STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

PETITION OF THE CITY OF ANDERSON, INDIANA, FOR (1) AUTHORITY ADJUST ITS RATES AND CHARGES THROUGH A FIVE-STEP RATE IMPLEMENTATION; AND (2) FOR AUTHORITY TO ISSUE LONG-TERM DEBT TO FINANCE WATER SYSTEM IMPROVEMENTS	)	**CAUSE NO. 46171**

VERIFIED PREFILED REBUTTAL TESTIMONY AND ATTACHMENTS OF LORI A. YOUNG, P.E.

Rebuttal Testimony of Lori A. Young, P.E. — Petitioner's Exhibit 2R

Anderson Well Capacity — Attachment LAY-R1

Respectfully submitted,

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VERIFIED PREFILED REBUTTAL TESTIMONY OF

LORI A. YOUNG, P.E.

ON BEHALF OF

CITY OF ANDERSON, INDIANA

I.

Introduction

1. PLEASE STATE YOUR NAME, ON WHOSE BEHALF YOU ARE TESTIFYING, AND BUSINESS ADDRESS.

A. My name is Lori A. Young, and I am testifying on behalf of the Petitioner, the City of Anderson, Indiana's ("Anderson") Municipal Water Utility (Petitioner" or "Utility"). My business address is 110 Commerce Drive, Danville, Indiana 46122.

2. ARE YOU THE SAME LORI A. YOUNG WHO FILED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes.

3. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to respond to the testimony offered by Mr. James Parks, P.E., and Mr. Carl Seals on behalf of the Indiana Office of Utility Consumer Counselor ("OUCC"). My testimony explains that I strongly disagree with the OUCC's position that Anderson does not need to construct the South Side Water Treatment Plant to ensure sufficient water capacity and replace the Wheeler Treatment Plant as soon as possible for the following reasons: (I) The City cannot rely upon a reduction of lost water to solve its current and future water production needs. Anderson is working on its objective to reduce water loss (non-revenue water) but Anderson cannot rely upon water loss reduction such that additional water supply capacity is not necessary. Anderson understands its lost water

rate is significant and is taking an aggressive approach with these projects to address lost water and protect public health. These projects include a $71 million investment in water main and service line replacement, as well as funding for annual extensions and replacements for water meter and water main and service line replacement. The City is moving forward with an overall comprehensive water loss reduction strategy with these proposed projects. (II) The water production capacity of the Lafayette Water Treatment Plant and Well Field expansion project will be 11.3 MGD firm (safe) capacity and 13.1 MGD peak capacity, which are not sufficient alone to meet the current and 20-year projected needs of the system. At the same time, the Wheeler Well Field must not be planned for continued operation beyond April 2029 in order to protect public health and meet EPA regulatory requirements. The water demand projection differences between the PER and Mr. Parks are not meaningfully different as it relates to Lafayette Well Field and Water Treatment Plant capacity and the need to decommission the Wheeler Well Field and Water Treatment Plant. Contrary to Mr. Parks' suggestion, the reduction of water loss cannot be relied upon to reduce Anderson's water demand to a level that can be met by the Lafayette Water Treatment Plant and Well Field Expansion Projects alone. (III) The benefits of having two water treatment plants to provide a level of redundancy and resiliency for the City of Anderson is critical. Once the Commission approves Anderson's plan to proceed with the South Side Water Treatment Plant, Anderson will first analyze final well testing and water quality to inform the Plant's design, which will be finalized

after Anderson analyzes design alternatives and performs a life-cycle cost analysis for the Plant's design.

4. DOES ANDERSON PRESENT OTHER WITNESSES WHO REBUT THE OUCC'S TESTIMONY?

A. Yes. Anderson also provides the testimony of: (i) Mr. Neal L. McKee to address certain operational aspects of the testimonies of Mr. James Parks and Mr. Carl Seals, as well as the vacant positions adjustment by Ms. Sullivan; and (ii) Ms. Jennifer Wilson to address certain financial aspects of the testimonies of Ms. Carla F. Sullivan and Mr. Shawn Dellinger.

I.

WATER LOSS (NON-REVENUE WATER)

5. WHAT ACTIONS DOES ANDERSON PLAN TO REDUCE LOST WATER THROUGH THIS RATE CASE?

A. As identified in prior testimony and **Exhibit LAY-1**, Anderson proposes to invest $71 million dollars in ten water main and service line replacement projects to target areas of known leak history. Anderson proposes to implement a water main and service line replacement program prioritizing 2" galvanized steel water mains through a $1.5 million-dollar annual capital improvements budget to be funded through this rate increase. Anderson is replacing all residential water meters, and the capital improvements budget will allow for an approximate 10% annual replacement of approximately 2,400 meters each

year. The water meter replacement project includes state-of-the art Advanced Metering Infrastructure "AMI", which can be used in conjunction with the City's leak detection equipment as described by Mr. McKee.

