

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC BIG SANDY WATER)
DISTRICT’S UNACCOUNTED-FOR WATER) CASE NO. 2022-00301
LOSS REDUCTION PLAN, SURCHARGE AND)
MONITORING)

NOTICE OF AMENDMENT TO INFRASTRUCTURE IMPROVEMENT PLAN
AND MOTION FOR AUTHORIZATION FOR USE OF SURCHARGE PROCEEDS

Pursuant to 807 KAR 5:001, Section 5, Big Sandy Water District (“Big Sandy District” or “the District”) gives notice of the amendment of its current Infrastructure Improvement Plan and moves for authorization to use the proceeds of its Water Loss Reduction Surcharge (“Surcharge”) for the purposes set out in this Motion.

In support of its Notice and Motion, the District states:

1. In Case No. 2022-00044, the District requested authority to assess the Surcharge to fund its water loss reduction efforts.¹ It proposed to assess a monthly surcharge of \$6.15 on each customer for 60 months. The District estimated that the proposed surcharge would generate \$354,240 annually, or \$1,771,200 over the proposed life of the surcharge. The amount of the proposed surcharge was based upon the sum of purchased water expense and purchased power expense in calendar year 2020 that 807 KAR 5:066, Section 3 required to be disallowed from recovery in the District’s rates due to excessive unaccounted-for water loss. In its application, the District identified initial expenditures of \$910,328 for which the proposed surcharge proceeds would be used but noted that other water loss control expenditures would subsequently be submitted for Public Service Commission (“the Commission”) review and approval.

¹ *Electronic Application of Big Sandy Water District for an Adjustment of Its Water Rates Pursuant to 807 KAR 5:076, Case No. 2022-0004 (Ky. PSC filed Mar. 25, 2022), Application, Exhibit N.*

2. On September 13, 2022, the Commission found that a monthly surcharge was “a reasonable means for Big Sandy District to recover the cost of its efforts in **water leak detection and repair** in order to reduce the increased expense and lost revenue from unaccounted-for water loss”² and authorized the District to assess a monthly surcharge of \$6.42 per active meter for a period of 60 months. The Commission expected the Surcharge to produce \$369,639 annually³ or \$1,848,195 over the 60-month period.

3. In its Order of September 13, 2022, the Commission also directed the District to file a qualified infrastructure improvement plan.⁴

4. On December 16, 2022, the District submitted its Infrastructure Improvement Plan to the Commission.

5. On February 10, 2023, the District requested authorization to use \$88,576 of Surcharge proceeds to replace a damaged water stream crossing and to temporarily withdraw an additional amount not to exceed \$48,413 for materials and outside labor and services related to the replacement crossing’s construction pending its receipt of Cleaner Water Grant Funds. On April 14, 2023, the Commission granted the requested authorization. The District subsequently used \$68,255.42 of Surcharge proceeds to construct the replacement crossing.⁵

6. On February 10, 2023, the District also submitted a revised Infrastructure Improvement Plan (“First Revised Plan”) that provided greater details of its proposed use of Surcharge proceeds. In the First Revised Plan, a copy of which is set forth at **Exhibit A** of this

² *Electronic Application of Big Sandy Water District for an Adjustment of Its Water Rates Pursuant to 807 KAR 5:076*, Case No. 2022-0004 (Ky. PSC Sep. 13, 2022),

³ *Id.* at 19.

⁴ *Id.* at 20-21.

⁵ The District originally estimated the total replacement cost to be \$136,989 and expected to use \$48,412.93 in Cleaner Water Program grant funds towards that cost. The actual replacement cost was \$116,668.35.

Motion, the District proposed improvements and programs whose expected total cost was \$1,451,246.

7. On May 30, 2023, the Commission authorized the District to use Surcharge proceeds to acquire a truck, leak detection equipment, and 1,000 water meters and to fund an employee position devoted to water leak detection. It denied the use of Surcharge proceeds for the other improvements and programs set forth in the Amended Plan. A copy of the Order of May 30, 2023, is attached to this Motion as **Exhibit B**.

8. Consistent with the Order of May 30, 2023, the District has made the authorized purchases at a total cost of \$397,227⁶ but has not created the water leak detection position after being unable to find a qualified person to fill the position.

9. As of December 31, 2024, the District's Surcharge billings totaled approximately \$815,250; approximately \$788,200 of Surcharge proceeds has been collected; and \$465,482.42 of Surcharge proceeds has been spent. As of December 31, 2024, the balance of the Surcharge fund is \$328,229.46.

10. The District has revised the First Revised Plan to add the necessary equipment and infrastructure to improve the District's ability to identify and respond to water leaks and to identify for replacement existing water mains that significantly contribute to the District's water loss. A copy of this revised plan ("Second Revised Plan") is attached to this Motion as **Exhibit C**. The District has discussed the revisions set forth in the Second Revised Plan previously in its annual surcharge progress reports to the Commission.

⁶ Meters	\$339,000.00
Itron Digital Leak Detection Equipment	\$ 3,227.00
Truck	<u>\$ 65,000.00</u>
Total	\$397,227.00

11. The District proposes to use the remaining Surcharge proceeds for the following:

a. **Purchase of a Hydro Excavator.** The District proposes to purchase a hydro excavator at an estimated cost of \$53,276. A hydro excavator uses a blast of pressurized water to quickly create a dirt slurry that is then vacuumed into a storage tank, uncovering water lines without damaging them. Hydro excavation provides for better damage and safety control than mechanical methods. As it is more accurate, it limits accidents and injuries for laborers and the general public. It avoids damage to underground facilities, thus reducing repair and restoration costs. It also limits damage to customers' property on which broken or leaking lines are located. Most importantly, it will allow District employees to more quickly access and repair broken or leaking lines. A specifications sheet providing additional information about the hydro excavator the District proposes to purchase and price quotes are attached to this Motion as **Exhibits D and E**. The Commission has authorized other water utilities to use water loss surcharge proceeds to purchase such equipment.⁷

b. **Purchase of Meters to Create Additional District Metering Areas.** The District proposes to purchase ten zone meters to create ten additional district metering ("DMAs") at a total estimated cost of \$101,528.89. DMAs are capable of being isolated. A "zone" meter monitors water flow entering the DMA and allows the District to compare that flow to metered sales to determine water loss within the DMA. Each zone meter is equipped with pressure sensing equipment and is integrated into the District's telemetry network, providing the District with accurate real-time flow information that can be used to pinpoint areas of loss, focus repair efforts, and prioritize future projects. The District currently has 16 DMAs. The water flow within a DMA

⁷ See, e.g., *Application of Graves County Water District for an Alternative Rate Adjustment*, Case No. 2018-00429 (Ky. PSC Sep. 30, 2019); *Electronic Application of Estill County Water District No. 1 for a Surcharge to Finance Water Loss Control Efforts*, Case No. 2019-00119 (Ky. PSC Dec. 13, 2023), Order at 8.

is more effectively monitored, and water leaks more quickly detected, if a DMA contains a smaller number of meters. Currently, the District's DMAs have an average of approximately 300 meters. The creation of ten additional DMAs will reduce the average number of meters within a DMA to 190. The estimated cost includes the cost of nine three-inch meters, one four-inch meters, five six-inch meter assemblies and four four-inch meter assemblies. District employees will install the metering equipment. The District's proposal is consistent with the Commission's policy statement in Case No. 2019-00041⁸ which endorsed and encouraged the creation of DMAs and installation of zone meters to better detect water loss. Price quotes for the metering equipment are attached as **Exhibit F** to this Motion.

c. **Water Main Improvements.** In its Second Revised Plan, the District has identified five water main improvement projects that should significantly reduce water loss. It proposes to use surcharge proceeds to fund the replacement of two projects – the Bear Creek Road and the Friendship Road Replacement Project – which have the greatest water lost. The total estimated cost of these projects is \$1,555,000. A detailed breakdown of the cost of each replacement project is found at **Exhibit G** of this Motion. The District prefers to construct both projects simultaneously or in rapid succession, but, if funding is unavailable to do so, priority will be given to the Bear Creek Road Replacement Project, which has a projected cost of \$775,000.

d. **Reimbursement of Cost of Engineering Review of Water Main Replacements.** The District requests authorization to use \$5,370 of Surcharge proceeds for work which the District's engineers performed to develop cost estimates for the water main

⁸ *Electronic Investigation Into Excessive Water Loss By Kentucky's Jurisdictional Water Utilities*, Case No. 2019-00041 (Ky. PSC Nov. 22, 2019), Order at 6-7 (recommending that “[t]hose water utilities that rely on traditional methods for locating leaks begin installing zone meters to help identify problem areas”).

improvement projects set forth in the Revised Plan. A copy of the invoice for these services is attached as **Exhibit H** to this Motion.

12. Neither the proposed acquisition of equipment nor the two water main improvement projects require a certificate of public convenience and necessity.

a. The proposed acquisition and installation of metering equipment is an ordinary extension in the usual course of business as it will not result in the wasteful duplication of equipment or plant, compete with the certificates or service of other utilities subject to Commission jurisdiction, will not involve sufficient capital outlay to materially affect the District's existing financial condition or result in increased charges to the District's customers.⁹

b. KRS 278.020(1)(a)(3) exempts waterline improvement projects from the requirement for a certificate of public convenience and necessity if constructed by a Class A water district, does not require the issuance of debt obligations requiring Commission approval pursuant to KRS 278.300, and will not result in increased rates to the water district's customers. The District has annual revenues in excess of \$3,000,000¹⁰ and is therefore a Class A water district.¹¹ The proposed waterline improvement projects, if constructed with Surcharge proceeds, will not require the issuance of any debt obligations and will not affect the District's rates for water service.¹²

⁹ KRS 278.020(1)(a)(2)807 KAR 5:001, Section 15(3).

¹⁰ *Annual Report of Big Sandy Water District to the Kentucky Public Service Commission for the Year Ending December 31, 2023* at Ref Page 11.

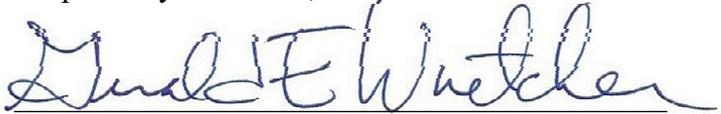
¹¹ *Uniform System of Accounts for Class A/B Water Districts and Associations* at 14 (Ky. PSC 2002) (defining Class A water utilities as "[u]tilities having annual water operating revenues of \$750,000 or more").

¹² Under current conditions, the District expects to have sufficient funds in the Surcharge Account to construct one of the proposed water main improvement projects but will require an addition \$332,463 to construct both projects. The District may use internal funds or seek grants from state and federal government agencies to obtain this additional amount. If such funding is not available and an extension of the surcharge or a rate adjustment or a long-term loan is necessary to fund the second project, then the District will apply for a certificate of public convenience and necessity for that project.

WHEREFORE, Big Sandy Water District respectfully moves for an Order authorizing the expenditure of Surcharge proceeds as set forth in this Motion.

Dated: January 27, 2025

Respectfully submitted,



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CERTIFICATE OF SERVICE

In accordance with 807 KAR 5:001, Section 8, and the Commission's Order of July 22, 2021 in Case No. 2020-00085, I certify that this document was submitted electronically to the Public Service Commission on January 27, 2025, and that there are currently no parties that the Public Service Commission has excused from participation by electronic means in this proceeding



Gerald E. Wuetcher

EXHIBIT A

INFRASTRUCTURE IMPROVEMENT PLAN (AMENDED)

Background. Big Sandy Water District (“the District”) purchases its total water requirements from neighboring water suppliers. As shown in the table below, in each year since 2010 it has been unable to account for 23 percent or more of its total purchased water. During that period, it has experienced an average annual unaccounted water loss rate of 33.4 percent. Simply put, for every two gallons of water it has sold since 2010, the District has lost one gallon of water. In 2021 it lost more than four of every ten gallons of water that it purchased for resale.

Year	Purchased (Gallons)	Water Loss (Gallons)	Water Loss (%)
2010	378,902,000	88,960,000	23.48
2011	375,060,000	120,386,000	32.10
2012	374,610,000	118,358,000	31.59
2013	333,317,000	92,728,000	27.82
2014	359,009,000	111,684,000	31.11
2015	380,610,000	124,737,000	32.77
2016	377,589,000	128,461,000	34.02
2017	353,039,000	105,920,000	30.00
2018	409,693,000	167,013,000	40.77
2019	359,009,000	111,684,000	31.11
2020	413,582,000	183,368,000	44.34
2021	385,288,890	160,485,361	41.65

This high rate of unaccounted-for water adversely affects the District’s finances. In 2021, the District expended approximately \$501,927.80, or approximately 16.61 percent of its operating expenses, to purchase and to transport unaccounted-for water – water that never reaches customer meters. For the same year, it reported an operating loss of \$332,241. For four of the last six years in which the District has filed an annual report with the Public Service Commission, it has reported operating losses.

Approximately 26.65 percent of the cost that the District incurred in 2021 to purchase and transport this unaccounted-for water cannot be recovered through rates for water service. 807 KAR 5:066, Section 6(3) provides that “[e]xcept purchased water rate adjustments for water districts and water associations, and rate adjustments pursuant to KRS 278.023(4), for rate making purposes a utility’s unaccounted-for water loss shall not exceed fifteen (15) percent of total water produced and purchased, excluding water used by a utility in its own operations.” 807 KAR 5:066, Section 6(3) requires the disallowance of approximately \$442,086.81 of purchased power and purchased power costs due to the District’s high level of water loss.

