



MSD Exhibit No. MSD 3C
2019 Rate Change Proceeding

RICHARD L. UNVERFERTH

Direct Testimony

Metropolitan St. Louis Sewer District

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1 Witness Background & Experience

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

3 A. Richard L. Unverferth, 2350 Market, St. Louis, Missouri 63103, (314)768-6204,
4 rlunve@stlmsd.com

5 Q2. What is your occupation?

6 A. I am the Director of Engineering for the Metropolitan St. Louis Sewer District

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

8 A. I have been associated with the District for 32 years.

9 Q4. What is your professional experience?

10 A. I have been with the District since January 1987. I held numerous staff-level engineering
11 positions early in my career, I was promoted to Engineering Manager in September 1993,
12 was transferred to Operations/Maintenance Department from 1995 through 2001 as an
13 Associate Director responsible for the Operations Technical Division, returned to the
14 Engineering Department in 2001 as a Program Manager in the Planning Division, and
15 promoted to Assistant Director of Engineering/ Planning in 2006 overseeing the long
16 range planning of the Consent Decree (CD) and the District Capital Improvement and
17 Replacement Program currently being implemented. I was promoted to my present
18 position of Director of Engineering on May 2013. Prior to joining the District I held staff
19 -level engineering positions with the City of St. Louis and the City of St. Charles.

20 Q5. What is your educational Background?

21 A. I hold a Bachelor of Science degree in Civil Engineering from the University of Missouri
22 – Rolla (Missouri University of Science and Technology).

23 Q6. Are you a registered Professional Engineer?

24 A. Yes, I am a registered Professional Engineer in the state of Missouri.

1 Wastewater Capital Improvement & Replacement Program (CIRP)

2 Q6. What is the purpose of MSD’s wastewater CIRP?

3 A. The wastewater CIRP provides a listing, schedule, and cost of needed repairs, additions,
4 and improvements to the wastewater system to maintain the system in operating order
5 and to ensure the system operates in a manner that complies with all State and Federal
6 Regulatory requirements and the CD.

7 Q7. Why is the CIRP needed?

8 A. The CIRP is needed to provide the project identification, planned fiscal year and
9 anticipated annual costs associated with system improvements. This will then provide
10 the basis for required annual revenue and resources needed to plan, design, and construct
11 these improvements.

12 Q8. Does the District have a list of projects that comprises the wastewater CIRP?

13 A. Yes, it has been provided as Appendix 7.2.2 in the Rate Change Proposal.

14 Q9. What is the size of the wastewater CIRP reflected in the Rate Change Proposal?

15 A. Approximately \$1.6 billion in improvements over the four fiscal years 2021 to 2024.

**16 Q10. How much of the wastewater CIRP is required to comply with State or Federal
17 requirements?**

18 A. The wastewater CIRP is primarily composed of projects required to comply with the CD
19 or other regulatory requirements. There are asset management related projects planned
20 that are not specifically listed in the CD or required to meet regulations. These projects
21 typically upgrade and renew wastewater assets or support systems to prevent failure and
22 improve operational efficiencies. Without upgrades and system renewal there is inherent
23 risk of system failure. A listing of the non-CD and non-regulatory related projects has
24 been provided as Appendix 7.2.3. The cost of these non-CD projects within the proposed

1 rate cycle is \$14 million.

2 **Q11. Are all of the wastewater CIRP projects necessary?**

3 A. Yes

4 **Q12. If the proposed rate change is not implemented, will the District be able to construct**
5 **all of the projects required by the Consent Decree (CD)?**

6 A. No

7 **Q13. Do all of the improvement projects shown in the wastewater CIRP need to be**
8 **constructed in the timeframe shown or could some of the projects be delayed?**

9 A. Both the scope and timing of all the projects in the wastewater CIRP are designed to meet
10 defined regulatory schedules, and schedules required by the CD.

11 **Q14. What are the ramifications of projects being delayed?**

12 A. Any delays could result in fines or penalties due to system failure or inability to meet CD
13 or other regulatory deadlines. These fines or penalties are clearly defined within the CD
14 and applicable statutes and regulations.

