INFORMATION SHEET

PRESIDING: Commissioner Charlotte A. Mitchell, presiding; and Chairman Finley and Commissioner Patterson
PLACE: NCUC Hearing Room, Raleigh, NC
DATE: June 20, 2018
TIME: 9:30 a.m. – 12:42 p.m.
DOCKET NO.: W-1075, Sub 12
COMPANY: KRJ, Inc., d/b/a KRJ Utilities Company
DESCRIPTION: Application for Authority to Increase Rates for Water and Sewer Utility Service in its Southern Trace and Rockbridge Subdivisions in Wake County, North Carolina
VOLUME: 2

APPEARANCES

FOR KRJ, INC., d/b/a KRJ UTILITIES COMPANY:
Robert H. Bennink, Jr., Esq.

FOR THE USING AND CONSUMING PUBLIC:
William E. Grantmyre, Esq.
Gina Holt, Esq.

WITNESSES

Jacqueline Walker	Shelley Iverson	Veronica Long
James R. Butler	Iris Morgan	Gregory Cols
Gina Casselberry	Gabriel Hoxie	
Affidavit of John R. Hinton		

EXHIBITS

Butler Exhibits 1 & 2 (I/A)	Morgan Exhibits I & II (I/A)
Casselberry Exhibits 1 – 3 (I/A)	Application of KRJ Utilities (A)

Report on Customer Comments From Public Hearing (A)
Application Response Providing Additional Comments (A)
Stipulation of KRJ Utilities and Public Staff (A)

EMAIL COPIES ORDERED: E-mail: Grantmyre and Holt
PRINTED COPIES ORDERED: 0
REPORTED BY: Kim Mitchell
TRANSCRIBED BY: Kim Mitchell
DATE TRANSCRIBED: June 28, 2018

TRANSCRIPT PAGES: 147
PREFILED PAGES: 64
TOTAL PAGES: 211

NORTH CAROLINA UTILITIES COMMISSION
PUBLIC STAFF - APPEARANCE SLIP

DATE June 20, 2018 DOCKET #: W-1075, Sub 12

PUBLIC STAFF MEMBER Gina Holt and William Grantmyre

ORDER FOR TRANSCRIPT OF TESTIMONY TO BE **EMAILED** TO THE PUBLIC STAFF - PLEASE INDICATE YOUR DIVISION AS WELL AS YOUR EMAIL ADDRESS BELOW:

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LEGAL gina.holt@psncuc.nc.gov; william.grantmyre@psncuc.nc.gov
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_____

/Gina Holt

Signature of Public Staff Member

NORTH CAROLINA UTILITIES COMMISSION
APPEARANCE SLIP

DATE 6/20/18
DOCKET #: W-1075, Sub 12
NAME OF ATTORNEY Robert H. Bennink, Jr.
TITLE ATTORNEY AT LAW
FIRM NAME BENNINK LAW OFFICE
ADDRESS 130 MURPHY DRIVE
CITY CARY, NC
ZIP 27513

APPEARING FOR: ~~KRJ Utilities, d~~
KRJ, INC., d/b/a KRJ UTILITIES

APPLICANT ✓ COMPLAINANT _____ INTERVENO R _____
PROTESTANT _____ RESPONDENT _____ DEFENDANT _____

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I/A

James Roderick Butler
Post Office Box 2369
Swansboro, North Carolina 28584
Office: 252.393.8562
e-mail: rod@mgnc.us

W-1075, Sub 12
Butler Exhibit 1

EXECUTIVE PROFILE:

Engineer, Utility System Manager
Forty plus year career providing detailed management, operation and design of water and sewer utility infrastructure. Manager of multiple regulated public utility entities. Provide broad ranging client and project support and coordination.

PROFESSIONAL EXPERIENCE:

Jan 1999 -- present **James R. Butler, PE**
JRB Engineering Associates, PLLC
Swansboro NC

Detailed engineering design and consultation to regulated public water and sewer utility companies.

- Design of 1.2 MGD Sequencing Biological Reactor high-removal water reclamation plant with high rate infiltration ponds.
- Design of biological nitrogen reduction wastewater treatment plant with effluent reuse on nitrogen limited vegetation.
- Design of water reclamation and reuse systems for large communities.
- Design of renovation or replacement of several small (50,000 gpd – 250,000 gpd) wastewater treatment plants.
- Engineering alternatives analysis for municipal wastewater treatment plants.
- Design of numerous ground absorption wastewater systems;
- Start-up services for approximately 15 water and wastewater treatment facilities, and ongoing operational consultation.
- Preparation of Wastewater Engineering Alternative Analyses for NPDES Permit renewal; design of complex pumping and conveyance systems, including an 8-mile forcemain system for the Village of Walnut Creek in Wayne County, NC.
- Technical evaluation and expert witness testimony regarding AIG purchase of Utilities, Inc. and its impact on sewer service to North Topsail Beach.
- Development of application packages for State low-interest revolving construction loans; and, preliminary engineering reports supporting State grant and loan applications.
- Design of several groundwater source and treatment systems, and elevated tank storage for large residential developments.

Sep 2002 – present **Management Group of NC, Inc.– Vice President**
Sep 1986 -- present **Aqua Resource Corporation - President**
Cedar Point, NC

Management and operating services to regulated water and sewer utility companies.

- Provision of accounting and customer billing consistent with North Carolina Utilities and NARUC requirement.
- Managing Utility system customer support.
- Provide of regulatory liaison for utility companies with Utilities Commission, North Carolina Department of Environment and Natural Resources Divisions of Water Quality and Water Resources Public Water Supply Section.
- Operational advisement and consultation to water and sewer utility companies and municipalities.
- Preparation of rate studies and cases for municipal and private regulated public utilities.

Sep 2010 – Mar 2012 **Onslow Water and Sewer Authority**
Director of Engineering

Management, planning and operational oversight for moderate sized water and sewer authority.

- Development of Capital Improvements Plan including long range planning.
- Management as Owner's Representative significant number of complex capital improvement projects.
- Supervise small Engineering/GIS/Inspection staff.
- Oversight and operational support of operation of eighteen water and six wastewater treatment facilities.
- Provide staff support to Executive Director and Board of Directors.

Aug 1984 -- Jan 1999 Bass, Nixon & Kennedy, Inc.
Senior Principal Engineer / Assistant Corp. Secretary
Raleigh, NC

Technical design supervision of sanitary engineering functions of firm, consultation to municipal water and sewer utilities, corporate management of engineering firm.

- Provided general supervision and coordination of the civil design section of the firm.
- Performed detailed design of the more complex water and sewer treatment, pumping and conveyance systems.
- Performed the duties of general business manager including: the implementation of a management information system; development and institution of a detailed personnel position classification and pay plan; and, served as coordinator of insurance, risk management, and personnel benefit programs.
- Design of water source (well), treatment, and elevated tank storage for several large residential developments.
- Design of a number of modifications of existing intermediate size wastewater treatment plants.
- Provided biological and physiochemical process consultation and guidance to municipal and private wastewater treatment plant operations.
- Served as Town Engineer for the Town of Morrisville, through contract. The services I provided included: technical support to Town staff, including wastewater treatment operators; review of site and subdivision plans; preparation of construction documents for street and utility improvements; development of engineering standards for extension of pubic facilities; and, negotiation of an intermunicipal agreement by which the town purchases water and sewer treatment from a neighboring municipality.
- Prepared detailed evaluation of North Topsail Beach Sewer system for due-process consideration by Onslow County.
- Provided consultation and advisement to N C Utilities Commission in matter of failed or failing ground absorption utility systems.
- Design and permitting responsibility of:
  - Ten advanced wastewater treatment plants;
  - 90,000 linear feet of 24-inch to 54-inch sanitary sewer interceptor for the City of Raleigh;
  - Over forty sanitary sewer pumping stations with capacity of from 75 gallons per minute to 5,000 gallons per minute.
  - Fifteen (15) well treatment systems for public water supply systems.

James Roderick Butler

City of Raleigh, North Carolina

May 1979 – Aug 1984 **Public Utilities Director**
Jan 1975 – May 1979 **Assistant Public Utilities Director**

Chief executive and principal technical advisor/administrator of the second largest non-tax-supported water and sewer enterprise in North Carolina.

- Provided fiscal planning and control, including development and administration of a $ 23 million/year (1984 dollars) operating budget.
- Developed physical facility long range planning.
- Provided design administration.
- Researched and perfected funding acquisition.
- Performed or supervised construction management of construction contracts totaling $ 80,000,000.
- Provided departmental interface with all other municipal, State, and Federal agencies.
- Provided policy research and development for consideration by the City Council, working closely with the City's legal staff.
- Supervised enforcement of the policies established by the City Council.
- Worked closely with the Council members in maintaining their knowledge of the overall state and performance of the department.
- Supervised and administered a 283 person organization.
- Maintained liaison with neighboring municipalities, County Commissioners, State and Federal regulatory agencies, and members of the North Carolina General Assembly.

Nov 1970 - Jan 1975 **City of Greensboro, North Carolina**
Municipal Engineer II

Responsible for detailed design, construction supervision and contract administration of major water transmission, pumping, sewer collection, park and street improvements.

EDUCATION: N C State University - Raleigh
Bachelor of Science - Civil Engineering - 1970

MILITARY: United States Marine Corps Reserve – Honorable Discharge

PRACTICE LICENSES:

Professional Engineer - NC, VA, SC (Emeritus)

FACILITY OPERATOR CERTIFICATIONS:

NC Water - B-Well, B-Distribution, Cross Connection Control
NC Wastewater - Grade IV Biological, Grade II Collection, Spray Irrigation

The above curricula vitae is a listing of substantive issues and terms, and does not represent a total professional history.

I/A

W-1075, Sub 12
Butler Exhibit 2

KRJ, Inc.
d/b/a KRJ Utilities
Post Office Box 2369
Swansboro NC 28584
Phone: 252.393.8562
Facsimile: 252.393.1287

7-Apr-2006

Ms. Babette McKemie
Public Staff – Water Division
4326 Mail Service Center
Raleigh NC 27699-4326

In Re: W-1075, sub 5 – Rockbridge Subdivision

mbl
Clerk
AG
Brown
Kite
Legal
Acctg.
Eq/Rb.
Water

Dear Ms. McKemie,

In your letter to us, dated 23-Mar-2006, you requested that the Public Staff be provided a letter stating why the costs associated with the water and sewer system serving Rockbridge subdivision were somewhat higher than other systems in the area. This letter is in response to that request.

In order to fully respond to your request, it is necessary to review the entire decision-making process leading up to the selection of systems being installed to serve the subdivision. In doing so, I will attempt to contrast, as appropriate, items within the Rockbridge systems to those in more typical systems in the state.

BACKGROUND

An initial consideration in the development of any property is the availability of water and sewer services that will provide the highest level of quality service, efficiency and environmental responsibility.

Private wells and septic systems are often chosen for simplicity and ease of permitting. However, they are not without their problems. First, eastern Wake County groundwater is known to be high in radiological activity, including uranium and radium. Private wells are generally never tested or treated for these contaminants or for the 100+ other contaminants that are regulated in public water supply systems by the Federal Safe Drinking Water Act. Individual septic systems are only minimally regulated, and that ceases after installation unless there is an identified failure of a system. Both are subject to poor maintenance when the homeowner often takes an "out of sight – out of mind" attitude regarding them.

The position of the Wake County Division of Environmental Health (which was publicly expressed during the regulatory approval process of Rockbridge), is that a single regulated water and wastewater treatment system is far more desirable than several hundred small unregulated systems serving the same population for reasons of both public health and environmental protection.

A public utility system is the preferred avenue to provide service to a new subdivision.

We understand that the previous owner of the land, the late Mr. Charles Gaddy (Gaddy) or his agent, investigated utilizing existing utility systems in the general vicinity of the property with the following results:

- CAROLINA WATER SERVICE (CWS) serves the adjoining Rutledge Landing subdivision as an extension of their Amber Acres system. The response received when they were approached was that:
  1) They had no available water capacity to serve the additional area;
  2) The existing wastewater treatment plant had no available capacity to serve the additional area; and,
  3) Their wastewater treatment plant had been constructed to the capacity of their discharge (NPDES) permit and could not be expanded further.

- The TOWN OF WENDELL which owns and operates a wastewater pumping station immediately adjacent to the property advised that they could not/would not allow connection to their facility due to:
  1) contractual restrictions with the City of Raleigh that require any property connecting to their system to be within the Wendell zoning jurisdiction, which the property is not and can not be, due to its location without Raleigh consent;
  2) there being no additional capacity in their facilities to serve the property, and
  3) they could not purchase additional capacity from Raleigh because of issues at the Raleigh Wastewater Treatment Plant, at that time.

- The TOWN OF KNIGHTDALE advised that they had all of the same issues as Wendell and therefore could not serve the property from their system.

- The CITY OF RALEIGH was not initially contacted due to lack of proximity to the property. However, they issued a letter to Wake County, during the subdivision approval process, making it very clear that Raleigh would not serve the area.

Therefore, a self-contained water and wastewater system was the only way by which public services could be provided to the property. A Utility Service Agreement was entered into on August 10, 2005 by Gaddy, setting out the terms by which KRJ will provide public water and sewer services to the property. A copy has been provided to the Public Staff in response to Data Requests in Docket W-1075, Sub 5.

Wells were installed during evaluation of the property for development to assure that sufficient quantities of water were available. The treatment of which will be discussed later in this letter.

If a wastewater treatment facility was to be constructed, a means of accommodating its resulting effluent must be identified. The "easy" method historically utilized was to obtain a NPDES permit for the discharge of effluent into a convenient surface water course. This is the case with the City of Raleigh, CWS Amber Acres, and most existing systems. However, more recently, the N C Department of Environment and Natural Resources (NCDENR), has required that the applicant for a new permit demonstrate conclusively that there is no other alternative available. The result of their position is that there have been less than five (5) new NPDES permits issued in the entire state in the past three years, and I am advised that none were in the Neuse River Basin. The principal driving force in the position taken by DENR is the nutrient and assimilative loading of the surface waters. Most NPDES permits include a condition requiring that the same alternatives analysis must be performed each time that the permit is renewed in an attempt to reduce the number of discharges over time. Regardless, obtaining an NPDES permit was not an option.

A non-discharging wastewater system was the only available option.

Subsurface disposal public utility systems are quite limiting due to their reliance on the hydraulic capacity of the soils. Further, after the debacle following Hurricane Fran in the early 90's, when a number of large LPP systems were destroyed, their acceptability to the regulatory community was essentially terminated.

"Effluent spray" systems (much akin to the hog parlor lagoon systems) are unacceptable in residential settings due to the potential odors, high land demand, lack of process control, restriction of use of spray sites, and potential environmental and health impacts. All of these reasons contributed to the rejection of this alternative.

The system selected to address the sewage needs of the community is that of a "water reclamation and reuse" system. A reuse system uses very highly treated (reclaimed) water for beneficial reuse. Reclaimed water must meet contaminant, disinfection and clarity (turbidity) standards significantly more restrictive than those imposed on a plant operating under an NPDES permit. In many areas of the country where water is less plentiful, such as Florida, Arizona, California, Nevada and New Jersey, reclaimed water is actually sold to individual homeowners for irrigation. I have recently been advised that the State of California is permitting reclaimed water to be used for direct recharge of groundwater aquifers. In North Carolina, regulations have not progressed to such a level and reclaimed water is relegated to being reused on specific sites where its application can be controlled by its producer. In the case of Rockbridge, the reclaimed water is reused to irrigate approximately 43 acres of open space.

Even the City of Raleigh is beginning to enter the water reclamation/reuse arena with the reclaimed water from its plant being utilized to irrigate the golf course at River Ridge subdivision on Auburn-Knightdale Road. Raleigh's entrance into water reclamation/reuse is motivated by the limitation of expansion of their NPDES permit to serve expanded populations. It is my understanding that Raleigh's NPDES permit can not be expanded beyond its current size. Such a limitation will require than any enlargement of its plant beyond the NPDES permitted capacity, to serve greater populations, will require a commensurate development of reuse sites.

COST SHARING

Mr. Gaddy's estate, as the initial entity requesting public water and sewer facilities at Rockbridge, was required by KRJ's Utility Service Agreement to contribute, at no cost, all lands necessary for the installation and operation of the water and wastewater systems serving the community, including water reuse areas.

The developer of the lots at Rockbridge is required, under the terms of the Utility Service Agreement, to construct at his expense and convey (contribute) to the Utility all water distribution and sewer collection mains and service lines at no cost to the utility, similar to contribution required when a new subdivision is developed and served by an extension of a municipal system.

The home builder is required to pay tap fees, as approved by the Utilities Commission (which have been requested in our filing to be set at $5,000 per lot, which is comparable to the fees paid to most municipalities in Wake County). The tap fees collected are used to offset part of the capital costs incurred by the utility to install facilities that are not contributed to it, including source, treatment, storage, and reuse facilities.

The Utility (KRJ) will obtain financing for the necessary facilities that are either not contributed or paid for as set in our Utility Services Agreement, as I have summarized above.

REGULATORY OVERSIGHT

The water supply system, including all treatment processes, must be permitted for construction and operation by NCDENR Division of Environmental, Public Water Supply Branch. This agency administers, for USEPA, the Federal Safe Drinking Water Act (SDWA) as it applies to all public water supply systems, such as the one providing water service to Rockbridge.

The water reclamation and reuse system must be permitted for construction and operation by NCDENR Division of Water Quality. This agency administers, for USEPA, the Federal Clean Water Act.

Compliance with the requirements of NCDENR Division of Environmental Health, Public Water Supply Branch and Division of Water Quality is mandatory, and all capital and operating expenses required by their permits conditions are necessary to operate the systems. The systems described below are designed to comply with these requirements.

WATER SYSTEM DESCRIPTION

The raw water source is obtained from several deep (400+ feet) wells located within the subdivision. A total of six (6) wells were drilled. Two were "dry" wells, and the others produced water at rates of between 38 and 200+ gallons per minute. All were found to have water quality requiring treatment beyond disinfection, which will be described further below; and, two were found to have elevated levels of uranium, requiring treatment for its removal. Three wells were selected for initial utilization; the two without uranium and the one with the lesser concentration. All three are required to comply with the NCDENR requirements for water quantity. The fourth well will be "temporarily abandoned" and will not be utilized unless yield of the others falls in the future.

Although no volatile or synthetic organic chemicals, nitrate, nitrite, and minimal to no concentrations of inorganic materials such as iron were detected in the water from these wells, the absence of alkalinity, calcium, and magnesium and a low pH causes the water to be quite aggressive (low Langlier Index) which will result in erosion of plumbing within houses if the water is not treated appropriately.

The treatment process for the water, excluding treatment for uranium, is:

- the addition of hydrated lime to increase alkalinity;
- the addition of sodium hydroxide to adjust the pH; and,

- the addition of sodium hypochlorite as a disinfectant, as is required for all water supply systems constructed since the early 1970s.

The raw water from all wells is brought to a common point for treatment, to minimize capital costs. Chemical application is flow proportional to help assure uniform water quality.

The water from the well containing the elevated uranium concentration is subjected to an additional treatment process to remove the uranium.

Initially, blending of the water from the three wells was proposed to reduce the uranium concentration below the maximum contaminant level set by the SDWA. However, this approach was rejected by NCDENR/DEH/PWS early in the permitting process; as they only allow blending to be considered as a remediation of a condition arising in existing systems and not for the initial method of address.

The preferred method of removal of uranium, or other radionuclides, is by ion exchange. Historically, the radiologically enriched regeneration water (waste) from the ion exchange process was discharged to surface water under authority of an NPDES permit; which is now generally infeasible. (See above discussion) Alternatively, the wastewater from the process would be discharged into the wastewater treatment and disposal system. This is also not feasible as it would result in the reclaimed water to be reused having a significantly elevated uranium concentration. The treatment process chosen is one where ion exchange is utilized to entrap the uranium on the treatment media, which is then removed from the process by an outside contractor for disposal off-site, as a low level waste material.

The water distribution mains and service lines are constructed of materials normally utilized in municipal and county systems throughout the state and as prescribed by NCDENR regulation. Each lot is provided a separate water service line. The meter is installed at the Utility's expense when service is initiated to that lot.

An elevated water tank is provided for system storage. NCDENR regulations require elevated storage in all systems having greater than 300 connections. A telemetry system will transmit tank water level data to the water treatment facility which will be used to automatically control the wells and treatment systems.

WATER RECLAMATION/REUSE SYSTEM DESCRIPTION

Wastewater is conveyed from each lot by gravity via a collection system constructed consistent will accepted standards of the industry, as prescribed by NCDENR regulation. The gravity collection system terminates at an influent pumping station located on the site of the water reclamation system.

The **influent pump station** is equipped with dual submersible pumps which convey the wastewater to the water reclamation plant. Power to the pump station is from the operations building, which houses among other things the standby generator's automatic transfer switch and electrical distribution equipment for the entire site.

The **water reclamation facility** was initially a "Sheaffer" system proposed for water reclamation (sewage treatment). However, the Wake County Board of Commissioners has refused, for political reasons, to approve any subdivision using this type of system.

The facility that is to be utilized is a conventional process containing operating elements of:

- Influent flow screening to remove debris such as paper, plastics;
- Influent flow equalization to cause the flow to be uniform into the biological processes; and,
- Dual process trains, as required by NCDENR, for water reclamation facilities, each consisting of:
  1. Anoxic process cell
  2. Aerobic process cell
  3. Gravity clarification
- A three bed gravity filtration system
- Liquid chlorine storage and disinfection system
- UV disinfection system
- Liquid dechlorination chemical storage and application system
- Continuous turbidity and chlorine residual monitoring and recording facilities
- Sampling equipment
- Measurement and recording facilities.

A 5-day (685,000 gallon) **upset pond** is provided to side-stream plant flow should the turbidity of the final water exceed a preset limit, until the process can be brought back into proper performance.

A 12,750,000 gallon **long term storage pond** is provided to receive the reclaimed water. The reclaimed water must be held in storage after production until circumstances are appropriate for the reuse of water by surface irrigation. Rain events, freezing weather and rate of evapotranspiration all impact the timing of reuse. A model of the most recent 27-years of climatic record for the Triangle area was developed to determine the size requirements of the long term storage pond.

Both ponds are lined with a long-life synthetic membrane, as required by NCDENR regulation, as the soils on the site are quite sandy at depths required for construction of the ponds.

Reclaimed water is pumped from the long term storage pond by an **irrigation pump station** through approximately 2 miles of **reclaimed water mains** to approximately 41 acres of **reuse sites** which are equipped with 92 control zones comprised of approximately 632 spray heads and approximately 4 miles of small diameter distribution lines.

COST COMPARISONS

Water:

Notable items in the water supply system that significantly increase capital costs, when compared with other systems of its size, are the nature of chemicals being applied for treatment and the uranium removal system. The application of hydrated lime requires liquid slurry storage facilities equipped with continuous mixing equipment and pumping equipment capable of reliably handling the abrasive slurry.

The operating cost of the water system is significantly increased by operating and maintenance of the addition of lime addition and the removal/replacement of the uranium treatment media.

Wastewater:

A number of items increase the capital cost of the water reclamation and reuse system over that of a discharging (NPDES) facility; all of which are required in order for the resulting water to be reused.

1. Process Duality Requirements

   NCDENR requires that all reclamation/reuse plant have dual process trains, as opposed to NPDES facilities that may have a single process train. This results in additional capital cost in creating capacity to handle the same volumes in two separate sets of elements.

2. Redundancy of Equipment

   NCDENR requires that each piece of equipment in a treatment process be shadowed by a second "standby" piece of equipment. This is impacted quite heavily by the process duality. Specifically, where an NPDES plant may require two (2) pumps or mixers (one duty, one redundant), the process train dualization requires that four (4) be provided.

3. Process Monitoring

NCDENR requires continuous monitoring of only rate of flow in an NPDES plant; in contrast, a reclaim/reuse facility must also continuously monitor turbidity, which is part of the required automatic control of finished water routing. Further, due to concerns raised during the permitting process that excess chlorine may result in groundwater issues in the future, continuous residual chlorine monitoring and recording is also required.

4. Disinfection

Where a NPDES plant would typically have chlorination/dechlorination to meet a coliform population limit of 200 cfu/100 mL, a reclaim/reuse plant must also include dual pass ultraviolet irradiation to assure the plant produces reclaimed water with no more than 14 cfu/100 mL.

5. Storage

An NPDES plant would not be required to construct either the upset or long-term storage ponds. Ongoing maintenance of the ponds is required for its mechanical aeration equipment and to assure that aquatic vegetative growth is held to a minimum.

6. Reuse facilities

An NPDES plant is not a reuse facility. Therefore, it would not incorporate the irrigation pump station, reclaimed water mains, reuse fields, reuse application equipment and controls. Reuse fields must be agronomically maintained to assure that spray patterns are not adversely impacted by vegetative growth and that spray operation can be monitored and maintained. The spray system must be visually observed on a continuing basis to assure that application rates/times do not result in runoff. Continuing maintenance of the equipment and controls is essential to assure that proper and timely application of reclaimed water is affected.

Operating and maintenance costs associated with reclaim/reuse system are significantly greater than those of an NPDES plant for the simple reason that there is a whole lot more equipment, processes, complexity and detail involved in the proper operation and maintenance of a reclaim/reuse system than a simple, single pass, low removal rate, discharging plant.

COST DOCUMENTATION

The Public Staff has previously been provided documentation of bids received for the supply and installation of approximately 80-percent of the capital improvements that are to be installed by KRJ Utilities in its provision of service to the residents of Rockbridge subdivision. All remaining capital expenditures,

which are documented by engineer's opinion of probable cost, will be vetted at such time as KRJ may apply for rate adjustments.

The Public Staff has also been previously provided abundant documentation of the projected cost, including man-hours and payroll expense projections, chemical, power, laboratory, maintenance and repair, and management expenses associated with the system. Again, these will be vetted as actual expenses at such time as KRJ may apply for rate adjustments.

SUMMARY

The costs, both capital and operation, associated with the water and wastewater systems at Rockbridge are greater than those of other, older systems for the reasons explained above.