In Case No. 2019-00041,¹ the Public Service Commission investigated the District’s high level of water loss. In its final order, the Commission recommended several actions. These included the implementation of a plan to comply with the meter testing requirements of 807 KAR 5:066, Section 16; the development of a zone metering system; the performance of annual water audits, and the

¹ *Electronic Investigation Into Excessive Water Loss by Kentucky’s Jurisdictional Water Utilities*, Case No. 2019-00041 (Ky. PSC Nov. 22, 2019).

hiring of additional personnel to perform leak detection and water loss prevention activities changes.

The District has acted to reduce its high level of water unaccounted-for water. It has established eleven (11) district meter areas and plans to establish four additional ones before the end of 2023, a series of district meter areas. The District monitors water usage within each of these meter areas. Unusual water usage in a meter area is an indicator of a possible leak or water main break. Once unusual water usage is identified in an area, the District deploys resources to that meter area to pinpoint and repair the leak or break.

The District has also sought to reduce the number of meters currently in service that have not been tested for accuracy within ten (10) years. Inaccurately registering meters are believed to be a major contributor to the District's high water loss. 807 KAR 5:066, Section 16, requires a water utility to periodically test all 5.8-inch water meters so that no meter remains in service longer than ten years between tests. In July 2019, the District advised the Public Service Commission that approximately 2,100 meters were in service for 10 years or longer since last being tested for accuracy. This backlog resulted from the District's limited testing facilities and its lack of personnel. To alleviate the problem and to replace aging meters – the District's last major meter replacement occurred in 2000 - the District purchased 1,100 new meters at a cost of \$216,000. The District financed this purchase in part through the withdrawal of \$100,000 from its depreciation reserve account. As the District's bond covenants required the maintenance of the depreciation reserve account, the District was required the approval of Rural Development ("RD") - the holder of the District's bonded debt. RD authorized the withdrawal of funds on the condition that the District replenish the account as soon as possible. At this time, approximately \$81,665 remains to be redeposited into the depreciation reserve account. At this time, the District has 1,308 meters in service that have been in service for 10 or more years since last being tested for accuracy.

The District has been conducting annual water audits. The first water audit, conducted with the assistance of the University of Kentucky Water Resources Research Institute ("WRRI") and using the methodology set forth in the American Water Works Association M36 Manual, was completed and filed with the Public Service Commission in January 2021. A second audit, also prepared with the WRRI's assistance, was completed in December 2021. The District has committed to conducting a water audit annually.

The District has lacked the funds to hire additional personnel to conduct additional leak detection and water loss prevention activities. It currently has two unfilled full-time positions unrelated to enhanced leak detection and water loss prevention efforts.

Surcharge Proposal. A lack of funding has stymied the District's water loss control efforts. To improve these efforts and obtain a meaningful reduction in water loss, the District applied to the Public Service Commission in Case No. 2022-00044² to assess a surcharge of \$6.15 on each customer's monthly bill for a period of 60 months. Assuming a customer base of 4,800 customers, the proposed surcharge will produce additional annual revenue of \$354,240. The amount of the surcharge is based upon the sum of purchased water expense and purchased power expense that

² *Electronic Application of Big Sandy Water District for an Adjustment of Its Water Rates Pursuant to 807 KAR 5:076, Case No. 2022-00044 (Ky. PSC filed Mar. 25, 2022).*

807 KAR 5:066, Section 3 requires to be disallowed from rate recovery due to excessive unaccounted-for water.

To ensure full transparency and the appropriate use of surcharge proceeds, the District further proposed that following controls be placed on the proposed surcharge:

a. The surcharge will be billed as a separate line item and identified as “Water Loss Detection and Control Program Surcharge.”

b. All surcharge proceeds will be maintained in a separate, interest-bearing account.

c. The District must obtain prior Public Service Commission approval for the use of surcharge proceeds for any expenditure.

d. For each month in which the surcharge is in effect and until all surcharge proceeds are expended, the District must submit to the Public Service Commission monthly activity reports that include a statement of monthly surcharge billings and collections; a monthly surcharge bank statement; a list of each payment from the account, its payee and a description of its purpose; and invoices supporting each payment.

e. The District must submit to the Public Service Commission monthly water loss reports for each month in which the surcharge is in effect and until all surcharge proceeds are expended.

f. With the exception of deposits to District’s depreciation reserve fund to replenish the remaining balance (\$81,665) withdrawn for the purchase of metering equipment in 2020, the District may not use surcharge proceeds for expenses incurred prior to surcharge’s effective date .

g. Each year following the effective date of the surcharge, the District must submit to the Public Service Commission a schedule of the estimated and actual progress of its Water Loss Detection and Repair Program and the estimated and actual surcharge expenditures. These reports will permit the Public Service Commission to annually review the progress of the District’s efforts and determine if changes are required or if the surcharge is no longer required.

h. Should the District fail to reduce its unaccounted-for water loss level to fifteen (15) percent or less of total water produced and purchased, excluding water used by the District in its own operations within 60 months of the effective date, the District may request an extension of the period in which the surcharge may be assessed and collected.

i. Failure to comply with any control placed on the assessment of the surcharge is sufficient basis to terminate the surcharge and to require the refund of all surcharge proceeds in the District’s possession or control and of all proceeds disbursed for expenses or projects not approved by the Public Service Commission.

The proposed surcharge was similar to and consistent with the surcharge that the Commission authorized in Cases No. 2011-00217³ and No. 2018-00376⁴ for Cannonsburg Water District and in Case No. 2019-00119⁵ for Estill County Water District to fund water loss control efforts. The proposal was also consistent with the Water Loss Demonstration Project that the Commission previously conducted in its effort to assist water utilities in their efforts to reduce water loss.⁶

On September 13, 2022, the Public Service Commission issued its decision in Case No. 2022-00044, in which it, among other things, authorized the District to assess a monthly surcharge of \$6.42 on each active meter for a period of 60 months. It found the surcharge was “a reasonable means for Big Sandy District to recover the cost of its efforts in water leak detection and repair in order to reduce the increased expense and lost revenue from unaccounted-for water loss.”⁷ Assuming a customer base of 4,800 customers, the proposed surcharge will produce additional annual revenue of \$369,792, or approximately \$1,848,960 over the period that surcharge is assessed. The Public Service Commission further directed the District to file a Qualified Infrastructure Improvement Plan that provides a detailed spending plan for surcharge proceeds. On November 13, 2022, the District filed with the Public Service Commission tariff sheets reflecting the rules governing the surcharge. On December 16, 2022, the District submitted its Infrastructure Improvement Plan.

Upon further review of its initial Infrastructure Improvement Plan, the District has determined that revisions are required and has submitted this revised plan.

Proposed Initial Expenditures. The District proposes to use surcharge proceeds to make the following expenditures:

³ *Application of Cannonsburg Water District for (1) Approval of Emergency Rate Relief and (2) Approval of the Increase in Nonrecurring Charges*, Case No. 2011-00217 (Ky. PSC Jun 4, 2012).

⁴ *Application of Cannonsburg Water District for A Rate Adjustment for Small Utilities Pursuant to 807 KAR 5:076*, Case No. 2018-00376 (Ky. PSC May 13, 2019).

⁵ *Electronic Application of Estill County Water District No. 1 for a Surcharge to Finance Water Loss Control Efforts*, Case No. 2019-00119 (Ky. PSC Mar. 24, 2020).

⁶ *See, e.g., Adjustment of Rates of North Logan Water District*, Case No. 97-399 (Ky. PSC May 22, 1998); *An Investigation Into the Operations and Management of Mountain Water District*, Case No. 96-126 (Ky. PSC Aug. 11, 1997); *The Notice of Lake Village Water Association, Inc., of a Tariff Amendment Adjusting Rates and Imposing Construction Surcharge*, Case No. 89-075 (Ky. PSC Jan. 29, 1990); *The Application of the Muhlenberg County Water District, A Water District Organized Pursuant to Chapter 74 of the Kentucky Revised Statutes for a General Adjustment of Rates and Revision of Rates*, Case No. 9262 (Ky. PSC Oct. 9, 1985); *The Notice By Lake Village Water Association, Inc. of A Tariff Amendment Adjusting Rates; Notice of Tariff Amendment Imposing A Temporary Special Rule To Limit The Availability of Water Service Connections; Application For A Certificate of Public Convenience and Necessity; Application For Authority To Issue A Promissory Note and Mortgage To the Farmers Home Administration; and Application and Request That It Be Included In the Demonstration Project to Define Excessive Water Loss*, Case No. 9290 (Ky. PSC Dec. 30, 1985)

⁷ Case No. 2022-00044, Order of Sept. 13, 2022 at 19.

Expenditure	Amount
Replenish Depreciation Reserve Fund (1/2020 Withdrawal for Meter Purchase)	\$ 81,665.00
Additional 1,000 Meters	\$216,000.00
Water Listening Device	\$ 5,156.00
Leak Loggers	\$ 13,582.00
Pumps	\$168,000.00
Generator	\$ 89,668.00
Meter Testing Building	\$180,000.00
Meter Testing Bench	\$ 27,815.00
One Truck	\$ 65,000.00
Full-Time Employees (Leak Detection Team) (Annual Wage & Overhead)	\$204,360.00
Repair Reserve Fund	\$400,000.00
	\$1,451,246.00

Replenish Depreciation Reserve Fund. As a condition to RD’s approval of the withdrawal of \$100,000 from the District’s depreciation reserve fund for the purpose of purchasing metering equipment in February 2020, the District must, in addition to the monthly deposits required under its bond ordinances, must redeposit withdrawn funds. Approximately \$81,665 remains to be returned to the fund. The District proposes to refund this amount over a period of five years.

Additional 1,000 Meters. The District proposes to purchase an additional 1,000 meters to replace existing meters and to return the District to compliance with the meter testing requirements of 807 KAR 5:066, Section 16. The District presently plans to purchase these meters over two-year period.

Water Listening Devices and Leak Loggers. The District’s leak detection equipment was purchased in 2005 and has limited capabilities. The District proposes to obtain a more sensitive and accurate acoustical listening device. It also proposes to purchase water loggers to located in meter zones experiencing higher than normal water usage to acoustically detect leaks. This equipment is expected to be purchased within the surcharge’s first year.

Pumps and Generator. The District proposes to purchase ten pumps and one portable generator to ensure system resiliency and continuity of service and to prevent potential water loss due to pumping and power failures. This equipment will be purchased over a three-year period

Meter Bench and Meter Building. The District’s current meter building is poor condition and its meter test bench can test only four meters at one setting. These conditions have contributed to the failure to meet meter testing requirements. The District proposes to either construct a new meter facility or renovate existing facility and to acquire a new test bench capable of testing twelve meters concurrently.

Trucks. The District proposes to purchase one truck for use in leak detection and repair work. The estimated cost for the truck includes a contingency to account for potential increases due to supply chain problems. The District’s current vehicle fleet is old and has significant mileage. The purchase of this vehicles is expected to occur within the first 18 months that the surcharge is in effect.

Additional Employees. The District proposes to hire as soon as possible one full time employee whose sole assignment will be leak detection and repair. The employee is expected to work approximately 40 hours per week at a starting hourly wage of \$15.00. Estimated annual cost of \$40,872, includes federal payroll taxes and employer pension contributions.

Repair Reserve Fund. Once leaks are located, they must be repaired. The District assumes that labor of the repair of leaks will be funded through the District's general fund. However, it currently plans to reserve approximately \$400,000 to cover the cost of materials and outside labor and other services necessary for such repairs. Where feasible, the District will seek other sources of funding, for example, government grants, to address these expenses. The District intends to use funds from the Repair Reserve Fund to cover the materials and outside labor and service costs of a water main stream crossing replacement completed on September 26, 2022. This replacement, whose total cost approximately \$136,989, was necessary to correct a significant leak in a 6-inch main. The District would seek reimbursement for the expenses associated with this stream crossing replacement are not financed from other sources, such as grant funds.

Retaining A Water Loss Specialist. The District may use remaining surcharge funds to contract with a firm specializing in water loss reduction. It has been in discussions with one such firm, Integrity Water and Energy, LLC, to assist its water loss efforts. The contacting firm would assist in designing and implementing the District's water loss reduction program. It would provide training on leak detection techniques and equipment to District employees, assist in the purchase and deployment of GIS software and equipment, and the identification of the geographic coordinates of meters, valves, hydrants, and existing taps. It would also provide guidance and assistance in the expansion of the District's zone meter system.

Depending upon the results achieved and other circumstances, the District may modify its list of proposed expenditures. As previously noted, all expenditures must receive prior Public Service Commission approval. Any potential changes to its current list of expenditures would be address in the District's annual report on the surcharge.

EXHIBIT B

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC BIG SANDY WATER DISTRICT'S)	
UNACCOUNTED-FOR WATER LOSS)	CASE NO.
REDUCTION PLAN, SURCHARGE AND)	2022-00301
MONITORING)	

ORDER

By Order issued September 13, 2022, in Case No. 2022-00044¹ the Commission approved an unaccounted-for water loss reduction surcharge for Big Sandy Water District (Big Sandy District), and ordered Big Sandy District to file a qualified infrastructure improvement plan with the Commission. The Commission opened this proceeding to monitor Big Sandy District's surcharge billings, collection, deposits, and expenditures. On December 16, 2022, Big Sandy District filed its infrastructure improvement plan, and on February 10, 2023, Big Sandy District filed a motion to amend its infrastructure improvement plan, as well as an amended plan.

LEGAL STANDARD

The Commission approved a \$6.42 per customer per month surcharge for five years to provide Big Sandy District funds to address its excessive unaccounted-for water loss.² Pursuant to Commission regulation 807 KAR 5:066, Section 6(3,) for ratemaking purposes a utility's unaccounted-for water loss shall not exceed 15 percent of the total

¹ Case No. 2022-00044, *Electronic Application of Big Sandy Water District for an Adjustment of Its Water Rates Pursuant to 807 KAR 5:076* (Ky. PSC Sept. 13, 2022).