6. CAN ANDERSON QUANTIFY THE REDUCTION OF WATER LOSS THAT WILL BE ACHIEVED BY THESE AGGRESSIVE PROJECTS AND PROGRAMS?

A. Contrary to Mr. Parks' implication, it is not possible to accurately predict the water loss reduction from these projects. I believe it would be irresponsible to assume a potential quantity of water loss reduction. We cannot base future plans on the hope and speculation that we will accomplish drastic water loss. Mr. McKee's long-term experience with water main replacement projects has demonstrated that the success of water loss reduction with water main and service line replacement projects cannot be accurately known until after the projects have been completed. The actual reduction in lost water is often less than anticipated. Meaningful water loss reduction could take as long as twenty years. If Anderson were to wait for the water loss results that Mr. Parks suggests without having another water source in place, the utility may be without sufficient supply, especially during an emergency.

7. DO YOU AGREE WITH MR. PARKS THAT "PETITIONER IGNORES ITS PROPOSED INVESTMENT OF $71 MILLION IN TEN TRANSMISSION AND WATER MAIN REPLACEMENT PROJECTS THAT TARGET AREAS OF THE PETITIONER'S DISTRIBUTION SYSTEM WITH SMALL DIAMETER

GALVANIZED IRON WATER MAINS THAT ARE PRONE TO LEAKS WITH A HIGH NUMBER OF MAIN BREAKS AND SERVICE LINE LEAKS."?

A. No, I do not agree with Mr. Parks. The water main and service line replacement projects have clearly been prioritized to reduce water loss. The ongoing concern is that while these segments of the water distribution are effectively replaced, the remaining 80%+ of 2" water mains will continue to be in service, and as they continue to further age and deteriorate, the leakage in those sections could increase such that the net improvement of the water main replacements does not substantially reduce the percent of water loss. The 2022 water loss rate of 39% was projected for future planning out of caution that existing conditions and the potential that water loss in other areas of the water distribution system may worsen over time while these projects are constructed.

8. DO YOU AGREE WITH MR. PARKS' STATEMENT THAT THE PROJECTED CONTINUED 39% WATER LOSS RATE MEANS IT WAS ASSUMED THAT NEITHER THE IURC NOR IDEM WILL MANDATE PETITIONER ADDRESS ITS EXCESSIVE WATER LOSSES, WHICH HAVE BEEN GROWING?

A. No, I do not agree with this statement. The 39% water loss rate was utilized to plan conservatively to make sure Anderson has adequate water supply in the future. Anderson is taking a major step forward with these projects to reduce water loss, but it does not want to be unrealistic. The projection of continued water loss of 39% is not intended to communicate complacence or acceptance of this high rate of water loss. The water loss

projections may be revised in the future based upon success; however, over-estimating the projected success could result in a shortfall of water supply if the water loss reduction relied upon is not achievable. Mr. Parks suggests that the average water loss from 2019 to 2023 might be more appropriate at 36.7% water loss. The difference between a projection of 36.7% and 39% water loss is not meaningful in the overall projections or the intent of the City of Anderson to reduce lost water.

Anderson is very concerned about the water loss and its objective is to significantly reduce water loss and work toward the 15% water loss goal as stated by the IURC. The City proposes significant funding for capital improvements that will continue the City's efforts to move forward with elimination of 2" water mains. However, this is going to take many years and substantial investment. The City is continuously monitoring and documenting leaks on service lines and water mains. The City has a working list of priorities based on high leak density, but the order of priority for improvements is flexible to adjust priorities as realized by the operations team. The projects included in this case are intended to work on water loss reduction, in particular related to the approximately 340,000 linear feet of 2" galvanized water mains. First, approximately 74,000 linear feet or over 20% of 2" galvanized water mains will be replaced or retired through this project. Additionally, the capital improvements plan allows for additional water main replacement funding to address priority areas. As the City continues its ongoing monitoring of leaks and breaks, priority areas for 2" water main replacement will continue to be

updated based on the frequency of issues and field data collection. This rate case will begin significant steps to replacing 2" galvanized water mains and ensure sufficient water supply quality, capacity, redundancy, and resiliency through the construction of a new South Side Water Treatment Plant.

Preliminary estimates are that approximately 3,000 linear feet/year of problematic water main and service lines could be replaced or retired with the planned $1,500,000/year of water main replacement capital improvements planning funding.

If the City were to instead pursue large scale water loss projects to replace the remaining 2" galvanized water mains as Mr. Parks suggests, the costs would likely be over $140 million, and funding for that large investment would need to be recovered over a series of additional rate cases, along with the costs associated with rate cases. Assuming these projects span 20 years, these additional costs would calculate to a necessary $7,000,000 of annual capital improvements funding over approximately 20 years instead of the Anderson's current proposed $1,500,000 annual capital improvement funding. The costs of Mr. Parks' proposal are significant when compared to Anderson's proposal to spend $28 million to fund a new South Side Water Treatment Plant. As I discuss in greater detail below, Mr. Parks' proposal would leave Anderson without the resilience and redundancy of water supply that the South Side Water Treatment Plant would provide. As such, the OUCC's proposal to forego the South Side Water Treatment Plant is unrealistic,

costly, and endangers the utility's ability to provide adequate, resilient, and redundant water supply in the future.

II.

CURRENT CAPACITY & DEMAND PROJECTIONS

9. PLEASE DESCRIBE THE CITY OF ANDERSON'S CURRENT PROJECT TO EXPAND CAPACITY OF THE LAFAYETTE WATER TREATMENT PLANT AND WELL FIELD. WHAT PEAK AND FIRM WATER PRODUCTION CAPACITY WILL BE ACCOMPLISHED BY THESE PROJECTS?

