

**COMMONWEALTH OF KENTUCKY**

**BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY**

**IN THE MATTER OF:**

**ELECTRONIC BEECH GROVE WATER )  
SYSTEM, INC. FOR WATER LOSS )  
REDUCTION PLAN, SURCHARGE AND )  
MONITORING ) CASE NO. 2022-00318**

**REQUEST FOR APPROVAL OF UPDATED QUALIFIED INFRASTRUCTURE  
IMPROVEMENT PLAN (QIIP)**

**BEECH GROVE WATER SYSTEM, INC.**, by counsel, hereby respectfully requests approval of its Updated Qualified Infrastructure Improvement Plan attached hereto as Exhibit A.

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## **EXHIBIT A**

### **UPDATED QUALIFIED INFRASTRUCTURE IMPROVEMENT PLAN (QIIP)**

**DATED APRIL 4, 2024**

#### **Status Update**

Beech Grove has found and repaired many leaks on its service lines. Beech Grove service lines and water meters are the biggest part of Beech Grove's water loss. Beech Grove has been completing field surveys and meter service line inspections of these lines. Beech Grove needs additional tools for inspection. Upon finding leaks Beech Grove has been replacing the service line and meter setter to fix each problem. Beech Grove has attached as Exhibit B a list of the leaks that have heretofore been repaired.

#### **Meter Replacement**

The Zenner AMI System is nearing the end of its useful life. The Zenner Meter is very poor at reading low flow causing a low flow water loss. The water loss has been noted on these meters. Replacement of these meters will be a significant benefit to reducing water loss in the long-term. In our QIIP filed in April 2023, we noted that meter replacement will be important in the coming years. The Commission found that approval of a full meter replacement project should be deferred for further consideration in its Order on November 23, 2023.

Beech Grove has received notification of our award of a KIA Grant that will enable Beech Grove to replace approximately 25% of its existing meters with new meters that include a leak listening device. We are excited to use the grant to help offset costs to our association members. We plan to replace those meters that we know have issues using the funds provided to us through the grant. After we have exhausted the funds from the KIA Grant, we will request Commission approval to fund the replacement of our remaining meters.

### Equipment Acquisition

The LEICA DS2000 Utility Detection Radar was approved by the Commission in its Order Dated November 23, 2023. We requested the detector in the Beech Grove QIIP Dated April 14, 2023. This device is enabling Beech Grove to locate and inspect water lines that are not marked or mapped. Beech Grove recently purchased this device.

The AQUASCOPE 550 Digital Acoustic Water Leak Detector is an additional piece of equipment that enables Beech Grove to find water leaks by listening to water line, meter, and fire hydrant valves. The equipment costs \$3,051.61 and Beech Grove seeks Commission approval to pay for the equipment using Surcharge Funds. Please see the brochure attached as Exhibit C with information regarding the AQUASCOPE 550.

**EXHIBIT B**

Leaks repaired by Beech Grove on customer service line from January 2023-March 2024.

	10070 Comer Elba Rd	
	Mcgee Chapel	
	Patterson Lane	
	580 Bohannon Rd	
	800 KIASER LN	
	11777 HWY 56	
	651 high banks	
	590 high banks	
	211 roland	
	2100 basil young	
	4602 Hwy 593	
	JEEPS 525 HWY 136 W	
	400 BASIL YOUNG RD	
	3936 HWY 56N	
	3702 HWY 593	
	12041 HWY 56 N	
	134 MT LIBERTY CHURCH RD	

## EXHIBIT C

### **AQUASCOPE 550** Digital Acoustic Water Leak Locator



**Powerful and intelligent – hear the inaudible noise**

The unique feature "Frequency Shifting" makes audible what was once not audible: It lifts otherwise inaudible low frequency noise (below 30 Hz) that is common for leaks in plastic pipes or large diameter pipes to a higher, readily audible frequency band.

Manual filters are user-programmable in blocks of 40Hz. A large graphical display transforms the crystal digital sound into a visual frequency spectrum showing a clear peak of the leak and aiding the advanced technician to pinpoint the most difficult leaks with ease.



**Simple operation and versatile for all situations**

With only 2 buttons/dials on the control unit and 3 pre-set filter ranges, the operation of the AQUASCOPE 550 is very quick and easy. The amplifier can also be activated and deactivated with a trigger button directly on the microphone, leaving the other hand free to carry other tools. A twin headphone socket enables a second operator to listen in.

The "Minimum Level Profiling" function enables the operator to record leak values that are independent of passing traffic and other ambient noises. The AQUASCOPE 550 latches to the lowest noise recorded at each sounding. The last eight readings are displayed as bar chart showing the operator whether he is moving away from or closer to the leak.



**Built for frequent use and a long life**

The AQUASCOPE 550 has an ergonomic design and a very solid, yet light-weight body that was designed specifically for utilities that are faced with the everyday challenge of finding leaks on plastic and large diameter pipes. The microphones are constructed of robust high-grade stainless steel and rubber for comfort and stability.

The AQUASCOPE 550 is highly reliable and virtually maintenance-free which makes it an extremely cost-effective product over its expected lifetime. GUTERMANN provides a 2-year factory warranty like on all other products from GUTERMANN.



**With ground microphone or electronic listening stick**

The AQUASCOPE 550 comes with the choice of either a ground microphone or an electronic listening stick (hand probe), or as combined kit. The ground microphone 'foot' is robust, weather proof and acoustically shielded against non-leak interference. It is particularly suitable for leak surveys on flat grounds and roads. The versatile hand probe incorporates a handle and the same high-performance sensor as the ground microphone. It allows direct listening on fittings or - with a tripod foot magnetically attached to it - on soft grounds and on walls.

#### System Configuration

##### Basic Configuration:

- 1 Amplifier with waist belt
- 1 Stereo headphones
- 1 Connecting cable
- 1 Operating manual
- 2 Year warranty

##### With Ground Microphone:

- 1 Ground microphone
- 1 Ground microphone rod

##### With Hand Probe:

- 1 Hand probe microphone
- 3 400mm probe rods
- 1 Tripod foot

##### Optional Accessory

- 1 Carry case
- 1 Aviation quality headphones
- 1 Pocket ground microphone kit

#### Technical Specifications

##### Display mode

- Amplification
- Signal processing
- Frequency shifting
- Filters
- Memory
- Display
- Operation
- Power
- Battery life
- Operating temperature
- Ingress protection
- Dimensions

##### Weight

Simultaneously showing real time spectrum, signal and minimum noise

Greater than 100 dB

Very low noise preamplifiers with automatic gain

4 scales of frequency shifting

Three pre-set filters and manual filter for custom setting

Last 8 measurements

Transflective LCD with backlight

Waterproof rotary switch and on/off button

2 standard "C" or "LR14" alkaline batteries

25 hours with backlight off, 12.5 hours with backlight on

-20°C to +50°C (-4°F to +122°F)

Ground and hand probe microphones: IPE7

Amplifier: 230 mm x 80 mm x 85 mm (9.1" x 3.1" x 3.3")

Ground microphone: Ø 150 mm x 150 mm (Ø 5.9" x 5.9")

Hand probe: Ø 35 mm x 200 mm (Ø 1.4" x 7.9")

Amplifier: 1 kg (2.2 lbs) including batteries and carrying strap

Ground microphone: 1.6 kg (3.5 lbs)

Hand probe: 0.4 kg (0.9 lbs)



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Your Nearest Distributor

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