The greater issue, I believe, is the current perception of what water and wastewater utility service should cost, which is borne of prior history. With the advent of:

- New EPA regulation of uranium monitoring requirements and institution of a regulatory concentration limit, which is estimated to require the installation of treatment equipment for over 600 wells in public water supply systems in the state in the near future; and,
- The near cessation of issuance of NPDES permits in North Carolina

the capital costs indicated in the W-1075 sub 5 filing will shortly become the "norm" rather than the exception for new and many existing utility systems. Further, the operating costs for both small and large systems will be significantly elevated due to these and other increasing regulatory requirements.

No one, particularly a utility that must deal with customer billing and complaint issues, wants to spend money needlessly. However, we all are properly concerned with our health and that of others; protecting and improving our environment, both natural and constructed; and complying with ever-changing regulatory requirements. There are costs associated with each.

Respectfully,

James R. Butler, P.E.
Design Engineer and Management Consultant

CERTIFICATE OF SERVICE

I hereby certify that I have today served a copy of the foregoing **Direct Testimony and Exhibits of James R. Butler, P.E.,** filed by KRJ, Inc., d/b/a KRJ Utilities in Docket No. W-1075, Sub 12, on the attorneys for the Public Staff (the only formal party to this case) in accordance with North Carolina Utilities Commission Rule R1-39, either by United States mail, first class postage pre-paid; by hand delivery; or by means of electronic delivery upon agreement of the receiving party.

This the 4th day of May, 2018.

Electronically Submitted
/s/Robert H. Bennink, Jr.
North Carolina State Bar No. 6502

BENNINK LAW OFFICE
BenninkLawOffice@aol.com
Tel: 919-760-3185
Attorney for KRJ, Inc., d/b/a KRJ Utilities

1A

FOR REVISED 6/04

DOCKET NO. W-1075, sub 12
FILING FEE RECEIVED _____

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

APPLICATION FOR RATE INCREASE

INSTRUCTIONS

Notes or explanations placed in the margins of the application are acceptable. If additional spase is needed, supplimentary sheets may be attached. If any section does not apply, write "not applicable" or cross out the section

APPLICANT

1. Trade name used for utiity business: KRJ Utilities
2. Name of owner (if different from trade name): KRJ, Inc.
3. Business mailing address: P O Box 2369
   City and state: Swansboro, NC Zip Code: 28584-2369
4. Business street address (if different from mailing address): 246 Valleyfield Ln, Southern Pines NC 28387
5. Business telephone number: 919.827.8055
6. List the counties in which you provide water utility service: Wake
7. List the counties in which you provide sewer utility service: Wake

PROPOSED AND PRESENT RATES

	Proposed Rates	Present Rates
8. Metered Residential Service (**Southern Trace**):		
Water:	$ 34.82/month + 4.84/1,000 gallons of usage	$ 19.14/month + 2.66/1,000 gallons of usage
Sewer:	n/a	
9. Metered Residential Service (**Rockbridge**):		
Water:	$ 34.55/month + 3.57/1,000 gallons of usage	$ 14.40/month + 1.49/1,000 gallons of usage
Sewer:	$ 105.37/REU/month	$ 68.33/REU/month
10. Availability Rates (**Rockbridge**):		
Water:	none	$ 14.40/REU/month
Sewer:	none	65.80/REU/month
11. Tap-on Fees (**Southern Trace**):		
Water:	$500	$500
Sewer:	n/a	n/a
12. Tap-on Fees (**Rockbridge**):		
Water:	$1,000	$1,000
Sewer:	$4,000	$8,000

OTHER PROPOSED RATES

13. Finanace charge for late payment: 1% per month on unpaid balance 25 days after billing date
(NCUC Rule R12-9 specifies not more than one percent (1.0%) per month will be applied to the unpaid balance of all bills still past due 25 days after billing date.)
14. Reconnection charge if water service cut-off by utility as specified in NCUC Rule R7-20: $ 15.00
15. Reconnection charge if water service discontinued at customer's request: $ 15.00
16. Reconnection charge if sewer service cut off by utility as specified in NCUC Rule R10-16:
17. Other Charges: Disconnection or Collection Charge - $ 15.00/instance | Returned Check - $ 25.00

18. What date are the proposed rates to become effective: Immediately after Commission Approval
19. How long have the present rates been in effect? Southern Trace 01/07/05 - Rockbridge 11/30/06

PROPOSED BILLING

20. Frequency of billing shall be (monthly, quarterly, etc.) Monthly
21. Billing shall be for service (in advance or arrears) Arrears
22. Bills past due 15 days after the billing dates:
(NCUC Rule R12-9 specifies that bills shall not be past due less than fifteen (15) days after billing date).
23. Will regular billing be by written statement? (yes or no) Yes

REVENUES AND EXPENSES

For 12 Months Ended 6/30/2016 (Date)

		Water	Sewer
	Revenues		
1.	Residential service (flat rate)	$	$ 177,815.96
2.	residential service (metered rate)	$ 131,340.24	$
3.	Nonresidential service (flat rate)	$	$
4.	Nonresidential service (metered rate)	$	$
5.	Other revenues (describe in remarks below)	$ 738.83	$ 1,020.28
6.	Total Revenues (Lines 1 thru 5)	$ 132,079.07	$ 178,836.24
	Expenses		
7.	Total Salaries	$	$
8.	Administrative and office expense (except salaries)	$ 38,534.72	$ 15,347.86
9.	Maintenance and repair expense (except salaries)	$ 74,438.32	$ 18,866.36
10.	Transportation expenses	$	$
11.	Electric power for pumping	$ 7,316.76	$ 42,723.99
12.	Chemicals for treatment	$ 3,017.50	$ 9,193.97
13.	Testing fees	$ 6,630.90	$ 2,421.50
14.	Permit fees	$ 805.00	$ 1,310.00
15	Purchased water/sewer treatment	$	$
16.	Annual depreciation	$ 33,302.87	$ 191,554.88
17.	Taxes: State income taxes	$	$
18.	Federal income taxes	$	$
19.	Gross receipts (or franchise tax)	$	$
20.	Property taxes	$ 330.29	$
21.	payroll taxes	$	$
22.	other taxes	$ 238.32	$ 241.26
23.	Other expenses (describe in remarks below)	$ 57,596.95	$ 60,827.99
24.	Total Expenses (Lines 7 thru 23)	$ 222,211.63	$ 342,487.81
25.	Net Operating Income (Line 6 minus Line 24)	$ -90,132.56	$ -163,651.57
26.	Interest on debt during year	$	$
27.	Net Income (Line 25 minus Line 26)	$ -90,132.56	$ -163,651.57

Remarks

28. L5 - Returned Check, Reconnection Charges (total prorated)
29. L23 - Please see attachment
30.
31.
32.

NUMBER OF CUSTOMERS SERVED
(at end of month)

		Water			Sewer		
	Month	Flat Rate Customers	Metered Customers	Gallons Sold to Metered Custs	Flat Rate Customers	Metered Customers	Gallons Sold to Metered Custs
33.	July		400	2,809,728	208		
34	August		400	2,732,090	208		
35.	September		400	2,616,519	208		
36.	October		400	2,177,341	208		
37.	November		400	1,899,679	208		
38.	December		423	1,960,660	231		
39.	January		423	1,623,657	231		
40.	February		422	1,850,207	231		
41.	March		423	1,788,062	232		
42.	April		426	2,006,630	234		
43.	May		426	1,744,390	234		
44.	June		428	2,366,219	236		

ORIGINAL COST OF UTILITY SYSTEM

As of Year Ended 6/30/2016 (Date)

Note: List the total original cost to construct and establish the system, whether or not paid for by the Present Owner.

	Utility Property in Service	Balance at End of Year Water	Balance at End of Year Sewer
1.	Land and rights-of-way	$ 29,312.30	$
2.	Structures and site improvement	$ 219,245.51	$ 2,481,147.00
3.	Wells	$ 180,056.75	$
4.	Pumping equipment	$ 72,769.69	$ 349,657.13
5.	Treatment equipment	$ 373,682.41	$ 77,315.38
6.	Storage tanks	$ 358,748.81	$ 887,690.32
7.	Mains (excluding service connections)	$ 487,991.25	$ 868,477.81
8.	Service connections	$ 103,759.77	$ 106,515.00
9.	Meters (including spare meters)	$ 36,654.43	$
10.	Office furniture and equipment	$ 210.12	$ 210.11
11.	Transportation equipment	$	$
12.	Other utility property in service (describe in remarks below)	$	$ 640,717.72
13.	Total utility property in service (lines 1 thru 12)	$ 1,862,431.04	$ 5,411,730.47
14.	Less: accumulated depreciation	$ 408,799.08	$ 1,980,608.36
15.	Less: accumulated tap fees and other contributions in aid of construction	$ 872,251.02	$ 2,273,851.00
16.	Less: customer advances	$ 0.00	$ 0.00
17.	Net investment in utility property (Line 13 minus 14, 15, & 16)	$ 581,380.94	$ 1,157,271.11

	Utility Property Not in Service	Balance at End of Year Water	Balance at End of Year Sewer
18.	Construction work in progress	$ 45,376.17	$
19.	Property held for future use	$	$
20.	Other (describe in remarks below)	$	$

Remarks

21. L12 - Tractor/Mower, Reclaimed Water Re-Use Spray System
22.
23.

ANNUAL DEPRECIATION

25. If annual depreciation is claimed using a composite rate for the entire system, show composite rate used:
    Water: 25 year
    Sewer: 25 years
26. If annual depreciation is claimed using individual rates for each type of equipment, show rates of depreciation used:

Type of Equipment	Annual Depreciation Rate	Method Used (Straight Line, etc.)	Amount of Annual Depreciation

CONTRIBUTIONS IN AID OF CONSTRUCTION
(Including Tape Fees)

1. Has the utility collected any gross-up on contributions in aid of construction (CIAC), such as contributed plant and tap fees, since the test year of its last rate case? (yes or no) No

EMPLOYEE SALARIES
(Including Owners)

	Name	Duties	Salaries Paid During Year	Hours Worked During Year
2.			$ 0	
3.			$ 0	
4.			$ 0	

FINANCIAL INFORMATION

	Source of Loans (For Utility Purposes)	Interest Rates	Amount Unpaid End of Year
5.	Stafford Land Co	8%	$ 4,994,494.63
6.			$
7.			$

OTHER FINANCIAL INFORMATION

8.	Stocks Issued	$
9.	Accumulated (or retained) earnings or losses	$ 2,915,180.67
10.	Cash on hand	$ 8,700.80
11.	Accounts receivable	$ 16,350.78
12.	Accounts payable	$ 138,699.26
13.	Customer deposits on hand	$ 250.00
14.	Materials and supplies	$
15	Other Investments	$

FILING INSTRUCTIONS

16. Seven (7) copies of the application and exhibits shall be filed with the North Carolina Utilities Commission, 4325 Mail Service Center, Raleigh, North Carolina 27699-4325. **Twenty five (25) copies of a Class A or B utility company should be filed.** One of these copies must have original signature. (Applicants must make their copies if desired.) Class A and B utility companies are also required to file a written letter of intent to file a general rate case with the Commission thirty (30) days in advance of filing this application. Furthermore, Class A utility companies should file a NCUC Form W-1 along with this rate increase application form as required in Rule R1-176(12)(d).

17. Enclose a filing fee s required by G. S. §62-300. Class A company (annual revenues of $1,000,000 or more) requires a $500 filing fee. A class B company (annual revenues between $200,000 and $1,000,000 requires a $ 250 filing fee. A class C company (annual revenues less than $ 200,000 requires a filing fee of $100. **MAKE CHECK PAYABLE TO N.C. DEPARTMENT OF COMMERCE/UTILITIES COMMISSION.**

Signature

18. Application shall be signed and verified by the Applicant.

Signature

12/18/17
Date

19. (Typed or Printed Name) Robert R. Stafford Jr.
personally appeared before me and being first duly sworn, says that the information contained in this application and in the exhibits attached hereto are true to the best of his/her knowledge and belief.

This the 18th day of December, 2017

Angie G. Gilman
Notary Public

2148 Vass-Carthage Rd, Carthage NC 28327
Address

My Commission expires: 5-24-2021
Date

Line 23 - Other Expenses	Water	Sewer
Loss from disposal of equipment	24,043.61	
Bank Charges - Divided 50/50	479.29	479.29
Contract Operator Services	28,581.87	50,270.00
Liability Insurance - divided 50/50	3,852.73	2,349.59
Bad Debts	639.45	923.59
Trash Pick-Up		299.52
Sludge Removal		6,506.00
Totals	57,596.95	60,827.99

1A

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. W-1075, SUB 12

In the Matter of Application by KRJ, Inc., d/b/a KRJ Utilities, Post Office Box 2369, Swansboro, North Carolina 28584, for Authority to Increase Rates for Water and Sewer Utility Service in its Southern Trace and Rockbridge Subdivisions in Wake County, North Carolina	)	**REPORT ON CUSTOMER COMMENTS FROM PUBLIC HEARING IN RALEIGH, NORTH CAROLINA HELD MAY 15, 2018**

NOW COMES KRJ, Inc., d/b/a KRJ Utilities (KRJ or Company) and files this report in response to customer comments raised in testimony at the public hearing held in Raleigh, North Carolina by the North Carolina Utilities Commission (Commission or NCUC) beginning at 7:00 p.m., on Tuesday, May 15, 2018, in the Commission's Hearing Room 2115. Commissioner Charlotte Mitchell, who served as the Presiding Commissioner, was joined by Commissioner James G. Patterson. Chairman Edward S. Finley, Jr., who was not present, will also serve on the Commission Hearing Panel for this case. Staff Attorneys William Grantmyre and Gina C. Holt appeared for the Public Staff on behalf of the using and consuming public, accompanied by Public Staff Water Engineer Gina Casselberry. Robert H. Bennink, Jr., of the Bennink Law Office, appeared on behalf of KRJ, accompanied by James R. Butler, P.E., the Vice President of Management Group of NC, Inc. Mr. Butler will be the witness for KRJ in this proceeding. KRJ filed witness Butler's direct testimony and exhibits in this docket on May 4, 2018.

A total of eleven witnesses testified at the Raleigh public hearing. Three of those witnesses reside in KRJ's Southern Trace service area and are water utility customers. The remaining eight witnesses reside in the Company's Rockbridge service area and are water and sewer utility customers. Their testimony will be addressed below.

General Comments

First, KRJ believes it is important to initially explain some principles and facts that impact both the Company's service obligation and the rules that apply to the rate-setting process for public utilities such as KRJ, which ensure protections to customers. The Company appreciates this opportunity to speak to its concerned customers and to its regulators. Not surprisingly, an appreciable amount of the customer testimony from witnesses focused to a degree on opposition to KRJ's proposed rate increase, which is one of the primary issues to be decided by the Commission based upon careful consideration of all the evidence offered in this proceeding, including customer testimony. KRJ's rates will be set in this legal proceeding by the Commission based upon the statutory requirements of proof and after investigation and challenge by an expert consumer advocate, the Public Staff.

The legal principles that govern ratemaking are set forth in the North Carolina General Statutes, Chapter 62, and in rules promulgated by the Commission under those statutes. By law, KRJ will receive a rate increase only if it proves, in the face of an intensive and extensive investigation by the

Public Staff, that such an increase is authorized under the law, based on the actual costs and a level of prudent and reasonable investment in plant and operations. Further, investment in plant is *only* recoverable after it has been made, placed into service, and audited by the Public Staff. This principle—referred to as the "used and useful" requirement—applies to recovery of costs in a general rate case.

As to assurance of efficiency, KRJ urges all customers to understand the level of scrutiny that is imposed in the Public Staff's examination of this case - an examination that delves into the details of Company books and management and operational decisions to ensure that, and rates are based on costs that flow from efficient, reasonable, and prudent operation of the Company. Over many weeks of discovery, the Public Staff propounded numerous data requests and follow-up questions and conversations. The Public Staff also conducted field inspections of the water system at Southern Trace and the water and sewer systems at Rockbridge.

A public hearing was held by the Commission in Raleigh on May 15, 2018, which was attended by representatives of the Public Staff and the Company. An evidentiary hearing will be held in Raleigh on June 20, 2018, to receive evidence and to examine the expert witnesses. Eleven customers testified, while numerous others attended the hearing but chose not to testify. Customers were given a full and fair opportunity to express their complaints and concerns. In addition, the Public Staff will conduct its own independent investigation to assess

the quality of water and sewer utility service provided by KRJ to its customers at Southern Trace and Rockbridge.

The rate-setting process before the NCUC is rigorous and intensive, as it should be, and the burden of proof is on KRJ in this case to prove in a judicial arena that it merits additional rates. The public's assurance of fairness is found in the strict, highly-skilled oversight of the Public Staff and the Commission. Consumers can review every document that is filed and every NCUC Order that is issued on the Commission's website. The rate case procedures are open and fair. Rates charged by KRJ must be based on cost of service and must be justified by detailed proof which is carefully examined and may be challenged by the Public Staff in a contested legal proceeding. Rate increases, while controversial, are necessary to support prudent investment by public utilities, such as KRJ, in the capital-intensive water and sewer utility industry.

Second, KRJ is always willing to speak with customers regarding any questions they may have regarding billing, service, rates, etc. The Company takes very seriously its duty as a public utility in North Carolina to provide its customers with adequate, efficient, and reasonable service at reasonable rates as required by North Carolina law and the rules and regulations promulgated by the NCUC and NCDEQ.

Third, the water supplied by KRJ at Southern Trace and Rockbridge is potable and entirely safe to drink. It meets all State and Federal Safe Drinking Water Act requirements for potability and safety. KRJ concedes that customers may experience intermittent problems with the appearance of the water, such as

cloudiness or a milky appearance, but those problems are generally transient and do not present health concerns. That said, by offering these comments, KRJ does not mean to minimize, in any way, customer testimony regarding their water quality concerns. To the contrary, the Company is fully committed to rectifying any problems, once reported, which are capable of correction as expeditiously as possible.

However, as a matter of full disclosure, some customers at Southern Trace recently experienced an episode of "muddy" brown water and air which was first reported to KRJ on the morning of Thursday, May 24, 2018. Company personnel were immediately dispatched to resolve the reported water quality problems and worked diligently for two days to do so. The situation is now stable. A copy of the May 28, 2018 Incident Report which KRJ sent to David Furr, who is the Director of the Public Staff Water and Sewer Division, is attached to this report as Exhibit A. KRJ's Incident Report describes in detail the actions taken by the Company to address and resolve the situation.

Fourth, the water pressure supplied by KRJ consistently meets or exceeds minimum State requirements and standards. As the case with any water system, pressure varies somewhat from time to time during the day due to the necessary expenditure and replenishment of water in the storage facilities that are a part of the water system.

Fifth, KRJ has implemented certain important and significant customer communication and service policy changes in response to the testimony offered by customers at the public hearing which are detailed later in this report.

Report Regarding Southern Trace Water System

The three witnesses served with water utility service by KRJ at Southern Trace were Thomas D. Rains, Jacqueline Walker, and Shelley Iverson.

General Responses of KRJ Regarding the Southern Trace Water System

1. **Replacement of Submersible Pump at Well 2**

The replacement of the failed submersible pump located within well 2, which occurred during the period of time in July and August 2015, was complicated by failure of suppliers to provide proper replacement equipment. Much of the problems were as a result of the pump being powered by a 15-horsepower single phase submersible motor, which is quite difficult to find. Maintaining one as a spare is ill advised as there is a recognized "shelf" life of such a device which could render it unusable at a future date. At such time as the pump must again be replaced, KRJ will consider replacing it with the combination of a 3-phase pump powered by a modified variable frequency drive (VFD) to convert the only power available within Southern Trace (single phase) to 3-phase.

2. **Diminished Pumping Capacity of Well 2**

After replacement of the pump in well 2, it was determined in August 2015 that the yield of well 2 had diminished from its original 78 gallons per minute (gpm) to approximately 25 gpm. Fortunately, well 3 had been placed into service in June 2015 to augment production from wells 1 and 2. Upon identifying the decline in production of well 2, KRJ immediately set about locating a suitable

contractor who could successfully renovate the well to recover as much of the lost capacity as possible. Such a contractor is not the typical well driller, but one who utilizes very specialized equipment and technique. The first such contractor provided a totally unresponsive proposal. KRJ's pursuit of a contractor continued through yet another, who declined to provide a quotation due to the scope of the project. KRJ is waiting on a proposal from a third prospective contractor.

At this time, the available well yield from all three wells serving Southern Trace is approximately 91 gpm; with the full capacity of well 2 restored, the well production capacity would be 144 gpm. Even with the reduced production from well 2, no low-pressure complaints were received by KRJ's office during 2017. However, the current situation does point out the limitation of the Southern Trace water system, and any small system, to support irrigation loads. A single in-ground irrigation spray head will discharge approximately 5 gpm. Were three irrigation systems each operating four spray heads at a time to be actuated simultaneously, the demand would consume two-thirds of the well production, leaving only 31 gpm, under current conditions, to accommodate domestic needs. KRJ has consistently attempted to educate its customers of the need to refrain from irrigation of lawns as small well-sourced water systems are not designed to accommodate other than domestic usage; such effort appears to have had some success.

3. **Electronic Pressure Control System**

Although the current system controlling the operation of the wells at Southern Trace is functioning well, KRJ intends to pursue a system that will

utilize a control system that utilizes an electronic pressure transducer, which will produce more accurate pressure measurement than the pressure switches currently used; cellular data transmission, to avoid local interference with the radio communications system; and computer-based control logic. To date, equipment manufacturers have been identified, quotes obtained, and cellular field strength measurements made, to determine the most desirable cellular system to use. Scheduling of the installation will depend on availability of funds.

4. **Water Pressure Variations**

Pressure variations are both normal and necessary in any water system due to either the necessary partial expenditure and replacement of water within the tank to assure that the water is turned over and does not lose its chlorine residual. When demand exceeds the pumping rate of the wells, pressure tanks (or elevated storage tanks) serve to provide water to the system when instantaneous demand rate exceeds instantaneous production rate. Water storage tanks serve as "shock absorbers" between demand and supply by contributing or receiving water from the distribution system. They may be either pressure tanks, as at Southern Trace, or an elevated storage tank, as at Rockbridge.

Specific Responses by KRJ to Southern Trace Customer Comments

Thomas Rains testified that he has a professional background as a pharmaceutical biochemist. Witness Rains stated that he has a problem with KRJ choosing to use the time period from July 1, 2015 through June 30, 2016 as

its test year for this case, because KRJ was experiencing a lot of problems with low water pressure during this period of time (particularly the period from late-May through August of 2015) and probably had to spend unplanned capital to repair the system; thereby biasing the typical operating expenses of the Company. Mr. Rains alleged that KRJ failed to properly upgrade the Southern Trace system both before and after 2015. He asserted that the water system is poorly designed because it permits water to flow in a manner that is sometimes detrimental to houses at higher elevations in the subdivision, who may experience low to no water pressure and very poor water quality problems, while customers at lower elevations are not impacted at all.

Mr. Rains also criticized the management of the Southern Trace system remotely from Swansboro, particularly during the period of low pressure problems the system experienced during 2015. The witness criticized the Company for a lack of qualified on-site engineering supervision when the system is malfunctioning. Mr. Rains recited a number of alleged system operating deficiencies during 2015. He described the Company's approach to operations as continuing to reactive rather than proactive. He did, however, further state that, during the last three years, customers have not experienced water pressure problems at Southern Trace to the extent they did in 2015, and that, in fairness to KRJ, the water system seems to be operating better today than it did in 2015. He then stated that, in his opinion, KRJ has a severe deficiency of operating equipment and that the entire system needs to be overhauled with new equipment. Mr. Rains then opined that an engineering assessment of the entire

distribution system needs to be performed to ensure better balance between the older and newer sections of the system to provide consistent water pressure throughout the system. Witness Rains also stated his reasons for opposing a rate increase to KRJ at this time. In addition, he stated an opinion that, based upon his daily observations, the water pressure problems during 2015 were not related to lawn watering, including use of four observed irrigation systems. Witness Rains stated that in 2015, there were only two wells in operation on the system and one of those wells was experiencing a problem with the submersible pump as well as a decline in output. Today, there are three wells on the system.

In response to questions from Commissioner Patterson regarding water quality issues, Mr. Rains stated that he thought there had been one or two boil water notices during the 2015 period when the Company was experiencing problems with the pump replacement at Well No. 2 and that he could not recall any issues during 2018. Witness Rains also testified that he sends KRJ bill payments to a billing address located in Swansboro, North Carolina.

Response of KRJ to Testimony of Thomas Rains

First, KRJ wants to acknowledge appreciation for Mr. Rains' positive comments during his testimony to the effect that, in his opinion, during the last three years, customers have not experienced water pressure problems at Southern Trace to the extent they did in 2015, and that, in fairness to KRJ, the water system seems to be operating better today than it did in 2015. Next follows the Company's response to Mr. Rains' other less positive comments:

- Test Year. As was stated by Public Staff Attorney William Grantmyre, the

Public Staff will update the test year in this case for ratemaking purposes to the period April 1, 2017 - March 31, 2018, to be more reflective of current circumstances. KRJ has been fully cooperative with the Public Staff during its investigation and has supplied voluminous utility records during the discovery process.

- Failure to Upgrade System. The service lives of various components of a water system vary widely from 7 years for mechanical items such as pumps to 50 years for buried mains and services. Normal water utility practice is to replace items as they indicate pending failure or in fact fail, unless upgrade is necessary to accommodate changes in system demand or water quality. Premature replacement of plant facilities serves only to unduly expedite the expenditure of capital funds and could needlessly exaggerate and expedite the necessity of more frequent, higher rate increases. The Southern Trace water system is less than 20 years old. Accepted service lives of principal system components are as follows: Storage tanks - 50 years; distribution mains - 50 years; wells - 50 years; well pumps - 7 years. With the exception of well pumps, failure due to age of the system is well into the future. KRJ stocks most routinely-needed repair parts, such as electric or electronic components and chemical feed equipment repair kits.
- System Design. The entire water source, including the treatment and distribution system at Southern Trace, was designed, permitted and constructed consistent with the requirements of the NCDEQ, or that agency's predecessors. All water systems exhibit differing pressures at different

locations due to their different elevations above sea level due to the effects of gravity; and Southern Trace is no exception. There is approximately 100 feet of elevation differential from the front (highest) to back (lowest) portions of the system, thereby resulting in a differential pressure at any given time of approximately 43 psi.