A. The City of Anderson's Lafayette Water Treatment Plant Expansion project includes build out of the existing water treatment plant from 8 MGD firm capacity to 14 MGD firm capacity. The existing Lafayette Water Treatment Plant was originally designed for expansion to 14 MGD of firm capacity, and this project adds the three filters, pump, upgrades and associated improvements to accomplish the completion of the plant. The Lafayette Water Treatment Plant has a peak design capacity of 16 MGD. All water is supplied to the Lafayette Water Treatment Plant from the "Lafayette Well Field." The City received bids for this project on March 18, 2025, as noted by Mr. Parks. This project is funded through Tax Increment Financing ("TIF") Funds. The construction of this project is expected to be completed in 2026.

The Lafayette Well Field is located on the north side of Anderson and the wells are generally outside of the municipal limits. There are eleven (11) existing wells in the well

field. The Fuller Well Project includes the construction of two new wells on a property that has been owned by the City for many years, but has not been previously developed. A 20" raw water main will be constructed to connect the new wells to the existing raw water transmission main, which continues to the Lafayette WTP. The design capacity of the two Fuller Wells is 1,400 gpm each, equal to 2 MGD each. The maximum capacity of these two wells together is expected to be 4 MGD. The maximum pumping capacity of the Lafayette Well Field in 2024 was 6,775 gpm, which is equal to 9,756,000 gpd. The Firm (Safe) capacity with the Hannah 2 well out of service was 8,316,000 gpd.

The Lafayette Well Field includes wells constructed from 1969 to 2023. The Welborne, Schreckengast, Tuxford, and Jarrett wells are the oldest wells in the Lafayette Well Field. Due to declining production and marginal performance, the use of these wells is being phased out, with Welborne and Tuxford being retired by 2026 and Schreckengast and Jarrett to be retired within the next 5 years. The approximate total capacity of these four wells is 875 gpm. The new Fuller Wells serve to replace the capacity of these old wells and provide an additional production capacity of approximately 2,800 - 875 = 1,925 gpm. This should be a net gain of approximately 2.772 MGD. With the retirement of the older wells and completion of the Fuller Wells, the expected total well field capacity in 2026 will be 13,104,000 gpd with Firm (safe) capacity of 11,376,000 gpd. (See attached **Exhibit LAY-R1** which provides an update with 2024 well pumping rates and projected 2026 well production.)

The total water production capacity of the Lafayette Water Treatment Plant is limited by the well field capacity. With the addition of the two Fuller Wells and retirement of the four identified older wells, the maximum production capacity will be 13,104,000 gpd. The firm (safe) capacity of water production will be 11,376,000 gpd.

10. DO YOU AGREE WITH THE TESTIMONY OF MR. PARKS THAT THE "PETITIONER'S PLANS, CURRENTLY UNDERWAY TO EXPAND THE LAFAYETTE WELLS AND WATER TREATMENT PLANT TO 14.0 MGD FIRM CAPACITY AND 16.0 MGD RATED CAPACITY…" WILL MEET THE PETITIONER'S WATER PRODUCTION NEEDS THROUGH THE TWENTY-YEAR DESIGN PERIOD OF 2022 – 2042. (Public's Exhibit No. 4, pgs. 2, 7)

A. No, I do not agree with Mr. Parks' statement concerning Anderson's capacity. Mr. Parks' calculation of Anderson's firm capacity and rated capacity is not correct and must not be accepted as a basis for rejecting Anderson's plan to construct the proposed South Side Well Field and Treatment Plant. It appears that Mr. Parks did not consider that the Lafayette Well Field Capacity with the current upgrades will not support the full design capacity of the expanded Lafayette Water Treatment Plant. The current projects will provide a 11,376,00 gpd Firm Capacity and 13,104.000 gpd (peak) rated capacity. Additional wells and raw water transmission main will be required to further increase the water production capacity of the Lafayette Water Treatment Plant in the future.

11. DO YOU AGREE WITH THE TESTIMONY OF MR. PARKS THAT "COMBINED, THE LAFAYETTE AND SOUTH SIDE WTPS WOULD HAVE A 19.0 MGD FIRM CAPACITY (WITH ONE 3.0 MGD UNILATER OUT OF SERVICE) AND A 22 MGD RATED CAPACITY (ALL TEN FILTERS IN SERVICE). (p. 7 of 33)

A. No, I do not agree with Mr. Parks regarding the combined firm and rated capacity of these facilities. As stated above, the actual Firm Capacity of the Lafayette WTP and Well Field will be 11,376,00 gpd and 13,104.000 gpd (peak) of maximum capacity (as limited by the well field capacity). I agree with Mr. Parks' capacity assignment of 3.0 MGD firm capacity of the proposed South Side WTP, and 6.0 MGD peak rated capacity of the South Side WTP. I recommend the calculations be revised as follows to account for the appropriate production capacity of the Lafayette Water Treatment Plant and Well Field:

- The Combined Firm Capacity = 11.376 MGD Lafayette + 3.0 MGD South Side = 14.376 MGD Firm Capacity.
- The Combined Rated (Peak) Capacity = 13.104 MGD Lafayette + 6 MGD South Side = 19.104 MGD peak rated capacity.

