



DIVISION OF WATER QUALITY ODOR CONTROL PROGRAM UPDATE

Environmental Quality & Public Works Committee

February 11, 2025

Director Charles H. Martin, P.E., Division of Water Quality





AGENDA

- Background (2023)
- 2024 Summary of Progress
- 2025 Focus
- Questions





BACKGROUND

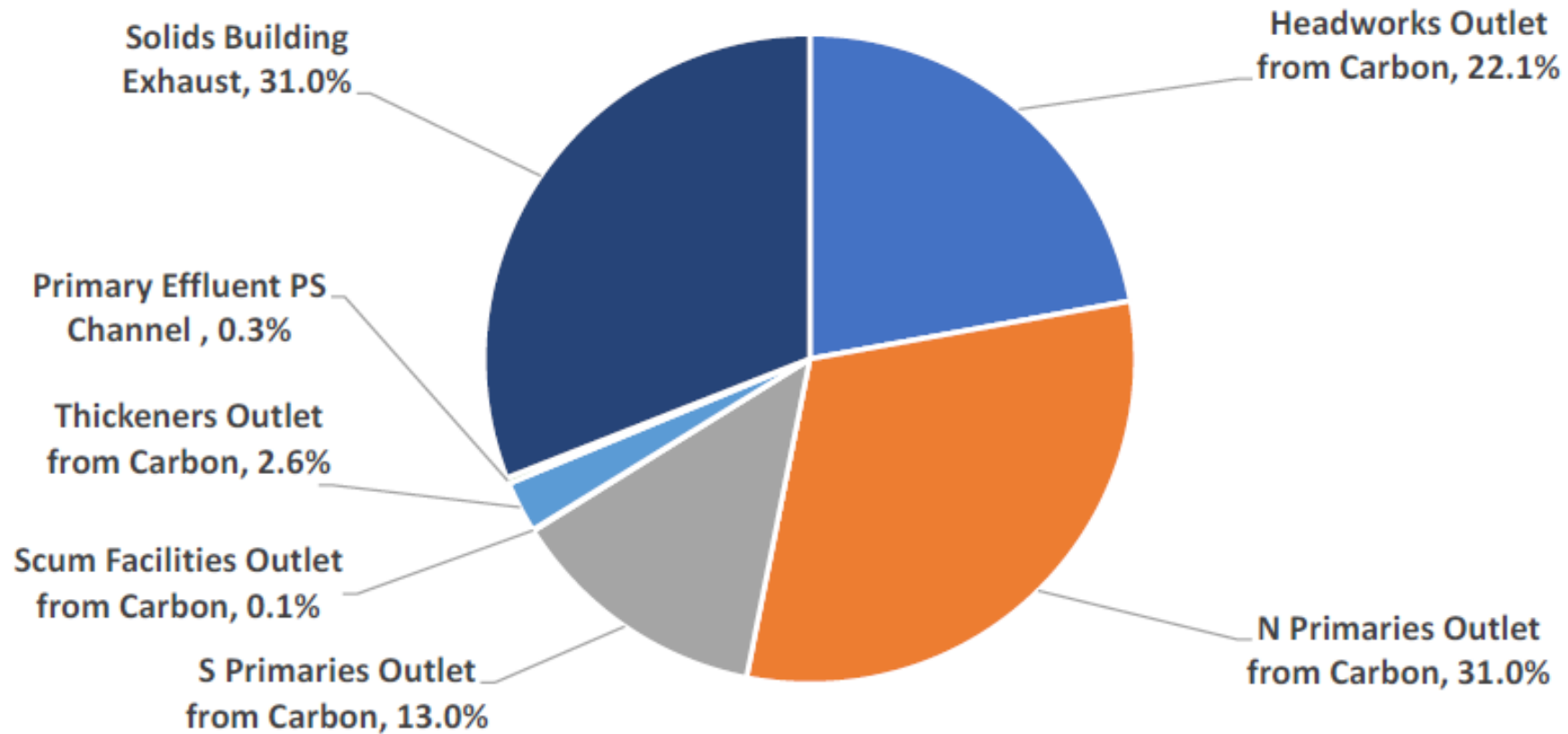
- 2023 had a significant escalation in sewer odor complaints.
- Webster Environmental Associates (WEA) was hired under an emergency declaration by the mayor to assist with corrective action.
- 2023 focus was on the two wastewater treatment plants
 - Town Branch – Leestown Road / New Circle area
 - West Hickman – Veterans Park area





