Ms. Shoultz 10 mentioned Metz. You've also used RedZone. I think -- Let 11 me pull up the document. I believe there were at least 12 four televising companies that were used over a span of 13 years. 14 Does that sound right to you? 15 A Yes. 16 Metz did work 2015 and prior; RedZone 17 approximately 2015/2016; PipeView 2017, and we've used 18 AccuDig 2018 to present. 19 O All right, and when you've gone through these 20 different companies, the information that you get from 21 them, are you able to correlate the information? 22 That's probably not the best word, but do they 23 all use the same kind of software? 24 A Yes. 25 I can't speak for Metz, but the RedZone data

1 that's discussed in my testimony, the PipeView work, and 2 AccuDig's work, they all work to the PACP standards which 3 is a pretty standard way of scoring or identifying defects 4 in a sewer --

5 Q And --

6 A -- and then --

7 Q -- if you know, were there sections of those 8 televising projects that overlapped between the different 9 companies?

10 In other words, did they televise the same 11 stretch of pipe over and over again?

12 A I wouldn't say over and over.

13 RedZone did a significant portion. I'd have to 14 look up the amount, but I think it was let's say 60 percent 15 of the system. PipeView finished that remainder say 16 40 percent in 2017, and since then, we've done 10 percent a 17 year. We have a program that basically rotates through the 18 system, and that is doubling back over what's been done 19 before to get back on a -- our 10 percent for a ten-year 20 televising program.

21 Q All right. So when you do the televising, there's 22 really two different things that can happen; right?

23 Televising is simply a camera goes through the 24 line; right?

25 A Yes.

Okay, and that camera may hit an obstacle such as a 1 Q 2 root ball or a wad of wipes or any number of other things; 3 is that right? 4 A It could, yes. Okay. So there are times when that camera is not able 5 O 6 to determine the condition of the pipe because of 7 obstructions. 8 Wouldn't that be accurate? 9 A No. 10 We perform cleaning and televising. If there's, 11 you know, an obstruction, typically they run a jetter to 12 clear the pipe. 13 Q Right, and that is --14 A But if it's a root -- Okay. 15 I would say no. 16 RedZone operated that way where they only 17 televised, and we've gotten away from that. I think the 18 cleaning and televising is an improvement. 19 O So, as you mentioned, when they do cleaning, which is 20 another step potentially in televising, then you jet out 21 that pipe to remove whatever the obstruction is. There are times, however, when you cannot clear 22 23 the obstruction; isn't that right? It's possible. 24 A 25 We haven't had that happen very often. C-47

Well, when it does happen, when you cannot clear the 1 Q 2 obstruction, then, does that particular section of pipe get 3 placed on a priority list to examine what the problem is? 4 A Yes. If it's an immediate issue, we would deal with it 5 6 pretty quickly. And what do you mean when you say an immediate issue? 70 What's immediate? 8 Well, if we know it's obstructing flow or could cause 9 A 10 back-ups. If it's fairly minor, we could put it on a longer 11 12 term list. 13 Again, we haven't had that happen. All right. Well, here's my next question, though: 14 Q Ιf 15 you have root balls in a pipe, that by definition means 16 that there is intrusion into the pipe from outside the 17 pipe; correct? 18 A Correct. Okay, and that being the case, isn't it true that if 19 Q 20 you remove that root ball, but you do not address the tree 21 roots around the pipe, that you are -- that you can have a 22 recurrence of that same root intrusion? You could. 23 A 24 Q All right. 25 THE COURT: I'm going to break in here real

Community Utilities of Indiana, Inc. Cause No. 45389 Petition for Reconsideration Attachment 2 Page 25 of 32

1 A Yes.

2 Q What operational challenges do your operators face 3 during those heavy rain or storm events?

4 A Depends on the storm event, and every -- each one is 5 different.

6 During heavy rain, you know, in my testimony I 7 explain some of the challenges at the wastewater plant 8 where we may need to set up a trash pump or make other 9 operational modifications to address, you know, potential 10 overflows and other issues there.

In the collection system, you know, we need to 12 ensure that all of the lift stations are operational and 13 make any other changes to prevent SSOs.