12. WHY IS THE LAFAYETTE WATER TREATMENT PLANT CAPACITY EXPANSION GREATER THAN THE LAFAYETTE WELL FIELD WATER PRODUCTION CAPACITY?

A. The Lafayette Water Treatment Plant is designed with 2 MGD filters, such that it is expandable in 2 MGD increments. The existing treatment plant is designed for the addition of 3 filters, each filter rated at 2 MGD. Expansion of the water treatment plant had to be a minimum of 4 MGD to treat the increased water production to provide 13.104 MGD peak capacity. Due to economies of scale, and the benefit of uniformity, expansion of the plant to the ultimate design of 14 MGD was the prudent choice. The water treatment plant will have approximately 14 – 11.376 = 2.624 MGD firm excess treatment capacity upon completion of the Fuller Wells. This provides available capacity for construction of additional wells and raw water mains in the future if Anderson's water demand increases and hydrogeological studies and investigations provide additional supply opportunities. Additional hydrogeological investigation is also part of the City's capital improvement plan funded through this rate case.

13. WHY IS ANDERSON NOT PROPOSING ADDITIONAL WELLS AT THE LAFAYETTE WELL FIELD INSTEAD OF THE SOUTH SIDE WELL FIELD?

A. The City has been performing hydrogeological investigation over the past several years, as identified in prior testimony. The hydrogeological summary included in the PER identifies these efforts and investigations. The City continues to work to seek access agreements for test well drilling. Access agreements and property owner coordination take time and are not guaranteed, but the City continues these efforts. A second water treatment plant to replace the Wheeler WTP has been a priority due to the age and condition of Wheeler wells

and water treatment plant, along with the urgent concern of PFAS contamination as described in my direct testimony.

A second water treatment plant and well field provide benefits to serve Anderson's large water distribution system from two points, as well as the benefit of two separate well field supplies. The City currently has two supply points and understands the benefits for redundancy and resiliency provided by two finished water entry points for the distribution system. This redundancy is beneficial to allow the Lafayette WTP to shut down segments of the facility for major maintenance or service activities. Neal McKee further explains these issues and instances. A second water treatment plant and well field also provide redundancy in the case that a raw water transmission main would break in the Lafayette Well Field. Additionally, Anderson does not have any emergency water supply connections with neighboring utilities. In fact, there are no other regional water providers with adequate capacity to provide Anderson an emergency connection. A second water treatment plant is valuable to provide a second source of water supply and treatment. To have only one source of supply is short-sighted.

14. WHAT IS ANDERSON'S TOTAL WATER PRODUCTION, AND WHAT IS PROJECTED WITH THE ADDITION OF THE FULLER WELLS?

A. Anderson's current water production is a total of the production from both the Wheeler and Lafayette Well Fields. The Preliminary Engineering Report (PER) submitted as **Attachment LAY-1** with my Prefiled Direct Testimony Tables 1.1.1.1 and 1.1.1.3

provided Existing Water Supply Well information for the wells supplying the Wheeler and Lafayette Water Treatment Plants, respectively. There have been some changes impacting the well production since the 2022 IURC report information that was stated in the PER. The attached **Exhibit LAY-R1** provides the 2022 Well Data, along with updates for 2024, and projected 2026 Well Production. The purpose of this exhibit is to provide updated well conditions and production rates.

15. HAVE YOU REVIEWED THE ANALYSIS AND RECOMMENDATIONS BY MR. PARKS FOR ANDERSON'S 20 YEAR PROJECTED WATER DEMAND, AND ARE THEY SUBSTANTIALLY DIFFERENT FROM THE PROJECTIONS IN THE PER?

A. Yes, I have. Mr. Parks identified some errors on PER Table 2.2.2, and I agree with his assessment that the breakdown of Total Domestic, Commercial, and Industrial water demand was not correct, particularly for Industrial. While there are discrepancies in the calculations and assumptions between my projections and Mr. Parks', the resulting total projection of daily customer demand in 2042 must be assessed against the current and projected water capacity of Anderson's existing water supply and treatment.

We cannot foretell the future water demand. Mr. Parks' projected decline in residential customers over the 20-year planning horizon may ultimately be correct, but it is ultimately speculative. While the historical data indicates declining population, Anderson continues to receive proposals for new subdivision developments, along with inquiries for

commercial and industrial developments. There are also several subdivisions within Anderson's water service area with homes on residential wells. There is potential that residents in these existing areas may request water service in the next 20 years. Anderson is located along the Interstate 69 corridor with two major interstate exits, and is located in close proximity to Indianapolis, Muncie, and Ft. Wayne. There is significant potential for growth and it is more responsible to err on the side of modest growth versus stagnation.

I have reviewed OUCC Attachment JTP-3, pages 1-5, which Mr. Parks prepared to show his derived water pumpage requirements for the 20-year planning horizon. Mr. Parks shows the Petitioner's projection as provided in the PER, which includes continued 39% water loss. Mr. Parks additionally prepared projections estimating water loss reductions to 25% and 30%. Mr. Parks included a 6% "other authorized consumption" for his forecasted projections. Mr. Parks' analysis for the Petitioner's projections does not include the 6% "other authorized consumption," and only identifies a flat 25% or 30% water loss.