The system controls that cause the operation of the well pumps, the source of the pressure in the system, are set to cause the submersible pumps in the wells to run, pumping water into the system, at 70 psi, and cause the pumps to stop at 78 psi. The difference between system demand rate and pumping rate is accommodated by the two hydropneumatic tanks located proximate to well 1, which is also in the higher area of the subdivision. The result of this is that normal operation of the system causes pressures to be 70-80 psi at the higher areas and 110-120 psi in the lower areas. As a comparison, Raleigh's "497" system exhibits pressures ranging from 40 psi to 135 psi.

The issue at Southern Trace is not "pressure" but the "perception of pressure." As was stated, when customers located at the higher portions of the system observe reduced pressure, those at the lower ends of the system do not observe the same reduction. Stated differently, if the pressure at the higher portions of the system drop by 45 psi (from 80 to 35 psi) that change is very easily observed; whereas, if the same drop occurs at the lower portions of the system, which they will, the change in pressure from 120 to 75 psi will not be observed by affected customers, as all of the houses have code-required pressure reducing valves, which deliver a uniform pressure to the

household plumbing, normally around 50 psi.

It should be noted that the required minimum pressure on a public water supply system is 30 psi. System pressure at Southern Trace is noted by the operator during each of his periodic rounds and system pressure is consistently observed to be in excess of 30 psi. KRJ knows of no way, other than continuous education of the customers, to address the issue; and clearly not by a physical system that would introduce not only additional complexity in the system but additional opportunities for mechanical failure.

- "Remote" Management of the System / Lack of On-Site Engineering. The portion of the management that exists out of the Wake County area is that of customer support, accounting, and billing. KRJ's management contractor, Management Group of NC, Inc. (MGNC), has trained personnel in the Wake County area to cause meter readings, customer collections, and, as necessary, triage system issues. Mr. Butler, the Vice President of MGNC, to whom Mr. Rains referred several times during his testimony, does live some distance from Wake County, but often returns to perform periodic observations of the systems of KRJ and provide technical support to other contract personnel, such as plant operators. He is both a licensed Professional Engineer and holds Treatment Operator Certifications well in excess of those required to operate the Southern Trace water system.

  During the period of system duress in the spring/summer of 2015, Mr. Butler was on site in Southern Trace on three separate occasions to gain knowledge of exactly what was happening. The sequence of events during 2015 was:

the submersible pump in well 2 failed; the particular model of pump was not available within the Continental United States, due to the manufacturer, and the large (15 horsepower) single-phase motor required due to the availability of electric power within Southern Trace; a new pump was ordered after the pump supplier advised KRJ's well contractor that it was a proper replacement based on his translation of the model number of the pump that failed; and the new pump was installed. This would have been the end of the issue, were it not for the fact that the supplier was incorrect in his translation of the model number which resulted in the new pump that been installed being incapable of performing. A proper replacement pump was obtained, and installed, only to find that its motor was defective. The pump had to be again removed from the well, a new motor affixed, and the pump had to again be reinstalled. Barring external damage, such as lightning, the pump should be functional for the remained of its anticipated service life of 7 years.

- Overhaul of the Entire System. As stated previously, with the exception of the need for remediation work at well 2, the system is well within its useful life, and such an expense is not warranted.
- Irrigation Demand. It is true that KRJ has opined on several occasions that increased demand for water imposed by irrigation systems may be exacerbating the water pressure/availability issues. Point of fact, it has been explained to Mr. Rains and many other customers that small water systems, such as the one serving Southern Trace, are not designed to accommodate irrigation demands, only domestic water usage. Unfortunately, a builder in

the lower portion of the system offered in-ground irrigation systems to the prospective home purchasers, without the knowledge or consent of KRJ. Fortunately, recently, as was acknowledged by Mr. Rains, their use and potential for system stress has reduced.

Jacqueline Walker became a KRJ water customer in May 2014. She expressed sympathy for the problems testified to by other customers, particularly the outages during the summer of 2015, but stated that, at her home, she does not personally experience water issues or problems; she does not have low water pressure or discoloration, although, here and there, there may be some cloudiness. She opposes the magnitude of the requested rate increase, particularly in view of the level of service many customers are receiving. Ms. Walker also complained that KRJ's responses are generally inadequate.

Response of KRJ to Testimony of Jacqueline Walker

Here again, KRJ appreciates Ms. Walker's positive comments to the effect that, at her home, she does not personally experience water issues or problems; and that she does not have low water pressure or discoloration, although, here and there, there may be some cloudiness. Next follows the Company's response to Ms. Walker's other comments:

- Level of Rate Increase. See KRJ's general response set forth above.
- Cloudy Water. Mr. Butler has no record of calls from Ms. Walker regarding cloudy water. However, intermittent cloudy water in systems with hydropneumatic tanks is not uncommon due to dissolution of air from within

the tank into the water. As the water is tested consistent with the Safe Drinking Water Act and has been found compliant with the requirements of the Act, the cloudiness does not reflect any safety or health hazard.

Mr. Butler has, subsequent to the hearing, spoken with Ms. Walker on at least two occasions regarding KRJ's activities, organization, and desire to improve the Southern Trace water system.

Shelley Iverson testified that she has been a KRJ customer since April 27, 2017. When she moved into her house, she experienced reddish-brown water. She and her husband drink bottled water. The water also often smells musty from all faucets. She experiences water pressure issues on a daily basis. She and her husband do not flush the toilet while someone is in the shower. She is not opposed to price increases for better service but opposes a rate increase based on the quality of service she currently receives from KRJ.

Response of KRJ to Testimony of Shelley Iverson

- Coloration of Water. As Public Staff attorney Grantmyre observed, the coloration of the water is most likely due to oxidized iron. Iron, although potentially imparting undesirable coloration, is not considered a health hazard, which is why it is on the United States Environmental Protection Agency's (USEPA) "Secondary" contaminant list as an aesthetic issue, rather than the "Primary" list which identifies health-risk contaminants. KRJ utilizes a process known as "sequestration" where a National Sanitation Foundation (NSF) approved chemical sequestering agent is added to the water

containing free-ion iron, which is colorless. The sequestering agent combines with the iron ion, as well as manganese, to prevent it from being oxidized by the chlorine added as a disinfectant, which would impart a color. Ideally, the distribution system would be flushed frequently to expel any settled sequestered iron. With the reduced yield of well 2, at present, flushing operations must be undertaken at less frequent intervals to conserve potable water.

- Odor of Water. KRJ has no explanation for the odor that Ms. Iverson reports, as KRJ has not received odor complaints from the customers served by the Southern Trace system in many years.
- Water Pressure. Ms. Iverson's residence is located in the "higher" portion of the subdivision, thus not enjoying the greater pressures present toward the lower areas. The water pressure that KRJ maintains, except in periods where demand exceeds well output, is well above the 30-psi minimum and approaches in some cases the 80-psi maximum allowed by the plumbing code. Given the elevation above sea level of the residence, it is very possible that her residence is equipped with an unnecessary pressure reducing valve installed when the house was constructed. Mr. Butler contacted Mr. Iverson and provided information on re-setting the device to cause it to deliver the maximum pressure it will allow.

Report Regarding Rockbridge Water and Sewer Systems

The eight witnesses served with water and sewer utility service by KRJ at Rockbridge were Craig. E. Buzak, Pat Foran, Robert C. Herbert, Jr., Taunia Teel, Brian Maxwell, Gerald Daniel, Kathleen Kendzierski, and Ginger Rodgers.

General Responses of KRJ to Rockbridge Customer Comments

1. Water Leaks

The water leaks spoken to by the customers providing testimony were, with one exception, as a result of service line leaks and not main breaks. The exception was when a main which had been marked was drilled into in 2017 by a contractor installing fiber-optic cable. The customers are correct in their observations that the vast majority of the service line leaks occurred on three specific streets within the 2006-2007 initial development phase of Rockbridge. What KRJ has determined is that the rock present in those areas fractures when being excavated during underground installations resulting in knife-like shards that if allowed to come in contact with the polyethylene tube service lines will over time cut the service, resulting in a water service leak. *Following the hearing, KRJ has established a new policy that if a given service line presents a leak for two occasions, it will be replaced rather than being repaired.*

2. Repair Response Times and Improved Communications with Customers

The customers offering testimony also observed their difficulty in obtaining information on repair of reported water leaks and that the leaks were not repaired in a timely fashion. *The day following the hearing, KRJ initiated a new protocol*

providing for improved communication between the plant operating personnel, maintenance/construction supervisor, contract manager, and utility contractor used to make repairs to assure that all Company personnel are kept abreast of the situations as they evolve so that customer inquiries can be answered with the best information possible and that the coordination of all utility personnel is significantly improved. The utility contractor was also counseled on the necessity that the response to reported problems should be as expeditious as possible and that the contractor was expected to provide timely completion of clean-up activities, including surface restoration, such as seeding or pavement repair. Mr. Butler will utilize his field technician in addition to the field maintenance/construction supervisor to triage the reported problems to better direct the repair contractor as to what materials and equipment they may require to address the problem. Additionally, to facilitate documentation and timely response to service issues, MGNC (through Mr. Butler) has established a new e-mail account - ***info@mgnc.biz*** *- that is dedicated to receipt and response to customer reports of service issues and inquiries associated with other water/sewer utility matters.* That e-mail address will soon appear on monthly customer bill statements.

3. **Unwillingness of Certain Customers to Drink the Water Supplied by KRJ**

Several customers testified that they do not drink the water provided by KRJ and, instead, purchase bottled water. Although that may be their preference, or response to inaccurate information, they should be aware that

KRJ's water system serving Rockbridge has had only one instance of a contaminant exceeding EPA's established levels. That instance was the identification of uranium, which is naturally occurring in some rock formations in the Wake County and some adjoining counties, and Gross Alpha which is most often associated with the presence of uranium in water. That situation never became such that the North Carolina Department of Environmental Quality Public Water Supply Section, USEPA's agent in enforcing the Federal Safe Drinking Water Act, declared a health emergency, requiring that alternate drinking water be provided.

The entire uranium issue was resolved by KRJ's installation of a uranium removal system which was placed into operation in June of 2016. No uranium has been detected in finished water samples since that time and the gross alpha has fallen to levels well below those acceptable under the Safe Drinking Water Act.

4. **Rate Case Test Year**

As was stated by Public Staff attorney Grantmyre, the Public Staff has updated the test year for ratemaking purposes in this case through the period April 1, 2017 - March 31, 2018, to be more reflective of current circumstances. KRJ has been fully cooperative with the Public Staff during its investigation and has supplied voluminous utility records during the discovery process.

5. **System Outages**

KRJ is aware of three system outages which occurred during the three-year period from 2015 through 2017: one associated with the damage caused by

the fiber-optic installer, one where a control relay failed, and one caused by an error of the contractor installing the uranium removal system. To guard against significant pressure drops or equipment trips, a remote alarm system was installed at Rockbridge some time ago.

Although the current system controlling the operation of the wells at Rockbridge is functioning well, KRJ is pursuing a system that will utilize a control system that utilizes an electronic pressure transducer, which will produce more accurate pressure measurement than the pressure switches currently used; cellular data transmission, to avoid proximal interference; and computer-based control logic. To date, equipment manufacturers have been identified, quotes obtained, and cellular field strength measurements made, to determine the most desirable cellular system to use. Scheduling of the installation will depend on availability of funds.

6. **Water Pressure Variations**

Pressure variations are both normal and necessary in any water system due to the necessary partial expenditure and replacement of water within the tank to assure that the water is turned over and does not lose its chlorine residual and when demand exceeds pumping rate as the tank serves to provide water to the system when instantaneous demand rate exceeds instantaneous production rate. The water level in the Rockbridge elevated tank is designed to fluctuate between 115 feet to 144 feet above the base of the tank which translates to a normal pressure variation of 13 psi.

7. **Chlorine-Related Complaints**

Chlorine is required to be continuously applied, more recently by USEPA, to all public drinking water systems placed into operation since the mid-1970s. USEPA sets the maximum concentration of chlorine in drinking water to be 3.5 mg/L. Some people may exhibit higher sensitivity to chlorine than others and the Company sympathizes with those customers who offered testimony in that regard; for that reason, KRJ attempts to maintain the chlorine concentration as low as possible while complying with applicable regulations. The electronic control system for the application of chlorine and all other water treatment chemicals is such that they are applied in a flow proportional manner. Some variation in chlorine concentrations will always exist throughout a distribution system due to distance from the water plant and changes in flow patterns within the system. KRJ must maintain the chlorine concentration leaving the treatment facility at a level that assures at least a 0.1 mg/L concentration throughout the distribution system. Representative copies of recent operating reports which indicate actual chlorine residual measurements within the distribution system, as filed with the North Carolina Department of Environmental Quality, are attached to this report as Exhibit B.

Specific Responses by KRJ to Rockbridge Customer Concerns

Craig Buzak testified that he has been a KRJ water and sewer customer since late-October 2008; that he has "experienced issue after issue after issue with KRJ;" that his family does not drink the water supplied by KRJ out of the

faucet and has not done so since 2009; and that his family of four goes through four cases (forty bottles) of bottled water a week. In 2009, witness Buzak stated that customers experienced a water main leak in the main road leading into the subdivision from Poole Road and that it took KRJ three or four weeks to repair the leak. During that period of time, water ran down the side of the road for a couple hundred feet. Once the repair was made, KRJ left the road open with gravel and dirt and it stayed that way until about 2011. According to witness Buzak, KRJ said that the road was being left in that state because the Company was afraid there would be further leaks. Mr. Buzak further testified that, since that time, there have been at least two additional leaks on that road; there have been three leaks on a second road; two giant leaks on a third road; and three leaks on a fourth road.

Mr. Buzak stated that he has personally called M&M Water on several occasions to report leaks, but that the responses have not been satisfactory; it sometimes took weeks for someone to come out to make the repair after a leak had been reported. He described one leak that occurred in either 2016 or 2017, as turning into a "geyser" and that it was a week before someone came out to make the repair after it was initially reported.

Witness Buzak said that his family initially decided to not drink the KRJ-supplied water in 2009, due to results of a quarterly report where something was a little bit high or slightly elevated; but nothing of major concern. He had an "uncomfortable feeling" and a two-year old child; as a result, he didn't trust the water. Then in late-2014 or early-2015, the system began getting test results

showing elevated levels of uranium and gross alpha which occurred over a period of four calendar quarters. Customers reached out to the media in June 2015, and, at that point, customers started seeing forward progress in fixing the issue. The Company installed a rad removal system. Mr. Buzak also contested KRJ's test period which encompassed this period of time as not being consistent with KRJ's actual costs during the last ten years. Witness Buzak also contended that KRJ's spray fields are not well maintained; they are not properly mowed and are overgrown the vast majority of time; some are not planted with grass or landscaped; they "look like absolute horrible trash." Mr. Buzak further testified that during the summer of 2015, the entire subdivision was without water at 7:00 p.m. and that it took KRJ almost twenty-four hours to make repairs and restore service. He described KRJ as providing "garbage service" and stated that, for the reasons given in his testimony, he opposed the requested rate increase.

Response of KRJ to Testimony of Craig Buzak

- Purchase of Drinking Water. The issue of water safety and quality is discussed in KRJ's general response that precede the Company's customer-specific responses.
- Repair Response Time and Information. The issues of delay in response to repair of and information about reported physical issues such as service line leaks are discussed in KRJ's general response that precede the Company's customer-specific responses.
- Test Year. The issue of Test Year is discussed in KRJ's general responses that precede the Company's customer-specific responses.

- Maintenance of Spray Fields. *KRJ's ownership and the maintenance and construction supervisor have been consulted regarding the maintenance of the spray fields and they have committed to more frequent mowing and maintenance of those areas.* To a large degree, the cost of mowing of the spray fields has to date been absorbed by the developer of Rockbridge; KRJ will be paying for mowing of the spray fields beginning this summer. *In the specific case of the field to which Mr. Buzak referred, the slopes from the curb to the fields will be re-seeded, as grass cover is sparse.* The field itself has not yet been placed into service and is therefore not visited as often as those that are in service. The "geyser" referred to was a result of vandalism of both a control valve and a spray riser, both of which have been repaired.
- System Outages. The issue of system outages is discussed in KRJ's general responses that precede the Company's customer-specific responses.

Pat Foran testified that she is a new customer, having only lived in Rockbridge since the end of September. Ms. Foran complained about KRJ's ability to select the test year for its rate case. She stated that the Company's billing practices are a big concern. She asserted that when she receives her monthly bill from KRJ that it is already overdue and that occurs every month. KRJ's billing practices are of great concern to her. She asserted that bills are mailed after the due date. Witness Foran voiced concerns about why a rate increase is necessary and "where the money is going." Ms. Foran has a two-

person household and questions the fairness of flat rate sewer service; she states that her usage is minimal.

In response to a question from Commissioner Mitchell, witness Foran stated that she has not experienced any questions with water quality. But she did notice that it took quite a while to fix a leak in the roadway at the entrance of the subdivision; i.e., the repair took a couple of weeks.

Response of KRJ to Testimony of Pat Foran

KRJ appreciates Ms. Foran's testimony to the effect that she has not experienced any questions with water quality. KRJ's responses to Ms. Foran's specific concerns are as follows:

- Test Year. The issue of Test Year is discussed in KRJ's general responses that precede the Company's customer-specific responses.
- Billing Practices. The Schedule of Rates ordered by the Commission for Rockbridge states: "Bills Past Due: 15 days after billing date." KRJ has always considered that the "billing date" was the date that the bills are mailed and applied to earned income and receivable ledger accounts. The "Date Mailed" that appears on the bill is the date that the bills are physically delivered to the United States Postal Service. Mr. Butler advises each new customer at the time that he is contacted by the customer to initiate their customer account that KRJ holds the "Past Due Date" uniform as the 5th day of each month and that the bills are mailed no less than 15 days prior to the "Past Due Date". The assertion that the bills are mailed after the "Due Date"

is incorrect. A copy of a sample redacted utility bill is attached to this report as Exhibit C.

- Repair Response Time and Information. The issues of delay in response to repair of and information about reported physical issues such as service line leaks is discussed in KRJ's general responses that precede the Company's customer-specific responses.

Robert C. Herbert, Jr. testified that he is not opposed to a rate increase, but that the amount being requested is this case is 'astronomical." Mr. Herbert stated that he was delayed in closing on the purchase of his house for a month in October 2015, due to the uranium issue. Witness Herbert stated that he and his wife drink bottled water because of several issues they have had; they want to "be on the safe side because of that." Mr. Herbert stated that he thinks that the requested rate increase is too much, considering everything that has been said.

Response of KRJ to Testimony of Robert C. Herbert, Jr.

- Radiological Issue. The issue regarding uranium and gross alpha exceedances is discussed in KRJ's general responses that precede the Company's customer-specific responses.
- Purchase of Drinking Water. The issue of water safety and quality is discussed in KRJ's general responses that precede the Company's customer-specific responses.

Taunia Teel stated that she has been a resident of Rockbridge since October 2008. Early on, Ms. Teel stated that she and her husband experienced

problems with the service provided by KRJ. During preparation for a birthday party for her husband, witness Teel stated that a well pump relay switch went out and she and other residents were without water for several hours. A natural area across from her house is not well maintained. Witness Teel testified that customers, including her, experienced low water pressure followed by no water for several hours on August 18, 2015, October 20, 2016, and January 9, 2017. She and her husband do not drink the water and, instead, use bottled water. A few months ago, there was a lot of chlorine in the water with no communication from KRJ as to why, leading the witness to have concerns about the quality of the water. Her husband has a skin condition that is affected greatly by the water sometimes resulting in rashes. She would like the ability make automated bill payments, including credit card payments, even if there was a surcharge to do so.

In response to a question from Commissioner Patterson, Ms. Teel testified that, in the last several months and with the exception of the outage in January 2017, she has probably experienced more consistent water pressure. As far as quality, she doesn't feel comfortable with the water because, many times, she detects a chlorine type smell when she turns on the water and that the chlorine causes her husband to develop rashes. Ms. Teel testified that Mr. Butler is very responsive when she calls, but that overall communications could be improved because Mr. Butler may not always be available so there is a need to leave a voicemail or a message on an automated system. On follow-up by the

Public Staff, witness Teel stated that there are still water pressure variations on the system. She has not observed as many water leaks recently.

Response of KRJ to Testimony of Taunia Teel

- System Outages. The issue of system outages is discussed in KRJ's general responses that precede the Company's customer-specific responses.
- Purchase of Bottled Water. The issue of water safety and quality is discussed in KRJ's general responses that precede the Company's customer-specific responses.
- Repair Response Time and Information. The issues of delay in response to repair of and information about reported physical issues such as service line leaks are discussed in KRJ's general responses that precede the Company's customer-specific responses.
- Maintenance of Spray Fields. As previously stated in this report, KRJ's ownership and the maintenance and construction supervisor have been consulted regarding the maintenance of the spray fields and have committed to more frequent mowing and maintenance of those areas.
- Chlorine Levels. The issue of chlorine concentration is discussed in KRJ's general responses that precede the Company's customer-specific responses.
- Pressure Variations. The issue of pressure variations is discussed in KRJ's general responses that precede the Company's customer-specific responses.

Brian Maxwell testified that he does drink the water supplied by KRJ and that he has been a customer since February 2008. Mr. Maxwell stated that he

too questions the timing of the test year used by KRJ in this case. Witness Maxwell stated that was the year that customers received notification of elevated levels of uranium in their drinking water (which he stated were four times the acceptable, safe levels) and that there was negative press in July 2015, regarding that issue. Thus, he questions the resulting expense time period. Mr. Maxwell does not object to a rate increase, but he suspects that the time period used for the test year was very expensive for KRJ from an operational standpoint, including a 7.5%-8.5% margin increase. Witness Maxwell questioned the magnitudes of the requested rate increases for both water and sewer service and wants to see justification for the request and the results of a full audit.

Mr. Maxwell testified that he too has experienced long delays in repair of water main breaks and questions why repairs are not made in a timely manner, considering the cost of providing and wasting water. He questioned the Company's concern with making repairs due to the delays in making those repairs. Mr. Maxwell also stated that water pressure has also been as issue with him. He cannot run more than one sprinkler head on his system at a time because his water pressure varies from less than 40 psi to no more than 46 psi. He believes that his stated pressure range is acceptable but noted that the system has an elevated storage tank.

In response to a question from Commissioner Patterson, Mr. Maxwell testified that, subsequent to the test period, he has seen no improvement in customer service regarding repairing leaks and response time; there have

continued to be leaks and the timing for repairs by KRJ has been as it was in years past.

Response of KRJ to Testimony of Brian Maxwell

- Test Year. The issue of Test Year is discussed in KRJ's general responses that precede the Company's customer-specific responses.
- Does Not Drink the Water. The issue regarding uranium and gross alpha exceedances is discussed in KRJ's general responses that precede the Company's customer-specific responses.
- Repair Response Time and Information. The issues of delay in response to repair of and information about reported physical issues such as service line leaks is discussed in KRJ's general responses that precede the Company's customer-specific responses.
- System Pressure. The issue of system pressure is discussed in KRJ's general responses that precede the Company's customer-specific responses. Additionally, Mr. Maxwell's house is located relatively close to the elevated tank and its ground elevation. The tank is designed such that maximum normal water level variation is from 115 feet to 144 feet above the base of the tank which translates to 49 to 62 psi. The pressures reported by Mr. Maxwell are reasonably correct, and well above the required minimum of 30 psi.

Gerald Daniel testified that he and his wife moved into Rockbridge in May 2010. Not long after moving into his house, Mr. Daniel experienced a sewer line break (the line was too small) and sewage ran into his back yard. KRJ

placed a larger pipe within "probably two days," which Mr. Daniel described as being "pretty quick." In 2014, a main water line running under Mr. Daniel's driveway broke and it took KRJ close to a week to make the necessary repairs. That same water main broke again in the same location in 2018 (about a month before the hearing). Mrs. Daniel reported the leak to M&M on a Friday, but KRJ did not send a repair crew out until the following Tuesday. Mr. Daniel stated that he was told by M&M that KRJ did not want to send a plumber out that weekend to make the repair because "it was too expensive." The repair crew came with a backhoe and dug a huge hole in his yard (more than 5 feet deep) and refilled the hole with the same clay soil that was initially removed and then threw out only a handful of grass seed. The repair crew did compact the soil. Mr. Daniel testified that he and his wife drink bottled water and do not drink the water supplied by KRJ. He favors implementation of a metered sewer rate because he does not use enough water to justify a metered water rate.

Response of KRJ to Testimony of Gerald Daniel

- Repair Response Time and Information. The issues of delay in response to repair of and information about reported physical issues is discussed in KRJ's general responses that precede the Company's customer-specific responses.
- M&M Response. The statement from M&M reported by Mr. Daniel to the effect that that, recently, KRJ did not want to send a plumber out on a weekend to make a repair because "it was too expensive" was not, nor has it ever been, the position or attitude of KRJ regarding necessary repairs. KRJ sincerely apologizes to Mr. Daniel for the unauthorized and inappropriate

comment. Newly-adopted protocols require that KRJ representatives triage reported leaks as soon as possible, and determine the most appropriate level of response, which includes "immediate" and "next working day" response times, depending on the severity of the issue.

- Dress of Leak Repair Site. Subsequent to the hearing, Mr. Butler contacted the maintenance and construction supervisor and asked that personnel be sent to Mr. Daniel's residence to more appropriately dress the site of the service line repair. The supervisor revisited the site on May 23 and reports that the area has now been re-shaped and additional seed and mulch were added. Mr. Butler then attempted to contact Mr. Daniel to determine the customer's level of satisfaction with the site repair, but the cell phone number on file with KRJ was incorrect.
- Purchase of Drinking Water. The issue of water safety and quality is discussed in KRJ's general responses that precede the Company's customer-specific responses.