14 Q You were asked some questions from Ms. Hitz-Bradley 15 about the fact that the proposal in this case does not 16 include any specific I&I work.

17 Do you recall those questions?

18 A Yes.

19 Q Can you summarize the comprehensive I&I program the 20 company is implementing outside of this case?

21 MS. HITZ-BRADLEY: Objection.

That goes beyond my cross, and he's already 23 testified to what constitutes the I&I project.

24 MR. PEABODY: Your Honor, Ms. Hitz-Bradley -25 THE COURT: Mr. Peabody?

D- 32

1 MR. PEABODY: Thank you, Your Honor.

Ms. Hitz-Bradley had asked him why we did not include any I&I projects or the fact that the consumer parties were concerned that there were no I&I projects in this case, and so I'm just allowing Mr. Carbonaro to explain why the company did not propose additional I&I work in this case.

8 THE COURT: Objection is overruled.

9 Thank you.

10 A Okay, so I would say our comprehensive I&I program is 11 broke into two similar components; there's the 12 investigation or inspection portion, which includes sewer 13 televising, manhole inspections, smoke testing, follow-up 14 dye testing, lateral televising, whether from the main or 15 part of our home inspection process, and the home 16 inspection process itself to identify prohibited 17 connections.

18 The other component is remediation where we 19 complete sewer point repairs or main replacement, sewer 20 lining; we complete manhole rehabilitation in response to 21 manhole defects, typically lining, but there's other 22 remediation such as inflow dishes or grout or, you know, 23 raising a manhole if needed, and then the home inspection 24 process. If a prohibited connection is identified, you 25 know, it leads to removal of that connection.

D- 33

1 CROSS-EXAMINATION OF MR. STEVEN M. LUBERTOZZI,

2 (Continuing)

3 QUESTIONS BY MS. SHOULTZ: (Continuing)

4 Q Mr. Lubertozzi, if I could have you turn to Page 32 of 5 that testimony back from Cause No. 44724, and just let me 6 know when you're there.

7 A Yes, I'm there.

8 Q And do you see there, what year -- The testimony that 9 you offered here, if I go to the front page of it, it 10 appears this was filed with the Commission in December of 11 2016; is that right?

12 A Correct; yes, on the first page filed December 30th, 13 2016.

14 Q Thank you.

So this was about four years ago, a little more than four years ago, and if we look on Page 33, you indicate at Line 4 that "Since 2010, CUII has been annually leaning and televising the sewer collection system, and premediation work is based upon these results each year."

20 Do you see that?

21 A Yes.

The Answer 66 on Line 4? Yes, I see that. Yes, and then do you see there on line -- well, that A same Line 5, the sentence talks about a more proactive approach indicating that "While the Company was over 50% of

1 the way through the entire collection system, it was 2 evident from the extraordinary weather-related issues in 3 2015 that a more proactive approach was necessary in order 4 to reduce the levels of I&I entering into the sewer system 5 and thereby reduce the potential of sewer overflows or 6 backups into customers' homes."

Do you see that?

8 A Yes, I do.

7

9 Q And then you indicate, because of that, it would be 10 critical that effective plans for infrastructure renewal be 11 developed with well supported prioritization of projects.

12 Do you see that?

13 A Yes, I see that sentence.

14 Q When you are talking in this passage of your testimony 15 here about effective plans for infrastructure, are you 16 talking about plans to replace and reline the collection 17 system so that there are no more back-ups?

18 A I need to re-read the whole response here instead of 19 just that one sentence.

20 Q Sure.

21 A I think that the question starts out about cleaning 22 and televising 10 percent a year and then goes into the 23 capital portion of it, and it's important to note that we 24 did clean and televise the entire systems through '15 and 25 '17 so that we did 100 percent of the system, and we

1 continue to do 10 percent of the system every year going 2 forward.

3 So here in this section, it talks about 4 alternatives to -- effective plans for infrastructure. 5 That's to make sure that we're just not focusing on one 6 aspect of the system, to make sure that we have a 7 comprehensive asset management framework in order to 8 address the service quality issues that these customers 9 have been having.

