



Memorandum

Memorandum No: 20-037

Date: May 27, 2020

To: Honorable Mayor and Commissioners

From: Chris Lagerbloom, ICMA-CM, City Manager

Re: Wastewater Consent Order Program Force Main Condition Assessment

Attached for your information is the Force Main Condition Assessment Report required by our Consent Order with the Florida Department of Environmental Protection (FDEP). The Consent Order required an assessment of our active force main system to determine risks and likelihood of failures. Our consultants, Jacobs Engineering Group along with Hazen and Sawyer, evaluated approximately 110 miles of active force main segments and classified them into three categories: Low Risk, Medium Risk and High Risk based on a score that was derived by multiplying the likelihood of failure by consequence of failure.

Out of approximately 110 miles of active force mains, 42 miles were subject to non-invasive Tier I external corrosion surveys while the remaining 68 miles were subject to desktop assessment. Together, they resulted in:

- 4 miles of force mains that were considered high risk
- 50 miles of force mains that were considered moderate risk and
- 56 miles of force mains that were considered low risk

Although the Condition Assessment Report identifies the force mains in the aforementioned risk categories, the Consent Order and Phase II projects mandated by FDEP were a mix of High, Medium and Low risk pipes as identified in the table below.

Risk Factor Category	Consent Order Projects (Miles)	Projects to be added to Phase II (Miles)	Projects to be added to CIP (Miles)	Pipes recommended to be monitored (Miles)
High	2.06	0.04	1.14	
Medium	7.25	1.38	10.33	
Low	1.87	0.46	1.62	
Total Existing FM	11.18	1.88	13.09	83.9

Utilizing the data collected and evaluated in this report, our consultants and Public Works staff have extended its findings and prepared a comprehensive status report on the force main projects. They are summarized in tabular format in Attachment 1.

Table 1 identifies how the force mains are grouped based on risk categories. The category, "Pipes to be monitored" will have to be closely checked routinely as the risk is not zero;

Table 2 identifies the list of current Consent Order projects, their cost and completion status;

Table 3 identifies the list of Phase II of Consent Order projects, their cost and completion deadlines;

Table 4 identifies the list of projects and their cost recommended by the consultants for inclusion in the City's five-year Capital Investment Plan (CIP).

We have received comments from FDEP on the Condition Assessment Report and we are preparing a response. Further, FDEP is recommending that we move the first two CIP projects identified in Table 4 to Phase II of the Consent Order projects.

Based on the progress to date, the force main projects should be completed by the mandated deadlines unless unforeseen conditions are encountered.

Please do not hesitate to contact my office or Raj Verma, Public Works Director, at (954) 828-5806 if you have any questions.

Attachments:

Attachment 1: Status of Force Main Projects in Tabular Format

Attachment 2: Map of Force Main Project Programming with Condition Assessment Status

Attachment 3: Map of Non-Consent Order Force Main Projects for Future CIP

Attachment 4: FDEP Comments

Attachment 5: Force Main Condition Assessment Report

<https://www.fortlauderdale.gov/Home/ShowDocument?id=47641>

c: Rob Hernandez, Deputy City Manager
Tarlesha W. Smith, Assistant City Manager
Alain E. Boileau, City Attorney
John C. Herbst, City Auditor
Jeffrey A. Modarelli, City Clerk
Department Directors
CMO Managers
Infrastructure Task Force