



District of Columbia

Water and Sewer Authority

Board of Directors

**Joint Meeting of the Environmental
Quality and Sewerage Services and
Water Quality and Water Services
Committees**

Thursday, November 19, 2015

10:00 a.m.

MEETING MINUTES

Committee Members Present

Rachna Butani, Chairperson
James Patteson, Chairperson
David Lake
Matthew Brown
Howard Gibbs

DC Water Staff Present

George Hawkins, CEO and General Manager
Len Benson, Chief Engineer
Randy Hayman, General Counsel
Linda Manley, Secretary to the Board

I. Call to Order

Ms. Rachna Butani, Chairperson, called the meeting to order at 10:25am.

II. FY 2016 – FY 2025 CAPITAL IMPROVEMENT PROGRAM (CIP)

Ms. Butani commented that the CIP update is being presented in the joint committee meeting as a continuation of the November Board meeting discussion. Mr. Len Benson, Chief Engineer, explained that the Lifetime Budget includes the entire cost of any projects that have any activity occurring in the 10-year budget period of FY2016 through FY2025.,

Mr. Benson commented that the DETS-managed projects amount to \$9.743 billion and factoring in capital equipment and Washington Aqueduct, and labor, the Total Capital Budget for FY2016 through FY2025 is \$10.4 billion as shown in attachment A-1 of the meeting materials. Mr. Benson explained that “dropped projects” are projects that have been completed and closed out and will be dropped from the Lifetime Budget the following year; “deferred projects” are projects that were not included in the FY2016 because of the need to balance risks with available budget and the resulting prioritization of projects. \$237 million of projects were deferred. “Project changes” refers to projects already in the CIP that experienced changes in their estimated cost.

Mr. Benson provided the DC Clean River (DCCR) Project as an example of “project change” by explaining that this was the first year where the estimated 2002 costs for the Potomac and Rock Creek Tunnel projects have been adjusted to 2030 dollars per their expected completion date.

Mr. Benson explained that the “New Projects” (slide 6) category may include some projects starting in year 2016 and others starting in year 2025. The budget for the Wastewater Treatment service area includes projects/systems that are near the end of their useful life and thus require replacement. The Sewer System service area budget includes the larger sewers where inspections and requests from the Department of Sewer Services (DSS) have resulted in an increased priority for these projects and the corresponding budgets and anticipated project start dates have been adjusted accordingly. Mr. Benson noted the Water System budget includes projects for facilities nearing the end of their useful life and will be closely monitored to determine whether the equipment may last another year(s) or if the equipment may need to be replaced earlier than the estimated start year for each project.

Mr. Benson explained that Project Changes (slide 7) represent projects already in the Lifetime Budget where there has been a budget increase either because of revised cost estimates or added scope to the project.

Mr. Benson explained that the proposed Capital Project Disbursement (slide 8) for the DETS-managed capital projects is \$3.36 billion and after factoring in capital equipment and Washington Aqueduct, the proposed Total CIP disbursement is \$3.66 billion. Mr. Benson highlighted the trend in capital spending decrease starting in FY 2017.

Mr. Benson explained the aggregated spending for each service area by year is depicted in the stacked graphs (slide 9). Mr. Benson noted that the Non-Process Facilities service area was added to provide more clarity and includes the new headquarters building, where previously costs/budgets associated with this facility were included in the combined sewer overflow (CSO) service area since the new headquarters building will be located on the Main Pumping Station parcel. Mr. Benson noted a decreasing trend in the disbursements for Blue Plains due to completion of mandated projects, and a decrease in DCCR disbursements approaching FY2022, when the Northeast Boundary Tunnel is scheduled to be completed.

Mr. Benson commented DCCR will have a period between FY2022 through FY2025 when green infrastructure (GI) will be the focus. Then, the Potomac River Tunnel Project will start with an expected increase in DCCR disbursements as a result. Mr. Benson noted a constant disbursement in the Water and Sewer service areas over the 10-year period with approximately \$50 million planned spending for sewer and \$60 million for water each fiscal year. The Committee commented the stacked graphs clearly depict the service areas disbursement trends well.

Mr. Hawkins commented on the line graph (slide 11) depicting the disbursements and highlighted that a majority of capital project funding was shared with suburban jurisdictions (wholesale customers) in the past for Blue Plains (light blue line) and that now, with the major projects at Blue Plains near completion, the Blue Plains disbursement is decreasing. Mr. Hawkins commented that the funding for other service areas is mostly paid for by the DC rate payers (retail customers). Mr. Hawkins explained that a significant portion of the rate increase for the retail customers is because a higher percentage of the capital program is anticipated to be allocated to the retail customers in the future. The Committee asked if the same or similar graph has been provided to the wholesale customers for them to understand the periods of increased user share and the decreasing disbursement planned for Blue Plains. Mr. Benson responded that the same graph will be presented to the Financing and Budget Committee meeting the next day and to the representatives of the wholesale customers at their annual meeting and tour planned for the same day.