² Case No.2022-00044, Sept. 13, 2022 Order at 22.

water produced or purchased, excluding water consumed by a utility in its own operations. In its 2020 annual report, Big Sandy District reported water loss of 44.34 percent.³

Big Sandy District was ordered to file a qualified infrastructure improvement plan with the Commission. According to the Commission's final Order in Case No. 2022-00044, and the opening Order in this proceeding, the infrastructure improvement plan should contain a "comprehensive unaccounted-for water loss reduction plan that establishes priorities and a time schedule for eliminating each source of unaccounted-for water loss and provided a detailed spending plan for the proceeds of the surcharge."⁴

DISCUSSION AND FINDINGS

December 16, 2022 Plan

Big Sandy District filed a prioritized list of what it considered to be its needs to address its unaccounted-for water loss. The item that the district considered to be of primary importance was the purchase of two trucks for use in leak detection and repair work. The district estimated two trucks would cost \$80,000.⁵

Second, Big Sandy District reported that it needed to update its leak detection equipment. Big Sandy District stated that the device it is currently using was purchased in 2005 and has a limited ability to detect leaks.⁶ Big Sandy District proposed to purchase a new, more sensitive listening device, as well as water leak loggers to be used in meter

³ *Annual Report of Big Sandy District to the Public Service Commission for the Year Ended December 31, 2020* (2020 Annual Report) at 57.

⁴ Opening Order, ordering paragraph 3; Case No. 2022-00044, Sept. 13, 2022 Order, ordering paragraph 8a.

⁵ Big Sandy District Qualified Infrastructure Improvement Plan (filed Dec. 16, 2022) (Plan) at unnumbered page 2.

⁶ Plan at unnumbered page 2.

zones experiencing higher than normal usage. The district estimated the cost of these items would be \$18,738.⁷

As its third identified funding priority, Big Sandy District proposed to use \$81,665 of surcharge proceeds to replenish its depreciation reserve fund.⁸ Big Sandy District stated that it had purchased 1,100 meters and it was required by Kentucky Rural Water Association to replenish the fund in the amount of \$100,000. Big Sandy District stated that \$81,665 remains to be returned to the fund, and it requested to use surcharge proceeds for this purpose.

Fourth, Big Sandy District stated that it plans to purchase 1,000 additional meters to replace existing meters and return the district to compliance with the meter-testing standards set forth in Commission regulation 807 KAR 5:066, Section 16, which establishes the maximum number of years a water meter may remain in service before it must be tested for accuracy. Big Sandy District estimated the cost of 1,000 new meters to be \$216,000.⁹

Fifth, Big Sandy District proposed to hire two part-time employees to work exclusively in leak detection and repair. The district anticipated each employee would work 30 hours a week, 50 weeks per year, at a starting hourly wage of \$15.00. Big Sandy District estimated the annual cost to employ two part-time employees would be \$48,442.50.¹⁰

⁷ Plan at unnumbered page 2.

⁸ Plan at unnumbered page 2.

⁹ Plan at unnumbered page 2.

¹⁰ Plan at unnumbered page 2.

Sixth, Big Sandy District proposed to update its current meter building or build a replacement. The estimated cost to do this was \$180,000.¹¹ Also, the district proposed to spend \$27,815 on a new meter test bench.¹²

Seventh, Big Sandy District proposed to purchase ten pumps, variable frequency drives and motors, for an estimated cost of \$168,000.¹³ Additionally, Big Sandy District proposed to purchase one portable generator at an estimated cost of \$89,668.¹⁴ Big Sandy District stated that these items would help avoid potential water loss due to pumping and power failures.¹⁵

Finally, Big Sandy District stated that it was considering entering into a contract with Integrity Water and Energy, LLC (Integrity).¹⁶ Big Sandy District stated that Integrity can provide the district's employees with training on leak detection, as well as mapping and GPS coordinates for meters valves, hydrants, and existing taps in Big Sandy District's system. Big Sandy District also stated that Integrity could add additional zone meters to Big Sandy District's system.¹⁷

February 10, 2023 Amended Plan

Along with a motion to amend its qualified infrastructure improvement plan, Big Sandy District filed an amended plan on February 10, 2023. In its motion to amend, Big

¹¹ Plan at unnumbered page 2.

¹² Plan at unnumbered page 2.

¹³ Plan at unnumbered page 2.

¹⁴ Plan at unnumbered page 2.

¹⁵ Plan at unnumbered page 2.

¹⁶ Plan at unnumbered page 3.

¹⁷ Plan at unnumbered page 3.

Sandy District stated that after additional consideration of the existing labor market, it had determined that hiring one full-time employee to perform leak detection work was preferable to hiring two part-time employees. Further, Big Sandy District stated that it had purchased one truck from general funds, and was seeking to purchase only one truck with surcharge proceeds. Finally, Big Sandy District requested to use surcharge funds to cover the costs of replacing a stream crossing that was the location of a major leak in its system, and proposed to use surcharge proceeds to establish a Repair Reserve Fund to be used to cover the costs of materials and outside labor and other services necessary to make repairs to its system when leaks are discovered.

On April 14, 2023, the Commission entered an Order approving Big Sandy District's permanent use of \$88,576 of surcharge proceeds to cover a portion of the cost of replacing the stream crossing, and the temporary use of \$48,412.93 of surcharge proceeds for the same purpose conditioned upon Big Sandy District replacing these funds in the surcharge account upon receipt of Cleaner Water grant funds from the Kentucky Infrastructure Authority.

Concerning its request to use surcharge funds to purchase a truck for use in its leak detection efforts, Big Sandy District stated that it had already purchased one truck using general funds, because it could not delay the purchase, but argued that it needed another truck because its current vehicle fleet is old and has significant mileage.¹⁸ Big Sandy District revised its cost estimate for the purchase of a truck to \$65,000.¹⁹ Big Sandy District stated this was done in order to include a contingency to account for

¹⁸ Big Sandy District's Amended Infrastructure Improvement Plan (filed Feb. 10, 2023) (Amended Plan) at 5.

¹⁹ Amended plan at 5.

potential increases due to supply chain problems.²⁰ Having reviewed the request, the Commission finds there is a suitably close nexus between the purchase of a truck and the goal of reducing unaccounted-for water loss to approve the use of surcharge proceeds for this purpose. Big Sandy District needs reliable, adequate transportation for its personnel and materials in order to locate and repair leaks. The Commission reminds Big Sandy District that if it chooses to finance the purchase of a truck, rather than wait to accumulate the needed surcharge proceeds, the financing for this purchase is subject to Commission approval as set forth in KRS 278.300.

Without stating why, Big Sandy District proposed to hire one full-time employee, rather than two part-time employees, to engage solely in leak detection and repair.²¹ Further Big Sandy District stated that this employee is expected to work 40 hours a week at a starting hourly wage of \$15. The estimated annual cost of employing this person, including federal payroll taxes and employer pension contributions is \$40,872.²² Having reviewed the request, the Commission finds that dedicating the labor of one full-time employee to leak detection and repair is an action that should assist the district in reducing its unaccounted-for water loss, and therefore the Commission approves this request. However, the Commission expects Big Sandy District to completely dedicate this employee to leak detection and repair, and not utilize this employee for general duties.

In its amended plan, Big Sandy District restated its requests to replenish its depreciation reserve fund with \$81,665 of surcharge proceeds; replace or renovate its

²⁰ Amended Plan at 5.

²¹ Amended Plan at 6.

²² Amended Plan at 6.

meter facility; purchase an additional 1,000 new meters, a water listening device, leak loggers, ten pumps, one portable generator, and a new meter-test bench; and retain the services of a water loss specialist, such as Integrity.²³ Big Sandy District did not make any adjustments to its estimated cost to purchase the meters or any of the other equipment it proposed to purchase.

Having considered the proposal, the Commission finds that the use of \$81,665 of surcharge proceeds to replenish depreciation reserve funds is inappropriate and should be denied. Big Sandy District entered into the commitment to purchase meters and replenish its reserve fund in February 2020,²⁴ more than two years before the surcharge was approved. The purpose of the surcharge is to provide Big Sandy District with funds it would not ordinarily have and to direct those funds toward spending that will reduce unaccounted-for water loss. The proposal to replenish the reserve fund is a request to use surcharge proceeds for what would otherwise be a normal operating expense and obligation of the utility. The intended use of surcharge proceeds is to make funds available for water loss reduction efforts that would otherwise not occur, not to provide additional funds to meet pre-existing commitments.

The Commission, having considered Big Sandy District's request to establish a Repair Reserve Fund, finds that this request should also be denied. The Commission will consider requests to use surcharge proceeds to cover the costs of materials and outside labor to repair leaks as those costs are incurred. Big Sandy District should file these requests into the record of this proceeding and should provide documentation of the

²³ Amended Plan at 5.

²⁴ Amended Plan at 5.

expense, including an explanation as to how it is related to reducing unaccounted-for water loss.

The Commission notes that according to its records Big Sandy District has been out of compliance with the meter-testing standards set forth in Commission regulation 807 KAR 5:066, Section 16(1) for a number of years.²⁵ Aging and untested meters often contribute to unaccounted-for water loss. Because the Commission wants Big Sandy District to return to compliance with the meter-testing regulation as soon as possible to eliminate one potential cause of water loss, the Commission finds that Big Sandy District should use surcharge proceeds to purchase the 1,000 new meters as proposed.

The purchase of a new water listening device and leak logging devices will enable Big Sandy District to locate leaks on its system in a timely and efficient manner and thereby reduce unaccounted-for water loss. Before a leak can be repaired it must be located accurately, and the purchase of equipment to reliably locate leaks is a proactive step toward reducing Big Sandy District's unaccounted-for water loss. Therefore the Commission finds that surcharge proceeds should be used to purchase a leak detection device and leak logging devices as proposed. As with the purchase of a truck, if Big Sandy District chooses to finance the purchase of meters, the listening device or the leak logging devices rather than accumulate surcharge proceeds to make the purchases, Big Sandy District must comply with the requirements of KRS 278.300.

²⁵ The Commission's Division of Inspections' records indicate that Big Sandy District was inspected on August 27, 2014; October 8, 2015; June 9, 2017; June 4, 2018; September 16, 2019; February 13, 2020; and April 11, 2023. The report for each inspection indicated Big Sandy District was out of compliance with the meter-testing requirement. The most recent inspection indicated that Big Sandy District has 1,500 meters currently in service for more than ten years without being tested.

Some of the purchases Big Sandy District proposed to make with surcharge proceeds are items the Commission finds are more appropriate to include in a sound capital spending plan. Big Sandy District indicated it planned to purchase ten pumps and a portable generator to be used in the event of pump or power failure. These items are not directly related to reducing the unaccounted-for water loss that the system is currently experiencing. Rather, their use is more preventative in nature. For this reason the Commission does not approve the use of surcharge proceeds for these purchases, but encourages Big Sandy District to develop and fund a capital spending plan to include these items.

Big Sandy District's proposal to replace or renovate its meter testing facility and replace its meter testing bench did not include a cost benefit analysis. Big Sandy District estimated the cost to replace or renovate the meter building is \$180,000, and a new meter bench is estimated to cost \$27,815.²⁶ The Commission does not approve the use of surcharge proceeds for this purpose, but encourages Big Sandy District to explore the option of utilizing a third-party contractor to test its meters and compare those costs to the cost of replacing the facility before making a final decision on this matter. Should Big Sandy District consider all possible alternatives and still conclude that the most reasonable, least cost solution is to replace the facility, the Commission encourages Big Sandy District to seek funding for this project from another source. Additionally, based on the evidence presented in this proceeding, the Commission finds that the construction anticipated by Big Sandy District requires a Certificate of Public Convenience and Necessity.

²⁶ Amended Plan at 5.

In regards to Big Sandy District's proposal to engage the service of a firm specializing in water loss reduction, the Commission lacks the necessary information to determine whether this is an appropriate use of surcharge proceeds. Whether the use of surcharge proceeds for this purpose is appropriate depends upon the specific services provided by such a firm. Identifying the specific source and location of leaks and developing a comprehensive asset improvement plan to remediate known causes of water loss is of primary importance, as is taking the steps to implement an asset improvement plan. Should Big Sandy District engage the services of such a firm, the Commission will consider a request to use surcharge proceeds based upon the scope and terms specific to such an arrangement.

IT IS THEREFORE ORDERED that:

1. Big Sandy District is granted authority to use surcharge proceeds to purchase 1,000 new meters, a listening device and leak logging devices, and a truck for use in water loss detection efforts.
2. Big Sandy District is granted authority to use surcharge proceeds to fund one full-time employee to work exclusively on leak detection and repair.
3. Big Sandy District's request to use \$81,665 to replenish its reserve fund is denied.
4. Big Sandy Districts request to use surcharge proceeds to renovate or construct a meter building is denied.
5. Big Sandy District's request to purchase a meter testing bench, ten pumps and a generator using surcharge proceeds is denied.

6. Big Sandy District shall file into the record of this proceeding requests to use surcharge funds to cover the costs of materials and outside labor used to repair leaks in its system.

7. Big Sandy District shall include in its monthly activity reports filed into the record of this proceeding documentation of the final costs of the items approved for purchase in this Order.

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PUBLIC SERVICE COMMISSION



Chairman



Vice Chairman



Commissioner

ENTERED
MAY 30 2023
rCS
KENTUCKY PUBLIC
SERVICE COMMISSION

ATTEST:



Executive Director

*Big Sandy Water District
18200 Kentucky Route #3
Catlettsburg, KY 41129

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EXHIBIT C

INFRASTRUCTURE IMPROVEMENT PLAN

Original: 12/16/2022

First Revision: 02/10/2023

Second Revision: 01/26/2025

Background

Big Sandy Water District (“the District”) purchases its total water requirements from neighboring water suppliers. As shown in the table below, in each year since 2010 it has been unable to account for 23 percent or more of its total purchased water. During that period, it has experienced an average annual unaccounted water loss rate of 34.54 percent. Simply put, for every two gallons of water it has sold since 2010, the District has lost one gallon of water.