Table LAY-R1 (below) provides a summary of scenarios considered by Mr. Parks. Mr. Park's tables identify current average day water loss at 4.84 MGD. I have calculated in the right column of Table LAY-R1 the required average day water loss reduction the City would need to achieve from current losses to accomplish these projected non-revenue percentages.

Table LAY-R1

2022-2042 Projected Growth & Non-Revenue Water Scenario	Avg. Day (MGD) 2042	Peak Day (MGD) 2042	Required Avg. Day Water Loss Reduction (MGD)
Petitioner PER growth rate, to Remain 39%	14.4	18.0	0
Parks-Forecasted growth, to Achieve 25% (31%)	9.7	13.75→12.13	1.83
Parks-Forecasted growth, to Achieve 30% (36%)	10.39	13.75→12.99	1.14
Parks-PER growth rate, to Achieve 25%	11.01	13.76	2.09
Parks- PER growth rate, to Achieve 30%	11.79	14.74	1.3

The average day projections for 2042 by Mr. Parks range from 9.7 MGD to 11.79 MGD. Mr. Parks' forecasted growth rates show either less average day demand than in 2022, or only a very small increase of 190,000 gpd of additional water demand by 2042. We do not believe it is responsible to project zero growth over 20 years, especially considering the pace of development up the Interstate 69 corridor. Additionally, as stated previously, water loss reduction cannot be relied upon. This would leave Anderson unprepared and unable to sustain any growth. The peak day water pumpage projections for 2042 by Mr. Parks range from 12.13 – 14.74 MGD. The PER projected Peak Day Pumpage is 18 MGD.

16. DOES THE LAFAYETTE WATER TREATMENT PLANT AND WELL FIELD EXPANSION PROJECT PROVIDE ADEQUATE CAPACITY TO SUPPLY ANDERSON'S WATER DEMAND FOR THE RANGE OF PROJECTED 2042 WATER DEMANDS?

A. No, the Lafayette Water Treatment Plant and Well Field capacity is not sufficient to meet the average and peak day demands for the range of scenarios as evaluated by Mr. Parks. As stated above, the actual Firm Production capacity of the Lafayette WTP and Well Field will be 11.376 MGD, with peak rated capacity of 13.1 MGD by 2026 but additional wells are aging and planned for retirement even as new hydrogeological investigations are underway. Of note, the Lafayette WTP and Well Field would not have enough capacity to supply the system for several years through the next 20 years, as daily demand will be higher until water loss is accomplished.

17. CAN ANDERSON RELY ON THE PROPOSED PROJECTS TO REDUCE WATER LOSS SUFFICIENTLY FOR ANDERSON'S TOTAL WATER PUMPAGE REQUIREMENT TO BE MET BY THE CURRENT LAFAYETTE WTP EXPANSION AND CONSTRUCTION OF THE TWO FULLER WELLS?

A. No, reduction of water loss cannot be relied upon to reduce Anderson's water demand to a level that can be met by the Lafayette Water Treatment Plant and Well Field. Reliance on reduction of water loss alone is not a responsible plan for the City's long-term water supply and reduction of water loss does not allow the City to achieve its desired redundancy or resiliency. Construction of additional water supply wells and treatment cannot be delayed until the outcome of water loss reduction from planned projects is measurable and known.

18. BASED ON CAPACITY ALONE, HOW MUCH WATER LOSS WOULD HAVE TO BE ACCOMPLISHED TO MAKE THE LAFAYETTE WTP AND WELL

FIELD VIABLE AS THE ONLY WATER SUPPLY TO THE CITY OF ANDERSON?

A. As shown in Table LAY-R1, water loss to achieve scenarios outlined by Mr. Parks would require the City to reduce water loss by anywhere from 1.14 MGD to 2.09 MGD. However, if the City were to try to depend solely on the Lafayette Plant to supply all water, my calculation for future planning show water loss would need to be reduced to 20% with no growth. As stated previously, any water loss reduction cannot be relied upon and, in particular, a 20% water loss cannot be assumed. Below is my calculation for estimation of water loss required. A 10% safety margin is recommended between peak demand and firm capacity.

11.376 MGD Production Firm Capacity (Lafayette) X 0.9 = 10.238 MGD Peak.

Peak Demand = 1.25 X Average Demand.

Average Demand = 10.238 MGD Peak ÷ 1.25 = 8.19 MGD Average Demand.

Average Day 2022 Water Demand = 11.3 MGD

Average Day 2022 Water Sold = 6.5 MGD

Average Day 2022 Water Lost = 4.8 MGD (39%)

Allowable total demand 8.19 MGD - 6.5 MGD = 1.69 MGD allowable water loss

Water Loss Limit for Lafayette WTP Only = 1.69 MGD

Water Loss Reduction Required: 4.8 MGD – 1.69 MGD = 3.11 MGD

Required to serve with Lafayette Only based on 2022 water sold and no growth:

6.5 MGD Sold + 1.69 MGD Lost Water = 8.19 MGD Total Production

Lost Water = 1.69 ÷ 8.19 = 20.6%

19. IS IT REASONABLY POSSIBLE FOR ANDERSON TO REDUCE WATER LOSS BY 3.11 MGD BY 2029 IN ORDER TO RESPONSIBLY TAKE THE WHEELER WTP OFFLINE DUE TO PFAS CONTAMINATION?