10 Q You go on there on Page 33, for example on Lines 16 11 and 17, to talk about mapping the system and "The RedZone 12 technology provides CCTV inspection of wastewater mains to 13 provide condition assessment of the sewage collection 14 system in accordance with the industry-standard NASCO PACP 15 rating system."

16 Do you see that?

17 A Yes, I do.

18 Q So that is speaking to the efforts that you describe 19 in 2016 as to the collection system; right?

20 A Correct, the RedZone technology and the collection 21 system, and in Line 18, I even reference the sewage 22 collection system.

23 Q And in this passage of your testimony, there isn't any 24 indication that you are going to stop chasing I&I, is 25 there?

1 A No.

2 We continue to work on I&I. We actually have a 3 project this month that we're making repairs and lining 4 part of the collection system.

5 Q And in this testimony four years ago, there wasn't any 6 indication, was there, that you were going to expand the 7 size of your wastewater treatment plant to treat more of 8 the I&I that is coming through the collection system, was 9 there?

10 A I don't recall every piece of information in that 11 case. It may have been in a data response or discovery, 12 but it's not in that portion of the testimony.

13 Q Is it anywhere in your testimony that you know of?
14 A Well, I'm not the only one that had testimony in that
15 case. We'd have to go back and read the transcript and
16 look at all the testimony that was provided in that case.
17 Q So are you saying you don't know or are you saying
18 that it's just not in yours?

19 A I don't think it was in mine, and I don't recall the 20 rest of the live testimony that we had that would be in the 21 transcript or other folks' testimony that may have 22 mentioned it. I just don't recall.

23 Q Mr. Lubertozzi, let's talk a little bit about the 24 plans that CUII is asking this Commission for preapproval 25 of in this proceeding and the rate impact of that.

1 THE COURT: Let's go back on the record. 2 Mr. Peabody? 3 Thank you, Your Honor. MR. PEABODY: 4 5 REDIRECT EXAMINATION OF MR. STEVEN LUBERTOZZI, 6 QUESTIONS BY MR. PEABODY: 7 O Good afternoon, Mr. Lubertozzi. 8 A Good afternoon, Mr. Peabody. Ms. Shoultz had asked you a series of questions about 90 10 your rebuttal testimony in CUII's last rate case and 11 whether there was any indication in your testimony from 12 that case that CUII would stop focusing on I&I. 13 Do you recall those questions? 14 A Yes, I do. 15 O Is it the company's proposal in this case to stop 16 focusing on I&I? 17 A No, it is not. 18 As we said earlier, we actually have some lining 19 projects that are happening by the end of the year. 20 Q So can you help us understand, then, the distinction 21 you are making in your rebuttal testimony when you talk 22 about chasing I&I versus focusing on I&I? 23 A Sure. 24 The point there if is you think back to the 25 Strand report that even at a 60 percent reduction -- or, F- 31

1 sorry, we'd have to get -- 30 percent I think is the best 2 we could do, and we'd have to get to a 60 percent reduction 3 before we'd see a meaningful impact that we wouldn't have 4 to do some of the capital projects. That's what is meant 5 by chasing I&I.

6 We're still going to focus on it; it's still 7 going to be part of the plan; we're still going to continue 8 to do smoke testing, dye testing, clean and televise, 9 manhole inspections, home inspections, rain barrel 10 giveaways, we're going to continue those as well. We 11 started those about two or three years ago, so we're going 12 to continue to focus on I&I.

13 I&I is going to be ongoing, not just from our end 14 but, you know, also on the private side and the utility 15 side; right? We have to focus on sump pumps; we have to 16 focus on downspouts, manhole linings, spot repairs, and 17 main lining, and we're going to continue to focus on all of 18 those.

19 Q Now Ms. Shoultz had asked you a number of questions 20 about concerns raised by LOFS and the OUCC in the mid- to 21 late 2019 time period.

22 Do you recall those questions?

23 A Yes, I do.

24 Q And she had asked you whether the company explored any 25 kind of middle ground or alternative approach.

F- 32