Kathleen Kendzierski has been a KRJ customer since October 31, 2007. Ms. Kendzierski opined that "none of us would be here...if we were able to drink the water." When she first moved into her house, the water "looked like milk." Ms. Kendzierski was told by KRJ that the problem was caused by air in the water. She also complained about a smell in the water. She and her family have never drunk the water supplied by KRJ. Because of the uranium problem, she installed an osmosis system at a cost of $500 to use for cooking and drinking

water. Witness Kendzierski says that communications are a problem and that she does not think she is being told the truth about the water or receiving the quality of water that they should receive. Her son has an autoimmune disease and gets rashes. When they smell too much chlorine in the water, her son cannot take a shower because his rashes get worse. The witness also complained about "tons of leaks" and recurrent water outages. She needs the water to be better and purer. She would like to receive notices from KRJ when chlorine is used. She wants better communication from KRJ.

Response of KRJ to Testimony of Kathleen Kendzierski

- Purchase of Drinking Water. The issue of water safety and quality is discussed in KRJ's general responses that precede the Company's customer-specific responses.
- Milky Water. There are two potential causes for "milky water". The first is trapped air within water mains recently placed into service where the air becomes entrained in the water as microscopic bubbles. The second is insufficient alkalinity in the water which results in the water evolving carbon dioxide, the fizz in soda pop. KRJ augments alkalinity by the addition of lime slurry as part of the. treatment process. Minor variations in water quality from the wells may result in the lime slurry feed rate being insufficient, as KRJ attempts to minimize the application of lime to a concentration just above the effective level since alkalinity is observed by the customer as hardness. When KRJ receives such a complaint, it immediately determines whether the lime feed system is operating properly and, if appropriate, slow flushes the

potentially offending water main in an attempt to purge it of any air-laden water.

- Smell in the water. KRJ is unsure as to what smell Ms. Kendzierski is referring unless it is chlorine, which is spoken to in KRJ's general responses.
- Uranium Issue. The issue regarding uranium and gross alpha exceedances is discussed in KRJ's general responses that precede the Company's customer-specific responses. At no time did the State of North Carolina or KRJ recommend or require acquisition of treatment systems by the customers; however, it is understood that some did so at their own choosing.

Ginger Rodgers has lived in Rockbridge since 2008. When her family first moved in to their house, her mother complained of a musty odor which is no longer present. Ms. Rodgers stated that she does sometimes now smell a strong chlorine odor and that she recently complained to KRJ about the chlorine odor. Her family no longer drinks the water or cooks with it and has not used the water supplied by KRJ for those purposes for the last seven or eight years. They use bottled water. The quality of the water varies; it can be cloudy; there can be bubbles; the water pressure varies from low to very strong; the water is currently milky or cloudy. Ms. Rodgers is considering installing a whole-house filter system.

Response to KRJ to Testimony of Ginger Rodgers

- Chlorine Levels. The issue of chlorine concentration is discussed in KRJ's general responses that precede the Company's customer responses.

- Purchase of Bottled Water. The issue of water safety and quality is discussed in KRJ's general responses that precede the Company's customer-specific responses.
- Milky Water. KRJ's response on this issue in identical to the comments set forth above with reference to Ms. Kendzierski; and that response is incorporated herein by reference.
- System Pressure. The issue of system pressure is discussed in KRJ's general responses that precede the Company's customer-specific responses.

This concludes KRJ's report.

Respectfully submitted, this the 30th day of May, 2018.

BENNINK LAW OFFICE

Electronically Submitted
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Attorney for KRJ, Inc., d/b/a KRJ Utilities

VERIFICATION

James R. Butler, being duly sworn, deposes and says:

That he is the Vice President of Management Group of NC, Inc.; that he is familiar with the facts set out in the attached **REPORT ON CUSTOMER COMMENTS FROM PUBLIC HEARING IN RALEIGH, NORTH CAROLINA HELD MAY 15, 2018**, filed in Docket No. W-1075, Sub 12; that he has read the foregoing Report and knows the contents thereof; and that the same is true of his knowledge except as to those matters stated therein on information and belief, and as to those he believes them to be true.

James R. Butler

North Carolina

Carteret County

Sworn to and subscribed before me this the 30th day of May, 2018.

Notary Public

Sheri T Dudley
Notary Public
Jones County, NC

Sheri T Dudley
Printed Name

My Commission Expires: November 5, 2022

KRJ Utilities
Post Office Box 2369 • Swansboro NC 28584
Phone: 919.827.8055

28-May-2018

Mr. David Furr, Director
N C Utilities Commission
Public Staff - Water

INCIDENT REPORT

Southern Trace Subdivision
W-1075

At approximately 0650 hrs, Thursday 24-May-2018 a call was received through our normal office number from a customer at Southern Trace Subdivision, Wake County, that the caller's water was "muddy" and dark brown.

Field service personnel were notified arrived on site at approximately 0900 hrs, and determined that two wells (#2 & #3) were both tripped off. It was reported by a customer that there had been a thunderstorm Wednesday night. Presumably, this is why the wells were out of service. Both wells were placed back in service and personnel responded to the area proximate to the original call. During the intervening period several more calls were received indicating "muddy", brown water and air. Our immediate concern was that the two hydropneumatic tanks had been so severely depleted that the air column had begun to enter the distribution system. It was determined that was the case.

As soon as the system pressure reached a workable level, multiple individuals proceeded to flush the mains in a coordinated manner from the principal source of water (well 1) to the rear of the subdivision. Although well 2 & 3 were pumping, they are both located a good distance into the subdivision and contributed to the flushing flow without contaminating the water originating at well 1. Flushing was performed such that system pressure at the tanks was maintained no less than 30 psi. Public Water Supply was notified of the situation.

The water I observed being flushed from the system was the color of strong tea or coffee. There was no apparent settleable solids in the flow, so it is reasonably certain that the color was as a result of air from the tanks re-suspending settled, sequestered iron.

Flushing operations continued until 1600 hrs, when it was suspended due to concern that customer demand would commence in a short period and time was needed for the storage to recover from the flushing.

At approximately 0700 hrs, Friday 25-May-2018 one customer contacted our office and advised that her pressure was fine but color was present in the toilet bowls. After further discussion, it was determined that the water to the residence did not present color and that the color in the toilet bowls was most likely as a result of residual coloration in the flush tanks. It was suggested to the caller that she may want to have someone flush her water heater, if any color is observed in the hot water.

At approximately 0900, personnel again reported to the site, determined that the system pressure had recovered fully, that all wells were in operation. Thereafter, they began to work through the site flushing the areas that had not been addressed on Thursday. One customer called approximately 1040 indicating that the water color had been absent earlier in the morning but had returned. The area of that caller, and color was observed by our personnel was in the eastern, (aka lower) extremities of the subdivision which had not been as thoroughly flushed on Thursday as was desired due to necessity of cessation of flushing activities. Flushing was discontinued at approximately 1600 hrs.

Although the current system controlling the operation of the wells is functioning well, KRJ intends to pursue a Supervisory and Control system that utilizes a electronic pressure transducer, which will produce more accurate pressure measurement than the pressure switches currently used, cellular data transmission, to avoid proximal interference, and use computer based control logic. Such a system will allow remote observation of system pressure at the tank, calls for pumps, and pump running status, as well as issue remote alarms should system pressure drop below a predetermined level or a well fail to respond to a pump call. To date, equipment manufacturers have been identified, quotes obtained, and cellular field strength measurements made, to determine the more desirable cellular system to use. We feel that such a SCADA system will provide us with far better control and ability to detect and respond to system malfunctions in a proactive manner.

Please call or e-mail if you have questions.

James R. Butler
Contract Manager

DISTRIBUTION FACILITY (Ground or Purchased Source)
MONTHLY OPERATING REPORT (from GPWMOR application)

[redacted]

Report Month / Year: OCTOBER, 2017
Distribution System Class: C
Public Water System ID • Name: NC4092073 • ROCKBRIDGE S/D
Treatment WSF ID • Name: D01 • DISTRIBUTION SYSTEM
County Name: WAKE

SAMPLE NBR	COLLECTION DATE	LOCATION CODE	SAMPLE ADDRESS	MRT Site Residual Disinfectant: FREE CHLORINE (mg/L)
1	10/02/2017	010	5436 Emerald Springs	1.38
2	10/03/2017	011	5241 Emerald Springs	1.84
3	10/04/2017	012	5244Emerald Springs	1.62
4	10/05/2017	001	1333 Moores Creek	1.58
5	10/06/2017	002	5248 Sapphire Springs	1.71
6	10/09/2017	003	5213 Sapphire Springs	1.46
7	10/10/2017	004	1433 Silver Valley	1.58
8	10/11/2017	005	5028 Stonewood Pines	1.79
9	10/12/2017	006	5312 Sapphire Springs	3.11
10	10/13/2017	007	5328 Sapphire Springs	2.78
11	10/16/2017	008	1428 White Opal	0.85
12	10/17/2017	009	5425 Emerald Springs	1.55
13	10/18/2017	010	5436 Emerald Springs	2.17
14	10/19/2017	011	5241 Emerald Springs	1.46
15	10/20/2017	012	5244 Emerald Springs	1.72
16	10/23/2017	001	1333 Moores Creek	1.49
17	10/24/2017	002	5248 Sapphire Springs	1.82
18	10/25/2017	003	5213 Sapphire Springs	1.14
19	10/26/2017	004	1433 Silver Valley	1.81
20	10/27/2017	005	5028 Stonewood Pines	1.95
21	10/30/2017	006	5312 Sapphire Springs	1.63
22	10/31/2017	007	5328 Sapphire Springs	1.12

ORC Name: Andy Mathews Certificate Number: 090086 Submitted Date: Thu, Nov 2, 2017

Comments:

DENR 3397A (05/2011) Submitted By (using GPWMOR web application): nancy n mathews Date / Time Printed: Thu, Nov 2, 2017 11:45 am

DISTRIBUTION FACILITY (Ground or Purchased Source)
MONTHLY OPERATING REPORT (from GPWMOR application)

[redacted]

Report Month / Year: NOVEMBER, 2017
Public Water System ID • Name: NC4092073 • ROCKBRIDGE S/D
Treatment WSF ID • Name: D01 • DISTRIBUTION SYSTEM

Distribution System Class: C
County Name: WAKE

SAMPLE NBR	COLLECTION DATE	LOCATION CODE	SAMPLE ADDRESS	MRT Site Residual Disinfectant FREE CHLORINE (mg/L)
1	11/01/2017	008	1428 White Opal	1.16
2	11/02/2017	009	5425 Emerald Springs	2.17
3	11/03/2017	010	5436 Emerald Springs	2.88
4	11/06/2017	011	5241 Emerald Springs	0.29
5	11/07/2017	012	5244 Emerald Springs	1.99
6	11/08/2017	001	1333 Moores Creek	2.23
7	11/09/2017	002	5248 Sapphire Springs	2.95
8	11/10/2017	003	5213 Sapphire Springs	1.33
9	11/13/2017	004	1433 Silver Valley	0.99
10	11/14/2017	005	5028 Stonewood Pines	0.63
11	11/15/2017	006	5312 Sapphire Springs	1.11
12	11/16/2017	007	5328 Sapphire Springs	0.91
13	11/17/2017	008	1428 White Opal	1.54
14	11/20/2017	009	5425 Emerald Springs	1.25
15	11/21/2017	010	5436 Emerald Springs	0.95
16	11/22/2017	011	5241 Emerald Springs	0.53
17	11/27/2017	012	5244 Emerald Springs	0.89
18	11/28/2017	001	1333 Moores Creek	0.55
19	11/29/2017	002	5248 Sapphire Springs	0.23
20	11/30/2017	003	5213 Sapphire Springs	0.21

ORC Name: Andy Mathews Certificate Number: 090086 Submitted Date: Sun, Dec 3, 2017

Comments:

DENR 3397A (05/2011) Submitted By (using GPWMOR web application): nancy n mathews Date / Time Printed: Sun, Dec 3, 2017 | 12:09 pm

DISTRIBUTION FACILITY (Ground or Purchased Source)
MONTHLY OPERATING REPORT (from GPWMOR application)

[redacted]

Report Month / Year: DECEMBER, 2017
Public Water System ID • Name: NC4092073 • ROCKBRIDGE S/D
Treatment WSF ID • Name: D01 • DISTRIBUTION SYSTEM

Distribution System Class: C
County Name: WAKE

SAMPLE NBR	COLLECTION DATE	LOCATION CODE	SAMPLE ADDRESS	MRT Site Residual Disinfectant FREE CHLORINE (mg/L)
1	12/01/2017	004	1433 Silver Valley	0.46
2	12/04/2017	005	5028 Stonewood Pines	0.21
3	12/05/2017	006	5312 Sapphire Springs	0.99
4	12/06/2017	007	5328 Sapphire Springs	1.07
5	12/07/2017	008	1428 White Opal	0.95
6	12/08/2017	009	5425 Emerald Springs	0.89
7	12/11/2017	010	5436 Emerald Springs	0.26
8	12/12/2017	011	5241 Emerald Springs	0.21
9	12/13/2017	012	5244 Emerald Springs	0.21
10	12/14/2017	001	1333 Moores Creek	0.22
11	12/15/2017	002	5248 Sapphire Springs	0.26
12	12/18/2017	003	5213 Sapphire Springs	0.26
13	12/19/2017	004	1433 Silver Valley	0.29
14	12/20/2017	005	5028 Stonewood Pines	0.23
15	12/21/2017	006	5312 Sapphire Springs	0.22
16	12/22/2017	007	5328 Sapphire Springs	1.14
17	12/27/2017	008	1428 White Opal	1.25
18	12/28/2017	009	5425 Emerald Springs	1.64
19	12/29/2017	010	5436 Emerald Springs	1.35

ORC Name: Andy Mathews Certificate Number: 090086 Submitted Date: Sun, Dec 31, 2017

Comments:

Christmas Holiday December 25 & 26

DISTRIBUTION FACILITY (Ground or Purchased Source)
MONTHLY OPERATING REPORT (from GPWMOR application)

[redacted]

Report Month / Year: JANUARY, 2018
Public Water System ID • Name: NC4092073 • ROCKBRIDGE S/D
Treatment WSF ID • Name: D01 • DISTRIBUTION SYSTEM

Distribution System Class: C
County Name: WAKE

SAMPLE NBR	COLLECTION DATE	LOCATION CODE	SAMPLE ADDRESS	MRT Site Residual Disinfectant FREE CHLORINE (mg/L)
1	01/02/2018	011	5241 Emerald Springs	1.28
2	01/03/2018	012	5244 Emerald Springs	1.31
3	01/04/2018	001	1333 Moores Creek	1.97
4	01/05/2018	002	5248 Sapphire Springs	1.51
5	01/08/2018	003	5213 Sapphire Springs	0.54
6	01/09/2018	004	1433 Silver Valley	1.38
7	01/10/2018	005	5028 Stonewood Pines	1.22
8	01/11/2018	006	5312 Sapphire Springs	1.31
9	01/12/2018	007	5328 Sapphire Springs	2.09
10	01/15/2018	008	1428 White Opal	1.44
11	01/16/2018	009	5425 Emerald Springs	1.21
12	01/17/2018	010	5436 Emerald Springs	1.26
13	01/18/2018	011	5241 Emerald Springs	1.24
14	01/19/2018	012	5244 Emerald Springs	1.39
15	01/22/2018	001	1333 Moores Creek	0.97
16	01/23/2018	002	5248 Sapphire Springs	1.04
17	01/24/2018	003	5213 Sapphire Springs	0.97
18	01/25/2018	004	1433 Silver Valley	0.34
19	01/26/2018	005	5028 Stonewood Pines	0.21
20	01/29/2018	006	5312 Sapphire Springs	0.25
21	01/30/2018	007	5328 Sapphire Springs	0.31
22	01/31/2018	008	1428 White Opal	0.95

ORC Name: Andy Mathews Certificate Number: 090086 Submitted Date: Fri, Feb 2, 2018

Comments:

DENR 3397A (05/2011) Submitted By (using GPWMOR web application): nancy n mathews Date / Time Printed: Fri, Feb 2, 2018 2:48 pm

UTILITY INVOICE

KRJ Utilities
P O Box 2369
Swansboro NC 28584-2369

Account Inquiry 919.827.8055
Service Emergencies 919.809.0690

Account Name	Account Number
[redacted]	[redacted]

Service Address	Rate
[redacted]	R2

Service From	Service To	Bill Mailed
04/10/2018	05/10/2018	05/21/2018

Meter Number	Old Read	New Read	Usage	Cd
47978495	175520	178410	2890 GAL	

Bill Due	Past Due On
05/21/2018	06/05/2018

Description	Amount
Prior Balance	94.45
Payment Received	-94.45
Water Service	18.70
Sewer Service	68.33
AMOUNT DUE	**$ 87.03**

DO NOT MAIL CASH OR COIN!!!

A 1% late charge will be applied to all account balances remaining unpaid 25 days after mailing date of this bill.

PLEASE RETAIN THIS PORTION OF INVOICE FOR YOUR RECORDS

1A

BENNINK LAW OFFICE

Robert H. Bennink, Jr., Attorney at Law

January 30, 2018

Ms. M. Lynn Jarvis, Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4325

Via Electronic Filing

Re: KRJ, Inc., d/b/a KRJ Utilities
Docket No. W-1075, Sub 12 - General Rate Increase Application
Response Providing Additional Information Filed in Compliance with Provisions of Commission Rule R1-17(b)

Dear Ms. Jarvis:

On January 25, 2017, the Public Staff filed a letter in this docket pursuant to Commission Rule R1-17((f)(1) notifying KRJ, Inc., d/b/a KRJ Utilities ("KRJ Utilities" or "Company") that it is necessary for the Company to file certain specified information in order to complete its general rate increase application. Enclosed for electronic filing, please find the additional information requested by the Public Staff in compliance with applicable provisions of Commission Rule R1-17(b).

As a matter of clarification regarding the Company's general rate case application, KRJ Utilities requests that its proposed rates become effective on Friday, February 9, 2018, unless suspended by the Commission. Pursuant to G.S. 62-134(a), this proposed effective date is 30 days subsequent to the filing date of the application, which occurred on January 10, 2018.

130 Murphy Drive, Cary, North Carolina 27513 · BenninkLawOffice@aol.com
Tel: 919-760-3185

As always, thank you and your staff for your assistance; please feel free to contact me if there are any questions or suggestions.

Sincerely,

Electronically Submitted
/s/ Robert H. Bennink, Jr.

North Carolina State Bar No. 6502
Attorney for KRJ, Inc., dba KRJ Utilities

c: Gina C. Holt, Staff Attorney, Public Staff
William E. Grantmyre, Staff Attorney, Public Staff

KRJ, Inc d/b/a KRJ Utilities - W-1075s12

NCUC R1-17(b)(3)

GL Acct#	Description	Sou.Trace Water	Original Cost Rockbridge Water	Rockbridge Sewer
304200-02-02	WELL SITE # 1	12,287.00		
304201-02-02	WELL HOUSE # 1	24,508.81		
304202-02-02	WELL SITE 2	6,777.65		
304203-02-02	WELL HSE #2	3,161.77		
304204-02-02	WELL SITE # 3	10,247.65		
304205-02-02	WELL HOUSE # 3	12,823.45		
304300-02-03	WATER TREATMENT BUILDING		23,387.10	
304500-02-03	WATER SITE IMPROVEMENTS		8,038.18	
304501-02-03	OPERATIONS BUILDING		14,775.03	
304502-02-03	ELECTRICAL & GENERATOR		132,551.17	
307200-02-02	WELL # 1	1,029.28		
307201-02-02	WELL #2	7,435.00		
307202-02-02	WELL # 3	6,285.00		
307205-02-03	WELL 1		65,074.81	
307206-02-03	WELL 2		58,154.40	
307207-02-03	WELL 3		42,078.26	
311200-02-02	WELL PUMP # 1	3,565.11		
311205-02-03	WELL 1 PUMP		10,869.25	
311206-02-03	WELL 2 PUMP		21,489.42	
311207-02-03	WELL 3 PUMP		16,674.27	
311208-02-02	ST WELL # 2 PUMP (2015)	20,171.64		
311209-02-02	WELL 3 PUMP (2016)	7,859.00		
320300-02-02	WATER TREATMENT EQUIPMENT-WELL #1	2,700.88		
320301-02-02	WELL #2 TELEMETRY EQUIPMENT	3,932.85		
320302-02-02	TRT EQUIP - WELL 2	3,557.73		
320303-02-02	REPLACEMENT EQUIP W-1	1,153.63		
320304-02-02	REPLACEMENT EQUIPMENT W02	1,198.08		
320305-02-02	TREATMENT EQUIP - WELL # 3	11,000.00		
320306-02-03	TELEMETRY & CONTROL ELEV TANK		62,217.37	
320310-02-03	WATER TREATMENT EQUIPMENT		78,816.08	
320311-02-03	WRT EQUIPMENT WELL 1		32,217.97	
320312-02-03	LIME SLURRY PUMP		5,775.93	
320313-02-03	URANIUM IX SYSTEM		171,111.89	
330400-02-02	PNEUMATIC TANKS	19,746.08		
330401-02-02	HYDRO PNEUMATIC TANK # 2	26,648.00		
330402-02-03	ELEVATED WATER TANK		310,354.73	
331400-02-02	DISTRIBUTION MAINS			
334401-02-02	METERS - 1996	117.70		
334402-02-02	METERS - 1997	1,571.96		
334403-02-02	METERS - 1998	1,710.47		
334404-02-02	METERS - 1999	813.40		
334405-02-02	METERS - 2000	1,358.69		

KRJ, Inc d/b/a KRJ Utilities - W-1075s12

NCUC R1-17(b)(3)

GL Acct#	Description	Sou.Trace Water	Original Cost Rockbridge Water	Rockbridge Sewer
334406-02-02	METERS - 2001	1,272.01		
334407-02-02	METERS - 2002	820.90		
334408-02-02	METERS - 2003	704.72		
334409-02-02	METERS - 2004	1,841.57		
334410-02-02	METERS - 2005	2,098.70		
334411-02-02	METERS - 2006	3,145.31		
334412-02-02	METERS - 2007	827.22		
334412-02-03	METERS - 2007		4,133.22	
334413-02-02	METERS - 2008	334.86		
334413-02-03	METERS - 2008		2,172.82	
334414-02-03	METERS -2009		616.99	
334415-02-03	METERS - 2010		2,435.09	
334416-02-03	METERS - 2011		2,300.38	
334417-02-03	METERS - 2012		868.29	
334418-02-03	METERS - 2013		317.15	
334419-02-02	METERS - 2014	227.24		
334419-02-03	METERS - 2014		2,097.97	
334420-02-02	METERS - 2015	1,002.50		
334420-02-03	METERS - 2015		5,743.51	
334421-02-02	METERS - 2016	245.72		
334421-02-03	METERS - 2016		1,318.59	
345500-01-03	DSI TRACTOR			15,692.75
345501-01-01	OFFICE EQUIPMENT			420.23
354400-03-03	PLANT STRUCTURE			1,605,864.05
354401-03-03	CHEMICAL FEED & INSTRUMENTATION			62,657.26
354402-03-03	MISC PLANT COST			17,626.09
354500-03-03	WWTP SITE IMPROVEMENTS			263,678.70
354501-03-03	OPERATIONS BUILDING			84,538.85
354502-03-03	ELECTRICAL & GENERATOR			238,384.05
361200-03-03	GRAVITY MAINS - 2007			531,836.00
361201-03-03	GRAV. MAINS - 2014			147,500.00
363200-03-03	SERVICE LINES - 2007			88,015.00
363201-03-03	SERV. LINES - 2014			18,500.00
364400-03-03	FLOW MONITORING EQUIPMENT			14,658.12
381400-03-03	PLANT SEWERS			460,197.07
381401-03-03	INFLUENT PUMP STATION			161,352.27
382400-03-03	IRRIGATION PUMP STATION			188,304.86
382402-03-03	SPRAY REUSE SYSTEM			625,024.97
389401-03-03	LONG TERM STORAGE POND			853,779.18
389402-03-03	UPSET POND			33,911.14
	Totals	**204,181.58**	**1,075,589.87**	**5,411,940.59**

The above does not reflect any adjustments that may be presented in working papers to be produced during discovery.