Year	Purchased (Gallons)	Water Loss (Gallons)	Water Loss (%)
2010	378,902,000	88,960,000	23.48
2011	375,060,000	120,386,000	32.10
2012	374,610,000	118,358,000	31.59
2013	333,317,000	92,728,000	27.82
2014	359,009,000	111,684,000	31.11
2015	380,610,000	124,737,000	32.77
2016	377,589,000	128,461,000	34.02
2017	353,039,000	105,920,000	30.00
2018	409,693,000	167,013,000	40.77
2019	359,009,000	111,684,000	31.11
2020	413,582,000	183,368,000	44.34
2021	385,288,890	160,485,361	41.65
2022	373,351,000	153,193,000	41.03
2023	350,859,000	137,318,000	39.14
Total	5,223,918,890	1,804,295,361	34.54

This high rate of unaccounted-for water adversely affects the District’s finances. In 2023, the District expended approximately \$424,575, or approximately 21.90 percent of its operating expenses, to purchase and transport unaccounted-for water – water that never reaches customer meters. While the District reported a net operating income of \$47,411 for calendar year 2023, it has reported operating losses for five of the last ten years in which the District has filed an annual report with the Public Service Commission.

Approximately 24.19 percent of the cost that the District incurred in 2023 to purchase and transport this unaccounted-for water, or approximately \$262,417, cannot be recovered through rates for water service. 807 KAR 5:066, Section 6(3) provides that “[e]xcept purchased water rate adjustments for water districts and water associations, and rate adjustments pursuant to KRS 278.023(4), for rate making purposes a utility's unaccounted-for water loss shall not exceed fifteen (15) percent of total water produced and purchased, excluding water used by a utility in its own operations.” 807 KAR 5:066, Section 6(3) requires the disallowance of approximately

\$442,086.81 of purchased power and purchased power costs due to the District's level of water loss.

In Case No. 2019-00041,¹ the Public Service Commission ("the Commission") investigated the District's high level of water loss. In its final order, the Commission recommended the implementation of a plan to comply with the meter testing requirements of 807 KAR 5:066, Section 16; the development of a zone metering system; the performance of annual water audits, and the hiring of additional personnel to perform leak detection and water loss prevention activities changes.

Between the issuance of the Commission's decisions in Case No. 2019-00041 and in Case No. 2022-00044,² the District took several actions to reduce its unaccounted-for water loss. It established eleven (11) district meter areas ("DMAs") and planned to establish additional DMAs. It monitored water usage within each of these meter areas for unusual water usage. If unusual water usage was identified in an area, the District then deployed resources to that meter area to confirm the existence of and repair the leak or break. The District also purchased 1,100 meters at a cost of \$216,000 to replace older meters that had been in service for 10 or more years since their last test for accuracy. With the assistance of the University of Kentucky Water Resources Research Institute ("WRRI") and using the methodology set forth in the American Water Works Association M36 Manual, the District conducted water audits to better assess the sources of its water losses and plan for reducing those losses.

Surcharge Proposal (Case No. 2022-00044)

A lack of funding stymied the District's water loss control efforts. To improve those efforts and obtain a meaningful reduction in water loss, the District applied in March 2022 to the Commission in Case No. 2022-00044 to assess a surcharge of \$6.15 on each customer's monthly bill for a period of 60 months.³ Assuming a customer base of 4,800 customers, the proposed surcharge would produce annual revenues of \$354,240. The amount of the surcharge was based upon the sum of purchased water expense and purchased power expense incurred in calendar year 2020 that 807 KAR 5:066, Section 3 required to be disallowed from rate recovery due to excessive unaccounted-for water.

To ensure full transparency and the appropriate use of surcharge proceeds, the District further proposed that:

- a. The surcharge be billed as a separate line item and identified as "Water Loss Detection and Control Program Surcharge;"
- b. All surcharge proceeds be maintained in a separate, interest-bearing account;

¹ *Electronic Investigation Into Excessive Water Loss by Kentucky's Jurisdictional Water Utilities*, Case No. 2019-00041 (Ky. PSC Nov. 22, 2019).

² *Electronic Application of Big Sandy Water District for an Adjustment of Its Water Rates Pursuant to 807 KAR 5:076*, Case No. 2022-00044 (Ky. PSC Sep. 13, 2022).

³ *Electronic Application of Big Sandy Water District for an Adjustment of Its Water Rates Pursuant to 807 KAR 5:076*, Case No. 2022-00044 (Ky. PSC filed Mar.25, 2022), Application at Exhibit N.

c. The District obtain prior Commission approval for the use of surcharge proceeds for any expenditure;

d. For each month in which the surcharge is in effect and until all surcharge proceeds are expended, the District submit to the Commission monthly activity reports that include a statement of monthly surcharge billings and collections; a monthly surcharge bank statement; a list of each payment from the account, its payee and a description of its purpose; and invoices supporting each payment;

e. The District submit to the Public Service Commission monthly water loss reports for each month in which the surcharge is in effect and until all surcharge proceeds are expended;

f. Except for deposits to replenish the District's depreciation reserve fund for \$81,665 withdrawn to purchase metering equipment in 2020, no surcharge proceeds would be used for expenses incurred prior to surcharge's effective date;

g. Each year following the effective date of the surcharge, the District submit to the Public Service Commission a schedule of the estimated and actual progress of its Water Loss Detection and Repair Program and the estimated and actual surcharge expenditures;

h. Should the District be unable to reduce its unaccounted-for water loss level to fifteen (15) percent or less of total water produced and purchased, excluding water used by the District in its own operations, within 60 months of the surcharge's effective date, the District may request an extension of the period in which the surcharge may be assessed and collected; and,

i. Failure to comply with any control placed on the assessment of the surcharge would serve as a sufficient basis to terminate the surcharge and to require the refund of all surcharge proceeds in the District's possession or control and of all proceeds disbursed for expenses or projects not approved by the Public Service Commission.

The proposed surcharge was similar to and consistent with surcharges the Commission authorized in Cases No. 2011-00217⁴ and No. 2018-00376⁵ for Cannonsburg Water District and in Case No. 2019-00119⁶ for Estill County Water District No. 1 to fund water loss control efforts. The proposal was also consistent with the Water Loss Demonstration Project that the Commission previously conducted in its effort to assist water utilities in their efforts to reduce water loss.⁷

⁴ *Application of Cannonsburg Water District for (1) Approval of Emergency Rate Relief and (2) Approval of the Increase in Nonrecurring Charges*, Case No. 2011-00217 (Ky. PSC Jun 4, 2012).

⁵ *Application of Cannonsburg Water District for A Rate Adjustment for Small Utilities Pursuant to 807 KAR 5:076*, Case No. 2018-00376 (Ky. PSC May 13, 2019).

⁶ *Electronic Application of Estill County Water District No. 1 for a Surcharge to Finance Water Loss Control Efforts*, Case No. 2019-00119 (Ky. PSC Mar. 24, 2020).

⁷ See, e.g., *Adjustment of Rates of North Logan Water District*, Case No. 97-399 (Ky. PSC May 22, 1998); *An Investigation Into the Operations and Management of Mountain Water District*, Case No. 96-126 (Ky. PSC Aug. 11, 1997); *The Notice of Lake Village Water Association, Inc., of a Tariff Amendment Adjusting Rates and Imposing Construction Surcharge*, Case No. 89-075 (Ky. PSC Jan. 29, 1990); *The Application of the Muhlenberg County Water District, A Water District Organized Pursuant to Chapter 74 of the Kentucky Revised Statutes for a General Adjustment of Rates and Revision of Rates*, Case No. 9262 (Ky. PSC Oct. 9, 1985); *The Notice By Lake Village Water Association, Inc. of A Tariff Amendment Adjusting Rates; Notice of Tariff Amendment Imposing A Temporary Special*

On September 13, 2022, the Public Service Commission issued its decision in Case No. 2022-00044, in which it, among other things, authorized the District to assess a monthly surcharge of \$6.42 on each active meter for a period of 60 months. It found the surcharge was “a reasonable means for Big Sandy District to recover the cost of its efforts in water leak detection and repair in order to reduce the increased expense and lost revenue from unaccounted-for water loss.”⁸ Assuming a customer base of 4,800 customers, the proposed surcharge will produce additional annual revenue of \$369,792, or approximately \$1,848,960 over the period that surcharge is assessed. The Public Service Commission further directed the District to file a Qualified Infrastructure Improvement Plan that provides a detailed spending plan for surcharge proceeds. On November 13, 2022, the District filed with the Public Service Commission tariff sheets reflecting the rules governing the surcharge. On December 16, 2022, the District submitted its Infrastructure Improvement Plan. On February 13, 2023, the District submitted a revised Infrastructure Improvement Plan to provide a more detailed plan for expending surcharge proceeds.

**Revised Infrastructure Improvement Plan and
Proposed Initial Expenditures of Surcharge Funds**

The District proposed using surcharge proceeds for the following:

Expenditure	Expected Cost
Replenish Depreciation Reserve Fund (1/2020 Withdrawal for Meter Purchase)	\$ 81,665.00
Additional 1,000 Meters	\$216,000.00
Water Listening Device	\$ 5,156.00
Leak Loggers	\$ 13,582.00
Pumps	\$168,000.00
Generator	\$ 89,668.00
Meter Testing Building	\$180,000.00
Meter Testing Bench	\$ 27,815.00
One Truck	\$ 65,000.00
Full-Time Employees (Leak Detection Team) (Annual Wage & Overhead)	\$204,360.00
Repair Reserve Fund	\$400,000.00
	\$1,451,246.00

Replenish Depreciation Reserve Fund. As a condition to RD’s approval of the withdrawal of \$100,000 from the District’s depreciation reserve fund for the purpose of purchasing metering equipment in February 2020, RD required the District, in addition to the monthly deposits required

Rule To Limit The Availability of Water Service Connections; Application For A Certificate of Public Convenience and Necessity; Application For Authority To Issue A Promissory Note and Mortgage To the Farmers Home Administration; and Application and Request That It Be Included In the Demonstration Project to Define Excessive Water Loss, Case No. 9290 (Ky. PSC Dec. 30, 1985)

⁸ Case No. 2022-00044, Order of Sept. 13, 2022 at 19.

under its bond ordinances, to redeposit withdrawn funds in that fund. The District proposed to deposit \$81,665 of surcharge proceeds into the fund over a period of five years.

Additional 1,000 Meters. The District proposed to purchase over a two-year period an additional 1,000 meters to replace existing meters and to return the District to compliance with the meter testing requirements of 807 KAR 5:066, Section 16.

Water Listening Devices and Leak Loggers. The District's then-existing leak detection equipment was purchased in 2005 and has limited capabilities. The District proposed to purchase a more sensitive and accurate acoustic listening device. It also proposed to purchase within the surcharge's first year water loggers for meter zones experiencing higher than normal water usage.

Pumps and Generator. The District proposed purchasing over a three-year period ten pumps and one portable generator to ensure system resiliency and continuity of service and to prevent potential water loss due to pumping and power failures.

Meter Bench and Meter Building. The District proposed to either construct a new meter facility or renovate its existing meter testing facility and acquire a new test bench capable of testing twelve meters concurrently.

Trucks. The District proposed to purchase within the first 18 months of the surcharge's assessment one truck for use in leak detection and repair work.

Additional Employees. The District proposed hiring as soon as possible one full-time employee whose sole assignment will be leak detection and repair. The employee will work approximately 40 hours per week at a starting hourly wage of \$15.00. Estimated annual cost of \$40,872, includes federal payroll taxes and employer pension contributions.

Repair Reserve Fund. The District proposed to create a reserve fund of approximately \$400,000 to cover the cost of materials and outside labor and other services necessary to repair leaks and replace deteriorating water lines.

Retaining A Water Loss Specialist. The District suggested that any remaining surcharge funds could possibly be used to contract with a firm specializing in water loss reduction to assist in the District in designing and implementing the District's water loss reduction program. The District did not expressly request approval of surcharge funds for this purpose but merely advised the Commission that it was considering such a possibility.

Emergency Water Main Replacement. On February 10, 2023, concurrent with the filing of its revised Infrastructure Improvement Plan, the District also requested authorization to use \$88,576 of surcharge proceeds to replace a damaged water stream crossing and to temporarily withdraw an additional amount not to exceed \$48,413 for materials and outside labor and services related to the replacement crossing's construction pending its receipt of Cleaner Water Grant Funds. On April 14, 2023, the Commission granted the requested authorization.⁹ The District subsequently used \$68,255.42 of Surcharge proceeds to construct the replacement crossing.

⁹ *Electronic Big Sandy Water District's Unaccounted-For Water Loss Reduction Plan, Surcharge And Monitoring*, Case No. 2022-00301 (Ky. PSC Apr. 14, 2023).

**Commission Decision on Amended Infrastructure Improvement Plan
and Requested Expenditures of Surcharge Proceeds**

On May 30, 2023, the Commission authorized the District to use surcharge proceeds to acquire truck, leak detection equipment, and 1,000 water meters and to fund an employee position devoted to water leak detection. It denied the use of surcharge proceeds to reimburse the District’s depreciation reserve fund for its previous purchase of 1,000 meters. Finding the District’s proposed purchase of pumps and generators was not related to the reduction of unaccounted-for water, it denied the District’s request to use surcharge funds for such purchases. Finding that the District had failed to provide a cost benefit analysis to support the use of surcharge proceeds to construct a new meter testing facility or renovate the District’s existing facility, the Commission also denied that request. The Commission declined to endorse or approve the creation of a repair reserve fund and ordered that the District request Commission approval to cover the costs of materials and outside labor to repair leaks as those costs are incurred.¹⁰

Based upon the Commission’s Order of May 30, 2023, the District has purchased 1,000 meters, a truck, and leak detection equipment at a total cost of \$397,727. The District has been unable to employ a qualified person to perform leak detection work under the conditions assumed in its First Revised Infrastructure Improvement Plan. A breakdown of total authorized expenditures to date, including the authorized emergency water main replacement, is shown below.