A. No, it is not reasonably possible for Anderson to reduce water loss from 39% to 20.6% by April 2029. This would be necessary to minimally serve the system without Wheeler. The proposed water main and service line replacement projects will only replace approximately 20% of the 2" galvanized steel water mains in the distribution system. It is not feasible to reduce water loss by 3.11 MGD, equal to 64.8% of current losses in this short period of time.

Mr. Parks' projections in his testimony only considered 25% and 30% water loss goals for the 20-year planning horizon, which would be monumental to achieve. It is not feasible or realistic for Anderson to reduce water loss by 64.8% in the next 4 years. Dueto the impossibility of reducing water loss by almost 65% in the next four years, Mr. Parks' suggestion that the City should meet its water needs with the Lafayette Water Treatment Plant and Well Field is not viable or reasonable and would jeopardize the City's ability to meet the needs of its current and future customers.

20. WILL CONSTRUCTION OF THE SOUTH SIDE WATER TREATMENT PLANT AND WELL FIELD PROVIDE WATER SUPPLY TO MEET THE WATER

DEMAND THAT CANNOT BE SUPPORTED WITH THE PROPOSED LAFAYETTE WTP AND WELL FIELD FACILITIES?

A. Yes, the proposed South Side Water Treatment Plant and Well Field are proposed to provide an additional 6 MGD peak water treatment plant and well field capacity.

Table LAY-R2: Project Water Production Capacity with Lafayette & South Side Water Treatment Plants

	Firm Capacity (MGD)	Peak Capacity (MGD)	Capacity Provided
Lafayette WTP & Well Field	11.376	13.104	
South Side WTP & Well Field	3.0	6.0	
Total	**14.376**	**19.104**	
Petitioner PER growth rate, to Remain 39%	14.4	18.0	Marginal
Parks-Forecasted growth, to Achieve 25% (31%)	9.7	13.75→12.13	Yes
Parks-Forecasted growth, to Achieve 30% (36%)	10.39	13.75→12.99	Yes
Parks-PER growth rate, to Achieve 25%	11.01	13.76	Yes
Parks- PER growth rate, to Achieve 30%	11.79	14.74	Yes

The South Side Treatment Plant is needed to provide an adequate water supply now to meet the current and long-term needs of the City of Anderson. The City cannot "wait and see" if the proposed water main replacement projects are successful enough, and then determine if Wheeler can be kept in operation or if a new treatment plant would be needed. Anderson cannot risk providing a marginal water supply at the ragged edge of adequacy due to reliance on accomplishing reduction in water loss. Even if water loss reduction is accomplished and there is no growth, the City would have no margin for error if it solely relied on the Lafayette Well Field and Treatment Plant alone.

21. WOULD ANDERSON KNOW THE WATER LOSS REDUCTION ACCOMPLISHED IN TIME TO MEET THE PFAS WATER QUALITY REQUIREMENTS?

A. No, by the time the results of water loss reduction are known, it will be beyond the date of PFAS Maximum Contaminant Level ("MCL") compliance enforcement in April 2029. It is not at all reasonable to assume water loss of 3.11 MGD will be accomplished by April 2029 and this must not be relied upon. The construction of the proposed 10 water main and service line replacement projects will not be complete until approximately 2029.

The earliest the effectiveness of the water loss reduction could be evaluated would be 12 months after completion of the project to provide a year of comparison data. If Anderson waited until 2030 to decide on the Wheeler WTP and Wells, it would already be in violation. As stated above, the actual Firm Production capacity of the Lafayette WTP and Well Field will be 11.376 MGD, with peak rated capacity of 13.104 MGD, as limited by the well field capacity.

22. DO YOU AGREE WITH MR. PARKS THAT THE WHEELER WTP CAN PROVIDE ADDITIONAL SUPPLY, AT LOWER PRODUCTION VOLUMES THAN CURRENTLY ACHIEVED, IF PETITIONER ONLY PUMPED RAW WATER FROM WELLS WITHOUT PFAS CONTAMINATION?

A. No, this is not recommended. The Wheeler Well Field is contaminated with PFAS. The wells are all in the same aquifer and the three Ranney wells have detects for PFAS. Ranney

Well 4 has been taken off line to minimize PFAS in the public water supply. Since the 2022 PER, the Norton Wells, which are extremely old, have failed and been retired from service. The PFAS plume will very likely spread to the Elder wells after taking the Ranney 4 well off-line, as we have seen occur in other well fields (Jackson County Water Authority, 2025).

For these reasons, the Wheeler Well Field and Water Treatment Plant cannot be relied upon for long term water supply, and it critical that the South Side Water Treatment Plant and Well Field be developed to replace the Wheeler facilities and provide Anderson a second source of water.

23. DO YOU RECOMMEND THE CITY OF ANDERSON CONSIDER MAINTAINING THE WHEELER WATER TREATMENT PLANT AND WELLS IN SERVICE AFTER THE APRIL 2029 DEADLINE TO MEET COMPLIANCE WITH EPA'S ESTABLISHED PFAS MAXIMUM CONTAMINANT LEVELS ?