2018.01.30

W-1075s12 - KRJ - Accumulated Depreciation of Water & Sewer Systems for Test Year 7/2015-6/2016

per NCUC R1-17(b)(5)

		Asset Value	Date Acquired	Deprec Method	Acc Dep to 06/2016 Sou.Tr Water	Acc Dep to 06/2016 RckBrg Water	Acc Dep to 06/2016 RckBrg Sewer
304200-02-02	WELL SITE # 1	12,287.00	06/30/1996	25-yr SL	9,829.60		
304201-02-02	WELL HOUSE # 1	24,508.81	06/30/1996	25-yr SL	19,607.00		
304202-02-02	WELL SITE 2	6,777.65	06/30/1999	25-yr SL	4,608.87		
304203-02-02	WELL HSE #2	3,161.77	06/30/1999	25-yr SL	2,149.99		
304204-02-02	WELL SITE # 3	10,247.65	06/30/2005	25-yr SL	4,509.01		
304205-02-02	WELL HOUSE # 3	12,823.45	06/30/2005	25-yr SL	5,642.34		
304300-02-03	WATER TREATMENT BUILDING	23,387.10	04/11/2007	25-yr SL		8,625.13	
304500-02-03	WATER SITE IMPROVEMENTS	8,038.18	04/11/2007	25-yr SL		2,964.51	
304501-02-03	OPERATIONS BUILDING	14,775.03	04/11/2007	25-yr SL		5,449.02	
304502-02-03	ELECTRICAL & GENERATOR	132,551.17	04/11/2007	25-yr SL		48,884.90	
307200-02-02	WELL # 1	1,029.28	06/30/1996	25-yr SL	823.40		
307201-02-02	WELL #2	7,435.00	06/30/1999	25-yr SL	5,055.80		
307202-02-02	WELL # 3	6,285.00	06/30/2005	25-yr SL	2,765.40		
307205-02-03	WELL 1	65,074.81	04/11/2007	25-yr SL		23,999.57	
307206-02-03	WELL 2	58,154.40	01/01/2015	25-yr SL		3,466.01	
307207-02-03	WELL 3	42,078.26	04/11/2007	25-yr SL		15,518.46	
311200-02-02	WELL PUMP # 1	3,565.11	06/30/1996	25-yr SL	2,852.00		
311205-02-03	WELL 1 PUMP	10,869.25	07/01/2007	25-yr SL		3,912.93	
311206-02-03	WELL 2 PUMP	21,489.42	01/01/2015	25-yr SL		1,280.77	
311207-02-03	WELL 3 PUMP	16,674.27	07/01/2008	25-yr SL		5,335.77	
320300-02-02	WATER TREATMENT EQUIPMENT-WELL #:	2,700.88	06/30/1996	25-yr SL	2,160.70		
320301-02-02	WELL #2 TELEMETRY EQUIPMENT	3,932.85	06/30/1999	25-yr SL	2,674.34		
320303-02-02	REPLACEMENT EQUIP W-1	1,153.63	08/15/2004	25-yr SL	547.74		
320304-02-02	REPLACEMENT EQUIPMENT W02	1,198.08	09/01/2004	25-yr SL	566.93		
320305-02-02	TREATMENT EQUIP - WELL # 3	11,000.00	06/30/2005	25-yr SL	4,840.00		
320306-02-03	TELEMETRY & CONTROL ELEV TANK	62,217.37	04/11/2007	25-yr SL		22,945.77	
320310-02-03	WATER TREATMENT EQUIPMENT	78,816.08	04/11/2007	25-yr SL		29,067.37	
320311-02-03	WRT EQUIPMENT WELL 1	32,217.97	04/11/2007	25-yr SL		11,881.99	
320312-02-03	LIME SLURRY PUMP	5,775.93	07/01/2009	25-yr SL		1,617.26	
320313-02-03	URANIUM IX SYSTEM	171,111.89	06/21/2016	25-yr SL		136.89	
330400-02-02	PNEUMATIC TANKS	19,746.08	06/30/1996	25-yr SL	15,796.86		
330401-02-02	HYDRO PNEUMATIC TANK # 2	26,648.00	06/30/2005	25-yr SL	11,725.12		
330402-02-03	ELEVATED WATER TANK	310,354.73	04/11/2007	25-yr SL		114,458.82	
331400-02-02	DISTRIBUTION MAINS	89,925.62	n/a	25-yr SL			
331401-02-02	DISTRIB SYS PH.2	42,397.83	n/a	25-yr SL			
331402-02-02	DISTRIB MAINS - PH 3	30,257.50	n/a	25-yr SL			
331403-02-03	DISTRIB. MAINS - 2007	263,210.30	n/a	25-yr SL			
331404-02-03	DIST. MAINS - 2014	62,200.00	n/a	25-yr SL			
333400-02-02	SERVICE LINES - PH.1	16,723.77	n/a	25-yr SL			
333401-02-02	SERVICE LINES - PH.2	10,400.00	n/a	25-yr SL			
333402-02-02	SERV LINES - PH 3	14,136.00	n/a	25-yr SL			
333403-02-03	SERVICE LINES - 2007	47,700.00	n/a	25-yr SL			
333404-02-03	SERV. LINES - 2014	14,800.00	n/a	25-yr SL			
334401-02-02	METERS - 1996	117.70	06/30/1996	25-yr SL	94.16		
334402-02-02	METERS - 1997	1,571.96	06/30/1997	25-yr SL	1,194.69		
334403-02-02	METERS - 1998	1,710.47	06/30/1998	25-yr SL	1,231.54		
334404-02-02	METERS - 1999	813.40	06/30/1999	25-yr SL	553.11		
334405-02-02	METERS - 2000	1,358.69	06/30/2000	25-yr SL	869.56		
334406-02-02	METERS - 2001	1,272.01	06/30/2001	25-yr SL	763.21		
334407-02-02	METERS - 2002	820.90	06/30/2002	25-yr SL	459.70		
334408-02-02	METERS - 2003	704.72	06/30/2003	25-yr SL	366.45		
334409-02-02	METERS - 2004	1,841.57	06/30/2004	25-yr SL	883.95		
334410-02-02	METERS - 2005	2,098.70	06/30/2005	25-yr SL	923.43		
334411-02-02	METERS - 2006	3,145.31	06/30/2006	25-yr SL	1,258.12		
334412-02-02	METERS - 2007	827.22	06/30/2007	25-yr SL	297.80		
334412-02-03	METERS - 2007	4,133.22	06/30/2007	25-yr SL		1,487.96	
334413-02-02	METERS - 2008	334.86	06/30/2008	25-yr SL	107.16		
334413-02-03	METERS - 2008	2,172.82	06/30/2008	25-yr SL		695.30	
334414-02-03	METERS -2009	616.99	06/30/2009	25-yr SL		172.76	
334415-02-03	METERS - 2010	2,435.09	06/30/2010	25-yr SL		584.42	

W-1075s12 - KRJ - Accumulated Depreciation of Water & Sewer Systems for Test Year 7/2015-6/2016

per NCUC R1-17(b)(5)

		Asset Value	Date Acquired	Deprec Method	Acc Dep to 06/2016 Sou.Tr Water	Acc Dep to 06/2016 RckBrg Water	Acc Dep to 06/2016 RckBrg Sewer
334416-02-03	METERS - 2011	2,300.38	06/30/2011	25-yr SL		460.08	
334417-02-03	METERS - 2012	868.29	06/30/2012	25-yr SL		138.93	
334418-02-03	METERS - 2013	317.15	06/30/2013	25-yr SL		38.06	
334419-02-02	METERS - 2014	227.24	06/30/2014	25-yr SL	18.18		
334419-02-03	METERS - 2014	2,097.97	06/30/2014	25-yr SL		167.84	
334420-02-02	METERS - 2015	1,002.50	06/30/2015	25-yr SL	40.10		
334420-02-03	METERS - 2015	5,743.51	06/30/2015	25-yr SL		229.74	
334421-02-02	METERS - 2016	245.72	06/30/2015	25-yr SL	9.83		
334421-02-03	METERS - 2016	1,318.59	06/30/2015	25-yr SL		52.74	
345500-01-03	DSI TRACTOR	15,692.75	06/30/2007	25-yr SL			5,649.39
345501-01-01	OFFICE EQUIPMENT	420.23	05/17/2011	25-yr SL			86.06
354400-03-03	PLANT STRUCTURE	1,605,864.05	05/07/2007	25-yr SL			587,746.24
354401-03-03	CHEMICAL FEED & INSTRUMENTATION	62,657.26	05/07/2007	25-yr SL			22,932.56
354402-03-03	MISC PLANT COST	17,626.09	05/07/2007	25-yr SL			6,451.15
354500-03-03	WWTP SITE IMPROVEMENTS	263,678.70	05/07/2007	25-yr SL			96,506.40
354501-03-03	OPERATIONS BUILDING	84,538.85	05/07/2007	25-yr SL			30,941.22
354502-03-03	ELECTRICAL & GENERATOR	238,384.05	05/07/2007	25-yr SL			87,248.56
361200-03-03	GRAVITY MAINS - 2007	531,836.00	05/07/2007	25-yr SL			194,651.98
361201-03-03	GRAV. MAINS - 2014	147,500.00	05/07/2007	25-yr SL			53,985.00
363200-03-03	SERVICE LINES - 2007	88,015.00	05/07/2007	25-yr SL			32,213.49
363201-03-03	SERV. LINES - 2014	18,500.00	05/07/2007	25-yr SL			6,771.00
364400-03-03	FLOW MONITORING EQUIPMENT	14,658.12	05/07/2007	25-yr SL			5,364.87
381400-03-03	PLANT SEWERS	460,197.07	05/07/2007	25-yr SL			168,432.13
381401-03-03	INFLUENT PUMP STATION	161,352.27	05/07/2007	25-yr SL			59,054.93
382400-03-03	IRRIGATION PUMP STATION	188,304.86	05/07/2007	25-yr SL			68,919.58
382402-03-03	SPRAY REUSE SYSTEM	625,024.97	05/07/2007	25-yr SL			228,759.14
389401-03-03	LONG TERM STORAGE POND	853,779.18	05/07/2007	25-yr SL			312,483.18
389402-03-03	UPSET POND	33,911.14	05/07/2007	25-yr SL			12,411.48
					105,226.10	**303,572.97**	**1,980,608.36**

The above is based on re-calculated depreciation to end of test year, and does not include any adjustments that may produced during discovery.

2018.01.29

KRJ, Inc. d/b/a KRJ Utilities - W-1075s12

Operating Experience of Utility Systems During Test Year

per NCUC R1-17(b)(8) (a),(b),(c)

			Southern Trace Water	Rockbridge Water	Rockbridge Sewer
Income					
	421000-01-01	MISC. UTILITY INCOME	0.27	0.26	
	421000-01-02	MISC. UTILITY INCOME	471.96	0.00	
	421000-01-03	MISC. UTILITY INCOME		320.52	
	461100-02-02	METERED RESIDENTIAL SALES	72,412.57	0.00	
	461100-02-03	METERED RESIDENTIAL SALES	0.00	58,927.67	
	521100-03-03	FLAT RATE RESIDENTIAL SEWER	0.00	0.00	177,815.96
		Total Gross Income	**72,884.80**	**59,248.45**	**177,815.96**
Expenses					
	403000-02-02	DEPRECIATION EXPENSE	18,645.26	0.00	
	403000-02-03	DEPRECIATION EXPENSE	0.00	14,657.61	
	403000-03-03	DEPRECIATION EXPENSE	0.00	0.00	191,554.88
	408100-02-02	UTILITY REGULATORY FEES	99.20	0.00	0.00
	408100-02-03	UTILITY REGULATORY FEES	0.00	129.12	0.00
	408100-03-03	UTILITY REGULATORY FEES	0.00	0.00	231.26
	408300-01-01	OTHER TAX & LICENSE	6.66	6.66	6.68
	408301-02-02	PROPERTY TAXES	330.29	0.00	0.00
	408301-02-03	PROPERTY TAXES	0.00	0.00	0.00
	414000-02-02	GAIN/LOSS FROM DISPOSITION OF EQUIP	13,887.74	0.00	0.00
	414000-02-03	GAIN/LOSS FROM DISPOSITION OF EQUIP	0.00	10,155.87	0.00
	426000-01-01	BANK CHARGES	212.05	175.73	534.18
	426001-01-03	LATE CHARGES	0.00	0.00	36.62
	615100-01-01	PURCHASED POWER - UNDIVIDED	0.00	0.00	0.00
	615100-02-02	PURCHASED POWER - WELLS	6,954.68	0.00	0.00
	615100-02-03	PURCHASED POWER - WELLS	0.00	0.00 **	0.00
	615101-02-03	PURCHASED POWER - ELEV. TANK	0.00	335.83	0.00
	618400-02-02	TREATMENT CHEMICALS	1,253.42	0.00	0.00
	618400-02-03	TREATMENT CHEMICALS	0.00	1,764.08	0.00
	632800-02-02	CONTRACT ACCOUNTING	700.00	0.00	0.00
	633800-02-02	LEGAL EXPENSES	207.50	0.00	0.00
	633800-02-03	LEGAL EXPENSES	0.00	3,049.50	0.00
	634700-02-02	CONTRACT MANAGEMENT - CUSTOMER ACCT	20,134.10	0.00	0.00
	634700-02-03	CONTRACT MANAGEMENT - CUSTOMER ACCT	0.00	14,083.62	0.00
	635100-02-02	CONTRACT OPERATION - SOURCE	12,744.00	0.00	0.00
	635100-02-03	CONTRACT OPERATION - SOURCE	0.00	15,837.87	0.00
	635101-02-02	LAB FEES - SOURCE	1,682.41	0.00	0.00
	635101-02-03	LAB FEES - SOURCE	0.00	448.00	0.00
	635200-02-02	CONTRACT MAINTENANCE - SOURCE	10,252.93	0.00	0.00
	635200-02-03	CONTRACT MAINTENANCE - SOURCE	0.00	349.45	0.00
	635400-02-02	CONTRACT TREATMENT MAINTENANCE	3,580.74	0.00	0.00
	635400-02-03	CONTRACT TREATMENT MAINTENANCE	0.00	54,947.95	0.00
	635403-02-02	CONTR. SITE MAINTENANCE	0.00	0.00	0.00
	635500-02-02	CONTRACT MAINTENANCE -DISTRIB.	5,307.25	0.00	0.00
	635501-02-02	LAB TEST - DISTRIBUTION SYSTEM	715.00	0.00	0.00
	635501-02-03	LAB TEST - DISTRIBUTION SYSTEM	0.00	3,785.49	0.00
	635701-02-03	METER READING	0.00	0.00	0.00
	659600-02-02	CASUALTY INSURANCE	1,805.18	0.00	0.00
	659600-02-03	CASUALTY INSURANCE	0.00	2,047.55	0.00
	670700-02-02	BAD DEBT EXPENSE	280.80	0.00	0.00
	670700-02-03	BAD DEBT EXPENSE	0.00	358.65	0.00
	675508-02-02	PWS PERMIT FEES	420.00	0.00	0.00
	675508-02-03	PWS PERMIT FEES	0.00	385.00	0.00
	675800-02-02	MISC EXP - ADMIN & GENERAL	120.00	0.00	0.00
	675800-02-03	MISC EXP - ADMIN & GENERAL	0.00	240.00	0.00
	711500-03-03	SLUDGE REMOVAL/DISPOSAL			6,506.00

KRJ, Inc. d/b/a KRJ Utilities - W-1075s12

Operating Experience of Utility Systems During Test Year

per NCUC R1-17(b)(8) (a),(b),(c)

		Southern Trace Water	Rockbridge Water		Rockbridge Sewer
715500-03-03	PURCHASED POWER - WRF SITE			**	42,045.25
715501-03-03	PURCHASED POWER - SPRAY FIELDS				678.74
717201-03-03	ALARM MONITORING				1,052.40
718500-03-03	CHEMICALS				9,193.97
720600-03-03	TREATMENT MAINTENANCE				1,223.65
733800-03-03	LEGAL EXPENSES				3,049.50
734700-03-03	CONTR MANAGEMENT - CUSTOMER ACCTS				12,058.36
735430-03-03	CONTR SERV - SITE MAINTENANCE				0.00
735400-03-03	CONTR SRV - PUMP STATION MAINT				300.00
735500-03-03	CONTR SERV - TREATMENT OPERATION				50,270.00
735501-03-03	WWTP LAB TESTS				2,421.50
735600-03-03	CONTR SERV - TREATMENT PLANT MAINT				16,290.31
735601-03-03	TRASH PICK-UP AT WWTP				299.52
735602-03-03	SPRAY FIELD MAINTENANCE				0.00
735603-03-03	MAINTENANCE EQUIPMENT REPAIR				0.00
759600-03-03	CASUALTY INSURANCE				2,349.59
770700-03-03	BAD DEBTS				923.59
775500-03-03	TREATMENT - MISC. SUPPLIES				0.00
775508-03-03	DWQ PERMIT FEES				1,310.00
775800-03-03	MISC EXPENSE - ADMIN & GENERAL				240.00
	Total Expense	**99,339.21**	**122,757.98**		**342,576.00**
	Loss	**26,454.41**	**63,509.53**		**164,760.04**

The above is from directly from General Ledger, excepting division of electric power delivered to all water/sewer treatment facilities and wells at Rockbridge, which is delivered through a single power meter. The calculated value of power for Rockbridge water is $ 6,703, but is not reported above to maintain consistency. All adjustments are presented in working papers to be produced during discovery.

2018.01.30

KRJ, Inc. d/b/a KRJ Utilities - W-1075s12
Effect of Proposed Increase
per NCUC R1-17(b)(9) (a),(b),(c),(d)

	Southern Trace Water	Rockbridge Water	Rockbridge Sewer
Gross Revenue for Test Year	72,884.53	59,248.19	178,783.12
Base Revenue Requirement	102,802.35	110,376.72	219,262.51
Net Revenue (7.5%)	7,710.18	8,278.25	16,444.69
Total	110,512.52	118,654.97	235,707.19
Revenue Retention Factor	0.82335	0.82335	0.82335
Total Revenue Requirement	134,223.72	144,113.19	286,279.74
Additional Gross Revenue	61,339.19	84,865.00	107,496.62
Additional Income Tax due to Increased Gross Revenue.	11,041.05	15,275.70	19,349.39

2018.01.30

KRJ, Inc. d/b/a KRJ Utilities - W-1075s12

Balance Sheet as of 06/30/2016

per NCUC R1-17(b)(10)

		Balance as of 06/30/2016
Current Assets		
131204-01-01	BB&T CHECKING xxxxx0601	3,621.59
131205-01-01	CAP.BANK RCKBRDG - xxxxxx7091	705.61
131206-01-01	ROCKBRIDGE BB&T xxxxxx6530	4,373.68
141000-01-01	CUSTOMER ACCOUNTS RECEIVABLE	16,350.78
141008-01-03	A/R FROM STAFFORD LAND	140.00
304200-02-02	WELL SITE # 1	12,287.00
304201-02-02	WELL HOUSE # 1	24,508.81
304202-02-02	WELL SITE 2	6,777.65
304203-02-02	WELL HSE #2	3,161.77
304204-02-02	WELL SITE # 3	10,247.65
304205-02-02	WELL HOUSE # 3	12,823.45
304300-02-03	WATER TREATMENT BUILDING	23,387.10
304500-02-03	WATER SITE IMPROVEMENTS	8,038.18
304501-02-03	OPERATIONS BUILDING	14,775.03
304502-02-03	ELECTRICAL & GENERATOR	132,551.17
307200-02-02	WELL # 1	1,029.28
307201-02-02	WELL #2	7,435.00
307202-02-02	WELL # 3	6,285.00
307205-02-03	WELL 1	65,074.81
307206-02-03	WELL 2	58,154.40
307207-02-03	WELL 3	42,078.26
311200-02-02	WELL PUMP # 1	3,565.11
311205-02-03	WELL 1 PUMP	10,869.25
311206-02-03	WELL 2 PUMP	21,489.42
311207-02-03	WELL 3 PUMP	16,674.27
311208-02-02	ST WELL # 2 PUMP (2015)	20,171.64
311209-02-02	WELL 3 PUMP (2016)	7,859.00
320300-02-02	WATER TREATMENT EQUIPMENT-WELL #1	2,700.88
320301-02-02	WELL #2 TELEMETRY EQUIPMENT	3,932.85
320302-02-02	TRT EQUIP - WELL 2	3,557.73
320303-02-02	REPLACEMENT EQUIP W-1	1,153.63
320304-02-02	REPLACEMENT EQUIPMENT W02	1,198.08
320305-02-02	TREATMENT EQUIP - WELL # 3	11,000.00
320306-02-03	TELEMETRY & CONTROL ELEV TANK	62,217.37
320310-02-03	WATER TREATMENT EQUIPMENT	78,816.08
320311-02-03	WRT EQUIPMENT WELL 1	32,217.97
320312-02-03	LIME SLURRY PUMP	5,775.93
320313-02-03	URANIUM IX SYSTEM	171,111.89
330400-02-02	PNEUMATIC TANKS	19,746.08
330401-02-02	HYDRO PNEUMATIC TANK # 2	26,648.00

KRJ, Inc. d/b/a KRJ Utilities - W-1075s12

Balance Sheet as of 06/30/2016

per NCUC R1-17(b)(10)

		Balance as of 06/30/2016
330402-02-03	ELEVATED WATER TANK	310,354.73
331400-02-02	DISTRIBUTION MAINS	89,925.62
331401-02-02	DISTRIB SYS PH.2	42,397.83
331402-02-02	DISTRIB MAINS - PH 3	30,257.50
331403-02-03	DISTRIB. MAINS - 2007	263,210.30
331404-02-03	DIST. MAINS - 2014	62,200.00
333400-02-02	SERVICE LINES - PH.1	16,723.77
333401-02-02	SERVICE LINES - PH.2	10,400.00
333402-02-02	SERV LINES - PH 3	14,136.00
333403-02-03	SERVICE LINES - 2007	47,700.00
333404-02-03	SERV. LINES - 2014	14,800.00
334401-02-02	METERS - 1996	117.70
334402-02-02	METERS - 1997	1,571.96
334403-02-02	METERS - 1998	1,710.47
334404-02-02	METERS - 1999	813.40
334405-02-02	METERS - 2000	1,358.69
334406-02-02	METERS - 2001	1,272.01
334407-02-02	METERS - 2002	820.90
334408-02-02	METERS - 2003	704.72
334409-02-02	METERS - 2004	1,541.56
334410-02-02	METERS - 2005	2,098.70
334411-02-02	METERS - 2006	3,123.05
334412-02-02	METERS - 2007	991.34
334412-02-03	METERS - 2007	4,999.19
334413-02-02	METERS - 2008	334.86
334413-02-03	METERS - 2008	1,522.96
334414-02-02	METERS -2009	526.40
334414-02-03	METERS -2009	505.37
334415-02-03	METERS - 2010	2,435.09
334416-02-03	METERS - 2011	521.54
334417-02-03	METERS - 2012	1,598.61
334418-02-03	METERS - 2013	248.54
334419-02-03	METERS - 2014	2,933.84
334420-02-02	METERS - 2015	563.55
334420-02-03	METERS - 2015	3,021.39
334421-02-02	METERS - 2016	245.72
334421-02-03	METERS - 2016	1,072.87
345500-01-03	DSI TRACTOR	15,692.75
345501-01-01	OFFICE EQUIPMENT	420.23
354400-03-03	PLANT STRUCTURE	1,605,864.05

KRJ, Inc. d/b/a KRJ Utilities - W-1075s12

Balance Sheet as of 06/30/2016

per NCUC R1-17(b)(10)

		Balance as of 06/30/2016
354401-03-03	CHEMICAL FEED & INSTRUMENTATION	62,657.26
354402-03-03	MISC PLANT COST	17,626.09
354500-03-03	WWTP SITE IMPROVEMENTS	263,678.70
354501-03-03	OPERATIONS BUILDING	84,538.85
354502-03-03	ELECTRICAL & GENERATOR	238,384.05
361200-03-03	GRAVITY MAINS - 2007	720,977.81
361201-03-03	GRAV. MAINS - 2014	147,500.00
363200-03-03	SERVICE LINES - 2007	88,015.00
363201-03-03	SERV. LINES - 2014	18,500.00
364400-03-03	FLOW MONITORING EQUIPMENT	14,658.12
381400-03-03	PLANT SEWERS	271,055.26
381401-03-03	INFLUENT PUMP STATION	161,352.27
382400-03-03	IRRIGATION PUMP STATION	188,304.86
382402-03-03	SPRAY REUSE SYSTEM	625,024.97
389401-03-03	LONG TERM STORAGE POND	853,779.18
389402-03-03	UPSET POND	33,911.14
Other Assets		
105051-01-03	WRT-CWIP-W2B	358.12
105061-02-03	CWIP - WELL 2/2B PUMP	2,810.31
105062-02-03	CWIP - RADIOLOGICAL ISSUE	0.00
106060-02-03	CWIP - WELL 2/2B	27,945.34
106061-02-03	CWIP - RCK.BRG. WELL 5	7,753.40
108000-01-01	ACCUMULATED DEPRECIATION	-1,988,959.04
110301-01-02	ACCUM AMORT - SUB 3	-1,091.30
110302-02-02	ACCUM AMORT - SUB 4	-9,915.20
110303-01-03	ACCUM AMORT - SUB 5	-73,053.39
174000-01-01	SECURITY DEPOSIT TO VENDOR	2,774.48
174000-01-03	SECURITY DEPOSIT TO VENDOR	3,530.16
271000-02-02	CIAC - DISTRIB SYS - PH 2	-42,397.83
271001-02-02	CIAC - TAP-FEES	-94,500.00
271001-02-03	CIAC - TAP-FEES	-186,000.00
271001-03-03	CIAC - TAP-FEES	-1,488,000.00
271003-02-02	CIAC - DISTRIBUTION SYS - PH 1	-89,925.62
271004-02-02	CIAC - SERVICE LINES - PH.1	-16,723.77
271005-02-02	CIAC - SERV LINES - PH.2	-10,400.00
271006-02-02	CIAC - DISTRIB SYSTEM - PH.3	-30,257.50
271007-02-02	CIAC - SERV LINES - PH. 3	-14,136.00

KRJ, Inc. d/b/a KRJ Utilities - W-1075s12

Balance Sheet as of 06/30/2016

per NCUC R1-17(b)(10)

		Balance as of 06/30/2016
271008-02-03	CIAC - DIST. MAINS - 2007	-263,210.30
271008-03-03	CIAC - GRAVITY MAINS - 2007	-531,836.00
271009-02-03	CIAC - SERVICE LINES - 2007	-47,700.00
271009-03-03	CIAC - SERVICE LINES - 2007	-88,015.00
271010-02-03	CIAC - DIST MAINS - 2014	-62,200.00
271010-03-03	CIAC - GRAV. MAINS - 2014	-147,500.00
271011-02-03	CIAC - SERV LINES - 2014	-14,800.00
271011-03-03	CIAC - SERV LINES - 2014	-18,500.00
301101-01-01	CORPORATE ORGANIZATION	125.00
301101-02-02	RATE CASE - W-1075, SUB 4	9,915.20
301102-01-03	SUB 5 - ROCKBRIDGE	73,053.39
302100-02-02	SUB 3 - CONTIG. EXPANSION	1,091.30
Long Term Liabilities		
224002-01-01	PAYABLE TO ROCKBRIDGE INVESTORS	-69,471.20
231000-01-01	ACCOUNTS PAYABLE	-137,285.45
231004-01-01	PAYABLE TO VAUGHAN UTILITIES	-1,413.81
235000-01-03	CUSTOMER SECURITY DEPOSITS	-250.00
224000-01-01	LOANS TO FUND OPNS/CAPITAL CONSTR.	-4,994,494.63
224001-01-01	CAP.BANK - ROCKBRIDGE LOAN TO RRS	10,000.00
409100-01-01	CORPORATE INCOME TAX	300.00
Stockholder's Equity		
215000-01-01	RETAINED EARNINGS - Thru 2015	2,924,149.44
215001-01-01	SUB.10 PRIOR YEAR REFUNDS	5,995.12
215001-01-03	SUB.10 PRIOR YEAR REFUNDS	176.32
301004-02-02	SUB 4 ADJUSTMENTS 2004	-11,764.85

The above is directly from General Ledger and does not include any adjustments that may be presented in working papers to be produced duriong discovery.

