

FILED
November 23, 2015
INDIANA UTILITY
REGULATORY COMMISSION

Petitioner's Exhibit 7

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

**IN THE MATTER OF THE PETITION OF)
EDWARDSVILLE WATER CORPORATION,)
A NONPROFIT CORPORATION, FOR)
AUTHORITY TO ISSUE LONG-TERM DEBT)
AND FOR APPROVAL OF A CHANGE IN)
RATES AND CHARGES.)**

CAUSE NO. 44642

**SETTLEMENT TESTIMONY
OF ROBERT E. CURRY, P.E.**

**ON BEHALF OF
EDWARDSVILLE WATER CORPORATION**

I. Introduction

A. The purpose of my testimony is to provide additional background in response to some of the issues raised by the Town of Elizabeth, Indiana (“Elizabeth”), in its prefiled testimony and exhibits, and then provide support for the settlement between Elizabeth, the Office of Utility Consumer Counselor (“OUCC”), and Edwardsville.

II.

Historical Relationship Between Edwardsville and Elizabeth

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4 4. Q. HAVE YOU REVIEWED THE PREFILED TESTIMONY AND EXHIBITS
5 FOR THE OUCC AND ELIZABETH?

6 A. Yes, I have.

7 5. Q. DO YOU HAVE ANY COMMENTS REGARDING THE OUCC'S
8 TESTIMONY?

9 A. I do not have significant comments regarding the OUCC's testimony from an
10 engineering and operational perspective. The OUCC's witness, Mr. Rees, agrees
11 that the projects and capital improvement proposed by Edwardsville should be
12 completed. Based on my review of Mr. Rees' testimony, I agree with his
13 recommendations.

14 6. Q. DO YOU HAVE ANY COMMENTS REGARDING THE PREFILED
15 TESTIMONY AND EXHIBITS OF MR. HUGH BURNS, ELIZABETH'S
16 REPRESENTATIVE?

17 A. Yes, I do.

18 7. Q. ARE YOU FAMILIAR WITH ELIZABETH, ITS WATER SYSTEM, AND
19 ITS ORIGINAL NEGOTIATIONS WITH RDI/CAESAR'S RIVERBOAT
20 CASINO, LLC ("CAESAR'S") FOR THE CONSTRUCTION OF ITS
21 WATER SYSTEM?

1 A. Yes, I am. For the past thirty (30) years, I have assisted Elizabeth as its consulting
2 engineer. In this role, I participated in the negotiations between Elizabeth and
3 Caesar's and later designed the water system that was paid for by Caesars and is
4 currently being used by Elizabeth today.

5 **8. Q. ARE YOU ALSO FAMILIAR WITH THE CONTRACTUAL**
6 **RELATIONSHIP BETWEEN EDWARDSVILLE AND ELIZABETH?**

7 A. Yes, I am familiar with the contractual relationship between the parties. I would
8 also note that in the 1990's, I designed and oversaw construction of the
9 interconnection facilities that were contemplated in the 1996 Agreement between
10 Edwardsville and Elizabeth ("1996 Agreement").

11 **9. Q. AT THE TIME OF SIGNING THE 1996 AGREEMENT, WAS IT**
12 **GENERALLY KNOWN THAT CAESAR'S WOULD CONSTRUCT AND**
13 **THEREAFTER DONATE THE WATER FACILITIES BEING USED BY**
14 **ELIZABETH TODAY?**

15 A. Yes, this fact was generally known. Based on my recollection, Elizabeth actively
16 participated in the negotiations between Harrison County and Caesar's for the
17 construction and subsequent dedication of the water facilities (to Elizabeth). The
18 understanding that Caesar's would construct and donate the water facilities to
19 Elizabeth was memorialized in an engineering report dated May 15, 1996. For
20 the Commission's convenience, a copy of the May 15, 1996 report is attached to

1 my testimony as Petitioner's Exhibit 8. I understand that Elizabeth faxed a copy
2 of the May 15, 1996 Report to Edwardsville on June 7, 1996. The 1996
3 Agreement (between Edwardsville and Elizabeth) was not signed until August 20,
4 1996. Accordingly, Elizabeth knew it would be receiving the water facilities from
5 Caesar's when it executed the 1996 Agreement