A. No, the Wheeler WTP and well field must be retired. A replacement water supply must be in operation by April 2029 to meet EPA's enforcement schedule for compliance with PFAS MCLs. The Wheeler Well Field is located within an area of known aquifer contamination, see PER Pages 1-5 and 1-6. The Wheeler Well Field is located within a 2018 designated EPA Superfund National Priority List site due to Tetrachloroethylene contamination.

The groundwater in this well field is under the Direct Influence of Surface Water per 2009 IDEM designation. This requires additional treatment steps and a 24-hour per

day licensed WT-5 operator to be at the water plant. PFAS Contamination was discovered in 2023. PFAS constituents were detected in three of the Ranney Wells. Ranney 4 was the highest detection, exceeding the MCL of 4 PPT at 35.8 PPT. PFAS constituents were also detected in Ranney Wells 1 and 5.

24. ARE THE OTHER EXISTING WELLS IN THE WHEELER WELL FIELD ADEQUATE FOR RELIABLE PRODUCTION OF WATER WITHOUT PFAS CONTAMINATION?

A. No. As of April 2025, the Elder Wells are the only operational wells in this well field that have not tested positive for PFAS. The Norton Wells are rock wells over 100 years old and they have had major failures in equipment and piping in the past year and have been removed from service. This has reduced the well field pumping capacity by approximately 400 gpm.

The Ranney Well 4 has been taken off-line due to high PFAS concentrations. Ranney Wells 1 and 5 are still in operation with production of approximately 1,505 gpm. These wells cannot be planned for long-term use due to contamination along with age and deteriorated condition.

The Elder 1 and 2 Wells have not had a detectable levels of PFAS to date. Due to location in the well field and with continued pumping, there is a significant potential that the PFAS plume will migrate to the Elder Wells. If the other wells were removed from service, operation of the Wheeler Plant to produce 1 MGD from the Elder Wells would be

very expensive and potentially challenging to treat such a small amount of water through this large facility.

25. COULD ADDITIONAL WELLS BE DRILLED AT THE WHEELER WELL FIELD FOR SHORT TERM OR LONG-TERM PRODUCTION?

A. No. Based on the existing known groundwater contamination in this area, it is not recommended. It is also unlikely that IDEM would approve a pre-well site survey or any construction of a new well in this area of known contamination.

III.

REDUNDANCY AND RESILIENCY

26. WHAT ARE THE BENEFITS OF HAVING TWO WATER TREATMENT PLANTS THROUGH THE ADDITION OF THE SOUTH SIDE WATER TREATMENT PLANT?

A. The first benefit of a second water treatment plant and well field on the South Side of Anderson is to provide greater resiliency to drought conditions and natural disasters. Climate change trends are anticipated to contribute to slower recharge. The Lafayette Well Field aquifer on the north side of Anderson is primarily recharged through precipitation which limits the production capacity during extended periods of drought. According to published weekly Palmer Hydrological Drought Index data (Weekly Palmer Drought Indices | Divisional Time Series | National Centers for Environmental Information (NCEI) https://www.ncei.noaa.gov/access/monitoring/weekly-

palmers/time-series/1205), the Central Indiana Climate Division, Division 5 (which Anderson is within), has been experiencing dry to drought climate conditions since October 2022. Lafayette Well Field production has increased to make up for the Wheeler Well Field Ranney 4 Well, which was turned off due to PFAS contamination. The increased groundwater withdrawal on the north side of Anderson, combined with reduced recharge under the drought conditions, will lead to lower aquifer levels and leave the City in the unenviable and exposed position of being unable to meet demand. Installation of a well field south of Anderson will provide additional reliable groundwater production while simultaneously reducing the reliance on the Lafayette Water Treatment Plant and Well Field. As noted by Neal McKee, several residential wells on the north side of Anderson have recently been impacted due to Anderson's well field pumping, resulting in lower groundwater supply levels. The City has been working with these residents and IDNR to replace or drill deeper wells. In total, these conditions provide a clear picture of the resiliency benefits of a second water treatment plant and well field .

Additionally, the second water treatment plant is necessary to provide the benefit of system redundancy. As stated previously the City does not have any emergency water connections with other utilities. As Anderson has experienced in the past, during emergency conditions, a second water supply is invaluable to maintain water service to protect the public health. As Neal McKee has stated, the City has experienced instances during tornado/storm events even as recently as this year where having two water treatment plants has proved important.

The City has always had two water treatment plants to provide for the City's water needs. Full reliance on one water treatment plant makes shut downs for maintenance much more complex and even short shut downs can cause stress, risk, and additional burdens to the City. (See Neal McKee's testimony related to recent examples of why a second water treatment plant is needed for resiliency and redundancy of water supply).

27. ASSUMING THE COMMISSION APPROVES OF THE CONSTRUCTION OF THE NEW SOUTH SIDE WATER TREATMENT PLANT, WHAT ALTERNATIVES WERE EVALUATED FOR THE TREATMENT PLANT DESIGN AND IS THERE A LIFE-CYLE COST ANALSYIS?