2018.01.30

CERTIFICATE OF SERVICE

I hereby certify that I have served a copy of the foregoing **Response Providing Additional Information Filed in Compliance with Provisions of Commission Rule R1-17(b)**, filed by KRJ, Inc., d/b/a KRJ Utilities in Docket No. W-1075, Sub 12, on the Public Staff in accordance with North Carolina Utilities Commission Rule R1-39, either by United States mail, first class postage pre-paid; by hand delivery; or by means of electronic delivery upon agreement of the receiving party.

This the 3oth day of January, 2018.

Electronically Submitted
/s/Robert H. Bennink, Jr.
North Carolina State Bar No. 6502

BENNINK LAW OFFICE
BenninkLawOffice@aol.com
Tel: 919-760-3185
Attorney for KRJ, Inc., d/b/a KRJ Utilities

1A

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. W-1075, SUB 12

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of Application by KRJ, Inc., d/b/a KRJ Utilities, Post Office Box 2369, Swansboro, North Carolina 28584, for Authority to Increase Rates for Water and Sewer Utility Service in its Southern Trace and Rockbridge Subdivisions in Wake County, North Carolina	)	STIPULATION

KRJ, Inc., d/b/a KRJ Utilities (KRJ or Company), and the Public Staff – North Carolina Utilities Commission (Public Staff), collectively, the "Stipulating Parties", through counsel and pursuant to Section 62-69 of the North Carolina General Statutes and Rule R1-24(c) of the Rules and Regulations of the North Carolina Utilities Commission (Commission), respectfully submit the following Stipulation for consideration by the Commission in this proceeding. The Stipulating Parties hereby stipulate and agree as follows:

1. Background.

A. On January 10, 2018, KRJ filed an application with the Commission seeking authority to increase its rates for water utility service in Southern Trace Subdivision and water and sewer service in Rockbridge Subdivision in Wake County, North Carolina.

B. By letter dated and filed on January 25, 2018, the Public Staff informed the Company that, pursuant to Commission Rule R1-17(f)(1), certain additional information needed to be filed to complete the Company's rate increase application.

C. On January 30, 2018, the Company filed a response to the Public Staff's letter, which provided the identified additional information in compliance with the provisions of Commission Rule R1-17(b).

D. By Order dated February 6, 2018, the Commission declared the above-captioned docket a general rate case, suspended rates, scheduled hearing, and required customer notice.

E. The Commission Order specified that the Public Staff and intervenors should pre-file testimony on or before May 21, 2018, and also provided that KRJ should file any rebuttal testimony no later than June 4, 2018.

F. The Certificate of Service was filed by the Company on February 20, 2018.

G. The Company filed on May 4, 2018, the testimony and exhibits of James R. Butler, P.E.

H. On May 18, 2018, the Public Staff filed a motion for extension of time to file testimony until May 25, 2018, which was granted by Commission Order on that same date.

I. On May 24, 2018, the Public Staff filed a second motion for extension of time to file testimony until May 31, 2018, which was granted by Commission Order on May 25, 2018.

J. On May 30, 2018, the Company filed a Report on Customer Comments from the Public Hearing held on May 15, 2018.

K. On May 31, 2018, the Public Staff filed a third motion for extension of time to file testimony until June 7, 2018, which was granted by Commission Order on June 1, 2018.

L. Subsequent to the filing of the Company's Application in this docket, the Public Staff engaged in substantial discovery of KRJ regarding the matters addressed by the Company's Application and further examined the relevant books and records of KRJ with respect to the Company's Application. The Public Staff's discovery efforts spanned a period of 19 weeks, entailed ten sets of data requests directed to the Company and numerous informal follow-up questions. The Public Staff also conducted field inspections of the water system at Southern Trace Subdivision and the water and sewer system at Rockbridge Subdivision.

M. Following completion of the Public Staff's investigation of the Company's Application and accompanying documents, review of the results of its examination of the Company's books and records, and review of the Company's responses to the Public Staff's data requests, the Stipulating Parties corresponded and participated in meetings and conference calls over the course of several business days to discuss possible settlement.

N. After significant negotiations, the Stipulating Parties were ultimately able to arrive at a settlement of all issues in this case. The Stipulation reflects the stipulated rate of return on rate base and operating margin and the Company's revenue requirements. The Stipulation reflects an increase in the Company's combined water and wastewater revenues by approximately 16.1% of the

Company's total operating revenues or roughly 21.8% of the combined rate increase requested in the Application.

O. On June 7, 2018, the Public Staff prefiled the testimony and exhibits of Public Staff witnesses Iris Morgan and Gina Casselberry, and the affidavit of Public Staff Economist Calvin Craig, III. KRJ has reviewed the Public Staff's prefiled testimony, affidavit, and exhibits and accepts the Public Staff's recommended revenue requirements, rate design, and other recommendations.

P. The Stipulating Parties agree that the levels of rate base, revenues and expenses set forth in Morgan Exhibit I and Morgan Exhibit II, which are incorporated by reference herein, are the appropriate levels for use in this proceeding.

2. Test Period. The test period for this rate case is the twelve months ended June 30, 2016, updated to March 31, 2018, adjusted for certain changes in plant, revenues, and costs that were not known at the time this case was filed but are based upon circumstances occurring or becoming known through May 31, 2018.

3. Rate Base. The original cost rate base used and useful in providing service to the Company's customers is $83,398 for Southern Trace water operations, $448,926 for Rockbridge water operations, and $336,054 for Rockbridge sewer operations. The stipulated revenue requirements result in a 43.3% increase in water revenues at Southern Trace compared to the applied for 81.8% increase, a 90.4% increase in water revenues at Rockbridge, compared to the applied for 136.3% increase, and a 14.3% decrease in sewer revenues at Rockbridge compared to the applied for 52.4% increase.

4. Revenue Requirement.

A. The appropriate operating revenues under present rates by rate division are as follows:

	Operating Revenues Under Present Rates
Southern Trace Water	$ 74,797
Rockbridge Water	$ 85,093
Rockbridge Sewer	$274,950

B. The overall level of operating revenue deductions including depreciation, regulatory fees, and taxes under the present rates appropriate for use in this proceeding is $97,299 for Southern Trace, $120,634 for Rockbridge water operations, and $218,897 for Rockbridge sewer operations.

C. The Stipulating Parties stipulate and agree that an overall return on rate base and an operations margin of 7.75% are appropriate to use to establish rates in this proceeding. For purposes of this proceeding, this agreed overall rate of return is deemed by the Stipulating Parties to be a reasonable rate of return that will provide the Company with a reasonable opportunity, by sound management, to produce a fair return for its shareholders, considering changing economic conditions and other factors, to maintain its facilities and services in accordance with the reasonable requirements of its customers in the territory covered by its franchises, and to compete in the market for capital funds on terms that are fair to its customers and to its existing investors. Each of the Stipulating Parties further agrees that such stipulated overall rate of return, together with the Company's supported levels of rate base and operating expenses, results in a revenue

requirement that is just and reasonable to the Company's customers in light of changing economic conditions.

D. The overall rate of return that the Company should be allowed an opportunity to earn on its rate base in Rockbridge Subdivision is 7.75%.

E. The Company should be allowed a 7.75% margin on operating revenue deductions requiring a return for the Southern Trace Subdivision, which results to an operating ratio of 92.97% (including taxes) or 92.81% (excluding taxes).

F. The Company should be authorized to increase its annual level of operating revenues through the rates and charges approved in this case by $32,377 for water service at Southern Trace, by $76,944 for water service at Rockbridge and a decrease of $39,216 for sewer service at Rockbridge. The operating revenues under present rates, the stipulated increase in water operating revenues at Southern Trace and Rockbridge, the decrease in sewer operating revenues at Rockbridge, and resulting annual level of operating revenues by rate division are as follows:

	Present Rates	Stipulated Increase (Decrease)	Stipulated Revenues
Southern Trace Water	$ 74,797	$32,377	$107,174
Rockbridge Water	$ 85,093	$76,944	$162,037
Rockbridge Sewer	$274,950	($39,216)	$235,734

G. The Stipulating Parties agree that, in the next general rate case filed by KRJ for the Company's Southern Trace and Rockbridge service areas, the stipulated amounts agreed to in this case, if approved by the Commission, for plant

in service, accumulated depreciation, contributions in aid of construction (CIAC), depreciation and amortization expense, and original cost rate base, shall be used as the starting point for the Company's rate case application and the Public Staff's investigation.

H. The Stipulating Parties agree that KRJ should be allowed to: increase its reconnection charge at Southern Trace from $23.91 to $25.00, if water service is cut off by the Company for good cause; increase the reconnection charge at Southern Trace from $19.12 to $20.00, if water service is disconnected at the customer's request; and increase the Southern Trace returned check charge from $23.96 to $25.00. At Rockbridge, the Stipulating Parties agree that KRJ should be allowed to increase the Company's reconnection charge from $14.40 to $15.00 if water service is cut off for good cause or if water service is disconnected at the customer's request; and increase the returned check charge from $23.96 to $25.00. The Company's tariffs for Southern Trace and Rockbridge shall continue to reflect a late charge of 1% per month to be applied to the unpaid balance of all bills still past due 25 days after the billing date. In view of opposition by the Public Staff, KRJ agrees to withdraw its proposal, contained in its rate case application, to add a new disconnection charge and/or collection charge in addition to the reconnection charge.

5. Rate Design. The Stipulating Parties agree to the changes in rates set forth in Casselberry Exhibit No. 3 which show the calculation of the average monthly residential bills for the Southern Trace and Rockbridge Subdivisions, respectively.

6. **Regulatory Fee Adjustment.** The Stipulating Parties agree that the revenue requirement set forth herein reflects the statutory regulatory fee rate of 0.14%, applied to total operating revenues at present rates, Company proposed rates and Public Staff recommended rates.

7. **Federal and State Income Tax.** The Stipulating Parties agree that it is reasonable and appropriate to calculate the federal income tax at 21% and the state income taxes based on the statutory corporate rate effective January 1, 2018, of 3%.

8. **Rate Case Expense**. The Stipulating Parties agree that, for purposes of this rate case, it is appropriate to use total rate case costs of $66,759, related to the current proceeding, to be amortized and collected over a three-year period, for an annual level of rate case expense of $5,027 for Southern Trace water, $8,652 for Rockbridge Subdivision water, and $8,573 for Rockbridge sewer.

9. **Tap Fees.** The Stipulating Parties agree there will not be a change in the Commission previously approved tap fees which shall remain:

Rockbridge:

Water per Residential Equivalent Unit (REU)	$1,000.00
Sewer per REU	$8,000.00

SouthernTrace~~Rockbridge~~:

Water per REU	$ 500.00

10. **Availability Fees.** The Stipulating Parties agree there will not be a change to the Commission previously approved availability fees for Rockbridge which shall remain:

Water – monthly availability rate per REU	$	15.00
Sewer – monthly availability rate per REU	$	70.00

11. Recommendations.

A. As appropriate and as directed by the Commission, the Company agrees to either file a written report or offer testimony at the evidentiary hearing concerning any customer complaints received during the hearing on this matter scheduled on June 20, 2018. If a written report is required, the Company agrees to file such report within 15 days of the evidentiary hearing.

B. The Stipulating Parties acknowledge that the Company is required, pursuant to Commission Order in Docket No. W-1075, Sub 5 (Sub 5 Order), and the Sub 5 Stipulation between the Public Staff and KRJ, which was incorporated by reference in the Order, to disclose the current Rockbridge water and sewer rates in marketing materials, with lot purchase agreements, and in the restrictive covenants pertaining to all lots in the Rockbridge Subdivision, to notify future customers in Rockbridge of the utility rates prior to their purchasing their lots or residences.

The Stipulating Parties recommend that the Commission no longer require the Company to publish notice of its rates as set forth above, as the Rockbridge Subdivision is now at approximately 80% build-out and the Company's resources could be better placed elsewhere. The Stipulating Parties assert that this requirement is no longer necessary and that it should be rescinded.

C. The Stipulating Parties acknowledge that, pursuant to decretal paragraph 5 of the Sub 5 Order, the Commission required KRJ to file annual

reports, beginning on October 31, 2007, on the status of the Rockbridge Subdivision and utility system. KRJ was also required to continue to file these annual reports until 90% (367) of the homes in Rockbridge are receiving utility service.

The Stipulating Parties recommend that the Commission no longer require the Company to file these Sub 5 Order required annual reports, as the Company currently serves 328 lots (approximately 80% build-out), and the Company's resources could be better placed elsewhere. The Stipulating Parties assert that this requirement is no longer necessary and that it should be rescinded. It is further noted that KRJ is still required to file a detailed annual report pursuant to G.S. 62-36 and Commission Rule R1-32.

12. **Agreement to Support Settlement; Non-Waiver**. The Stipulating Parties will support this Stipulation in any proposed order or brief and in any hearing before the Commission in this docket; provided, however, that, except as set forth in Paragraph 4.G above, the settlement of any issue pursuant to this Stipulation shall not be cited as precedent by any of the Stipulating Parties in any other proceeding or docket before this Commission. The provisions of this Stipulation do not necessarily reflect any position asserted by any of the Stipulating Parties. Rather, the provisions of this Stipulation reflect a settlement among the Stipulating Parties as to all issues, and the Stipulating Parties do not waive the right to assert a different position in any future docket before the Commission.

13. **Final Order and Waiver of Right to File Exceptions and Appeal**. The Stipulating Parties agree that any Order approving rates and charges agreed to in

this Stipulation may become the Final Order of the Commission upon issuance and waive the right to file exceptions and appeal the Final Order of the Commission incorporating the matters stipulated herein.

14. Introduction/Withdrawal of Testimony and Waiver of Cross Examination. The Stipulating Parties agree that all Company pre-filed testimony and exhibits, as well as the testimony, affidavit, and exhibits filed by the Public Staff, may be introduced into evidence without objection, and the Stipulating Parties waive their respective right to cross-examine all witnesses with respect to all such pre-filed testimony and exhibits. If questions should be asked by any person, including a Commissioner, who is not a Stipulating Party, the Stipulating Parties may present testimony and/or exhibits to respond to such questions and may cross-examine any witnesses with respect to such testimony and/or exhibits; provided, however, that such testimony, exhibits, and/or cross-examination shall not be inconsistent with this Stipulation.

15. Binding Only if Entire Stipulation Accepted. This Stipulation is the product of give-and-take negotiations, and no portion of this Stipulation shall be binding on the Stipulating Parties unless the entire Stipulation is accepted by the Commission. The terms and conditions set forth above represent, in full, the agreement of the Stipulating Parties.

The foregoing is agreed and stipulated to this the 7th day of June, 2018.

KRJ, Inc., d/b/a KRJ Utilities

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I/A

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
MARGIN ON OPERATING REVENUE DEDUCTIONS
REQUIRING A RETURN
For the Test Year Ended June 30, 2016, Updated for Known and
Measurable Changes Through March 31, 2018

Morgan Exhibit I
Schedule 1

Southern Trace

Line No.	Item	Present Rates (a)	Company Proposed Rates (b)	Public Staff Recommended Rates (c)
1.	Net operating income for a return	($22,502) [1]	$29,598 [4]	$7,533 [6]
2.	Operating revenue deductions requiring a return	97,194 [2]	97,194 [5]	97,194 [7]
3.	Return	-23.15% [3]	30.45% [3]	7.75% [8]

[1] Morgan Exhibit I, Schedule 3, Line 30, Column (c).
[2] Morgan Exhibit I, Schedule 3, Line 20 + Line 21 + Line 22 + Line 23, Column (c).
[3] Line 1 divided by Line 2.
[4] Morgan Exhibit I, Schedule 3, Line 30, Column (e).
[5] Morgan Exhibit I, Schedule 3, Line 20 + Line 21 + Line 22 + Line 23, Column (e).
[6] Line 2 x Line 3.
[7] Morgan Exhibit I, Schedule 3, Line 20 + Line 21 + Line 22 + Line 23, Column (g).
[8] Provided by Public Staff Financial Analyst Hinton.

INDEX TO MORGAN EXHIBIT I

Southern Trace

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
ORIGINAL COST RATE BASE
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Morgan Exhibit I
Schedule 2

Southern Trace

Line No.	Item	Per Application (a)	Public Staff Adjustments [1] (b)	After Public Staff Adjustments (c)	
1.	Plant in service	$204,182	$185,319	$389,501	[2]
2.	Accumulated depreciation	(105,226)	(152,396)	(257,622)	[3]
3.	Contributions in aid of construction	0	(253,948)	(253,948)	[4]
4.	Accumulated amortizatioon of CIAC	0	194,621	194,621	[5]
5.	Cash working capital	0	11,011	11,011	[6]
6.	Average tax accruals	0	(165)	(165)	[7]
7.	Original cost rate base (Sum of L1 thru L6)	$98,956	($15,558)	$83,398	

[1] Column (c) minus Column (a).
[2] Morgan Exhibit I, Schedule 2-1, Column (a), Line 47.
[3] Morgan Exhibit I, Schedule 2-1, Column (f), Line 47.
[4] Morgan Exhibit I, Schedule 2-2, Column (a), Line 20.
[5] Morgan Exhibit I, Schedule 2-2, Column (f), Line 20.
[6] Calculated at one-eighth of operating expenses.
[7] Calculated at one-half property tax.

Morgan Exhibit 3
Schedule 2-1
Page 1 of 2

KRF UTILITIES, INC.
Docket No. W-1075, Sub 12
CALCULATION OF PLANT IN SERVICE, ACCUMULATED DEPRECIATION AND DEPRECIATION EXPENSE
For the Test Year Ended June 30, 2018, Updated for Known and Measurable Changes Through March 31, 2018

Southern Trace

Line No.	Item	Plant In Service [1] (a)	Year Acquired [2] (b)	Life [3] (c)	Years In Service [4] (d)	Annual Depreciation [5] (e)	Accumulated Depreciation [6] (f)
	Plant in service per Sub 4 Rate Case:						
1.	Land	$32,287				$0	$0
2.	Structures	25,538	1996	25	21.75	1,022	(22,219)
3.	Pumping Equipment	3,565	1996	25	21.75	143	(3,110)
4.	Treatment Equipment	3,855	1996	25	21.75	154	(3,350)
5.	Storage Tanks	19,746	1996	25	21.75	790	(17,183)
6.	Meters	118	1996	25	21.75	5	(109)
7.	Distribution mains	89,926	1996	25	21.75	3,597	(78,235)
8.	Service lines	16,724	1996	25	21.75	669	(14,551)
9.	Meters	1,572	1997	25	20.75	63	(1,307)
10.	Meters	1,710	1998	25	19.75	68	(1,343)
11.	Well site	14,213	1999	25	18.75	569	(10,669)
12.	Structures	3,362	1999	25	18.75	126	(2,363)
13.	Pumping equipment	5,855	1999	25	18.75	234	(4,388)
14.	Treatment equipment	4,758	1999	25	18.75	190	(3,563)
15.	Distribution mains	42,398	1999	25	18.75	1,696	(31,800)
16.	Service lines	10,400	1999	25	18.75	416	(7,800)
17.	Telemetry	3,933	1999	25	18.75	157	(2,944)
18.	Meters	813	1999	25	18.75	33	(619)
19.	Meters	1,359	2000	25	17.75	54	(959)
20.	Meters	1,272	2001	25	16.75	51	(854)
21.	Meters	821	2002	25	15.75	33	(520)
22.	Meters	705	2003	25	14.75	28	(413)
23.	Organizational cost	1,091	2003	15	14.75	44	(649)
24.	Total Sub 4 plant in service (Sum of L1 thru L23)	265,419				10,142	(208,958)

KRF UTILITIES, INC.
Docket No. W-1075, Sub 12
CALCULATION OF PLANT IN SERVICE, ACCUMULATED DEPRECIATION AND DEPRECIATION EXPENSE
For the Test Year Ended June 30, 2018, Updated for Known and Measurable Changes Through March 31, 2018

Southern Trace

Morgan Exhibit 3
Schedule 2-1
Page 2 of 2

Line No.	Item	Plant In Service (a)	Year Acquired (b)	Life (c)	Years In Service [4] (d)	Annual Depreciation [5] (e)	Accumulated Depreciation [6] (f)
	Plant additions since Sub 4 Rate Case:						
25.	Meters	1,842 [2]	2004 [2]	25 [3]	13.75	74	(1,018)
26.	Replacement equipment W-1	1,154 [2]	2004 [2]	25 [3]	13.75	46	(633)
27.	Replacement equipment W-2	1,198 [2]	2004 [2]	25 [3]	13.75	48	(660)
28.	Land	10,248 [2]	2005 [2]	0 [3]	12.75	0	0
29.	Well house # 3	12,823 [2]	2005 [2]	20 [3]	12.75	641	(8,173)
30.	Well # 3	8,285 [2]	2005 [2]	50 [3]	12.75	166	(1,607)
31.	Treatment equipment - W-3	11,000 [2]	2005 [2]	25 [3]	12.75	440	(5,610)
32.	Hydro Pneumatic tank # 2	26,648 [2]	2005 [2]	25 [3]	12.75	1,066	(13,592)
33.	Meters	2,099 [2]	2005 [2]	25 [3]	12.75	84	(1,071)
34.	Meters	3,165 [2]	2006 [2]	25 [3]	11.75	126	(1,481)
35.	Meters	827 [2]	2007 [2]	25 [3]	10.75	33	(355)
36.	Meters	335 [2]	2008 [2]	25 [3]	9.75	13	(127)
37.	Meters	227 [2]	2014 [2]	25 [3]	3.75	9	(34)
38.	Meters	1,003 [2]	2015 [2]	25 [3]	2.75	40	(110)
39.	Meters	248 [2]	2015 [2]	25 [3]	2.75	10	(28)
40.	Meters	1,675 [2]	2016 [2]	25 [3]	1.75	67	(117)
41.	Pump replacement well No. 1	8,073 [3]	2016 [3]	7 [3]	1.75	668	(1,519)
42.	Pump replacement well No. 3	7,859 [3]	2016 [3]	7 [3]	1.75	1,123	(1,985)
43.	Replace pump/repair well No. 2	26,213 [3]	2015 [3]	7 [3]	2.75	3,745	(10,297)
44.	Water meter, well No. 3	1,064 [3]	2018 [3]	20 [3]	1.75	53	(93)
45.	PRV Replacement	1,719 [3]	2018 [3]	10 [3]	1.00	172	(172)
46.	Total Sub 12 plant in service (Sum of L25 thru L45)	128,682				8,784	(48,664)
47.	Total Plant in service (L24 + L46)	$394,501				$18,926	($257,622)

[1] Based on prior rate case, Docket No. W-1075, Sub 4, unless otherwise footnoted.
[2] Per examination of Company's financial records.
[3] Provided by Public Staff Engineer Casselberry.
[4] Calculated based on year placed in service using half year convention through 3/31/2018.
[5] Column (a) divided by Column (c), unless fully depreciated.
[6] Column (d) multiplied by Column (e), unless fully depreciated.

KRJ UTILITIES
Docket No. W-1075, Sub 12
CALCULATION OF CONTRIBUTIONS IN AID OF CONSTRUCTION, ACCUMULATED AMORTIZATION AND AMORTIZATION EXPENSE
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Morgan Exhibit I
Schedule 2-2

Southern Trace

Line No.	Item	CIAC Per Public Staff [1]	Year Contributed [1]	Amortization Period In Years [1]	Years In Service [3]	Amortization Expense [4]	Accumulated Amortization [5]
		(a)	(b)	(c)	(d)	(e)	(f)
	Tap fees per Sub 4						
1.	Tap fees	$5,000	1996	25	21.75	$200	$4,350
2.	Distribution mains	89,926	1996	25	21.75	3,597	78,235
3.	Service lines	16,724	1996	25	21.75	669	14,551
4.	Tap fees	12,500	1997	25	20.75	500	10,375
5.	Tap fees	14,500	1998	25	19.75	580	11,455
6.	Tap fees	6,500	1999	25	18.75	260	4,875
7.	Service lines	10,400	1999	25	18.75	416	7,800
8.	Distribution mains	42,398	1999	25	18.75	1,696	31,800
9.	Tap fees	9,000	2000	25	17.75	360	6,390
10.	Tap fees	5,000	2001	25	16.75	200	3,350
11.	Tap fees	5,000	2002	25	15.75	200	3,150
12.	Tap fees	1,500	2003	25	14.75	60	885
13.	Total (Sum of Line 1 thru Line 12):	218,448				8,738	177,216
	Tap fees additions since Sub 4						
14.	Tap fees	7,500 [2]	2004 [2]	25 [2]	13.75	300	4,125
15.	Tap fees	9,500 [2]	2005 [2]	25 [2]	12.75	380	4,845
16.	Tap fees	15,500 [2]	2006 [2]	25 [2]	11.75	620	7,285
17.	Tap fees	2,500 [2]	2007 [2]	25 [2]	10.75	100	1,075
18.	Tap fees	500 [2]	2014 [2]	25 [2]	3.75	20	75
19.	Total (Sum of Line 14 thru Line 18):	35,500				1,420	17,405
20.	Total CIAC (Line 13 + Line 19)	$253,948				$10,158	$194,621

[1] Based on prior rate case, Docket No. W-1075, Sub 4, unless otherwise footnoted.
[2] Per review of Company's records.
[3] Calculated based on year placed in service using half year convention through 3/31/2018.
[4] Column (a) divided by Column (c), unless fully depreciated.
[5] Column (d) x Column (e), unless fully depreciated.