6 **10. Q. WHY DID ELIZABETH ENTER INTO THE 1996 AGREEMENT IF IT**
7 **KNEW THAT CAESAR'S WOULD SOON CONSTRUCT AND DONATE**
8 **NEW WATER FACILITIES (TO ELIZABETH)?**

9 A. With the hopes of convincing Caesar's to use Elizabeth as its short and long-term
10 water provider, Elizabeth represented to Caesar's that Edwardsville would be the
11 short term supplier of water until the new facilities were built. Once the facilities
12 were built, Elizabeth assured Caesar's that Edwardsville would continue to serve
13 as the backup water supply (in the event of an interruption in the source of supply
14 from Elizabeth). At the time, continuous water supply was extremely important
15 to Caesar's due to the potential "down time" and corresponding loss of revenue
16 caused by the unavailability of water. This was especially a concern here because
17 Elizabeth had a history at that time of frequent water leaks that drained its entire
18 water system. I believe the 1996 Agreement (with Edwardsville) was critical for
19 Elizabeth in convincing Caesar's to use Elizabeth as its supplier and to thereafter
20 pay for the construction and subsequent dedication of the water facilities.

1 11. Q. ARE YOU FAMILIAR WITH THE CAPACITY OF ELIZABETH'S
2 CURRENT SYSTEM?

3 A. Yes, I am generally aware of its capacity and capabilities.

4 12. Q. DOES ELIZABETH HAVE SUFFICIENT WATER TO MEET ITS
5 NEEDS?

6 A. Yes, I believe it does. I must caution, however, that I am not fully aware of the
7 funds that Elizabeth has in reserves to cover future repairs and replacements of its
8 water system. For this reason, it is my professional opinion that Edwardsville
9 continues to serve as an important backup to Elizabeth in the event of problems
10 with Elizabeth's existing source of water supply.

11 13. Q. DOES ELIZABETH CURRENTLY HAVE THE ABILITY TO BE A
12 VIABLE BACKUP SOURCE OF SUPPLY FOR EDWARDSVILLE?

13 A. Absolutely not. The pressure on Edwardsville's system is significantly higher
14 than on Elizabeth's system. With this in mind, Elizabeth would need to conduct a
15 hydraulic study and construct a water booster station with SCADA controls, and
16 then Elizabeth could only provide, at most twenty-five (25%) of Edwardsville's
17 total water usage. In addition, Elizabeth only has about 350,000 gallons of excess
18 capacity that it could provide to Edwardsville. This amount of capacity is
19 probably not sufficient to be a viable backup source of supply for Edwardsville.

III.
Settlement

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4 **14. Q. MR. CURRY, HAVE YOU REVIEWED THE PROPOSED SETTLEMENT**
5 **BETWEEN EDWARDSVILLE, THE OUCC, AND ELIZABETH?**

6 A. Yes, I have.

7 **15. Q. DO YOU BELIEVE THE SETTLEMENT IS FAIR AND REASONABLE?**

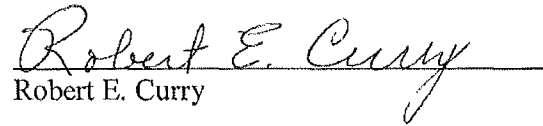
8 A. Yes, I do. On one hand, I believe that Edwardsville provides a viable backup
9 source of supply for Elizabeth in the case of emergency and/or Elizabeth's
10 inability to meet the needs of its customers. However, Elizabeth's system is
11 nearly 15 years old with a remaining useful life of approximately 15 years;
12 therefore, I do not anticipate significant problems before the 1996 Agreement
13 expires in 2026. In light of these facts (as well as the uncertainties of litigation
14 and the potential delay in receiving an order), I believe the settlement is a
15 reasonable compromise.

16 **16. Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

17 A. Yes, it does.

VERIFICATION

I affirm under the penalties of perjury that the foregoing Settlement Testimony is true to the best of my knowledge, information, and belief as of the date here filed.

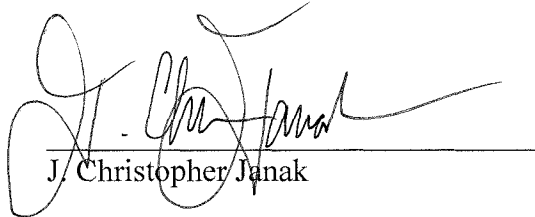

Robert E. Curry

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing *Settlement Testimony of Robert E. Curry, P.E.*, has been served via electronic mail this 23rd day of November, 2015, upon the following counsel of record:

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Petitioner's Exhibit 8

EXHIBIT C

RDI/CAESARS RIVERBOAT CASINO, L.L.C.