A. After final test well drilling, water quality sampling, and determination of the location South Side Wells and Water Treatment Plant, the design and cost estimates shall be further evaluated. Until full data is known on well field capacity and water quality, full life-cycle cost analysis cannot be meaningfully completed. Initial concept design has included a unilateral type of package plant for removal of iron and manganese. The City will consider and evaluate a traditional filter plant like the Lafayette Water Treatment plant per Mr. Parks' recommendations. Once data is available, more detailed preliminary design and cost estimates including the life-cycle cost analysis and comparison of alternatives will be performed. The proposed rate increase includes funding flexibility to evaluate multiple treatment options and select the most cost-effective option.

28. WHAT DO YOU RECOMMEND TO THE COMMISSION?

A. I recommend the Commission approve the Petitioner's request for rates to support the proposed south side water treatment plant and wellfield along with the identified water main and service line replacement projects and other rate case components. These projects are critical to reducing lost water, protecting public health, and ensuring sufficient water supply and capacity.

If approval is not achieved, the City will face a future with inadequate supply and unsafe drinking water at the Wheeler Treatment Plant. This rate case is not requesting excessive water system improvements and capacity- it is requesting adequate resources to provide safe and reliable water for the current needs and future demands of the City's customers. I recommend the Commission approve Anderson's request to issue bonds to finance construction of the Southside Wells and Water Treatment Plant as such project is, in my professional opinion, absolutely necessary to provide resiliency and redundancy for the City's water system and to ensure that water production and treatment are at safe and sustainable levels.

VERIFICATION

I affirm under the penalties for perjury that the foregoing testimony is true to the best of my knowledge, information, and belief.

Lori A. Young

Lori A. Young, P.E.
Curry & Associates, Inc., now part of
FLEIS & VANDENBRINK

CERTIFICATE OF SERVICE

I certify that a copy of the foregoing document was served upon the following by electronic mail this 30th day of April, 2025:

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Anderson Well Capacity - PER Data with 2024 Updates and Projected 2026 Pumping Capacity

Wheeler WTP Supply Wells	**2022 IURC Reporting & PER**		***2025 Updates***	
Well Name	**Original Rated Capacity**	**Actual Capacity**	**2024 IURC Report - Actual**	**Projected 2026**
Reference PER Table 1.1.1.1	**(gpm)**	**(gpm)**	**(gpm)**	**(gpm)**
Ranney 1	1,200	700	560	560
Ranney 2	1,500	300	220	220
Ranney 4*	1,200	360	360	360
Ranney 5	1,200	900	945	945
Elder 1	1,000	300	300	246
Elder 2	700	400	400	500
Norton 1	Unknown	150	150	*Retired*
Norton 2	Unknown	250	250	*Retired*
Total Max Well Capacity	**GPM**	**3,360**	**3,185**	**2,831**
	GPD	**4,838,400**	**4,586,400**	**4,076,640**
PER - Wheeler "Reliable Capacity"		***4,700,000***		
Firm (Safe) Well Capacity	**GPM**	**2,460**	**2,240**	**1,886**
Wheeler WTP Supply Wells	**GPD**	**3,542,400**	**3,225,600**	**2,715,840**

**Normally off due to PFAS contamination*

Lafayette WTP Supply Wells	**2022 IURC Reporting & PER**		***2025 Updates***	
Well Name	**Original Rated Capacity**	**Actual Capacity**	**2024 IURC Report - Actual**	**Projected 2026**
Reference PER Table 1.1.1.3	**(gpm)**	**(gpm)**	**(gpm)**	**(gpm)**
Hall	1200	800	800	800
Welborne	800	300	125	*To Retire*
Tucker 1	1,200	800	800	800
Tucker 2	1,200	1,200	900	900
Schreckengast	800	250	250	250
Tuxford	550	400	150	*To Retire*
Gahimer	800	600	600	500
Jarrett	Unknown	(not used)	350	350
Rock	1,400 (1,000)	900	900	1,200
Hannah 1	1,400	900	900	900
Hannah 2	1,400	1,400	1000	1,000
Fuller 1 (to be compelted 2026)	0	-	0	1,200
Fuller 2 (to be completed 2026)	0	-	0	1,200
Total Max Well Capacity	**GPM**	**7,550**	**6,775**	**9,100**
	GPD	**10,872,000**	**9,756,000**	**13,104,000**
Firm (Safe) Well Capacity	**GPM**	**6,150**	**5,775**	**7,900**
Lafayette WTP Supply Wells	**GPD**	**8,856,000**	**8,316,000**	**11,376,000**

Total Well Field Production		***2025 Updates***	
Well Field	**2022 IURC Capacity**	**2024 IURC Report**	**Projected 2026**
Wheeler Well Field Peak Rated	4,838,400	4,586,400	4,076,640
Lafayette Well Field Peak Rated	10,872,000	9,756,000	13,104,000
Peak Total Well Production	**15,710,400**	**14,342,400**	**17,180,640**
Wheeler Well Field Firm (Safe) Production	4,700,000	3,225,600	2,715,840
Lafayette Well Field Firm (Safe) Production	8,856,000	8,316,000	11,376,000
Total Well Production Firm (Safe) Production	**13,556,000**	**11,541,600**	**14,091,840**