Mr. Benson explained the “prioritization-of-spending line graph” and noted that known mandates

are decreasing; high-priority projects are steadily decreasing; and good engineering projects are remaining constant. The Committee commented that perhaps the decreased spending shown for mandates in the out-years (FY25) should be tempered with the many unknowns with regards to potential future regulatory requirements. Mr. Hawkins responded that the “mandate” heading should be revised to “Known Mandates” for clarity of definition. Mr. Benson added that the Chesapeake Bay Total Maximum Daily Load (TMDL) mid-term review in 2018 may result in new mandates to be implemented by 2023/2024 for example, which could impact the CIP budget but are not quantified at this time since potential timing and impacts are unknown.

Mr. Benson explained that the FY 2015 actual disbursement (slide 14) was 96.3% of the planned disbursements.

Mr. Benson explained that the Unfunded Projects or “below the line projects” (slide 15) are not included in the 10-year CIP budget. The listed projects are being monitored to identify if and when the projects might need to be included in the CIP. Mr. Benson noted some projects for CIP consideration, such as the Full Plant Deammonification project, will warrant business case evaluation to determine potential return on investment. Mr. Benson commented that any new projects added to the 10-CIP would push out an equivalent cost for lower critical/priority project(s) to maintain the 10-year CIP disbursement budget target.

Mr. Benson explained that the CIP Issues/Sensitivities (slide 16) and noted regulatory/consent decree unknowns were previously discussed. Mr. Benson commented that the DC Water cost for the DC PLUG is unknown. Mr. Benson noted the ramped up condition assessment for the large sewers has the potential to create new CIP projects based on the criticality of the findings.

III. ASSET MANAGEMENT PROGRAM UPDATE

Ms. Liliana Maldonado, Director of Engineering and Technical Services (DETS), introduced Mr. Craig Fricke, Manager Enterprise Asset Management, who will be leading the asset management effort moving forward and to provide an update to the Asset Management Program (AMP). Mr. Fricke presented the AMP governance structure (slide 23). Mr. Fricke explained the governance structure has two levels consisting of the Steering Team, which is comprised of executive management; and the Working Team, which is comprised of all operational areas of DC Water and support and subject matter expert (SME) resources such as strategic planning, financing, IT, and engineering project controls. Mr. Fricke noted one of the responsibilities of the Work Team members is to be liaisons to their respective departments. Mr. Fricke explained the governance structure will enable the expedited transition from consultant-led effort to a DC Water led effort. Mr. Fricke remarked that the transition is already taking place and continues to progress.

Mr. Fricke commented that the current approach to the AMP is to integrate and leverage the extensive efforts that have been performed in the water, sewer, and wastewater programs and to accelerate results. Mr. Fricke explained that the primary AMP objective is to integrate the asset management activities across all the program areas while focusing on strategic objectives and metrics to drive and focus the AMP efforts. Mr. Fricke noted that over the next year initial asset management plans for water, sewer, and wastewater will be developed.

Mr. Fricke explained that the AMP key elements (slide 26) include using the risk framework developed in Phase 1 to assess risk for water and sewer system assets in the authority; develop business case guidelines for alternative selection; develop project prioritization criteria; and

develop an enterprise asset management plan that would roll-up or provide an executive summary of the individual water, sewer and wastewater asset management plans.

Mr. Fricke explained that the water, sewer and wastewater Facility Plans have been developed considering asset management and that the approach moving forward will be to transform these Facility Plans into asset management plans by incorporating and normalizing of asset risk assessment throughout the authority; balancing risk and level of service and cost; identifying performance indicators; and using predictive modeling and analytics to quantify potential impacts; and calculating potential return on investment (ROI) if an action is taken on a specific facility/equipment. Mr. Fricke noted Facility Plans typically focus on capital improvement recommendations; whereas an asset management plan also incorporates O&M and business process improvements such as equipment data capture to optimize equipment performance and extend the equipment's beneficial use. The asset management plan also includes a long-term investment plan. Mr. Fricke presented a graphical illustration (slide 28) of a typical asset management plan decision matrix.