DESCRIPTION OF CONTRIBUTIONS TO UTILITIES

DEVELOPER HAS AGREED TO USE THE ELIZABETH WATER COMPANY TO SERVE ITS NEEDS FOR POTABLE WATER AND FIRE PROTECTION. THIS WILL PROVIDE TO THE WATER COMPANY THE OPPORTUNITY TO UPGRADE ITS FACILITIES TO NOT ONLY SERVE THE PROJECT BUT TO ALSO SERVE THE NEEDS OF THE RESIDENTS OF THE TOWN OF ELIZABETH AND SURROUNDING AREA AND TO SERVE THE NEW GROWTH THAT IS EXPECTED TO BE GENERATED BY THE PROJECT.

THE WATER COMPANY AND/OR DEVELOPER WILL NEED TO CONDUCT HYDRO-GEOLOGIC STUDIES OF THE UNDERLYING AQUIFERS, BRING NEW WELLS INTO PRODUCTION, PROVIDE NEW PUMPING FACILITIES AND NEW FACILITIES FOR WATER SOFTENING, IRON AND MANGANESE REMOVAL, DISINFECTING AND FLUORIDE INJECTION AND CONSTRUCT NEW STORAGE TANKS AND RELATED FACILITIES.

THIS EXHIBIT INCLUDES A PRELIMINARY COST ESTIMATE PREPARED BY THE WATER COMPANY'S ENGINEER WHICH SETS FORTH THE BASIC IMPROVEMENTS WHICH THE WATER COMPANY FEELS WILL BE NECESSARY TO DEAL WITH THE ANTICIPATED IMPACT OF THE PROJECT. THE COSTS THAT ARE SHOWN ARE INTENDED AS PRELIMINARY ESTIMATES AND ARE NOT INTENDED TO BIND DEVELOPER TO ANY SPECIFIC DOLLAR EXPENDITURE.

DEVELOPER AGREES TO ENGINEER, DESIGN, CONSTRUCT, AND PLACE INTO OPERATION THE PROPOSED IMPROVEMENTS IN CONSULTATION WITH THE WATER COMPANY AND ITS ENGINEER. THE IMPROVEMENTS MAY BE LOCATED ON THE PROJECT SITE OR OTHER LOCATION REASONABLY ACCEPTABLE TO THE WATER COMPANY. THE WATER COMPANY SHALL NEGOTIATE IN GOOD FAITH WITH DEVELOPER AS TO RATES AND CHARGES TAKING INTO ACCOUNT THE VOLUME REQUIREMENTS OF DEVELOPER FOR SUBMISSION AND APPROVAL BY THE INDIANA UTILITY REGULATORY COMMISSION. UPON COMPLETION AND APPROVAL OF RATES, DEVELOPER SHALL CONTRIBUTE THE IMPROVEMENTS AND ANY NECESSARY LAND AND EASEMENTS TO THE WATER COMPANY.

OVERVIEW OF TOWN OF ELIZABETH
PROPOSED WATERWORKS IMPROVEMENTS
FOR
WATER SERVICE TO CASINO OPERATION ADJACENT TO OHIO RIVER

GENERAL COMMENTS

Well logs for test holes located along the Ohio River generally indicate an excellent gravel and coarse sand formation. It appears the aquifer extends northeasterly parallel to the Ohio River. Data from the Indiana IDNR indicate the potential for 700 gpm to 1,000 wells. However, based on the depth of coarse gravel and the static water level it is possible these wells could yield substantially in excess of 700 gallons per minute.

WATER SUPPLY COMMENTS

It would be very easy to construct two 12" diameter naturally developed tubular wells with telescopic stainless steel screens. Based on the formation indicated, these wells should yield in excess of 700 gpm. These wells could be equipped with elevated platforms to extend the casing and well vent 2'-0" above the 100-year flood elevation. Electric service would be underground to the wells and a tower mounted motor starter with disconnect could be located at the wells. The wells would be located 200' from each other to prevent future interference. One well would be in the operational mode and the other would be in standby at all times. The wells would alternate in their operation. Each of the pumps would be connected to a vertical turbine discharge head. The well discharge head would be equipped with an automatic drainback assembly to avoid freezing. A valve vault would be located adjacent to the well to house the check valve and gate valve. The well pumps would be low head because they would only be pumping to the water treatment plant. Ideally a 10' wide gravel drive could be constructed to each well for maintenance and testing. An 8" diameter raw water main would extend from the well field header to the water treatment plant.

