



**MSD Exhibit No. MSD 3D**  
2019 Rate Change Proceeding

**BRET A. BERTHOLD**

Direct Testimony

Metropolitan St. Louis Sewer District

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1 **Witness Background and Experience**

2 **Q1. Please state your name, business address, and telephone number.**

3 A. Bret Berthold, 2350 Market Street, St. Louis, Missouri 63103-2555, (314) 768-6356,  
4 [bberthold@stlmsd.com](mailto:bberthold@stlmsd.com)

5 **Q2. What is your occupation?**

6 A. I am the Director of Operations for the Metropolitan St. Louis Sewer District (District).

7 **Q3. How long have you been associated with the District?**

8 A. I have been with the District continuously since April 2009

9 **Q4. What is your professional experience?**

10 A. I have spent the last 9+ years working in the wastewater industry. I came to the District  
11 in 2009 as the Division Manager at the Bissell Wastewater Treatment Plant, became an  
12 Assistant Director of Operations in 2011, and became Director of Operations in 2018.  
13 Prior to working for the District, I held a number of progressively responsible positions  
14 within the private business sector in the St. Louis area. I started as a Project Engineer for  
15 the Barry-Wehmiller Company, and my last position before coming to MSD was  
16 Manufacturing Manager for the Spectrum Brands Company.

17 **Q5. What is your educational background?**

18 A. I have a Bachelor of Science in Mechanical Engineering degree from the University of  
19 Missouri-Rolla (Missouri University of Science & Technology). I also have a Master's in  
20 Business Administration degree from Webster University in St. Louis.

21 **Q6. Are you registered as a Professional Engineer?**

22 A. Yes. I am a registered Professional Engineer in the State of Missouri.

23

**1 Wastewater Operations Services**

**2 Q7. What makes up the wastewater services within the District?**

3 A. Wastewater services are comprised of the effective collection, transport, and treatment of  
4 wastewater within the District. This requires the operations and maintenance of over  
5 6,300 miles of sanitary and combined sewers, over 270 pump stations, and 7 wastewater  
6 treatment plants.

**7 Q8. What is the purpose of the District’s wastewater operations and maintenance  
8 (O&M) program?**

9 A. To maintain the wastewater system in a proactive and efficient manner that meets all  
10 State and Federal regulatory requirements and minimizes disruptions to customers.

**11 Q9. What approach does the District take for its wastewater O&M program?**

12 A. The District’s wastewater O&M program takes an Asset Management approach. Utilities  
13 throughout the world are faced with the challenge of how best to manage their existing  
14 asset stock to provide satisfactory customer service with limited funds. Asset  
15 Management is a maintenance management process that guides the acquisition, use, and  
16 disposal of infrastructure assets to optimize service delivery and minimize costs over the  
17 asset’s entire life. What that means is with limited funds you focus your efforts on  
18 meeting wastewater service level goals such as regulatory requirements and customer  
19 service goals. To do this the District has to understand the condition of its infrastructure,  
20 and prioritize maintenance efforts on those assets that pose the greatest risk to District  
21 goals.

**22 Q10. What are the key components of the wastewater O&M Program?**

23 A. Within the collection system and pump stations groups, the O&M program is focused

1 around the requirements of the Capacity Management, Operations, and Maintenance  
2 (CMOM) program within the Consent Decree (CD). Within the collection system this  
3 requires proactive cleaning, inspecting, and rehabbing of pipe to assure adequate  
4 capacity. Pump stations and force mains are regularly inspected and maintained with the  
5 inspection frequency being based on the criticality of the asset. In the treatment plants,  
6 asset management consists of performing equipment maintenance and repairs based on  
7 criticality to assure permit and regulatory issues are met.

8 **Q11. Are the District’s O&M programs impacted by State and Federal requirements?**

9 A. Yes. Federal and State requirements make O&M mandatory. The CMOM program  
10 required by the CD requires that minimum maintenance and performance standards be  
11 met in the collection system and pump stations or penalties may be incurred. Proper  
12 O&M within the plants is required to meet the obligations outlined in each wastewater  
13 treatment plant permit.

14 **Q12. Does the District measure the performance of providing wastewater services?**

15 A. Yes it does. The District employs a number of measures and surveys to assure its  
16 programs are effective. These measures range from high level goals that are aligned  
17 around the District’s strategic plan, down to tactical and crew level goals that assure  
18 levels of wastewater service are being met. Examples of high level measures include:  
19 percent regulatory compliance; basement backups per thousand homes; percent on-time  
20 customer response and overall customer satisfaction. Tactical goals include measures  
21 such as miles of pipe cleaned and number of inspections.

22 **Q13. Can you provide any supporting documentation that the District’s wastewater**  
23 **services are being operated efficiently and making the best use of ratepayer monies?**

1 A. Yes. In recent years the District has made significant strides in improving its measured  
2 wastewater service levels, and this has been reflected positively in system performance,  
3 customer survey responses, and awards. Some measures worth noting include: Record  
4 high levels of customer satisfaction, exceeding 80% overall in 2018 customer surveys.  
5 All seven of the District’s treatment plants regularly receive awards from the National  
6 Association of Clean Water Agencies (NACWA) for plant permit compliance. CMOM  
7 activities have resulted in a downward trend in basement backups, with a record low  
8 number of basement backups in 2018. Backups are down 70% from historic levels.  
9 Additionally, dry weather overflows are down 50% over historic levels. While these are  
10 all strong performance indicators, efficiency is important to the District as well. The  
11 District benchmarks its performance and efficiency against other agencies. Included in  
12 Appendix 7.3.1 of the Rate Change Proposal are some key performance indicators  
13 included in the 2018 American Water Works Association (AWWA) and 2013 Water  
14 Environment Research Foundation (WERF) wastewater utility benchmarking surveys.  
15 These performance indicators include areas such as employee metrics, regulatory  
16 compliance, facility utilization, collection system maintenance, and customer calls.  
17 Appendix 7.3.1 includes the performance metric and its definition; the industry min, max,  
18 medium, average, or percentile. The right hand columns show the District's performance  
19 along with an explanation of the significance. In general these metrics show that the  
20 District operates with significantly fewer employees than is typical, yet maintenance,  
21 energy efficiency, and facility utilization are measurably better than most utilities.

22 **Q14. Does the District participate in any grant, incentive, or rebate programs to reduce**  
23 **operating expenditures?**

1 A. Yes. The District recently submitted a grant request to the State of Missouri Department  
2 of Natural Resources requesting \$1,000,000 from the Volkswagen Trust settlement  
3 program. This is the maximum amount allowable under this grant program. The District  
4 is currently waiting on notification of the grant award amount. The District also  
5 participates in available incentive and rebate programs with Ameren Missouri. Included  
6 in Exhibit MSD 59 is a list of projects. The District currently has 4 active projects in  
7 various stages. The District has completed 46 projects resulting in electrical energy  
8 savings of \$331,542.

9 **Q15. Does the Rate Change Proposal enhance the District’s ability to provide adequate**  
10 **sewer and drainage systems and facilities, or related services?**

11 A. Yes. The Rate Change Proposal provides the funds needed to continue adequate O&M in  
12 the collection systems, pump stations, and wastewater treatment plants. The CMOM  
13 program should continue to improve the operations of the collection system and reduce  
14 overflows and basement backups. This Rate Change Proposal will also allow for our  
15 aging treatment plants to continue to operate efficiently and meet permit requirements.

16 **Q16. Does this conclude your prepared direct testimony in this matter?**

17 A. Yes, it does.

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