Expenditure	Date	Amount
Stream Crossing Repair	04/14/2023	\$ 68,255.42
Meter Purchase (500)	06/18/2024	\$164,500.00
Meter Purchase (500)	09/05/2024	\$164,500.00
Itron Digital Leak Detector	10/30/2023	\$ 3,227.00
Ford F-350 Truck	07/01/2023	\$ 65,000.00
TOTAL		\$465,482.42

Proposed Infrastructure Improvements Through September 2027

Based upon the Commission’s assumption that the surcharge will generate \$1,848,960 over a five-year period, surcharge proceeds of approximately \$1,382,712 remain available to fund infrastructure improvements. The District proposes using those proceeds for the following improvements in the following order of priority:

¹⁰ *Electronic Big Sandy Water District’s Unaccounted-For Water Loss Reduction Plan, Surcharge And Monitoring*, Case No. 2022-00301 (Ky. PSC May 30, 2023).

Improvement	Expected Cost
Purchase of Hydro Excavator	\$ 53,276.00
Metering Equipment to Establish Additional DMAs	\$ 101,528.89
Water Line Replacements/Improvements	0
Bear Creek (SR 1937) from Friendship Road to Davis Branch	\$ 775,000.00
Friendship Road Replacement Project	\$ 780,000.00
Silver Run/Arthur Road Replacement Project	\$1,040,000.00
Redbud Subdivision Road	\$ 79,000.00
Deer Park Road/Compton Drive	\$ 120,000.00
Water Line Replacements/Improvements – Engineering Review	\$ 5,370.00
Total	\$2,954,174.89

Purchase of a Hydro Excavator. The District proposes to purchase a hydro excavator at an estimated cost of \$53,276. A hydro excavator uses a blast of pressurized water to quickly create a dirt slurry that is then vacuumed into a storage tank, uncovering water lines without damaging them. Hydro excavation provides for better damage and safety control than the use of mechanical methods. As it is more accurate, it limits accidents and injuries for laborers and the public. It avoids damage to underground facilities, thus reducing expenses needed for repair and restoration. It also limits damage to customers’ property on which broken or leaking lines are located. Equally important, it will allow District employees to more quickly access and repair broken or leaking lines. This use of surcharge proceeds is consistent with prior Commission decisions.¹¹

Purchase of Meters to Create Additional DMAs. The District proposes to purchase ten zone meters to create ten additional DMAs at a total estimated cost of \$101,528.89. It currently has 16 DMAs. The water flow within a DMA can be more effectively monitored, and water leaks more quickly detected, if a DMA contains a smaller number of meters. Currently, the District’s DMAs average approximately 300 meters. With the creation of ten additional DMAs, the average number of meters within a DMA will be 190. The estimated cost includes the cost of nine three-inch meters, one four-inch meters, five six-inch meter assemblies and four four-inch meter assemblies. District employees will install the metering equipment. The District’s proposal is consistent with the Commission’s policy statements in Case No. 2019-00041¹² which endorse and encourage the creation of DMAs and installation of zone meters to better detect water loss.

Water Main Improvements/Replacements. The District has identified five water main improvement/replacement projects that are expected to significantly reduce water loss. The water mains are either the oldest water mains in the District’s system (Silver Run/Arthur Road, Friendship Road, Bear Creek) or are exposed lines embedded in rock (Deer Park) or exposed creek crossings (Red Bud Subdivision Road). A detailed breakdown of the cost of each replacement project is appended to this Plan. The total cost of these projects is \$2,794,000. The District

¹¹ See, e.g., *Application of Graves County Water District for an Alternative Rate Adjustment*, Case No. 2018-00429 (Ky. PSC Sep. 30, 2019); *Electronic Application of Estill County Water District No. 1 for a Surcharge to Finance Water Loss Control Efforts*, Case No. 2019-00119 (Ky. PSC Dec. 13, 2023), Order at 8.

¹² *Electronic Investigation Into Excessive Water Loss By Kentucky’s Jurisdictional Water Utilities*, Case No. 2019-00041 (Ky. PSC Nov. 22, 2019), Order at 6-7 (recommending that “[t]hose water utilities that rely on traditional methods for locating leaks begin installing zone meters to help identify problem areas”).

recognizes that surcharge proceeds are insufficient to fund these projects in their entirety and is actively seeking additional sources of funding. Highest priority will be given to the Silver Run/Arthur Road Replacement Project and the Friendship Road Replacement Project.

Reimbursement of Cost of Engineering Review of Water Main Replacements. The District requests authorization to use \$5,370 of Surcharge proceeds for work which the District's engineers performed to develop cost estimates for the water main improvement projects listed above.

Creation of Leak Detection Employee Position. The District has previously proposed hiring a full-time employee whose sole assignment will be leak detection and repair. It assumed that the employee would work approximately 40 hours per week at a starting hourly wage of \$15.00. The District has been unable to find qualified person interested in the position at the stated wage and has determined that, rather than create the proposed position, it will use surcharge proceeds to focus on the replacement of problem water mains and provide the necessary tools to existing employees to better locate water line leaks and breaks.

APPENDIX

**BIG SANDY WATER DISTRICT
PSC WATER LOSS SURCHARGE
PROJECT ESTIMATES
WATERLINE REPLACEMENTS**

SUMMARY

Redbud Subdivision Road (Lawrence County)		\$79,000
Deer Park Road / Compton Drive (Boyd County)		\$120,000
Bear Creek (S.R. 1937) from Friendship to Davis Branch (Boyd County)		\$775,000
Friendship Road (From Bear Creek to Bowling Drive) (Boyd County)		\$780,000
Silver Run (From Callahan to Whites Creek) (Section A) Arthur Road (off Silver Run Road) (Section B) (Boyd County)	(Const. \$771,500) (Const. \$128,500)	\$1,040,000
	TOTAL	\$2,794,000

PROJECT COST ESTIMATE

BIG SANDY WATER DISTRICT
PSC WATERLINE REPLACEMENTS

BEAR CREEK (S.R. 1937) FROM FRIENDSHIP TO DAVIS BRANCH

Item No.	Description	Total Quantities	Unit Cost	Total Cost
1	10" HDPE, DR 11, IPS Waterline	11,000 LF	\$35	\$385,000
2	3" CL 250 PVC Waterline	250 LF	\$30	\$7,500
3	3/4" Service Line	2,800 LF	\$8	\$22,400
4	10" Gate Valves	6 EA.	\$7,500	\$45,000
5	3" Gate Valves	4 EA.	\$1,500	\$6,000
6	Fire Hydrants	3 EA.	\$7,500	\$22,500
7	Blow Offs	2 EA.	\$1,500	\$3,000
8	Tie New 10" Waterline to Existing 3" Waterline	3 EA.	\$4,000	\$12,000
9	Tie New 10" Waterline to Existing 8" Waterline	2 EA.	\$5,000	\$10,000
10	Reconnect Meters	70 LF	\$800	\$56,000
11	Zone Meters	1 EA.	\$5,000	\$5,000
12	Gravel Replacement	100 SY	\$30	\$3,000
13	Asphalt Replacement	100 SY	\$100	\$10,000
14	Concrete Replacement	100 SY	\$125	\$12,500
15	Utility Markers	20 EA.	\$50	\$1,000
SUBTOTAL				\$600,900

Contingency (10%) +/- \$60,600

Construction Estimate \$661,500

Legal \$2,000

Local Admin \$2,000

Permits \$2,000

Planning \$1,000

Engineering Fees - Design (80%) \$50,500

Engineering Fees - Construction (20%) \$12,500

Resident Inspection \$43,500

TOTAL PROJECT COST ESTIMATE \$775,000

* Fees Rural Development Schedule

PROJECT COST ESTIMATE

DIME #24023
10/29/2024

**BIG SANDY WATER DISTRICT
PSC WATERLINE REPLACEMENTS**

FRIENDSHIP ROAD (FROM BEAR CREEK TO BOWLING DRIVE)

Item No.	Description	Total Quantities	Unit Cost	Total Cost
1	10" HDPE DR11, IPS Waterline	11,000 LF	\$35	\$385,000
2	8" PVC CL 250 Waterline	250 LF	\$45	\$11,250
3	3/4" Service Line	2,200 LF	\$8	\$17,600
4	10" Gate Valves	5 EA.	\$7,500	\$37,500
5	3" Gate Valves	3 EA.	\$1,500	\$4,500
6	Fire Hydrants	2 EA.	\$7,500	\$15,000
7	Blow Off	1 EA.	\$1,500	\$1,500
8	PRV Assembly Vault	2 EA.	\$10,000	\$20,000
9	Tie New 10" Waterline to Existing 8" Waterline	1 EA.	\$5,000	\$5,000
10	Tie New 10" Waterline to Existing 3" Waterline	3 EA.	\$4,000	\$12,000
11	Reconnect Meters	70 EA.	\$800	\$56,000
12	Zone Meters	2 EA.	\$5,000	\$10,000
13	Concrete Encasement	100 LF	\$50	\$5,000
14	Gravel Replacement	100 SY	\$30	\$3,000
15	Asphalt Replacement	100 SY	\$100	\$10,000
16	Concrete Replacement	100 SY	\$125	\$12,500
17	Utility Markers	10 EA.	\$50	\$500
SUBTOTAL				\$606,350

Contingency (10%) +/- \$59,650

Construction Estimate \$666,000

Legal \$2,000

Local Admin \$2,000

Permits \$2,000

Planning \$1,000

Engineering Fees - Design \$51,000

Engineering Fees - Construction \$12,500

Resident Inspection \$43,500

TOTAL PROJECT COST ESTIMATE \$780,000

* Fees Rural Development Schedule

PROJECT COST ESTIMATE
BIG SANDY WATER DISTRICT
PSC WATERLINE REPLACEMENTS

SILVER RUN (FROM CALLAHAN TO WHITES CREEK)

Item No.	Description	Total Quantities	Unit Cost	Total Cost
SECTION A - SILVER RUN (FROM CALLAHAN TO WHITES CREEK)				
1	6" HDPE DR11, IPS Waterline	21,800 L.F.	\$25	\$545,000
2	3/4" Service Line	2,700 LF	\$8	\$21,600
3	8" Gate Valves	2 EA.	\$4,500	\$9,000
4	6" Gate Valves	8 EA.	\$3,500	\$28,000
5	4" Gate Valves	2 EA.	\$2,000	\$4,000
6	Fire Hydrants	3 EA.	\$7,500	\$22,500
7	Blow Off	1 EA.	\$1,500	\$1,500
8	Tie New 6" Waterline to Existing 8" Waterline	2 EA.	\$4,000	\$8,000
9	Tie New 6" Waterline to Existing 4" Waterline	1 EA.	\$2,500	\$2,500
10	Zone Meter	1 EA.	\$5,000	\$5,000
11	Reconnect Meters	53 EA.	\$800	\$42,400
12	Gravel Replacement	50 SY	\$30	\$1,500
13	Asphalt Replacement	50 SY	\$100	\$5,000
14	Concrete Replacement	50 SY	\$125	\$6,250
15	Utility Markers	10 EA.	\$50	\$500
SUBTOTAL SECTION A				\$702,750
SECTION B - ARTHUR ROAD (OFF SILVER RUN ROAD)				
1	4" HDPE DR 11, IPS Waterline	4,332 L.F.	\$15	\$64,980
2	3/4" Service Line	1,600 LF	\$8	\$12,800
3	4" Gate Valves	3 EA.	\$2,000	\$6,000
4	Fire Hydrant	1 EA.	\$7,500	\$7,500
5	Blow Off	1 EA.	\$1,500	\$1,500
6	Tie New 6" Waterline to Existing 4" Waterline	1 EA.	\$2,500	\$2,500
7	Reconnect Meters	12 EA.	\$800	\$9,600
8	Gravel Replacement	50 SY	\$50	\$2,500
9	Asphalt Replacement	50 SY	\$100	\$5,000
10	Concrete Replacement	50 SY	\$125	\$6,250
11	Utility Markers	5 EA.	\$50	\$250
SUBTOTAL SECTION B				\$118,880
TOTAL				\$821,630

Contingency (10%) +/-	78,370
Construction Estimate	900,000
Legal	2,000
Local Admin	2,000
Permits	2,000
Planning	1,000
Engineering Fees - Design (80%)	64,800
Engineering Fees - Construction (20%)	16,200
Resident Inspection	52,000
TOTAL PROJECT COST ESTIMATE	1,040,000

* Fees Rural Development Schedule

PROJECT COST ESTIMATE**BIG SANDY WATER DISTRICT
PSC WATERLINE REPLACEMENTS****REDBUD SUBDIVISION ROAD**

Item No.	Description	Total Quantities	Unit Cost	Total Cost
1	4" CL 250 PVC Waterline	1,050 LF	\$18	\$18,900
2	3" CL 250 PVC Waterline	250 LF	\$12	
3	3/4" Service Line	200 LF	\$8	\$1,600
4	4" Gate Valves	2 EA.	\$2,000	\$4,000
5	3" Gate Valves	2 EA.	\$1,600	\$3,200
6	Blow Off	1 EA.	\$3,000	\$3,000
7	Reconnect Existing Meters	7 EA.	\$800	\$5,600
8	Tie New 4" Waterline to Existing 4" Waterline	2 EA.	\$3,000	\$6,000
9	Tie New 3" Waterline to Existing 2" Waterline	1 EA.	\$1,500	\$1,500
10	Concrete Encasement	30 LF	\$50	\$1,500
11	Gravel Replacement	25 SY	\$30	\$750
12	Asphalt Replacement (HD/LD)	40 SY	\$100	\$4,000
13	Concrete Replacement	25 SY	\$125	\$3,125
14	Utility Markers	2 EA.	\$50	\$100
15	8" PVC Casing	40 LF	\$15	\$600
16	End Caps	2 EA.	\$400	\$800
SUBTOTAL				\$54,675