WATER TREATMENT PLANT

It is anticipated that the raw water will contain iron and manganese above the level which will cause staining of clothing and fixtures. Also, the raw water would be characterized as hard. To remove the iron, manganese, and hardness it will be necessary to construct a package type water treatment plant. The proposed water treatment plant would have a capacity of 700 gallons per minute. This would produce 1,000,000 gallons per day. The proposed water treatment plant would be the catalytic reactor type which would produce soft water free of

discoloration.

WATER STORAGE

The water treatment plant would pump the treated water to a 500,000 gallon ground level water storage tank via a 16" diameter water main. This tank would be located at a higher elevation on the hill above the Ohio River. The 16" diameter water main would serve a dual purpose of transmitting water to the ground level tank and to provide fire flow from the ground tank to the casino support facilities. A fire flow of approximately 3,000 gallons per minute could be provided. Pressure and flow could be adjusted via the placement of the 500,000 gallon ground level tank.

The water treatment plant will raise the pH of the raw water. This will allow the iron and manganese to oxidize and precipitate out of solution. The elevated pH will also cause calcium carbonate to become unstable. Within the catalytic reactor the hardness will plate onto the sand catalyst. After the iron and manganese precipitate out of solution they will attach to the catalyst.

In addition to softening, iron and manganese removal, the water treatment plant will provide pre and post chlorination for disinfection. Also sodium fluoride solution should be injected for dental hygiene purposes. All water, both raw and finished, should be metered to account for all water. The filter will have to be back washed twice per week.

DISTRIBUTION SYSTEM

This distribution system initially will extend from the well field to the water treatment plant to the 500,000 gallon ground level water storage tank. The ground tank will float on the water main to the casino support facilities. The casino facilities would be located between the 500,000 gallon ground level tank and the water treatment plant. The water distribution system will be rather compact. During periods of peak demand, water would enter the distribution system from the water treatment plant and the ground level water storage tank.

The distribution system will consist of ductile iron water mains ranging in size from 8" through 16" initially and could be increased in the future if water demand increases. Additional water storage can be added in the future if demand increases. Potentially a second 500,000 gallon water storage tank could be constructed if significant increased water demand occurs.

A water 350 gpm water booster station would be located at the 500,000 gallon ground level water storage tank. This booster

station would take suction from the 500,000 gallon ground level tank. These booster pumps would pump from the ground level water storage tank to the Town of Elizabeth's existing 150,000 gallon elevated water storage tank known as the O'Bannon Road water storage tank. This tank would then float on the Town of Elizabeth water distribution system.

PRELIMINARY COST ESTIMATES

The preliminary cost estimate for a 1,000,000 gallon per day well field, water treatment plant, 500,000 gallon water storage tank, water transmission-distribution mains, water booster station and telemetry controls is as follows:

PRELIMINARY COST ESTIMATE

FOR

WATER SUPPLY, WATER TREATMENT, AND WATER STORAGE

FOR

TOWN OF ELIZABETH AND CASINO SUPPORT FACILITIES

1. 2-700 gpm wells, turbine pumps a well platform. .	\$ 150,000.00
2. 1-700 gpm catalytic reactor water softening plant.	1,100,000.00
3. 8" Raw water transmission main.	10,000.00
4. 1.5 Miles of 16" Finished water transmission Main...	400,000.00
5. 1-500,000 Gallon ground level water storage tank..	175,000.00
6. 1-350 gpm water booster station.	100,000.00
7. Automatic radio telemetry controls.	50,000.00
8. 2.0 miles of 8" ductile iron water main	130,000.00

PRELIMINARY ESTIMATED CONSTRUCTION COSTS. \$2,115,000.00

9. CONSTRUCTION CONTINGENCY (10%). 210,000.00

10. NON-CONSTRUCTION COSTS (15%). 313,000.00

TOTAL ESTIMATED PROJECT COST. \$2,640,000.00