



MSD Exhibit No. MSD 3H
2019 Rate Change Proceeding

WILLIAM STANNARD

Direct Testimony

Metropolitan St. Louis Sewer District

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1 **Witness Background and Experience**

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

3 A. William Stannard, 3013 Main Street, Kansas City, Missouri, 64108, (816)285-9020,
4 wstannard@raftelis.com

5 **Q2. By whom are you employed and in what capacity.**

6 A. I am Chairman of the Board of Raftelis Financial Consultants, Inc. (Raftelis) and have
7 more than 40 years of experience providing financial and management consulting
8 services to municipally owned utilities throughout the United States and Canada. Raftelis
9 was established in 1993 in Charlotte, North Carolina to provide environmental and
10 management consulting services to public and private sector clients. Raftelis is a national
11 leader in the development of water, wastewater, and stormwater rates and employs 80
12 consultants providing financial and management consulting services to municipal utilities
13 throughout the United States and Canada. I have served as an expert witness in rate
14 litigation matters in federal and state courts and before arbitration panels and state public
15 service commissions.

16 **Q3. Please describe your educational background and work experience.**

17 A. I obtained a Bachelor of Science, Business Administration and a Bachelor of Science,
18 Civil Engineering from Kansas State University in 1975. I joined Raftelis in 2002 after a
19 28-year consulting career at Black & Veatch where I was head of that firm’s management
20 consulting division. I have extensive experience in the development of ordinances and
21 financial procedures for complying with the Clean Water Act and the Safe Drinking
22 Water Act, comprehensive cost of service studies, bond feasibility reports, project
23 financial feasibility analyses, organizational and management reviews, and utility
24 competitiveness studies. During my career I have conducted more than 250 water,

1 wastewater, and stormwater financial planning, cost of service, and rate studies. I have
2 also prepared more than 100 consulting engineers reports/financial feasibility studies in
3 support of more than \$7 billion of water and wastewater revenue bonds.

4 **Q4. Are you a registered Professional Engineer?**

5 A. Yes, I am a registered Professional Engineer in the states of Kansas, Ohio,
6 Massachusetts, and Michigan.

7 **Q5. Do you belong to any professional organizations or committees?**

8 A. Yes. I am a member of the American Water Works Association where I serve as Chair of
9 AWWA's Management and Leadership Division, a Trustee of AWWA's Technical &
10 Education Council, and a past-Chair of AWWA's Finance, Accounting and Management
11 Controls Committee. I am a member of the Water Environment Federation (WEF) where
12 I previously served as the Chair for the Task Force responsible for the development of the
13 Manual of Practice No. 27, Financing and Charges for Wastewater Systems. I also
14 authored a chapter entitled, "Selecting the Optimal Capital Financing Plan and Pricing
15 Structure," for the Fourth Edition of the industry guidebook, *Water and Wastewater
16 Finance and Pricing: The Changing Landscape*. In 2018 I was appointed to the United
17 States Environmental Protection Agency's Environmental Finance Advisory Board. I also
18 am an emeritus member of the Kansas State University College of Engineering Advisory
19 Council and have been listed in Best Lawyers in America – Directory of Expert
20 Witnesses and Who's Who in Science and Engineering.

21 **Q6. Have you previously testified before the Rate Commission of the St. Louis
22 Metropolitan Sewer District?**

23 A. Yes. I testified as the Rate Consultant to the Rate Commission in the 2007, 2008, and
24 2011 Rate Change Proceedings and as the Rate Consultant to the District in the 2015

1 Rate Change Proceedings.

2 **Q7. Please describe your role in this proceeding?**

3 A. The scope of my assignment in this proceeding is as Project Director for Raftelis’
4 assistance to the District in preparing the Rate Change Proposal which recommends
5 means of financing MSD's wastewater activities for fiscal years ending June 30, 2021
6 (FY21) through June 30, 2024 (FY24). As project Director I provided leadership and
7 direction to our team of consultants engaged in this work for the District as well as
8 technical advice during the conduct of our work.