15 **Q15. What are the components of the CIRP?**

16 A. The majority of the CIRP is made up of projects required to meet the CD or other
17 regulatory requirements. The program will provide for the elimination of Sanitary Sewer
18 Overflows (SSO) in the separate sewer system, address system capacity issues causing
19 building back-ups in the separate sewer system, and reduce or eliminate Combined Sewer
20 Overflows (CSO) in the District's combined sewer system. The program also includes
21 Green Infrastructure solutions to reduce stormwater flow to the combined sewer system
22 to reduce overflows to the Mississippi River. City-shed projects will be built to reduce
23 local structure flooding and building back-ups in the combined sewer area primarily in
24 the City of St. Louis and near North and South St. Louis County. The program also

1 includes Asset Management projects to address infrastructure renewal and upgrades at
2 our Wastewater Treatment Plants, Pump Stations, and Collections systems to provide
3 operational efficiencies and to meet O & M requirements of the CD.

4 The Capital Improvement and Replacement Program, or CIRP, is the primary cost driver
5 for the District’s financial plan, representing about two-thirds of anticipated expenditures
6 in the FY21 to FY24 period. In 2012, the District entered into a Consent Decree (CD)
7 with the United States Environmental Protection Agency and the Missouri Coalition for
8 the Environment for compliance with the Clean Water Act. The CD requires the District
9 to make investments in the wastewater system to ensure it has adequate capacity and is
10 properly maintained (Asset Management), to eliminate sanitary sewer overflows (SSO),
11 to eliminate, reduce, and control combined sewer overflows (CSO), and to reduce the risk
12 of flooding in the combined sewer area (Cityshed). This multi-decade CD effort is
13 estimated to cost approximately \$6 billion (in 2018 dollars), with approximately \$1.7
14 billion appropriated from FY13 through the end of FY19.

15 In 2018, an amendment to the CD was agreed to, providing an additional five years for
16 the District to complete its CD obligations, and rescheduling a number of major CSO
17 tunnels to later years. This was requested to financially accommodate additional major
18 treatment plant investment in sewage sludge incinerators and air emissions control
19 systems for compliance with the Clean Air Act, which will commence during the next
20 rate cycle.

21 The estimated CIRP needs for the next 6 years are presented in Figure 4-3 and Table 4-7.
22 The anticipated CIRP for the next 4 year rate cycle period, FY21 through FY24, is
23 approximately \$1.6 billion. The largest components of the CIRP over this period will be
24 capital investment related to capacity improvements in the wastewater system, and

1 sewage sludge incineration. The CIRP includes improvements necessary to comply with
2 the CD, with permit and regulatory requirements outside of the CD, and asset
3 management renewal projects. A project listing and additional project detail is presented
4 in Section 7 of the Rate Proposal.

5 **Q16. How are costs for the Wastewater CIRP determined?**

6 A. For sewer work, cost estimates are based on historical District bid prices using conceptual
7 and preliminary design information. For facility work, estimates are based on the
8 technical expertise of consulting engineers and past data on similar District projects and
9 similar work throughout the region and U.S.

10 **Q17. Does the District have the resources to successfully plan, design, and manage**
11 **construction of the CIRP presented in this rate proposal?**

12 A. Yes. The Engineering Department has developed a program delivery model that utilizes
13 multi-year consulting contracts to assure proper resources are maintained to provide
14 engineering design and construction management services based on various watershed
15 locations, facility types, and engineering disciplines. Program and contract management
16 is being handled by District Design and Construction Management staff. The combined
17 in-house and contracted resources for construction management and construction
18 inspection provides for early project bid document and constructability review to identify
19 potential issues, identify risks, and avert potential change orders prior to bidding and
20 construction.