Contingency (10%) +/-	\$5,325
Construction Estimate	\$60,000
Legal	\$500
Local Admin	\$500
Permits	\$1,000
Planning	\$500
Engineering Fees - Design	\$7,000
Engineering Fees - Construction	\$1,500
Resident Inspection	\$8,000
TOTAL PROJECT COST ESTIMATE	\$79,000

* Fees Rural Development Schedule

PROJECT COST ESTIMATE**BIG SANDY WATER DISTRICT
PSC WATERLINE REPLACEMENTS****DEER PARK ROAD / COMPTON DRIVE WATERLINE REPLACEMENT**

Item No.	Description	Total Quantities	Unit Cost	Total Cost
1	3" CL 250 PVC Waterline (Solid Rock)	2,500 LF	\$25	\$62,500
2	3/4" Service Line	250 LF	\$8	\$2,000
3	3" Gate Valves	2 EA.	\$1,600	\$3,200
4	Air Release Valve	1 EA.	\$3,000	\$3,000
5	Blow Off	1 EA.	\$3,000	\$3,000
6	Reconnect Existing Meters	5 EA.	\$800	\$4,000
7	Tie New 3" Waterline to Existing 3" Waterline	2 EA.	\$1,800	\$3,600
8	Gravel Replacement	100 SY	\$30	\$3,000
9	Utility Markers	5 EA.	\$50	\$250
SUBTOTAL				\$84,550

Contingency (10%) +/- \$8,450

Construction Estimate \$93,000

Legal \$500

Local Admin \$500

Permits \$500

Planning \$500

Engineering Fees - Design \$10,400

Engineering Fees - Construction \$2,600

Resident Inspection \$12,000

TOTAL PROJECT COST ESTIMATE \$120,000

* Fees Rural Development Schedule

EXHIBIT D

EV 150 VACUUM EXCAVATOR



HYDRAULIC TILT TANK. Efficiently offload debris.



40 GALLON WATER TANK. Has 40 gal (151 L) of fresh water with 4 gpm (15 L/min) @ 3,000 psi water pump.



FLOWMASTER (OPTION). The FlowMaster option can be used to hydraulically exercise water valves and hydrants, making sure they will work properly in times of need.



I BEAM TRAILER. Units are built from start to finish at our factory, including the trailer which consists of a sturdy I beam construction.



VERMEER.COM

Vermeer

EQUIPPED TO
DO MORE.

EV 150 VACUUM EXCAVATOR

DIMENSIONS - SKID	
Length	150 in (381 cm)
Width	55 in (140 cm)
Height	46 in (117 cm)
Empty weight	1,800 lb (816 kg)
DIMENSIONS - TRAILER	
Length	196 in (498 cm)
Width	72 in (188.9 cm)
Height	60 in (152.4 cm)
Empty weight	2,100 lb (953 kg)
GVWR	3,500 lb (1,587.6 kg)
Trailer axles	(1) 3,500 lb (1,587.6 kg)
ENGINE	
Make and model	Kohler EFI gas
Enclosure	N/A
Horsepower	27 hp (20 kW)
Fuel tank capacity	5 gal (19 L)
WATER TANK	
Water tank capacity	40 gal (151 L)
Number of Tanks	1
High pressure pump flow rate	4 gpm (15 L/min)
High pressure pump	3,000 psi (207 bar)
High pressure jetter hose length	50 ft (15.2 m)
Low water shutoff	Yes
SPOIL TANK	
Spoil tank capacity	150 gal (567.8 L)
Door type	Manual wheel-locking system
Tank lift type	Hydraulic tilt
VACUUM	
Type of filters	.5 micron
Hose length	30 ft (9.1 m)
Hose width	3 in (7.9 cm)
Vacuum	580 cfm (985 m ³ /hr)
Vacuum blower type	PD blower
Vacuum mercury	13 in hg (.3 bar)
CONTROL PANEL	
Controls	Curbside
Gauges	Analog
OPTIONS (FOR ALL)	

- FlowMaster - also offered with auxiliary hydraulics
- Air gap

Vermeer MV Solutions, Inc. reserves the right to make changes in engineering, design and specifications; add improvements; or discontinue manufacturing at any time without notice or obligation. Equipment shown is for illustrative purposes only and may display optional accessories or components specific to their global region. Please contact your local Vermeer dealer for more information on machine specifications. Vermeer and the Vermeer logo are trademarks of Vermeer Manufacturing Company in the U.S. and/or other countries. Kohler is a trademark of Kohler Co. © 2021 Vermeer MV Solutions, Inc. All Rights Reserved. Printed in the U.S.A. Please recycle.



EXHIBIT E



LEWIS
MUNICIPAL SALES

P.O. Box 576, Carmel, IN 46082

Phone - 317-606-0554 Fax - 877-807-1018

Scott.Lewis@Lewissales.com www.Lewissales.com

Quotation Number: LMQ121624-S2

To: Jimmy
Big Sandy Water District
18211 KY-3, Catlettsburg, KY 41129

RFQ#: Verbal

Ship To: Same

Date: December 14, 2024

Valid For: 60 days

Product Quantity

Product Description

Price

One	VAC300G 300 gallon debris tank on Heavy Duty Trailer with brakes and electric light system. 95 gallon water tank with high pressure, 4.8 gpm@3,000 psi, and low pressure wand for cleaning. 6 gallon anti-freeze tank. 38 HP Kohler fuel injected engine, Blower is 495 CFM @ 14Hg suction power. Ample power to perform all activities simultaneously at noted performance. 80db silence muffler. Hydraulic drive system. Spin Doctor 800 with standard head. Four Section valve wrench with Hydrant adapter included.	
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Cost - \$59,400.00 Delivered

* During the manufacturer's warranty period, Lewis Municipal Sales will provide any repair or service assistance at no additional charge. This excludes normal maintenance and fluid changes, but includes any unusual/unexpected repair issues to the equipment or trailer and the review of proper equipment use. ** Training on equipment included from Lewis Municipal Sales. ***All prices are FOB Harrisburg, South Dakota, delivered. ****Spin Doctor Boom assembly carries a limited lifetime warranty against torque related damage.



Vermeer
Heartland

2574 US HWY 22 NW
Washington CH, OH 43160
740-335-8571 Office

424 S. Mulberry St
Elizabethtown, KY 42701
270-737-1721 Office

5900 MacCorkle Ave
Saint Albans, WV 25177
304-768-5965 Office

LaVergne
1600 Hell Quaker Blvd
La Vergne, TN 37086
615-535-0222 Office

Knoxville
9724 Parkside Dr
Knoxville, TN 37922
865-524-9174 Office

Cincinnati
6455 Gano Road
West Chester, OH 45069
513-587-6907 Office

Ship To: IN STORE PICKUP

Invoice To: BIG SANDY WATER DISTRICT
18200 KY. RT. #3
CATLETTSBURG KY 41129

Branch 10 - WCH -OH		
Date 12/17/2024	Time 7:57:27 (O)	Page 1
Account No BIGSA001	Phone No 6069282075	Est No 03 Q02369
Ship Via	Purchase Order 1	
Tax ID No		
SCOTT BUTTS		Salesperson 202

EQUIPMENT ESTIMATE - NOT AN INVOICE

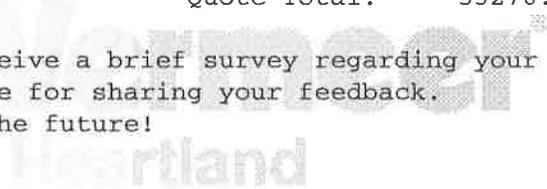
Description ** Q U O T E ** EXPIRY DATE: 01/17/2025 Amount

NEW VERMEER EV150 TRAILER VAC 49675.00
27 HP Kohler EFI Gas Engine, 580 CFM Vacuum Pump, Baghouse,
150 Gallon Debris Tank with Hydraulic Tilt, 3000 PSI @ 4
GPM - High Pressure Water System, 5 Gallon Fuel Tank, 40
Gallon Water Tank, Anti-Freeze Tank, Air Gap, 30' x 3"
Suction Hose and Suction Tool, Manual Door with Spin Wheel
Lock, Water Knife and Clean-up wand.
FLOWMASTER (INCLUDES ARM, HEAD, HYDRANT HOSE, DIFFUSER BOX,
TOOLS, & TOOL BOX)

Sale Total: 49675.00
Subtotal: 49675.00
FAYETTE County: 745.13
OH STATE TAX: 2856.31
Quote Total: 53276.44

Authorization: _____

We appreciate your business! You may receive a brief survey regarding your purchase experience. Thank you in advance for sharing your feedback. It helps us improve your experience in the future!



If above equipment is New: The Vermeer limited warranty is the only warranty applicable to this new equipment and is expressly in lieu of all other warranties by the seller/dealer, either expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose. Nothing in this language shall modify or change the obligations set forth in the existing manufacturer's written warranty.

If above equipment is Used: Any used equipment sold to the purchaser by the dealer under this written agreement is sold at the time of delivery by seller/dealer without any guarantee or warranty of merchantability or fitness for a particular purpose, as to its condition or the condition of any part thereof except as may be otherwise specifically provided in writing on the face of this purchase order or in a separate writing furnished to the purchaser by the dealer at the time of sale.

A FINANCE CHARGE of 11/2% per month shall be charged to accounts on the 11th day of each month on the amount of the previous balance remaining unpaid. This FINANCE CHARGE is equivalent to an ANNUAL PERCENTAGE RATE OF 18%.

CUSTOMER IS RESPONSIBLE FOR ANY AND ALL TAXES NOT COLLECTED BY VERMEER HEARTLAND, INC.

Thank You For Your Business!



Vermeer
Heartland

2574 US HWY 22 NW
Washington CH, OH 43160
740-335-8571 Office

424 S. Mulberry St
Elizabethtown, KY 42701
270-737-1721 Office

5900 MacCorkle Ave
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1600 Hell Quaker Blvd
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Knoxville
9724 Parkside Dr
Knoxville, TN 37922
865-524-9174 Office

Cincinnati
6455 Gano Road
West Chester, OH 45069
513-587-6907 Office

Ship To: IN STORE PICKUP

Invoice To: BIG SANDY WATER DISTRICT
18200 KY. RT. #3
CATLETTSBURG KY 41129

Branch 10 - WCH - OH		
Date 12/17/2024	Time 7:56:32 (O)	Page 1
Account No BIGSA001	Phone No 6069282075	Est No 02 Q02370
Ship Via	Purchase Order 1	
Tax ID No		
SCOTT BUTTS		Salesperson 202

EQUIPMENT ESTIMATE - NOT AN INVOICE

Description ** Q U O T E ** EXPIRY DATE: 01/17/2025 Amount

NEW VERMEER LP573XDT TRAILER VAC w/ 12k GVWR TRAILER 86173.00
 Include: 24 HP Kohler Diesel (Tier 4 Final) Engine, 580 CFM Vacuum Pump, Baghouse, Hydraulic Pump. Debris Tank with Hydraulic Tilt, 3000 PSI @ 4 GPM - High Pressure Water System, Fully enclosed and insulated engine stand (lockable), Anti-Freeze Tank, Air Gap, Reverse Pressure to off-load liquids and dislodge debris in hose, Polymer liner on bottom half of tank for easy dumping and cleanout, 30' x 3" Suction Hose and Suction Tool, Hydraulically operated full open and locking rear door, Water Knife and Clean-up wand, 30 Gallon Fuel Tank
 HYDRAULIC JACK
 FLOWMASTER & AUXILIARY HYDRAULICS 500 GAL TANK (INCLUDES ARM, HEAD, HYDRANT HOSE, DIFFUSER BOX, TOOLS, TOOL BOX, & HYDRAULIC PUMP).

Sale Total: 86173.00
 Subtotal: 86173.00
 FAYETTE County: 1292.60
 OH STATE TAX: 4954.95
 Quote Total: 92420.55

Authorization: _____

We appreciate your business! You may receive a brief survey regarding your purchase experience. Thank you in advance for sharing your feedback. It helps us improve your experience in the future!