Morgan Exhibit I
Schedule 3
Page 1 of 2

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
NET OPERATING INCOME FOR A RETURN
For the Test Year Ended June 30, 2016, Updated for
Known and Measurable Changes Through March 31, 2018

Southern Trace

Line No.	Item	Present Rates: Amount Per Revised Application (a)	Present Rates: Public Staff Adjustments [1] (b)	Present Rates: Per Public Staff [2] (c)	Company Proposed Rates: Net Company Increase [13] (d)	Company Proposed Rates: Operations After Rate Increase [14] (e)	Public Staff Recommended Rates: Net Public Staff Increase [17] (f)	Public Staff Recommended Rates: Operations After Rate Increase [18] (g)
	Operating Revenues:							
1.	Service revenues	$72,413	$2,193	$74,606 [3]	$61,212	$135,818 [3]	$32,377	$106,983 [19]
2.	Miscellaneous revenues	472	0	472	0	472	0	472
3.	Uncollectible accounts	0	(281)	(281) [4]	0	(281)	0	(281)
4.	**Total operating revenues:**	72,885	1,912	74,797	61,212	136,009	32,377	107,174
	Operating Expenses:							
5.	Loss from disposal of equipment	13,888	0	13,888	0	13,888	0	13,888
6.	Contract operations	12,744	12,648	25,392 [3]	0	25,392	0	25,392
7.	Contract maintenance and repair	19,141	(8,445)	10,696 [3]	0	10,696	0	10,696
8.	Purchased power	6,955	(81)	6,874 [3]	0	6,874	0	6,874
9.	Chemicals	1,253	(539)	714 [3]	0	714	0	714
10.	Testing	2,397	(87)	2,310 [3]	0	2,310	0	2,310
11.	General & administrative	120	0	120	0	120	0	120
12.	Permit fees	420	0	420	0	420	0	420
13.	Insurance	1,805	(302)	1,503 [5]	0	1,503	0	1,503
14.	Contract management	20,134	0	20,134	0	20,134	0	20,134
15.	Other expenses - bank charges	212	0	212	0	212	0	212
16.	Legal fees	208	(109)	99 [6]	0	99	0	99
17.	Contract accounting	700	0	700	0	700	0	700
18.	Bad debt expense	281	(281)	0 [7]	0	0	0	0
19.	Rate case expense	0	5,027	5,027 [8]	0	5,027	0	5,027
20.	**Total operating expenses:**	80,258	7,831	88,089	0	88,089	0	88,089
	Depreciation and Taxes:							
21.	Depreciation and amortization expense	18,645	(9,877)	8,768 [9]	0	8,768	0	8,768
22.	Property tax	330	0	330	0	330	0	330
23.	Other taxes	7	0	7	0	7	0	7
24.	Regulatory fee	99	6	105 [10]	85	190 [10]	45	150 [10]
25.	Gross receipts tax	0	0	0	0	0	0	0
26.	State income tax	0	0	0 [11]	1,159	1,159 [15]	295	295 [20]
27.	Federal income tax	0	0	0 [12]	7,868	7,868 [16]	2,002	2,002 [21]
28.	**Total depreciation and taxes**	19,081	(9,871)	9,210	9,112	18,322	2,342	11,552
29.	Total operating revenue deductions	99,339	(2,040)	97,299	9,112	106,411	2,342	99,641
30.	**Net operating income for return:**	($26,454)	$3,952	($22,502)	$52,100	$29,598	$30,035	$7,533

KRJ UTILITIES, INC.

Docket No. W-1075, Sub 12

FOOTNOTES TO SCHEDULE 3

For the Test Year Ended June 30, 2016, Updated for
Known and Measurable Changes Through March 31, 2018

Southern Trace

[1] Column (c) minus Column (a), unless otherwise footnoted.
[2] Column (a) plus Column (b), unless otherwise footnoted.
[3] Provided by Public Staff Engineer Casselberry
[4] Amount reclassified from bad debt expense.
[5] Morgan Exhibit I, Schedule 3-1, Line 3.
[6] Morgan Exhibit I, Schedule 3-2, Line 3.
[7] Adjustment to reclassify bad debts expense.
[8] Morgan Exhibit I, Schedule 3-3, Column (b), Line 7.
[9] Morgan Exhibit I, Schedule 2-1, Column (e), Line 46, minus Morgan Exhibit I, Schedule 2-2, Column (e), Line 21.
[10] Line 4 multiplied by .14%.
[11] Morgan Exhibit I, Schedule 3-4, Column (a), Line 12.
[12] Morgan Exhibit I, Schedule 3-4, Column (a), Line 14.
[13] Column (e) minus Column (c), unless otherwise footnoted.
[14] Column (c) plus Column (d), unless otherwise footnoted.
[15] Morgan Exhibit I, Schedule 3-4, Column (b), Line 12.
[16] Morgan Exhibit I, Schedule 3-4, Column (b), Line 14.
[17] Column (g) minus Column (c), unless otherwise footnoted.
[18] Column (c) plus Column (f), unless otherwise footnoted.
[19] Revenue requirement as calculated by the Public Staff.
[20] Morgan Exhibit I, Schedule 3-4, Column (c), Line 12.
[21] Morgan Exhibit I, Schedule 3-4, Column (c), Line 14.

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
ADJUSTMENT TO INSURANCE
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Morgan Exhibit I
Schedule 3-1

Southern Trace

Line No.	Item	Amount [1]
1.	Insurance per revised application	$1,805
2.	Adjustment to reflect actual insurance expense	(302)
3.	Insurance per Public Staff (L1 + L2)	1,503
4.	Adjustment to insurance (L3 - L1)	($302)

[1] Calculated by the Public Staff based on information provided by the Company.

Morgan Exhibit I
Schedule 3-2

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
ADJUSTMENT TO LEGAL FEES
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Southern Trace

Line No.	Item	Amount [1]
1.	Legal fees per revised application	$208
2.	Adjustment to reflect actual legal fees	(109)
3.	Legal fees per Public Staff (L1 + L2)	99
4.	Adjustment to legal fees (L3 - L1)	($109)

[1] Calculated by the Public Staff based on information provided by the Company.

Morgan Exhibit I
Schedule 3-3

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
CALCULATION OF RATE CASE EXPENSE
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Southern Trace

Line No.	Item	Amount (a)	Water [3] (b)
1.	Rate case application filing fee	$250 [1]	
2.	Legal fees	26,793 [2]	
3.	Administrative fees	37,988 [2]	
4.	Office supplies and overhead	1,728 [2]	
5.	Total rate case expense (Sum of L1 thru L4)	66,759	
6.	Amortization period in years	3	
7.	Rate case expense per Public Staff (L5 / L6)	$22,253	$5,027

[1] Statutory filing fee for Class C water companies.
[2] Negotiated settlement estimate.
[3] Column (a) multiplied by Southern Trace factor of 22.59%.

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
CALCULATION OF INCOME TAXES
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Morgan Exhibit I
Schedule 3-4

Southern Trace

Line No.	Item	Present Rates [1] (a)	Company Proposed Rates [2] (b)	Public Staff Recommended Rates [3] (c)
1.	Operating revenue	$74,797	$136,009	$107,174
2.	Operating revenue deductions:			
3.	Operating expenses	88,089	88,089	88,089
4.	Depreciation expense	8,768	8,768	8,768
5.	Property taxes	330	330	330
6.	Payroll taxes	7	7	7
7.	Regulatory fee	105	190	150
8.	Gross receipts tax	0	0	0
9.	Interest expense	0	0	0
10.	Total deductions (Sum of L3 thru L9)	97,299	97,384	97,344
11.	State taxable income (L1 - L10)	(22,502)	38,625	9,830
12.	State income tax (L11 x 3%)	0	1,159	295
13.	Federal taxable income (L11 - L12)	(22,502)	37,466	9,535
14.	Federal income tax (L13 x 21%)	0	7,868	2,002
15.	Net amount (L13 - L14)	(22,502)	29,598	7,533
16.	Add: Interest expense	0	0	0
17.	Net income for return (L15 + L16)	($22,502)	$29,598	$7,533

[1] Morgan Exhibit I, Schedule 3, Column (c).
[2] Morgan Exhibit I, Schedule 3, Column (e).
[3] Morgan Exhibit I, Schedule 3, Column (g).

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
CALCULATION OF OPERATING RATIOS
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Morgan Exhibit I
Schedule 4

Southern Trace

Line No.	Item	Present Rates (a)	Company Proposed Rates (b)	Public Staff Recommended Rates (c)
	Interest expense, regulatory fee, gross receipts, and income taxes included:			
1.	Gross operating revenues	$74,797 [1]	$136,009 [5]	$107,174 [9]
2.	Operating expenses	97,299 [2]	106,411 [6]	99,641 [10]
3.	Operating ratios (L2 / L1)	130.08%	78.24%	92.97%
	Interest expense, regulatory fee, gross receipts, and income taxes excluded:			
4.	Gross operating revenues	$74,692 [3]	$126,792 [7]	$104,727 [11]
5.	Operating expenses	97,194 [4]	97,194 [8]	97,194 [12]
6.	Operating ratios (L5 / L4)	130.13%	76.66%	92.81%

[1] Morgan Exhibit I, Schedule 3, Line 4, Column (c).
[2] Morgan Exhibit I, Schedule 3, Line 29, Column (c).
[3] Morgan Exhibit I, Schedule 3, Line 4 - Line 24 - Line 25 - Line 26 - Line 27, Column (c).
[4] Morgan Exhibit I, Schedule 3, Line 29 - Line Line 24 - Line 25 - Line 26 - Line 27, Column (c).
[5] Morgan Exhibit I, Schedule 3, Line 4, Column (e).
[6] Morgan Exhibit I, Schedule 3, Line 29, Column (e).
[7] Morgan Exhibit I, Schedule 3, Line 4 - Line Line 24 - Line 25 - Line 26 - Line 27, Column (e).
[8] Morgan Exhibit I, Schedule 3, Line 29 - Line 24 - Line 25 - Line 26 - Line 27, Column (e).
[9] Morgan Exhibit I, Schedule 3, Line 4, Column (g).
[10] Morgan Exhibit I, Schedule 3, Line 29, Column (g).
[11] Morgan Exhibit I, Schedule 3, Line 4 - Line 24 - Line 25 - Line 26 - Line 27, Column (g).
[12] Morgan Exhibit I, Schedule 3, Line 29 - Line Line 24 - Line 25 - Line 26 - Line 27, Column(g).

Morgan Exhibit II
Schedule 1(a)

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
RETURN ON ORIGINAL COST RATE BASE
For the Test Year Ended June 30, 2016, Updated for Known
and Measurable Changes Through March 31, 2018

Rockbridge - Water Operations

Line No.	Item	Capital-ization Ratio (a)	Original Cost Rate Base (b)	Embedded Cost (c)	Overall Cost Rate (d)	Net Operating Income (e)
1.	Present rates:	100.00%	$448,926 [1]		-7.92%	($35,541) [2]
2.	Company proposed rates:	100.00%	$448,926 [1]		14.41%	$64,660 [3]
3.	Public Staff recommended rates:	100.00%	$448,926 [1]		7.75%	$34,792

[1] Morgan Exhibit II, Schedule 2(a), Line 7, Column (c).
[2] Morgan Exhibit II, Schedule 3(a), Line 30, Column (c).
[3] Morgan Exhibit II, Schedule 3(a), Line 30, Column (e).

I/A

INDEX TO MORGAN EXHIBIT II

Rockbridge

Morgan Exhibit II
Schedule 1(b)

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
RETURN ON ORIGINAL COST RATE BASE
For the Test Year Ended June 30, 2016, Updated for
Known and Measurable Changes Through March 31, 2018

Rockbridge - Sewer Operations

Line No.	Item	Capital-ization Ratio (a)	Original Cost Rate Base (b)	Embedded Cost (c)	Overall Cost Rate (d)	Net Operating Income (e)
1.	Present rates:	100.00%	$336,054 [1]		16.68%	$56,053 [2]
2.	Company proposed rates:	100.00%	$336,054 [1]		49.48%	$166,255 [3]
3.	Public Staff recommended rates:	100.00%	$336,054 [1]		7.75%	$26,044

[1] Morgan Exhibit II, Schedule 2(b), Line 7, Column (c).
[2] Morgan Exhibit II, Schedule 3(b), Line 30, Column (c).
[3] Morgan Exhibit II, Schedule 3(b), Line 30, Column (e).

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
ORIGINAL COST RATE BASE
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Morgan Exhibit II
Schedule 2

Water and Sewer Combined

Line No.	Item	Per Application [1] (a)	Public Staff Adjustments [2] (b)	After Public Staff Adjustments [3] (c)
1.	Plant in service	$6,487,531	$290,820	$6,778,351
2.	Accumulated depreciation	(2,284,181)	371,339	(1,912,842)
3.	Contributions in aid of construction	0	(4,675,761)	(4,675,761)
4.	Accumulated amortizatioon of CIAC	0	560,678	$560,678
5.	Cash working capital	0	34,554	34,554
6.	Average tax accruals	0	0	0
7.	Original cost rate base (Sum of L1 thru L6)	$4,203,350	($3,418,370)	$784,980

[1] Morgan Exhibit II, Schedule 2(a) plus 2(b), Column (a).
[2] Morgan Exhibit II, Schedule 2(a) plus 2(b), Column (b).
[3] Morgan Exhibit II, Schedule 2(a) plus 2(b), Column (c).

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
ORIGINAL COST RATE BASE
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Morgan Exhibit II
Schedule 2(a)

Rockbridge - Water Operations

Line No.	Item	Per Application (a)	Public Staff Adjustments [1] (b)	After Public Staff Adjustments (c)	
1.	Plant in service	$1,075,590	$397,084	$1,472,674	[2]
2.	Accumulated depreciation	(303,573)	(158,996)	(462,569)	[3]
3.	Contributions in aid of construction	0	(713,910)	(713,910)	[4]
4.	Accumulated amortization of CIAC	0	139,839	$139,839	[5]
5.	Cash working capital	0	12,891	12,891	[6]
6.	Average tax accruals	0	0	0	
7.	Original cost rate base (Sum of L1 thru L6)	$772,017	($323,091)	$448,926	

[1] Column (c) minus Column (a).
[2] Morgan Exhibit II, Schedule 2-1(a), Column (a), Line 32.
[3] Morgan Exhibit II, Schedule 2-1(a), Column (f), Line 32.
[4] Morgan Exhibit II, Schedule 2-2(a), Column (a), Line 18.
[5] Morgan Exhibit II, Schedule 2-2(a), Column (f), Line 18.
[6] Calculated at one-eighth of operating expenses.

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
ORIGINAL COST RATE BASE
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Morgan Exhibit II
Schedule 2(b)

Rockbridge Sewer - Operations

Line No.	Item	Per Application (a)	Public Staff Adjustments [1] (b)	After Public Staff Adjustments (c)	
1.	Plant in service	$5,411,941	($106,264)	$5,305,677	[2]
2.	Accumulated depreciation	(1,980,608)	530,335	(1,450,273)	[3]
3.	Contributions in aid of construction	0	(3,961,851)	(3,961,851)	[4]
4.	Accumulated amortization of CIAC	0	420,839	420,839	[5]
5.	Cash working capital	0	21,663	21,663	[6]
6.	Average tax accruals	0	0	0	
7.	Original cost rate base (Sum of L1 thru L6)	$3,431,333	($3,095,279)	$336,054	

[1] Column (c) minus Column (a).
[2] Morgan Exhibit II, Schedule 2-1(b), Column (a), Line 22.
[3] Morgan Exhibit II, Schedule 2-1(b), Column (f), Line 22.
[4] Morgan Exhibit II, Schedule 2-2(b), Column (a), Line 18.
[5] Morgan Exhibit II, Schedule 2-2(b), Column (f), Line 18.
[6] Calculated at one-eighth of operating expenses.

Morgan Exhibit II
Schedule 2-1(a)

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
CALCULATION OF PLANT IN SERVICE, ACCUMULATED DEPRECIATION AND DEPRECIATION EXPENSE
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Rockbridge - Water Operations

Line No.	Item	Plant In Service [1] (a)	Year Acquired [1] (b)	Life [2] (c)	Years In Service [3] (d)	Annual Depreciation [4] (e)	Accumulated Depreciation [5] (f)
	Plant in service per Sub 12 Rate Case:						
1.	Water treatment building	$23,387	2007	40	10.75	$585	($6,289)
2.	Water site improvements	8,038	2007	40	10.75	201	(2,161)
3.	Operations building	14,775	2007	40	10.75	369	(3,967)
4.	Electrical and generator	132,551	2007	10	10.75	0	(132,551)
5.	Well 1	65,075	2007	50	10.75	1,301	(13,986)
6.	Well 3	42,078	2007	50	10.75	842	(9,052)
7.	Telemetry & control elevation tank	62,217	2007	15	10.75	4,148	(44,591)
8.	Water treatment equipment	78,816	2007	25	10.75	3,153	(33,895)
9.	Water equipment well 1	32,218	2007	25	10.75	1,289	(13,857)
10.	Elevated water tank	310,355	2007	50	10.75	6,207	(66,725)
11.	Meters	4,133	2007	25	10.75	165	(1,774)
12.	Well 1 pump	10,869	2007	7	10.75	0	(10,869)
13.	Service lines	47,700	2007	50	10.75	954	(10,256)
14.	Distribution mains	263,210	2007	50	10.75	5,264	(56,588)
15.	Meters	2,173	2008	25	9.75	87	(848)
16.	Well 3 pump	16,674	2008	7	9.75	0	(16,674)
17.	Meters	617	2009	25	8.75	25	(219)
18.	Lime slurry pump	5,776	2009	7	8.75	0	(5,776)
19.	Meters	2,435	2010	25	7.75	97	(752)
20.	Meters	2,300	2011	25	6.75	92	(621)
21.	Meters	868	2012	25	5.75	35	(201)
22.	Meters	317	2013	25	4.75	13	(62)
23.	Meters	2,098	2014	25	3.75	84	(315)
24.	Distribution mains	62,200	2014	50	3.75	1,244	(4,665)
25.	Service lines	14,800	2014	50	3.75	296	(1,110)
26.	Well 2	58,154	2015	50	2.75	1,163	(3,198)
27.	Well 2 pump	21,489	2015	7	2.75	3,070	(8,443)
28.	Meters	5,744	2015	25	2.75	230	(633)
29.	Meters	1,319	2015	25	2.75	53	(146)
30.	Uranium IX system	171,112	2016	25	1.75	6,844	(11,977)
31.	Meters	9,174	2017	25	1.00	367	(367)
32.	Total Sub 12 plant in service (Sum of L1 thru L31)	$1,472,674				$38,178	($462,569)

[1] Per examination of Company's financial records.
[2] Provided by Public Staff Engineer Casselberry.
[3] Calculated based on year placed in service using half year convention through 3/31/2018.
[4] Column (a) divided by Column (c), unless fully depreciated.
[5] Column (d) multiplied by Column (e), unless fully depreciated.

Morgan Exhibit II
Schedule 2-1(b)

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
CALCULATION OF PLANT IN SERVICE, ACCUMULATED DEPRECIATION AND DEPRECIATION EXPENSE
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Rockbridge - Sewer Operations

Line No.	Item	Plant In Service [1] (a)	Year Acquired [1] (b)	Life [2] (c)	Years In Service [3] (d)	Annual Depreciation [4] (e)	Accumulated Depreciation [5] (f)
	Plant in service per Sub 12 Rate Case:						
1.	Plant structure	$1,605,864	2007	50	10.75	$32,117	($345,258)
2.	Chemical feed & instrumentation	62,657	2007	10	10.75	0	(62,657)
3.	Miscellaneous plant cost	17,626	2007	50	10.75	353	(3,795)
4.	WWTP site improvements	263,679	2007	50	10.75	5,274	(56,696)
5.	Operations building	84,539	2007	40	10.75	2,113	(22,715)
6.	Electrical & generator	238,384	2007	10	10.75	0	(238,384)
7.	Gravity mains	531,836	2007	50	10.75	10,637	(114,348)
8.	Service lines	88,015	2007	50	10.75	1,760	(18,920)
9.	Flow monitoring equipment	14,658	2007	25	10.75	586	(6,300)
10.	Plant sewers	337,945	2007	50	10.75	6,759	(72,659)
11.	Influent pump station	161,352	2007	50	10.75	3,227	(34,690)
12.	Irrigation pump station	188,305	2007	50	10.75	3,766	(40,485)
13.	Spray reuse system	625,025	2007	40	10.75	15,626	(167,980)
14.	Long term storage pond	853,779	2007	40	10.75	21,344	(229,448)
15.	Upset pond	33,911	2007	40	10.75	848	(9,116)
16.	DSI tractor	15,693	2007	15	10.75	1,046	(11,245)
17.	Office equipment	420	2011	10	6.75	42	(284)
18.	Gravity mains	147,500	2014	50	3.75	2,950	(11,063)
19.	Service lines	18,500	2014	50	3.75	370	(1,388)
20.	Blower replacement	7,098 [2]	2015	10	2.75	710	(1,953)
21.	Blower replacement	8,890 [2]	2018	10	1.00	889	(889)
22.	Total Sub 12 plant in service (Sum of L1 thru L21):	$5,305,677				$110,417	($1,450,273)

[1] Per examination of Company's financial records, unless otherwise footnoted.
[2] Provided by Public Staff Engineer Casselberry.
[3] Calculated based on year placed in service using half year convention through 3/31/2018.
[4] Column (a) divided by Column (c), unless fully depreciated.
[5] Column (d) multiplied by Column (e), unless fully depreciated.

KRJ UTILITIES
Docket No. W-1075, Sub 12
CALCULATION OF CONTRIBUTIONS IN AID OF CONSTRUCTION, ACCUMULATED AMORTIZATION AND AMORTIZATION EXPENSE
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Morgan Exhibit II
Schedule 2-2(a)

Rockbridge - Water Operations

Line No.	Item	CIAC Per Public Staff [1]	Year Contributed [1]	Amortization Period In Years [2]	Years In Service [3]	Amortization Expense [4]	Accumulated Amortization [5]
		(a)	(b)	(c)	(d)	(e)	(f)
	Tap fees per Sub 12						
1.	Tap fees	$46,000	2007	25	10.75	$1,840	$19,780
2.	Service lines	47,700	2007	50	10.75	954	10,256
3.	Distribution mains	263,210	2007	50	10.75	5,264	56,588
4.	Tap fees	16,000	2008	25	9.75	640	6,240
5.	Tap fees	6,000	2009	25	8.75	240	2,100
6.	Tap fees	30,000	2010	25	7.75	1,200	9,300
7.	Tap fees	43,000	2011	25	6.75	1,720	11,610
8.	Tap fees	16,000	2012	25	5.75	640	3,680
9.	Tap fees	6,000	2013	25	4.75	240	1,140
10.	Tap fees	25,000	2014	25	3.75	1,000	3,750
11.	Distribution mains	62,200	2014	50	3.75	1,244	4,665
12.	Service lines	14,800	2014	50	3.75	296	1,110
13.	Tap fees	45,000	2015	25	2.75	1,800	4,950
14.	Tap fees	5,000	2015	25	2.75	200	550
15.	Tap fees	20,000	2016	25	1.75	800	1,400
16.	Tap fees	51,000	2017	25	1.00	2,040	2,040
17.	Tap fees	17,000	2018	25	1.00	680	680
18.	Total (Sum of Line 1 thru Line 17):	$713,910				$20,798	$139,839

[1] Per review of Company's records.
[2] Based on composite life for plant.
[3] Calculated based on year placed in service using half year convention through 3/31/2018.
[4] Column (a) divided by Column (c).
[5] Column (d) x Column (e).

KRJ UTILITIES
Docket No. W-1075, Sub 12
CALCULATION OF CONTRIBUTIONS IN AID OF CONSTRUCTION, ACCUMULATED AMORTIZATION AND AMORTIZATION EXPENSE
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Morgan Exhibit II
Schedule 2-2(b)

Rockbridge - Sewer Operations

Line No.	Item	CIAC Per Public Staff [1]	Year Contributed [1]	Amortization Period In Years [2]	Years In Service [3]	Amortization Expense [4]	Accumulated Amortization [5]
		(a)	(b)	(c)	(d)	(e)	(f)
	Tap fees per Sub 12						
1.	Tap fees	$352,000	2007	50	10.75	$7,040	$75,680
2.	Gravity mains	531,836	2007	50	10.75	10,637	114,348
3.	Service lines	88,015	2007	50	10.75	1,760	18,920
4.	Tap fees	128,000	2008	50	9.75	2,560	24,960
5.	Tap fees	48,000	2009	50	8.75	960	8,400
6.	Tap fees	240,000	2010	50	7.75	4,800	37,200
7.	Tap fees	344,000	2011	50	6.75	6,880	46,440
8.	Tap fees	128,000	2012	50	5.75	2,560	14,720
9.	Tap fees	48,000	2013	50	4.75	960	4,560
10.	Tap fees	200,000	2014	50	3.75	4,000	15,000
11.	Gravity mains	147,500	2014	50	3.75	2,950	11,063
12.	Service lines	18,500	2014	50	3.75	370	1,388
13.	Tap fees	360,000	2015	50	2.75	7,200	19,800
14.	Tap fees	120,000	2016	50	1.75	2,400	4,200
15.	Tap fees	408,000	2017	50	1.00	8,160	8,160
16.	Tap fees	136,000	2018	50	1.00	2,720	2,720
17.	Imputed tap fees (83 customers x $8,000)	664,000	2018	50	1.00	13,280	13,280
18.	Total (Sum of Line 1 thru Line 18):	$3,961,851				$79,237	$420,839

[1] Per review of Company's records.
[2] Based on composite life for plant.
[3] Calculated based on year placed in service using half year convention through 3/31/2018.
[4] Column (a) divided by Column (c).
[5] Column (d) x Column (e).