Mr. Fricke presented a sample of the Top-Down Risk Assessment (slide 29) that was completed for the major vertical assets outside of Blue Plains. Mr. Fricke noted a similar risk assessment has been performed to date for 24 of the 35 asset systems at Blue Plains. Mr. Fricke explained that the high level risk assessment is useful for focusing and prioritizing specific asset systems where a more detailed risk assessment is warranted. The Committee inquired how continuity is maintained if the assessment is not performed by the same staff. Mr. Fricke acknowledged the challenge and noted that developing a framework with procedures, guidelines and consistent criteria and definitions will help maintain the continuity. Mr. Fricke further noted the risk assessment will evolve to include also a bottoms-up analysis that will be documented in the maintenance management system.

The Committee inquired if the relative risk score includes repair history and performance criteria. Mr. Fricke responded that there are templates used to calculate the risk score, such as the likelihood of failure template, which consists of maintenance history, physical condition and asset performance among other factors. There is also a consequence of failure template. The Committee inquired if the template for consequence of failure includes the nature of the consequence. Mr. Fricke responded that consequence can be defined as potential impacts to public image and/or health and safety for example. Ms. Maldonado provided an example whereas the consequence-score for a major trunk sewer failure for a sewer with no redundancy or bypass capability will be higher; whereas, a trunk sewer with a bypass line will score lower on the consequence matrix.

Mr. Fricke indicated that three business case evaluation process pilots will be conducted for each service area. The three projects were selected because alternatives and costs have already been identified, which will now warrant the application of the business case methodology to determine the best alternative. Ms. Maldonado noted that a difference with the Phase 2 AMP approach is that the analysis of alternatives will incorporate the O&M cost and will account for benefits for projects that may initially have a high capital cost but may result in significant cost savings over the life-cycle of the project. This approach will enable ROI evaluation and/or for quantification of pay-back or savings, and potential social and/or environmental benefits in other areas of the enterprise. Previously, it has been difficult to consistently quantify the overall benefits to the enterprise for a particular project when considering only the capital cost.

Mr. Fricke presented a draft graphical illustration of the Capital Project Prioritization Process (slide 31) consisting of 8 initial criteria and weights. Once the DC Water criteria are determined, scoring

scales will be developed for each, which will then be applied to representative projects. The results will be used to calibrate the scales for each criterion and/or to refine the criteria as needed. The Committee inquired to the definition of the "public image" criteria since a failure of a system may result in health and safety issues that might then impact DC Water's image. Mr. Fricke explained that the "public image" criteria will be evaluated during the piloting of the 3 selected projects and discussed with the steering team as to its applicability within the overall project prioritization criteria. The Committee inquired if notes/records will be maintained and stored to provide a history that documents the rationale for the decision making process. Mr. Fricke responded that records development and maintenance will be part of the guidebook and/or standard operating procedures (SOP) set up under the AMP. Ms. Maldonado noted that a standard template for capturing the information and discussions was developed in Phase 1 and will be modified to include the Phase 2 work and to document key issues or insight that factored into the project scoring. The prioritization scores and supporting documentation and notes will be part of a database that is updated at least annually when the CIP is updated.

Mr. Fricke presented the draft asset management metrics for the water, sewer and wastewater service areas that will be used to baseline and establish performance targets for each service area. Mr. Fricke noted that water and sewer performance metrics may be more directly related to impact on customers; whereas, the vertical asset metrics may be related to regulatory compliance, proactive and reactive maintenance, and/or operational readiness. The Committee requested that the 3- to 5-year timeline and spending for the AMP be closely monitored. Mr. Fricke responded that the commitments and spending will be monitored. The Committee requested that a presentation be provided to the entire BOD members to provide a clear understanding of the AMP objectives and when they can expect to begin seeing CIP project prioritization results. Ms. Maldonado responded that the CIP update planned for the spring of 2016 will incorporate the results of the AMP risk assessment work done to date. Ms. Maldonado noted that not all assets in the enterprise will be assessed in the coming year; however, the objective will be to evaluate a significant portion of assets including those with high risks per the top-down risk assessment to better inform the updated 2016 CIP.

IV. ACTION ITEM – JOINT USE

1. Recommendation for Board Action – Project Lifetime Budget
2. Recommendation for Board Action –Disbursements

Mr. Benson requested for approval to send forward the 10-year Disbursement Plan and Lifetime Budget to the full board and referenced the above FY2016 – FY2025 CIP summary for the request.

The Committee will recommend the action items to the full Board for approval.

V. OTHER BUSINESS/EMERGING ISSUES

None

VI. EXECUTIVE SESSION

No executive session was held.

VII. ADJOURNMENT

The meeting was adjourned at 11:21am.

Follow-up Items

None