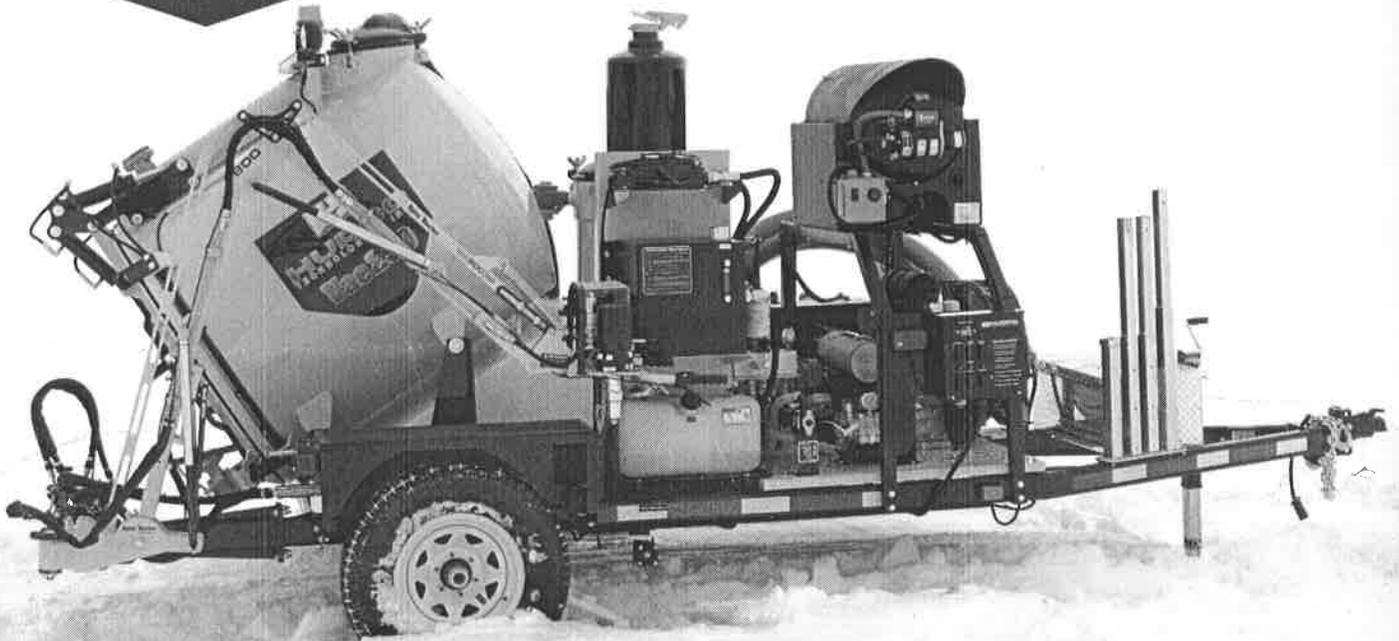
If above equipment is New: The Vermeer limited warranty is the only warranty applicable to this new equipment and is expressly in lieu of all other warranties by the seller/dealer, either expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose. Nothing in this language shall modify or change the obligations set forth in the existing manufacturer's written warranty.

If above equipment is Used: Any used equipment sold to the purchaser by the dealer under this written agreement is sold at the time of delivery by seller/dealer without any guarantee or warranty of merchantability or fitness for a particular purpose, as to its condition or the condition of any part thereof except as may be otherwise specifically provided in writing on the face of this purchase order or in a separate writing furnished to the purchaser by the dealer at the time of sale.

A FINANCE CHARGE of 11/2% per month shall be charged to accounts on the 11th day of each month on the amount of the previous balance remaining unpaid. This FINANCE CHARGE is equivalent to an ANNUAL PERCENTAGE RATE OF 18%.

CUSTOMER IS RESPONSIBLE FOR ANY AND ALL TAXES NOT COLLECTED BY VERMEER HEARTLAND, INC.

Thank You For Your Business!



AFFORDABLE VACUUM
HYDRO EXCAVATION



VAC300

The HURCO VAC300 is the perfect trailer mounted hydro excavation tool, making quick work of your maintenance, repair and excavation needs.

We utilize top of the line components including Cat® or Kohler® engines and Gardner Denver® blowers, so you know you'll have years of hassle free performance.

The 330 gallon spoils tank provides ample capacity for smaller daily tasks, such as:

- Potholing for buried utilities
- Clean out water main valve boxes, catch basins and storm drains
- Making post holes for signs or fences
- Excavate and replace valve boxes
- Various jobsite cleanup tasks



For a 600 gallon spoils / 200 gallon water option, we offer the VAC600, which provides the best suction, water pressure and ease of use of any comparable unit available.

Visit our website for more information, or call us for a demonstration!

Specifications

VAC300 GAS OR DIESEL

POWER / CONTROLS

CONTROLS

Engine	DEISEL: Caterpillar C2.2 Industrial Diesel Engine. Highly Regulated. 49.6 bhp. 27.0 bkW. 3000 rpm. I4, 4-Stroke. Amply powered to perform all activities simultaneously at noted performance. EPA (US) Tier 4 Interim, Stage IIA (EU) emissions requirements. GAS: 37HP Gasoline Engine. Kohler Command Pro. V-twin cylinder, 4-cycle. Amply powered to perform all activities simultaneously at noted performance. Meets EPA and CARB Emissions Standards.
Controls	Curbside Panel. Digital tachometer/ engine hour meter, vacuum gauge, spoils rear door switch, water pump switch, strobe light switch, work light switch, low water bypass switch, Spin Doctor / Aux Switch, engine control panel Model LOFA EP250
Electrical Power	12 Volt system. 12 Volt Battery.
Hydraulic System	9 GPM @ 2250 PSI. Direct coupled hydraulic pump. Temperature / oil level gauge, pressure gauge, spin on filter, 15 gallon reservoir.

SPOILS

SPOILS

Debris Holding Tank	300 gallon holding capacity. Top hinged fully opening dump door with twin hydraulic lift cylinders. Door is locked using a 4 point spider positive locking system. Compressible rear door O-ring. Vacuum breaker factory preset and certified at 14 Hg. 4 inch rear door dump valve. 4 inch steel suction tube with 4 inch gate valve.
Dumping	32 degree angle fixed pitch debris tank for self unloading. No mechanical lift will be allowed. 4 inch drain valve to dump liquids without opening rear door.

VACUUM

VACUUM

Vacuum Pump	495 CFM @ 14 Hg. Gardner Denver Legend R Series Blower. Dual Belt Driven. 80 db silencer muffler. HiCFM available for diesel - 845 CFM @ 14" Hg (referred to as 1000 CFM)
Filtration	19 - 5 micron filtration tubes. Grain dust rated. Washable. High velocity heavy material dropout debris tank with 3 inch quick drain valve.
Hose and Wands	25 feet of 3 inch hose with quick connect ball and socket connection on both ends. Hose end increases at suction tube to 4 inch to help prevent clogging. 3 inch suction tube with PVC extension, 8 feet long.

WATER

WATER

Pressure Washer Pump	4.8 GPM at 3000 PSI. Clutch operated, single belt drive, Cat Pump pressure sensitive regulating unloader valve. Y-strainer water filter element. 6 gallon antifreeze tank with 2 position selector valve.
Capacity	95 gallon water tank.
Hose and Wands	50 feet high pressure hose on manual hose reel with positive lock for travel. 3 foot wash down wand and 8 foot emulsifying wand. High pressure quick disconnects.

TRAILER / LIGHTING

LIGHTING

Trailer Frame	Power System Skid Frame is constructed of 4" x 1-5/8" 5.4 lbs structural steel channel. All spliced joints are reinforced with a splice plate. Frame deck is 7 ga. steel. Power System plate is mounted on anti-vibration mounts. 2 - 7000 lb Dexter Torflex axles with electric brakes. 285.16 load range E tires and wheels. Battery operated electric breakaway brake system. 7000 lb Bull Dog trailer jack. Acid wash and baked on Powder Coat finish. Non-skid surface on fenders. 2-5/16 standard Ball Hitch with safety chains. Pintle hitch available.
Lighting / Reflectors	DOT approved LED lights with environmentally sealed connectors. DOT Red and White safety striping and side marker lights. Provides all legally required lighting and reflectors for trailers under 80" wide. 12 volt DOT compliant amber strobe light. 2 swiveling work lights.
Approximate Weight and Dimensions	Overall - 204" long x 79" wide x 98" height to top of strobe light. 12" ground clearance. GVWR - 4600 lbs. Payload capacity - 14000 lbs. Tongue weight - 550 lbs

ADDITIONAL OPTIONS

OPTIONS

Tool Box	Heavy Duty locking polished diamond plate tool box.
Arrow Board	Programmable arrow board with controller
Wands	Additional sized pressure washer wands and suction wands
Heat Exchanger	Thermostatic Controlled fan cooled heat exchanger / cooler and temperature gauge.
Hot Water Heater	Diesel fired. 12 volt burner. 340,000 BTU. 9 GPM @ 4000 PSI capable.
Auxiliary Hydraulics	Auxiliary power tool circuit
Hydraulic Tools	Various hydraulic tools available. Contact Hurco for information.

Additional options may be available; please contact us with any requests.

Visit our website for more information, or call us for a demonstration!

EXHIBIT F

Request for quote

2 messages

Jessica Sexton <jsexton@bigsandywater.com>
To: Bill Howell <BHowell@necowater.com>

Fri, Oct 18, 2024 at 8:34 AM

Good morning!
We are looking into purchasing more zone meters to help with water loss detection. Could you send me a quote on a 2" and 3" zone meter?

Thank you,

—
Jessica Sexton
Big Sandy Water District
(606) 928-2075

Bill Howell <BHowell@necowater.com>
To: Jessica Sexton <jsexton@bigsandywater.com>

Fri, Oct 18, 2024 at 9:36 AM

Hi Jessica –
Absolutely – the pricing is below.

Meter	Unit Price	Optional Cellular Adder
2" MACH Ultrasonic Water Meter	\$ 1,108.00	\$ 180.00
3" MACH Ultrasonic Water Meter	\$ 2,993.23	\$ 180.00

Because they are zone meters – I added the option of adding a cellular transmitter. Of course, as Jimmy and I found out you need at least 2-bars of coverage to get consistent reports. Less than that and they do not do very well, but if it is fortunate enough to have coverage they will report directly into your 360 with cellular.

The base unit price includes your standard radio read style.

I also attached product sheets on both sizes.

Please let me know if you have any questions or need more information – thanks!

Bill

Bill Howell
Kentucky Sales Manager

email: BHowell@necowater.com



QUOTATION

Quotation Number **S151416**
 Version Number **1**
 Quotation Date **10/18/2024**

JOB NAME 6" ZONE METER ASSEMBLY

SALE SITE
 CONSOLIDATED PIPE & SUPPLY
 907 HONEYBRANCH INDL PARK
 DEBORD, KY 41214-8915
 PHONE: 606-298-0333

SHIP TO
 BIG SANDY WATER DIST
 RT 3 MAINTENANCE SHOP
 CATLETTSBURG, KY 41129, USA

Last Communication
Expiration Date 11/29/2024
Written By Brian Hansel
Customer RFQ
Customer Number KY0280252L
Requested By JIM BLANTON
Sales Rep Brian Hansel

SOLD TO
 BIG SANDY WATER DIST
 18200 STATE ROUTE 3
 CATLETTSBURG, KY 41129, USA

Ship Via Our Truck
Delivery Terms Prepaid Destination
Payment Terms Net 30 Days

SALES

Line	CPS Part No Part Description	Wanted Delivery Date	Sales Qty	UoM	Unit Net Price	Extended Amount
1	20-0600-01423		2.00	EA	\$242.13	\$484.26
1.1	6x3 C153 DI TEE L/ACC MJ IMP					
2	60-0300-00101		20.00	FT	\$74.70	\$1,494.00
2.1	3 CL52 ASPHALT COATED OD CEMENT ID DI PIPE SJ					
3	20-0300-00912		2.00	EA	\$77.15	\$154.30
3.1	3 C153 DI 90 ELBOW LESS ACC MJ IMP					
4	22-0300-00197		2.00	EA	\$875.51	\$1,751.02
4.1	3 MUELLER A-2361-23 DI OL GATE VALVE L/ACC MJ 2" OP NUT					
5	22-0600-00216		1.00	EA	\$1,089.75	\$1,089.75
5.1	6 MUELLER A-2361-23 DI OL GATE VALVE L/ACC MJ 2" OP NUT					
6	20-0300-01597		8.00	EA	\$65.07	\$520.56
6.1	3 MIDLAND 3019 MIDCO GRIPPER SETS					
7	20-0600-00874		2.00	EA	\$649.16	\$1,298.32
7.1	6 ROMAC ALPHA ALPHA-A-7.00 EPOXY DI RESTRAINT COUPLING					
8	20-0600-00792		6.00	EA	\$97.40	\$584.40
8.1	6 ROMAC GRAP-IP DI GRIP RING RESTRAINT DOM					

Subtotal Amount \$7,376.61
 Tax Amount \$0.00
Total \$7,376.61

6" ZONE METER ASSEMBLY
 CUSTOMER WILL PROVIDE METER & STRAINER

This Quotation is subject to and will be governed by Consolidated Pipe's Domestic Terms and Conditions which can be found at <https://consolidatedpipe.com/wp-content/uploads/Consolidated-Pipe-Supply-General-Terms-and-Conditions-of-Sale-10.1.16-03622602-7.pdf>. Only Consolidated Pipe's Terms and Conditions shall apply. Any other new, additional or conflicting terms and conditions shall be inapplicable to this Quotation as well as to any related purchase order or other agreement, or any performance thereunder.