Webster Preliminary Findings

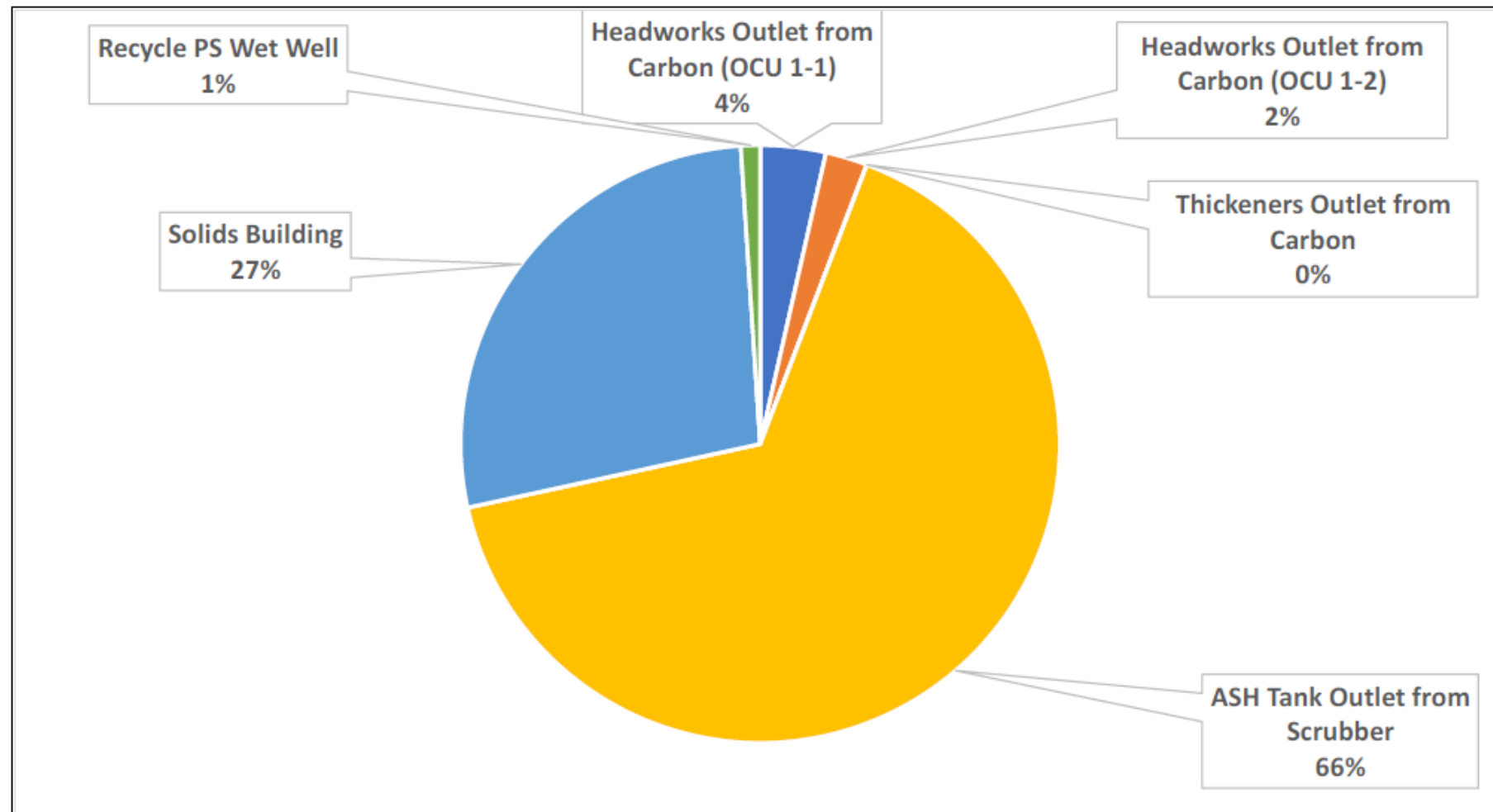
Figure 5 - Town Branch WWTP Odor Emission Rates Graph