9

10 **General Matters**

11 **Q8. What requirements are you aware of that any proposed changes in wastewater rates**
12 **by the District must meet?**

13 A. Pursuant to Section 7.040 of the Charter Plan of the District any proposed changes in
14 wastewater rates must be necessary to pay (i) interest and principal due on bonds issued
15 or to be issued to finance assets of the District, (ii) the costs of operation and
16 maintenance, and (iii) such other amounts as may be required to cover emergencies and
17 anticipated delinquencies.

18 **Q9. How is it determined whether the District’s Rate Change Proposal is necessary?**

19 A. This determination begins with the development of the District’s Comprehensive
20 Financial Plan which is a major component of the Rate Change Proposal. As the Rate
21 Consultant to the District, our work included the development of this financial plan in
22 collaboration with District Staff and the District’s other consultants. The forecasts set
23 forth in the Rate Change Proposal form the foundation of the level of revenues needed to
24 achieve the District’s operational and capital investment objectives. The Rate

1 Commission will examine the District’s projected revenue requirements to ensure that
2 such revenue requirements are necessary and reasonable to meet the District’s near-term
3 financial needs, that such revenue requirements do not overstate the District’s near-term
4 financial needs, and that such revenue requirements are being recovered in a fair and
5 equitable manner.

6 **Q10. What criteria are used to assess the Rate Change Proposal?**

7 A. In accordance with Section 7.270 of the Charter Plan of the District, the Rate Change
8 Proposal, and all portions thereof, must:

- 9 1. be consistent with constitutional, statutory or common law as amended from time to
10 time;
- 11 2. enhance the District’s ability to provide sewer and drainage systems and facilities, or
12 related services;
- 13 3. be consistent with and not in violation of any covenant or provision relating to any
14 outstanding bonds or indebtedness of the District;
- 15 4. not impair the ability of the District to comply with applicable Federal or State laws
16 or regulations as amended from time to time; and
- 17 5. impose a fair and reasonable burden on all classes of ratepayers.

18 **Q11. How should it be determined whether the Rate Change Proposal is consistent with**
19 **constitutional, statutory or common law as amended from time to time?**

20 A. The District’s legal counsel advises that issues concerning Charter authority,
21 environmental laws and regulations, constitutional and statutory provisions, and case law
22 should be evaluated.

23 **Q12. How should it be determined whether the Rate Change Proposal enhances the**
24 **District’s ability to provide adequate sewer and drainage systems and facilities, or**

1 **related services?**

2 A. The Rate Change Proposal should be assessed as to whether it enhances the District’s
3 ability to provide adequate sewer and drainage systems and facilities, or related services
4 by examining the District’s Rate Change Proposal and supporting testimony, the Rate
5 Commission's Rate Consultant testimony, and the testimony provided by any interveners
6 in the case.

7 **Q13. How should it be determined whether the Rate Change Proposal is consistent with**
8 **and not in violation of any covenant or provision relating to any outstanding bonds**
9 **or indebtedness of the District?**

10 A. Such a determination requires an analysis of covenants or provisions contained in the
11 resolutions or ordinances issuing any such outstanding bonds or indebtedness. It may be
12 determined that this condition is met by examining the District’s submittal as well as the
13 testimony filed in support of the Rate Change Proposal by the District.

14 **Q14. How should it be determined whether the Rate Change Proposal impairs the ability**
15 **of the District to comply with applicable Federal or State laws or regulations as**
16 **amended from time to time?**

17 A. Whether the Rate Change Proposal impairs the ability of the District to comply with
18 applicable Federal or State laws or regulations may be evaluated based on the testimony
19 provided by District staff and by others, including any interveners.

20 **Q15. How should it be determined whether the Rate Change Proposal imposes a fair and**
21 **reasonable burden on all classes of ratepayers?**

22 A. Whether the rate change imposes a fair and reasonable burden on all classes of ratepayers
23 may be determined by examining the Rate Change Proposal and the testimony filed in
24 support of the District's Rate Change Proposal as well as information provided by the

1 Commission's Rate Consultant and other parties, including any interveners.

2 **Q16. In the context of utility rate setting, what do the words “fair and reasonable” mean?**

3 A. In the context of utility rate setting, the word “fair” means that rates recover revenues
4 from customer classes in relation to the costs incurred in providing utility services to
5 those customer classes and be free from self-interest, prejudice or favoritism. In the
6 context of utility rate setting, the word “reasonable” means that the revenue requirements
7 upon which the rates are based reflect an appropriate level of funding to enable the utility
8 to provide adequate and sustainable service and support the financial health of the utility.