21 **Q18. How successful has the District been in meeting the budget and schedule of prior**
22 **wastewater CIRPs?**

23 A. The District anticipates successfully completing the FY 17-20 CIRP as presented in the
24 previous rate proposal. This is following the successful completion of the three previous

1 CIRP programs and rate cycles. The District has managed the program within budget
2 and on schedule while complying with a number of specific deadlines for early action
3 projects, program implementation, and significant reporting required by the CD. During
4 this current rate cycle the District has achieved several milestones including the removal
5 of all Separate Sewer overflow required by December 31, 2018, the completion of the
6 removal CSO elimination on Gingras Creek, and all continuing milestones related to the
7 CMOM and Green Infrastructure programs.

8 **Q19. What steps have been taken by the District to reduce program costs?**

9 A. The District has structured construction contracts for bidding in an efficient manner,
10 bundling together like work in bid package sizes that are efficient to build and manage.
11 The District structures its bid opening schedule to allow adequate time for bidders to
12 develop competitive pricing. The District at times phases construction contracts with
13 multiple bid packages when it benefits the District to do so. The eight multi-year
14 consultant contracts mentioned earlier have led to an efficient and expeditious design
15 process for the program.

16 **Q20. Have wastewater related capital improvements been delayed recently due to lack of**
17 **funding?**

18 A. No

19 **Q21. Does the proposed wastewater rate change enhance the District’s ability to provide**
20 **adequate sewer and drainage systems and facilities, or related services?**

21 A. Yes. The appropriate funding is necessary to allow the District to operate and maintain
22 our systems, and make necessary capital improvements to meet the commitments of the
23 CD and comply with existing permit regulations.

24

1 Wastewater Additional Funding Sources

2 Q22. Are there any other financial contributions or grants the District could possibly
3 obtain?

4 A. The District does not anticipate obtaining other financial contributions during the
5 upcoming rate cycle, but the District regularly monitors MDNR, EPA, and other entities
6 for possible grant opportunities. While having been able to take advantage of some
7 MDNR 319 and EPA State and Tribal Assistance Grants (STAG) in the past, there are
8 very few grant opportunities that match and could support the District’s core business and
9 compliance activities.

10 The District has been successful in obtaining federal authorization to have the Corps of
11 Engineers construct improvements to certain District infrastructure. This authorization
12 has led to approximately \$24 Million in infrastructure projects constructed by the Corps
13 within the District’s combined sewer area over the last fifteen years. The District works
14 with the Corps on an ongoing basis to maximize this federal benefit.

15 The District does obtain low interest financing from MDNR, through the State’s
16 Revolving Loan Fund (SRF), for its wastewater infrastructure capital program. Though
17 not strictly a grant, this program currently provides capital program financing for the
18 ratepayers at a lower cost than bond financing. The District works with MDNR on an
19 ongoing basis to maximize this state benefit.

20 The District also has utilized low interest financing from EPA, through the federal Water
21 Infrastructure Finance and Innovation Act (WIFIA), for its wastewater infrastructure
22 capital program. Similar to SRF, this program provides capital program financing for the
23 ratepayers at a lower cost than bond financing.

24 The District also maintains state and federal lobbying activities, one of the main goals of

1 which is to seek financial assistance for the District.

2

3 **Future Wastewater Regulatory Requirements**

4 **Q23. What additional future wastewater regulatory requirements may be anticipated?**

5 A. Although not anticipated within this Rate Cycle, there are several pending regulatory
6 requirements on the planning horizon. The following regulations would primarily impact
7 our Wastewater Treatment Plants and Processes: New EPA ammonia limits to protect
8 freshwater mussels, requirements for enhanced Nutrient treatment to meet future limits
9 on Total Nitrogen (TN) and Total Phosphorus (TP) from our discharges, and the potential
10 for future limits on certain viruses. Regulatory impacts on the Collections system could
11 be the requirement for further CSO controls on the Mississippi River and River Des Peres
12 beyond the current approved Long Term Control Plan to meet instream bacteria, virus,
13 and dissolved oxygen criteria.

14 **Q24. Does this conclude your prepared direct testimony in this matter?**

15 A. Yes it does.

16