QUOTATION

Quotation Number **S151430**
 Version Number **1**
 Quotation Date **10/18/2024**

JOB NAME 4" ZONE METER ASSEMBLY

SALE SITE
 CONSOLIDATED PIPE & SUPPLY
 907 HONEYBRANCH INDL PARK
 DEBORD, KY 41214-8915
 PHONE: 606-298-0333

SHIP TO
 BIG SANDY WATER DIST
 RT 3 MAINTENANCE SHOP
 CATLETTSBURG, KY 41129, USA

Last Communication
Expiration Date 11/29/2024
Written By Brian Hansel
Customer RFQ
Customer Number KY0280252L
Requested By JIM BLANTON
Sales Rep Brian Hansel

SOLD TO
 BIG SANDY WATER DIST
 18200 STATE ROUTE 3
 CATLETTSBURG, KY 41129, USA

Ship Via Our Truck
Delivery Terms Prepaid Destination
Payment Terms Net 30 Days

SALES

Line	CPS Part No Part Description	Wanted Delivery Date	Sales Qty	UoM	Unit Net Price	Extended Amount
1	20-0400-01357		2.00	EA	\$183.85	\$367.70
1.1	4x3 C153 DI TEE L/ACC MJ					
2	60-0300-00101		20.00	FT	\$74.70	\$1,494.00
2.1	3 CL52 ASPHALT COATED OD CEMENT ID DI PIPE SJ					
3	20-0300-00912		2.00	EA	\$77.15	\$154.30
3.1	3 C153 DI 90 ELBOW LESS ACC MJ					
4	22-0300-00197		2.00	EA	\$875.51	\$1,751.02
4.1	3 MUELLER A-2361-23 DI OL GATE VALVE L/ACC MJ 2" OP NUT					
5	22-0400-00263		1.00	EA	\$929.19	\$929.19
5.1	4 MUELLER A-2361-23 DI OL GATE VALVE L/ACC MJ 2" OP NUT					
6	20-0400-00857		6.00	EA	\$82.47	\$494.82
6.1	4 ROMAC GRAP-IP DI GRIP RING RESTRAINT DOM					
7	20-0300-01597		8.00	EA	\$65.07	\$520.56
7.1	3 MIDLAND 3019 MIDCO GRIPPER SETS					
8	20-0400-00929		2.00	EA	\$474.96	\$949.92
8.1	4 ROMAC ALPHA ALPHA-A-4.90 EPOXY DI RESTRAINT COUPLING					
Subtotal Amount						\$6,661.51
Tax Amount						\$0.00
Total						\$6,661.51

4" ZONE METER ASSEMBLY
 CUSTOMER TO PROVIDE METER & STRAINER

This Quotation is subject to and will be governed by Consolidated Pipe's Domestic Terms and Conditions which can be found at <https://consolidatedpipe.com/wp-content/uploads/Consolidated-Pipe-Supply-General-Terms-and-Conditions-of-Sale-10.1.16-03622602-7.pdf>. Only Consolidated Pipe's Terms and Conditions shall apply. Any other new, additional or conflicting terms and conditions shall be inapplicable to this Quotation as well as to any related purchase order or other agreement, or any performance thereunder.

EXHIBIT G

**BIG SANDY WATER DISTRICT
PSC WATER LOSS SURCHARGE
PROJECT ESTIMATES
WATERLINE REPLACEMENTS**

SUMMARY

Redbud Subdivision Road (Lawrence County)		\$79,000
Deer Park Road / Compton Drive (Boyd County)		\$120,000
Bear Creek (S.R. 1937) from Friendship to Davis Branch (Boyd County)		\$775,000
Friendship Road (From Bear Creek to Bowling Drive) (Boyd County)		\$780,000
Silver Run (From Callahan to Whites Creek) (Section A) Arthur Road (off Silver Run Road) (Section B) (Boyd County)	(Const. \$771,500) (Const. \$128,500)	\$1,040,000
	TOTAL	\$2,794,000

PROJECT COST ESTIMATE

**BIG SANDY WATER DISTRICT
PSC WATERLINE REPLACEMENTS**

SILVER RUN (FROM CALLAHAN TO WHITES CREEK)

Item No.	Description	Total Quantities	Unit Cost	Total Cost
SECTION A - SILVER RUN (FROM CALLAHAN TO WHITES CREEK)				
1	6" HDPE DR11, IPS Waterline	21,800 L.F.	\$25	\$545,000
2	3/4" Service Line	2,700 LF	\$8	\$21,600
3	8" Gate Valves	2 EA.	\$4,500	\$9,000
4	6" Gate Valves	8 EA.	\$3,500	\$28,000
5	4" Gate Valves	2 EA.	\$2,000	\$4,000
6	Fire Hydrants	3 EA.	\$7,500	\$22,500
7	Blow Off	1 EA.	\$1,500	\$1,500
8	Tie New 6" Waterline to Existing 8" Waterline	2 EA.	\$4,000	\$8,000
9	Tie New 6" Waterline to Existing 4" Waterline	1 EA.	\$2,500	\$2,500
10	Zone Meter	1 EA.	\$5,000	\$5,000
11	Reconnect Meters	53 EA.	\$800	\$42,400
12	Gravel Replacement	50 SY	\$30	\$1,500
13	Asphalt Replacement	50 SY	\$100	\$5,000
14	Concrete Replacement	50 SY	\$125	\$6,250
15	Utility Markers	10 EA.	\$50	\$500
SUBTOTAL SECTION A				\$702,750
SECTION B - ARTHUR ROAD (OFF SILVER RUN ROAD)				
1	4" HDPE DR 11, IPS Waterline	4,332 L.F.	\$15	\$64,980
2	3/4" Service Line	1,600 LF	\$8	\$12,800
3	4" Gate Valves	3 EA.	\$2,000	\$6,000
4	Fire Hydrant	1 EA.	\$7,500	\$7,500
5	Blow Off	1 EA.	\$1,500	\$1,500
6	Tie New 6" Waterline to Existing 4" Waterline	1 EA.	\$2,500	\$2,500
7	Reconnect Meters	12 EA.	\$800	\$9,600
8	Gravel Replacement	50 SY	\$50	\$2,500
9	Asphalt Replacement	50 SY	\$100	\$5,000
10	Concrete Replacement	50 SY	\$125	\$6,250
11	Utility Markers	5 EA.	\$50	\$250
SUBTOTAL SECTION B				\$118,880
TOTAL				\$821,630

Contingency (10%) +/-	78,370
Construction Estimate	900,000
Legal	2,000
Local Admin	2,000
Permits	2,000
Planning	1,000
Engineering Fees - Design (80%)	64,800
Engineering Fees - Construction (20%)	16,200
Resident Inspection	52,000
TOTAL PROJECT COST ESTIMATE	1,040,000

* Fees Rural Development Schedule

PROJECT COST ESTIMATE

DIVE #24023
10/29/2024

**BIG SANDY WATER DISTRICT
PSC WATERLINE REPLACEMENTS**

FRIENDSHIP ROAD (FROM BEAR CREEK TO BOWLING DRIVE)

Item No.	Description	Total Quantities	Unit Cost	Total Cost
1	10" HDPE DR11, IPS Waterline	11,000 LF	\$35	\$385,000
2	8" PVC CL 250 Waterline	250 LF	\$45	\$11,250
3	3/4" Service Line	2,200 LF	\$8	\$17,600
4	10" Gate Valves	5 EA.	\$7,500	\$37,500
5	3" Gate Valves	3 EA.	\$1,500	\$4,500
6	Fire Hydrants	2 EA.	\$7,500	\$15,000
7	Blow Off	1 EA.	\$1,500	\$1,500
8	PRV Assembly Vault	2 EA.	\$10,000	\$20,000
9	Tie New 10" Waterline to Existing 8" Waterline	1 EA.	\$5,000	\$5,000
10	Tie New 10" Waterline to Existing 3" Waterline	3 EA.	\$4,000	\$12,000
11	Reconnect Meters	70 EA.	\$800	\$56,000
12	Zone Meters	2 EA.	\$5,000	\$10,000
13	Concrete Encasement	100 LF	\$50	\$5,000
14	Gravel Replacement	100 SY	\$30	\$3,000
15	Asphalt Replacement	100 SY	\$100	\$10,000
16	Concrete Replacement	100 SY	\$125	\$12,500
17	Utility Markers	10 EA.	\$50	\$500
SUBTOTAL				\$606,350

Contingency (10%) +/- \$59,650

Construction Estimate \$666,000

Legal \$2,000

Local Admin \$2,000

Permits \$2,000

Planning \$1,000

Engineering Fees - Design \$51,000

Engineering Fees - Construction \$12,500

Resident Inspection \$43,500

TOTAL PROJECT COST ESTIMATE \$780,000

* Fees Rural Development Schedule

PROJECT COST ESTIMATE**BIG SANDY WATER DISTRICT
PSC WATERLINE REPLACEMENTS****REDBUD SUBDIVISION ROAD**

Item No.	Description	Total Quantities	Unit Cost	Total Cost
1	4" CL 250 PVC Waterline	1,050 LF	\$18	\$18,900
2	3" CL 250 PVC Waterline	250 LF	\$12	
3	3/4" Service Line	200 LF	\$8	\$1,600
4	4" Gate Valves	2 EA.	\$2,000	\$4,000
5	3" Gate Valves	2 EA.	\$1,600	\$3,200
6	Blow Off	1 EA.	\$3,000	\$3,000
7	Reconnect Existing Meters	7 EA.	\$800	\$5,600
8	Tie New 4" Waterline to Existing 4" Waterline	2 EA.	\$3,000	\$6,000
9	Tie New 3" Waterline to Existing 2" Waterline	1 EA.	\$1,500	\$1,500
10	Concrete Encasement	30 LF	\$50	\$1,500
11	Gravel Replacement	25 SY	\$30	\$750
12	Asphalt Replacement (HD/LD)	40 SY	\$100	\$4,000
13	Concrete Replacement	25 SY	\$125	\$3,125
14	Utility Markers	2 EA.	\$50	\$100
15	8" PVC Casing	40 LF	\$15	\$600
16	End Caps	2 EA.	\$400	\$800
SUBTOTAL				\$54,675

Contingency (10%) +/-	\$5,325
Construction Estimate	\$60,000
Legal	\$500
Local Admin	\$500
Permits	\$1,000
Planning	\$500
Engineering Fees - Design	\$7,000
Engineering Fees - Construction	\$1,500
Resident Inspection	\$8,000
TOTAL PROJECT COST ESTIMATE	\$79,000

* Fees Rural Development Schedule

10/29/2024

PROJECT COST ESTIMATE**BIG SANDY WATER DISTRICT
PSC WATERLINE REPLACEMENTS****DEER PARK ROAD / COMPTON DRIVE WATERLINE REPLACEMENT**

Item No.	Description	Total Quantities	Unit Cost	Total Cost
1	3" CL 250 PVC Waterline (Solid Rock)	2,500 LF	\$25	\$62,500
2	3/4" Service Line	250 LF	\$8	\$2,000
3	3" Gate Valves	2 EA.	\$1,600	\$3,200
4	Air Release Valve	1 EA.	\$3,000	\$3,000
5	Blow Off	1 EA.	\$3,000	\$3,000
6	Reconnect Existing Meters	5 EA.	\$800	\$4,000
7	Tie New 3" Waterline to Existing 3" Waterline	2 EA.	\$1,800	\$3,600
8	Gravel Replacement	100 SY	\$30	\$3,000
9	Utility Markers	5 EA.	\$50	\$250
SUBTOTAL				\$84,550

Contingency (10%) +/- \$8,450

Construction Estimate \$93,000

Legal \$500

Local Admin \$500

Permits \$500

Planning \$500

Engineering Fees - Design \$10,400

Engineering Fees - Construction \$2,600

Resident Inspection \$12,000

TOTAL PROJECT COST ESTIMATE \$120,000

* Fees Rural Development Schedule

PROJECT COST ESTIMATE

BIG SANDY WATER DISTRICT
PSC WATERLINE REPLACEMENTS

BEAR CREEK (S.R. 1937) FROM FRIENDSHIP TO DAVIS BRANCH

Item No.	Description	Total Quantities	Unit Cost	Total Cost
1	10" HDPE, DR 11, IPS Waterline	11,000 LF	\$35	\$385,000
2	3" CL 250 PVC Waterline	250 LF	\$30	\$7,500
3	3/4" Service Line	2,800 LF	\$8	\$22,400
4	10" Gate Valves	6 EA.	\$7,500	\$45,000
5	3" Gate Valves	4 EA.	\$1,500	\$6,000
6	Fire Hydrants	3 EA.	\$7,500	\$22,500
7	Blow Offs	2 EA.	\$1,500	\$3,000
8	Tie New 10" Waterline to Existing 3" Waterline	3 EA.	\$4,000	\$12,000
9	Tie New 10" Waterline to Existing 8" Waterline	2 EA.	\$5,000	\$10,000
10	Reconnect Meters	70 LF	\$800	\$56,000
11	Zone Meters	1 EA.	\$5,000	\$5,000
12	Gravel Replacement	100 SY	\$30	\$3,000
13	Asphalt Replacement	100 SY	\$100	\$10,000
14	Concrete Replacement	100 SY	\$125	\$12,500
15	Utility Markers	20 EA.	\$50	\$1,000
SUBTOTAL				\$600,900

Contingency (10%) +/- \$60,600

Construction Estimate \$661,500

Legal \$2,000

Local Admin \$2,000

Permits \$2,000

Planning \$1,000

Engineering Fees - Design (80%) \$50,500

Engineering Fees - Construction (20%) \$12,500

Resident Inspection \$43,500

TOTAL PROJECT COST ESTIMATE \$775,000

* Fees Rural Development Schedule

EXHIBIT H



SISLER-MAGGARD ENGINEERING, PLLC
220 EAST REYNOLDS ROAD, SUITE A3
LEXINGTON, KY 40517
(859) 271-2978
Fax (859) 271-5670

January 10, 2024

Big Sandy Water District
18211 S.R. 3
Catlettsburg, KY 41129

**Re: Big Sandy Water District
SME #24023 – PSC Waterline Replacements (Including Estimates; Silver Run /
Arhtur Lane Design)
Invoice No. 24023-1**

Dates of Service: Through 01/10/2025

Principal Engineer – 18 Hours x \$160/Hour =	\$ 2,880.00
Sr. Specialist – 27 Hours x \$62.50/hour =	1,687.50
Sr. CADD Operator – 6.5 hours x \$60.00/hour =	390.00
2 Trips x 275 miles @ \$0.75/mile =	412.50
TOTAL	\$ 5,370.00

**Fees @ Hourly Rates until DOW submittal, then convert to RD Fee Schedule*

**PLEASE REMIT TO: 220 E. REYNOLDS RD., A-3
LEXINGTON, KY 40517**