9 **Q17. Do you believe the Rate Change Proposal meets these criteria?**

10 A. Yes.

11

12 **Inflow and Infiltration (I/I) Cost Recovery**

13 **Q18. What is infiltration and inflow?**

14 A. Infiltration and inflow (I/I) is water entering the wastewater system from illegal roof and
15 foundation drains, groundwater infiltration through sewer service pipe and main joints,
16 and stormwater runoff or inflow from the combined sewer system. I/I occurs in all
17 wastewater collection and treatment systems.

18 **Q19. How is the relative amount of I/I determined?**

19 A. Total wastewater volume reaching the treatment plants is comprised of contributed
20 wastewater volume (i.e., wastewater entering the system from customers’ water usage)
21 and I/I. We examined the District’s operational data for the three most recent fiscal years
22 (2016-18), in order to normalize the impacts of rainfall.

23 **Q20. What is the relative amount of I/I used in the current Rate Change Proposal?**

24 A. After examining and analyzing the District’s historic treatment plant and billed

1 consumption data, we estimate that District-wide I/I is approximately 59% of the total
2 wastewater flow reaching the treatment plants on an annual basis.

3 **Q21. How does this compare with the I/I percentage used in the District’s 2015 Rate**
4 **Change Proposal?**

5 A. In the District’s prior rate case, the percentage of I/I was estimated to be 50% of the total
6 wastewater flow on an annual basis.

7 **Q22. Did you expect this increase in the I/I percentage?**

8 A. Yes. The data show that a key driver in the total volume of I/I collected and transported
9 to the wastewater treatment plants is precipitation, both in terms of rainfall and snowfall.
10 The District has also been making significant investments in its infrastructure to reduce
11 combined sewer overflows (CSO) and separate sewer overflows (SSO), which result in
12 an increase in the total wastewater volumes conveyed and treated at the wastewater
13 treatment plants, especially during wet weather periods. The District is also working
14 diligently with customers to remove sources of I/I entering the collection system from
15 private property. Overall, the increase in the percentage of I/I shown in the data is
16 consistent with my expectations. Based on my experience with other major wastewater
17 utilities, I believe that the 59% factor for I/I is reasonable.

18 **Q23. How is responsibility for I/I determined?**

19 A. Each customer class should bear its proportionate share of the costs associated with I/I
20 because the District’s wastewater system must be adequate to convey and process the
21 total volume of wastewater that is conveyed to the District’s wastewater treatment plants.
22 The proportionate share of costs should reflect the responsibility of the appropriate
23 customer classes for the amount of I/I that is generated to the extent reasonably
24 practicable. It is recognized in the wastewater utility industry that there are two principal

1 sources of I/I: (1) private property service lines and other connections and (2) leaks
2 within the collection system pipes and manholes. In 2005 the District engaged CDM, a
3 nationally-recognized engineering firm, to perform an independent study of the sources
4 and responsibility for the I/I occurring within the District. That study determined that 40
5 percent of the total I/I is related to individual customers and 60 percent is related to the
6 District’s collection system infrastructure. Therefore, the amount of I/I costs to be
7 recovered directly from wastewater service charges is assigned to customer classes on the
8 premise that 40 percent of the total cost is distributed on the basis of the number of
9 customers within each class, with the remaining 60 percent allocated on the basis of
10 contributed wastewater volume. These percentage allocations were adopted in the
11 District’s 2007 Wastewater and Stormwater Rate Change Proposal and have been used
12 ever since. The findings of the CDM study were reviewed and it is my opinion that
13 these percentages remain reasonable. This allocation of I/I costs can be seen in Table 4-
14 16 of the 2019 Rate Change Proposal.

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

16 A. Yes it does.