Webster Preliminary Findings

Figure 5 – West Hickman WWTP Odor Emission Rates Graph





2024 ACCOMPLISHMENTS

- Treatment plants odor control equipment improvements based on WEA's preliminary findings.
- Implemented evaluation documenting overall effectiveness of the chemicals being used to control odor generation in the collection system.
- Transitioning from a reactive state of mind to a proactive state of mind.





2024 TREATMENT PLANT ACCOMPLISHMENTS

Town Branch

- Replaced activated carbon units treating foul air from primary clarifiers and headworks.
- Awarded a contract to construct a bio-scrubber that will augment the service capacity of the primary clarifier activated carbon units.





July 2024



Construction
2025



2024 TREATMENT PLANT ACCOMPLISHMENTS

West Hickman

- Implemented a process modification that reduced the potential for septic conditions in the ASH tanks and thickeners.
- Rehabilitated the existing chemical scrubber serving the ASH tanks.
- Awarded a contract to upgrade and replace the activated carbon units serving the ASH tank/thickener complex.





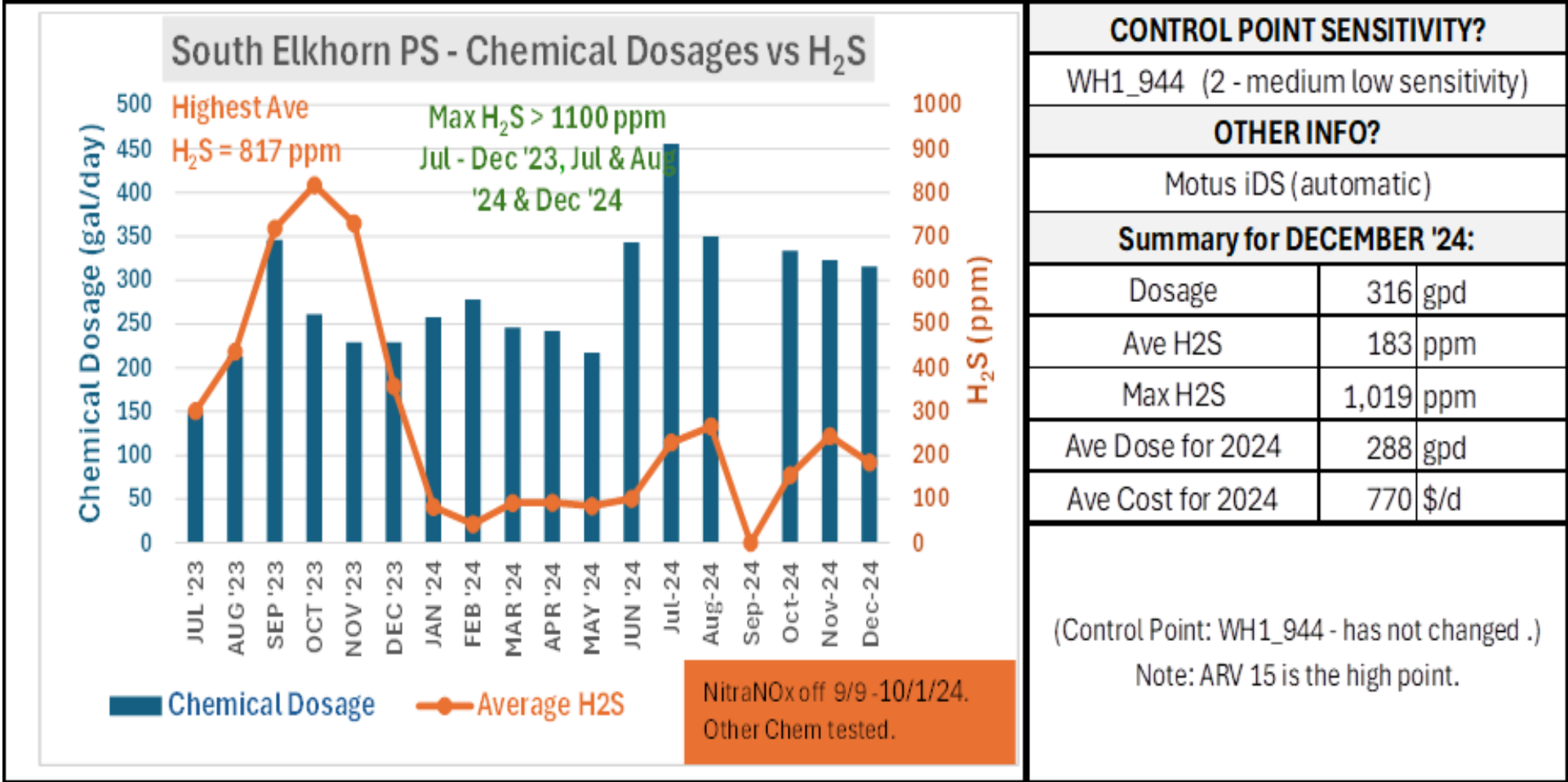


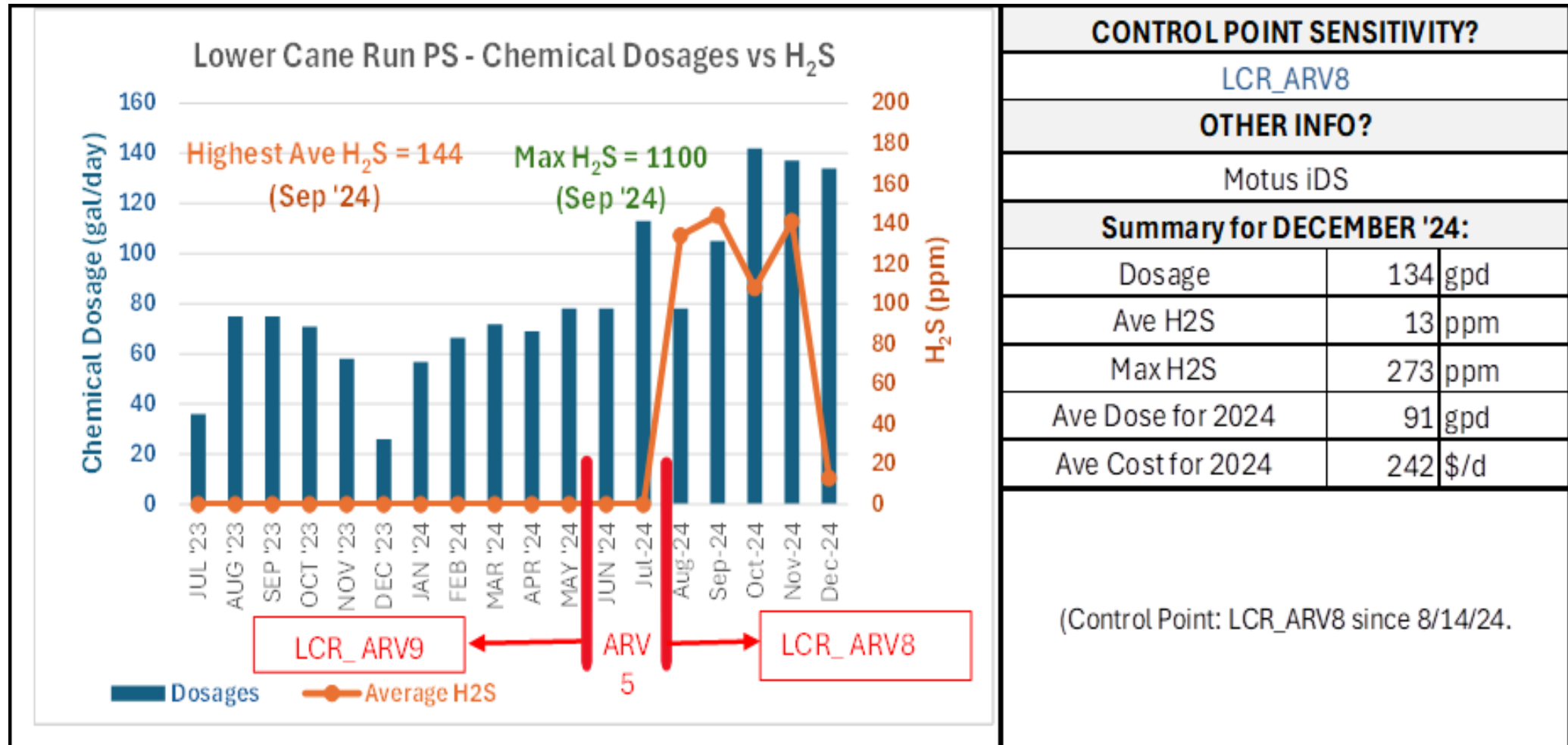
2024 TREATMENT PLANT ACCOMPLISHMENTS

Collection System

- Monitored H₂S from air release valves on eight different force mains which are believed to be primary contributors to odor issues. Chemical adjustments were made based on data.
- Pilot tested alternative chemicals to determine effectiveness (cost / benefit).









Chemical Expenses January - November 2024*

2024 YTD Totals:	Gallons:	Unit Cost:	Ext. Cost:
Keeneland	5,135	\$2.67	\$13,710.45
Horse Park	10,400	\$2.67	\$27,768.00
Hamburg	8,900	\$2.67	\$23,763.00
Lower Cane Run	27,200	\$2.67	\$72,624.00
Mint Lane	16,575	\$2.67	\$44,255.25
South Elkhorn	120,150	\$2.67	\$320,800.50
North Elkhorn	28,450	\$2.67	\$75,961.50
East Hickman	49,100	\$2.67	\$131,097.00
Picadome	26,650	\$2.67	\$71,155.50
Total Gallons:	292,560	Total Cost:	\$781,135.20



* Expenses for pilot study work with another vendor excluded



2024 ACCOMPLISHMENTS / LESSONS

- Created and filled a dedicated Odor Control Manager position – Rick Bowman.
- Completed WWTP Warm Weather Odor Testing and Modeling Reports for both plants.
- Completed collection system smoke testing in neighborhood surrounding the WWTPs.





2025 GOALS

1. Place the newly constructed plant improvements into service:
 - Town Branch bio-scrubber: November 2025
 - West Hickman activated carbon upgrade: June 2025

2. Implement remote pilot studies to further evaluate chemical application program effectiveness:
 - South Elkhorn force leading to West Hickman
 - Lower Cane Run force main leading to Town Branch





2025 GOALS (CONTINUED)

3. Develop and implement Unit Price Service Contracts for:
 - Odor control equipment servicing and maintenance
 - Manhole / air release valve inserts
4. Implement next set of recommendations found in WWTP Warm Weather Modeling Reports.
5. Continue implementing long term monitoring program to proactively address odors.





Questions?