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
NET OPERATING INCOME FOR A RETURN
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Morgan Exhibit II
Schedule 3

Water and Sewer Combined

Line No.	Item	Present Rates: Amount Per Revised Application (a)	Present Rates: Public Staff Adjustments (b)	Present Rates: Per Public Staff [1] (c)	Company Proposed Rates: Net Company Increase (d)	Company Proposed Rates: Operations After Rate Increase [2] (e)	Public Staff Recommended Rates: Net Public Staff Decrease (f)	Public Staff Recommended Rates: Operations After Rate Decrease [3] (g)
	Operating Revenues:							
1.	Service revenues	$236,744	$111,867	$348,611	$259,987	$608,598	$37,728	$386,339
2.	Miscellaneous revenues	321	12,394	12,715	0	12,715	0	12,715
3.	Uncollectible accounts	0	(1,283)	(1,283)	0	(1,283)	0	(1,283)
4.	Total operating revenues	237,065	122,978	360,043	259,987	620,030	37,728	397,771
	Operating Expenses:							
5.	Loss from disposal of equipment	10,156	0	10,156	0	10,156	0	10,156
6.	Contract services operations	66,108	11,208	77,316	0	77,316	0	77,316
7.	Contract maintenance & repair	74,163	(15,218)	58,945	0	58,945	0	58,945
8.	Purchased power	43,060	(3,309)	39,751	0	39,751	0	39,751
9.	Chemicals	10,958	6,950	17,908	0	17,908	0	17,908
10.	Testing	6,655	(3,783)	2,872	0	2,872	0	2,872
11.	General & administrative	480	0	480	0	480	0	480
12.	Permit fees	1,695	0	1,695	0	1,695	0	1,695
13.	Insurance expense	4,398	(302)	4,096	0	4,096	0	4,096
14.	Contract management	26,142	8,096	34,238	0	34,238	0	34,238
15.	Other expenses - bank & late charges, trash pick-up	1,046	300	1,346	0	1,346	0	1,346
16.	Legal fees	6,100	(3,892)	2,208	0	2,208	0	2,208
17.	Bad debts expense	1,283	(1,283)	0	0	0	0	0
18.	Sludge removal	6,506	1,691	8,197	0	8,197	0	8,197
19.	Rate case expense	0	17,225	17,225	0	17,225	0	17,225
20.	Total operating expenses	258,750	17,683	276,433	0	276,433	0	276,433
	Depreciation and Taxes:							
21.	Depreciation and amortization expense	206,212	(157,652)	48,560	0	48,560	0	48,560
22.	Property tax	0	0	0	0	0	0	0
23.	Other tax	14	0	14	0	14	0	14
24.	Regulatory fee	360	144	504	364	868	53	557
25.	Gross receipts tax	0	0	0	0	0	0	0
26.	State income tax	0	1,800	1,800	6,318	8,118	(340)	1,460
27.	Federal income tax	0	12,220	12,220	42,902	55,122	(2,309)	9,911
28.	Total depreciation and taxes	206,586	(143,488)	63,098	49,584	112,682	(2,596)	60,502
29.	Total operating revenue deductions	465,336	(125,805)	339,531	49,584	389,115	(2,596)	336,935
30.	Net operating income for return	($228,271)	$248,783	$20,512	$210,403	$230,915	$40,324	$60,836

[1] Morgan Exhibit II, Schedule 3(a) plus Schedule 3(b), Column (c).
[2] Morgan Exhibit II, Schedule 3(a) plus Schedule 3(b), Column (e).
[3] Morgan Exhibit II, Schedule 3(a) plus Schedule 3(b), Column (g).

Morgan Exhibit II
Schedule 3(a)
Page 1 of 2

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
NET OPERATING INCOME FOR A RETURN
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Rockbridge - Water Operations

Line No.	Item	Present Rates: Amount Per Revised Application	Present Rates: Public Staff Adjustments		Present Rates: Per Public Staff		Company Proposed Rates: Net Company Increase		Company Proposed Rates: Operations After Rate Increase		Public Staff Recommended Rates: Net Public Staff Increase		Public Staff Recommended Rates: Operations After Rate Increase	
		(a)	(b)		(c)		(d)		(e)		(f)		(g)	
	Operating Revenues:													
1.	Service revenues	$58,928	$24,016		$82,944	[3]	$115,975		$198,919	[3]	$76,944		$159,888	[19]
2.	Miscellaneous revenues	321	2,187		2,508	[4]	0		2,508		0		2,508	
3.	Uncollectible accounts	0	(359)		(359)	[4]	0		(359)		0		(359)	
4.	Total operating revenues	59,249	25,844		85,093		115,975		201,068		76,944		162,037	
	Operating Expenses:													
5.	Loss from disposal of equipment	10,156	0		10,156		0		10,156		0		10,156	
6.	Contract services operations	15,838	1,154		16,992	[3]	0		16,992		0		16,992	
7.	Contract maintenance & repair	55,297	(25,307)		29,990	[3]	0		29,990		0		29,990	
8.	Purchased power	336	10,167		10,503	[3]	0		10,503		0		10,503	
9.	Chemicals	1,764	3,420		5,184	[3]	0		5,184		0		5,184	
10.	Testing	4,233	(2,837)		1,396	[3]	0		1,396		0		1,396	
11.	General & administrative	240	0		240		0		240		0		240	
12.	Permit fees	385	0		385		0		385		0		385	
13.	Insurance expense	2,048	0		2,048		0		2,048		0		2,048	
14.	Contract management	14,084	3,114		17,198	[5]	0		17,198		0		17,198	
15.	Other expenses - bank & late charges	176	0		176		0		176		0		176	
16.	Legal fees	3,050	(2,842)		208	[6]	0		208		0		208	
17.	Bad debts expense	359	(359)		0	[7]	0		0		0		0	
18.	Sludge removal	0	0		0		0		0		0		0	
19.	Rate case expense	0	8,652		8,652	[8]	0		8,652		0		8,652	
20.	Total operating expenses	107,966	(4,838)		103,128		0		103,128		0		103,128	
	Depreciation and Taxes:													
21.	Depreciation and amortization expense	14,657	2,723		17,380	[9]	0		17,380		0		17,380	
22.	Property tax	0	0		0		0		0		0		0	
23.	Other taxes	7	0		7		0		7		0		7	
24.	Regulatory fee	129	(10)		119	[10]	162		281	[10]	108		227	[10]
25.	Gross receipts tax	0	0		0		0		0		0		0	
26.	State income tax	0	0		0	[11]	2,004		2,004	[15]	835		835	[20]
27.	Federal income tax	0	0		0	[12]	13,608		13,608	[16]	5,668		5,668	[21]
28.	Total depreciation and taxes	14,793	2,713		17,506		15,774		33,280		6,611		24,117	
29.	Total operating revenue deductions	122,759	(2,125)		120,634		15,774		136,408		6,611		127,245	
30.	Net operating income for return	($63,510)	$27,969		($35,541)		$100,201		$64,660		$70,333		$34,792	

KRJ UTILITIES, INC.

Docket No. W-1075, Sub 12

FOOTNOTES TO SCHEDULE 3(a)

For the Test Year Ended June 30, 2016, Updated for
Known and Measurable Changes Through March 31, 2018

Rockbridge - Water Operations

[1] Column (c) minus Column (a), unless otherwise footnoted.
[2] Column (a) plus Column (b), unless otherwise footnoted.
[3] Provided by Public Staff Engineer Casselberry.
[4] Based on review of Company financial records.
[5] Morgan Exhibit II, Schedule 3-1, Column (b), Line 4.
[6] Morgan Exhibit II, Schedule 3-2, Column (b), Line 3.
[7] Adjustment to reclassify bad debts expense.
[8] Morgan Exhibit II, Schedule 3-5, Column (b), Line 7.
[9] Morgan Exhibit II, Schedule 2-1(a), Column (e), Line 32.
minus Morgan Exhibit II, Schedule 2-2(a), Column (e), Line 18.
[10] Line 4 multiplied by .14%.
[11] Morgan Exhibit II, Schedule 3-6(a), Column (a), Line 12.
[12] Morgan Exhibit II, Schedule 3-6(a), Column (a), Line 14.
[13] Column (e) minus Column (c), unless otherwise footnoted.
[14] Column (c) plus Column (d), unless otherwise footnoted.
[15] Morgan Exhibit II, Schedule 3-6(a), Column (b), Line 12.
[16] Morgan Exhibit II, Schedule 3-6(a), Column (b), Line 14.
[17] Column (g) minus Column (c), unless otherwise footnoted.
[18] Column (c) plus Column (f), unless otherwise footnoted.
[19] Revenue requirement as calculated by the Public Staff.
[20] Morgan Exhibit II, Schedule 3-6(a), Column (c), Line 12.
[21] Morgan Exhibit II, Schedule 3-6(a), Column (c), Line 14.

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
NET OPERATING INCOME FOR A RETURN
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Rockbridge - Sewer Operations

Line No.	Item	Present Rates: Amount Per Revised Application (a)	Present Rates: Public Staff Adjustments [1] (b)	Present Rates: Per Public Staff [2] (c)	Company Proposed Rates: Net Company Increase [15] (d)	Company Proposed Rates: Operations After Rate Increase [16] (e)	Public Staff Recommended Rates: Net Public Staff Decrease [19] (f)	Public Staff Recommended Rates: Operations After Rate Decrease [20] (g)
	Operating Revenues:							
1.	Service revenues	$177,816	$87,851	$265,667 [3]	$144,012	$409,679 [3]	($39,216)	$226,451 [21]
2.	Miscellaneous revenues	0	10,207	10,207 [4]	0	10,207	0	10,207
3.	Uncollectible accounts	0	(924)	(924) [4]	0	(924)	0	(924)
4.	**Total operating revenues**	177,816	97,134	274,950	144,012	418,962	(39,216)	235,734
	Operating Expenses:							
5.	Contract salaries	0	0	0	0	0	0	0
6.	Contract services operations	50,270	10,054	60,324 [3]	0	60,324	0	60,324
7.	Contract maintenance & repair	18,866	10,089	28,955 [3]	0	28,955	0	28,955
8.	Purchased power	42,724	(13,476)	29,248 [3]	0	29,248	0	29,248
9.	Chemicals	9,194	3,530	12,724 [3]	0	12,724	0	12,724
10.	Testing	2,422	(946)	1,476 [3]	0	1,476	0	1,476
11.	General & administrative	240	0	240	0	240	0	240
12.	Permit fees	1,310	0	1,310	0	1,310	0	1,310
13.	Insurance expense	2,350	(302)	2,048 [5]	0	2,048	0	2,048
14.	Contract management	12,058	4,982	17,040 [6]	0	17,040	0	17,040
15.	Other expenses - bank & late charges, trash pick-up	870	300	1,170 [7]	0	1,170	0	1,170
16.	Legal fees	3,050	(1,050)	2,000 [8]	0	2,000	0	2,000
17.	Bad debts expense	924	(924)	0 [9]	0	0	0	0
18.	Sludge removal	6,506	1,691	8,197 [3]	0	8,197	0	8,197
19.	Rate case expense	0	8,573	8,573 [10]	0	8,573	0	8,573
20.	**Total operating expenses**	150,784	22,521	173,305	0	173,305	0	173,305
	Depreciation and Taxes:							
21.	Depreciation and amortization expense	191,555	(160,375)	31,180 [11]	0	31,180	0	31,180
22.	Property tax	0	0	0	0	0	0	0
23.	Other taxes	7	0	7	0	7	0	7
24.	Regulatory fee	231	154	385 [12]	202	587 [12]	(55)	330 [12]
25.	Gross receipts tax	0	0	0	0	0	0	0
26.	State income tax	0	1,800	1,800 [13]	4,314	6,114 [17]	(1,175)	625 [22]
27.	Federal income tax	0	12,220	12,220 [14]	29,294	41,514 [18]	(7,977)	4,243 [23]
28.	**Total depreciation and taxes**	191,793	(146,201)	45,592	33,810	79,402	(9,207)	36,385
29.	Total operating revenue deductions	342,577	(123,680)	218,897	33,810	252,707	(9,207)	209,690
30.	**Net operating income for return**	($164,761)	$220,814	$56,053	$110,202	$166,255	($30,009)	$26,044

KRJ UTILITIES, INC.

Docket No. W-1075, Sub 12

FOOTNOTES TO SCHEDULE 3(b)

For the Test Year Ended June 30, 2016, Updated for
Known and Measurable Changes Through March 31, 2018

Rockbridge - Sewer Operations

[1] Column (c) minus Column (a), unless otherwise footnoted.
[2] Column (a) plus Column (b), unless otherwise footnoted.
[3] Provided by Public Staff Engineer Casselberry
[4] Based on review of Company financial records.
[5] Morgan Exhibit II, Schedule 3-3, Line 3.
[6] Morgan Exhibit II, Schedule 3-1, Line 4.
[7] Morgan Exhibit II, Schedule 3-4, Column, Line 3.
[8] Morgan Exhibit II, Schedule 3-2, Column (c), Line 3.
[9] Adjustment to reclassify bad debts expense.
[10] Morgan Exhibit II, Schedule 3-5, Column (c), Line 7.
[11] Morgan Exhibit II, Schedule 2-1(b), Column (e), Line 22.
minus Morgan Exhibit II, Schedule 2-2(b), Column (e), Line 18.
[12] Line 4 multiplied by 0.14%.
[13] Morgan Exhibit II, Schedule 3-6(b), Column (a), Line 12.
[14] Morgan Exhibit II, Schedule 3-6(b), Column (a), Line 14.
[15] Column (e) minus Column (c), unless otherwise footnoted.
[16] Column (c) plus Column (d), unless otherwise footnoted.
[17] Morgan Exhibit II, Schedule 3-6(b), Column (b), Line 12.
[18] Morgan Exhibit II, Schedule 3-6(b), Column (b), Line 14.
[19] Column (g) minus Column (c), unless otherwise footnoted.
[20] Column (c) plus Column (f), unless otherwise footnoted.
[21] Revenue requirement as calculated by the Public Staff.
[22] Morgan Exhibit II, Schedule 3-6(b), Column (c), Line 12.
[23] Morgan Exhibit II, Schedule 3-6(b), Column (c), Line 14.

Morgan Exhibit II
Schedule 3-1

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
ADJUSTMENT TO CONTRACT MANAGEMENT
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Rockbridge

Line No.	Item	Amount [1] (a)	Water (b)	Sewer (c)
1.	Contract management per revised application	$26,142		
2.	Adjustment to update contract management expenses	4,687		
3.	Adjustment to reflect customer growth	3,409		
4.	Contract management expenses per Public Staff (L1 + L2 + L3)	$34,238	17,198 [2]	17,040 [3]
5.	Contract management per revised application		14,084	12,058
6.	Adjustment to contract management (L4 - L5)		$3,114	$4,982

[1] Calculated by the Public Staff based on information provided by the Company.
[2] Column (a), Line 4 multiplied by water allocation factor of 50.23%.
[3] Column (a), Line 4 multiplied by sewer allocation factor of 49.77%.

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
ADJUSTMENT TO LEGAL FEES
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Morgan Exhibit II
Schedule 3-2

Rockbridge

Line No.	Item	Amount [1] (a)	Water [1] (b)	Sewer [1] (c)
1.	Legal fees per revised application	$6,100		
2.	Adjustment to reflect actual legal expenses	(3,892)		
3.	Legal fees per Public Staff (L1 + L2)	$2,208	208	2,000
4.	Legal fees per revised application		3,050	3,050
5.	Adjustment to legal fees (L3 - L4)		($2,842)	($1,050)

[1] Calculated by the Public Staff based on information provided by the Company.

Morgan Exhibit II
Schedule 3-3

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
ADJUSTMENT TO INSURANCE
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Rockbridge - Sewer Operations

Line No.	Item	Amount [1]
1.	Insurance per revised application	$2,350
2.	Adjustment to reflect actual insurance expense	(302)
3.	Insurance per Public Staff (L1 + L2)	2,048
4.	Adjustment to insurance (L3 - L1)	($302)

[1] Calculated by the Public Staff based on information provided by the Company.

KRJ UTILITIES, INC.
Docket No. W-1075, Sub 12
ADJUSTMENT TO OTHER EXPENSES
For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Morgan Exhibit II
Schedule 3-4

Rockbridge - Sewer Operations

Line No.	Item	Amount [1]
1.	Other expenses per revised application	$870
2.	Adjustment to reflect actual other expenses	300
3.	Other expenses per Public Staff (L1 + L2)	1,170
4.	Adjustment to other expenses (L3 - L2)	$300

[1] Calculated by the Public Staff based on information provided by the Company.

KRJ UTILITIES, INC.

Morgan Exhibit II
Schedule 3-5

Docket No. W-1075, Sub 12

CALCULATION OF RATE CASE EXPENSE

For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Rockbridge

Line No.	Item	Amount (a)	Water [3] (b)	Sewer [4] (c)
1.	Rate case application filing fee	$250 [1]		
2.	Legal fees	26,793 [2]		
3.	Administrative fees	37,988 [2]		
4.	Office supplies and overhead	1,728		
5.	Total rate case expense (Sum of L1 thru L4)	66,759		
6.	Amortization period in years	3		
7.	Rate case expense per Public Staff (L5 / L6)	$22,253	$8,652	$8,573

[1] Statutory filing fee for Class C water and sewer companies.
[2] Negotiated settlement estimate.
[3] Column (a), Line 7 multiplied by water allocation factor of 38.88%.
[4] Column (a), Line 7 multiplied by sewer allocation factor of 38.53%.

KRJ UTILITIES, INC.

Docket No. W-1075, Sub 12

CALCULATION OF INCOME TAXES

For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Morgan Exhibit II
Schedule 3-6(a)

Rockbridge - Water Operations

Line No.	Item	Present Rates [1] (a)	Company Proposed Rates [3] (b)	Public Staff Recommended Rates [5] (c)
1.	Operating revenue	$85,093	$201,068	$162,037
2.	Operating revenue deductions:			
3.	Operating expenses	103,128	103,128	103,128
4.	Depreciation expense	17,380	17,380	17,380
5.	Property taxes	0	0	0
6.	Other taxes	7	7	7
7.	Regulatory fee	119	281	227
8.	Gross receipts tax	0	0	0
9.	Interest expense	13,468 [2]	13,468 [4]	13,468 [6]
10.	Total deductions (Sum of L3 thru L9)	134,102	134,264	134,210
11.	State taxable income (L1 - L10)	(49,009)	66,804	27,827
12.	State income tax (L11 x 3%)	0	2,004	835
13.	Federal taxable income (L11 - L12)	(49,009)	64,800	26,992
14.	Federal income tax (L13 x 21%)	0	13,608	5,668
15.	Net amount (L13 - L14)	(49,009)	51,192	21,324
16.	Add: Interest expense	13,468 [2]	13,468 [4]	13,468 [6]
17.	Net income for return (L15 + L16)	($35,541)	$64,660	$34,792

[1] Morgan Exhibit II, Schedule 3(a), Column (c).
[2] Morgan Exhibit II, Schedule 1(a), Column (e), Line 1.
[3] Morgan Exhibit II, Schedule 3(a), Column (e).
[4] Morgan Exhibit II, Schedule 1(a), Column (e), Line 4.
[5] Morgan Exhibit II, Schedule 3(a), Column (g).
[6] Morgan Exhibit II, Schedule 1(a), Column (e), Line 7.

KRJ UTILITIES, INC.

Docket No. W-1075, Sub 12

CALCULATION OF INCOME TAXES

For the Test Year Ended June 30, 2016, Updated for Known and Measurable Changes Through March 31, 2018

Morgan Exhibit II
Schedule 3-6(b)

Rockbridge - Sewer Operations

Line No.	Item	Present Rates [1] (a)	Company Proposed Rates [3] (b)	Public Staff Recommended Rates [5] (c)
1.	Operating revenue	$274,950	$418,962	$235,734
2.	Operating revenue deductions:			
3.	Operating expenses	173,305	173,305	173,305
4.	Depreciation expense	31,180	31,180	31,180
5.	Property taxes	0	0	0
6.	Other taxes	7	7	7
7.	Regulatory fee	385	587	330
8.	Gross receipts tax	0	0	0
9.	Interest expense	10,082 [2]	10,082 [4]	10,082 [6]
10.	Total deductions (Sum of L3 thru L9)	214,959	215,161	214,904
11.	State taxable income (L1 - L10)	59,991	203,801	20,830
12.	State income tax (L11 x 3%)	1,800	6,114	625
13.	Federal taxable income (L11 - L12)	58,191	197,687	20,205
14.	Federal income tax (L13 x 21%)	12,220	41,514	4,243
15.	Net amount (L13 - L14)	45,971	156,173	15,962
16.	Add: Interest expense	10,082 [2]	10,082 [4]	10,082 [6]
17.	Net income for return (L15 + L16)	$56,053	$166,255	$26,044

[1] Morgan Exhibit II, Schedule 3(b), Column (c).
[2] Morgan Exhibit II, Schedule 1(b), Column (e), Line 1.
[3] Morgan Exhibit II, Schedule 3(b), Column (e).
[4] Morgan Exhibit II, Schedule 1(b), Column (e), Line 4.
[5] Morgan Exhibit II, Schedule 3(b), Column (g).
[6] Morgan Exhibit II, Schedule 1(b), Column (e), Line 7.

I/A

KRJ, Inc. d/b/a KRJ Utilities
Docket No. W-1075, Sub 12
Test Year Ending March 31, 2018

Casselberry
Exhibit No. 1

Southern Trace Subdivision

Water Testing	# of samples Required	Frequency	factor	Cost per Test	Annual Cost
Bacteriologial	1	Monthly	12.000	$ 40.00	$ 480.00
Lead & Copper	5	Every 3 Years	0.333	$ 30.00	$ 49.95
TTHM & HAA5	1	Annually	1.000	$ 150.00	$ 150.00
Inorganics/Secondaries	3	Every 3 Years	0.333	$ 275.00	$ 274.73
Nitrate	3	Annually	1.000	$ 15.00	$ 45.00
VOC	3	Every 3 Years	0.333	$ 110.00	$ 109.89
SOC	3	Every 3 Years	0.333	$ 750.00	$ 749.25
Gross Alpha Well #1	1	Every 6 Years	0.167	$ 45.00	$ 7.52
Combined Uranium Well #1	1	Every 6 Years	0.167	$ 75.00	$ 12.53
Combined Radium (226/228) Well #1	1	every 3 years	0.333	$ 180.00	$ 59.94
Gross Alpha Well #2	1	Every 9 Years	0.111	$ 45.00	$ 5.00
Combined Uranium Well #2	1	Every 9 Years	0.111	$ 75.00	$ 8.33
Combined Radium (226/228) Well #2	1	Every 9 years	0.111	$ 180.00	$ 19.98
Gross Alpha Well #3	1	Every 6 Years	0.167	$ 45.00	$ 7.52
Uranium Well #3	1	Quarterly	4.000	$ 75.00	$ 300.00
Combined Radium (226/228) Well #3	1	Every 6 years	0.167	$ 180.00	$ 30.06
Total					$ 2,309.67

F/H

KRJ, Inc. d/b/a KRJ Utilities
Docket No. W-1075, Sub 12
Test Year Ending March 31, 2018

Casselberry
Exhibit No. 2
Page 1 of 2

Rockbridge Subdivision

Water Testing	# of samples Required	Frequency	factor	Cost per Test	Annual Cost
Bacteriologial	1	Monthly	12.000	$ 40.00	$ 480.00
Lead & Copper	10	Every 3 Years	0.333	$ 30.00	$ 99.90
TTHM & HAA5	1	Every 3 Years	0.333	$ 150.00	$ 49.95
Inorganics/Secondaries	1	Every 3 Years	0.333	$ 275.00	$ 91.58
Nitrate	1	Annually	1.000	$ 15.00	$ 15.00
VOC	1	Annually	1.000	$ 110.00	$ 110.00
SOC	1	Every 3 Years	0.333	$ 750.00	$ 249.75
Gross Alpha	1	Annually	1.000	$ 45.00	$ 45.00
Uranium	1	Annually	1.000	$ 75.00	$ 75.00
Combined Radium (226 & 228)	1	Annually	1.000	$ 180.00	$ 180.00
Total					$ 1,396.18

Wastewater Analysis	# of samples Required	Frequency	Tests per Year	Cost per Year	Annual Cost
BOD	1	Monthly	12	$ 20.00	$ 240.00
Total Suspended Solids (TSS)	1	Monthly	12	$ 10.00	$ 120.00
Ammonia, Nitrogen	1	Monthly	12	$ 15.00	$ 180.00

I/A

KRJ, Inc. d/b/a KRJ Utilities
Docket No. W-1075, Sub 12
Test Year Ending March 31, 2018

Casselberry
Exhibit No. 3

KRJ's Present and Proposed Rates and the Public Staff's Recommend Rates

SOUTHERN TRACE SUBDIVISION

	KJR's Present Rates	KRJ's Proposed Rates	Public Staff's Recommended Rates
Monthly Metered Water Rates:			
Base charge, zero usage	$19.12	$34.82	$19.12
Usage charge, per 1,000 gallons	$ 2.66	$ 4.84	$ 5.44
Average bill (average usage 5,115 gallons)	$32.73	$59.58	$46.95
Percent increase		82.03%	43.45%

ROCKBRIDGE SUBDIVISION

	KJR's Present Rates	KRJ's Proposed Rates	Public Staff's Recommended Rates
Monthly Metered Water Rates:			
Base charge, zero usage	$14.40	$ 34.55	$16.30
Usage charge, per 1,000 gallons	$ 1.49	$ 3.57	$ 5.41
Average bill (average usage 4,520 gallons)	$21.13	$ 50.69	$40.75
Percent increase		139.90%	92.85%
Monthly Flat Sewer Rate:	$68.33	$105.37	$58.25
Percent increase/decrease		54.21%	(14.75%)
Combined Water and Sewer:	$89.46	$156.06	$99.00
Net percent increase		74.45%	10.66%