District of Columbia Water and Sewer Authority

Evaluation of Alternative Governance Structures

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EXECUTIVE SUMMARY

1. Study Purpose and Background

WASA's enabling legislation directed that a study be performed by 2000 that focused on the feasibility of regionalizing some or all of the operations of WASA. This study was commissioned by WASA and performed for WASA in 2000 by the Metropolitan Washington Council of Governments. That study concluded that WASA's governance structure was working well, and suggested no changes in governance at that time. One of the recommendations contained in the 2000 study was that WASA should revisit the issue of governance in five years. This was a non-binding recommendation, and WASA's Board of Directors determined that good stewardship suggested that a periodic review of WASA's governance was desirable. In early 2005, the WASA Board of Directors formed a Governance Committee. The purpose of the Committee was to provide oversight of WASA's governance programs and activities, with an immediate focus on the recommended governance study. The Committee was charged with the responsibility for evaluating alternative structures for the ownership, management and governance of the Authority and its facilities. The members of the Governance Committee are:

- Mr. Bruce F. Romer (Montgomery County) - Chairman
- Mr. David J. Bardin (District of Columbia)
- Mr. Alfonso N. Cornish (Prince George's County)
- Mr. Glenn S. Gerstell (District of Columbia)
- Mr. Anthony H. Griffin (Fairfax County)
- Mr. Alexander McPhail (District of Columbia)

During the spring of 2005, the Governance Committee drafted a request for proposals (RFP) that was distributed to interested and qualified consulting firms. Proposals were received by WASA on April 28, 2005, and a consulting team led by the Municipal & Financial Services Group, supported by LeBoeuf, Lamb, Greene and MacRae and Tatum & Associates was engaged for the study.

STUDY OBJECTIVES

The Board of Directors Governance Committee established the basic objective of this study to be the evaluation of alternative structures for the ownership, management and governance of WASA and its facilities. In commissioning the study, the Committee directed that the study team carefully review the governance alternatives that would allow the Authority to better meet its mission and its statutory obligations, in an objective, timely, efficient and cost effective manner and with an appropriate balance of independence and accountability. As part of the study, the Committee directed that the study document the benefits, costs, risks, and implementation steps at a high level associated with those options deemed to be feasible. The Committee also established the expectation that the study team should examine a broad range of alternatives - from maintaining the current operating model to options that would increase or decrease WASA's current span of authority, services and operations. The Committee stated that changes in the scope of WASA's operations could incorporate portions of other regional water and wastewater utility services currently operated by regional utilities, local governments, or the

Washington Aqueduct Division of the U.S. Army Corps of Engineers. In addition, the Committee asked the study team to also consider alternative ownership, management and governance configurations.

The Committee also stated that the study should build upon the work done in the 2000 Regionalization Study. The Committee directed that the study provide an updated assessment of the efficiency and effectiveness of the current Authority structure and define how alternative structures might impact the current level of overall efficiency and effectiveness. The Committee further requested that the study provide an explicit study methodology, and that the study team use that methodology to perform the assessment of the alternative structures.

2. General Study Methodology

The project team followed a simple and straightforward workplan and study process:

- Meet with the Governance Committee and Board of Directors to validate the study's objectives and goals

- Review prior studies and the relevant available data (legislation, strategic plan, mission statement, literature search, etc.)

- Interview key individuals:
  - All members of the Board of Directors and their alternates
  - Senior WASA management
  - Elected officials
  - Other stakeholders

- Identify other agencies that operated across state lines with multi-jurisdictional boards, as well as other major water and wastewater agencies; document positive and negative aspects of each agency (at it might relate to WASA's needs)

- Develop and evaluate alternative governance models

- Formulate recommendations as necessary

- Document the study's results in a report and formal presentation.

3. Findings and Conclusions

WASA's Board of Directors includes a wide range of talent and experience, and represents a broad range of interests and priorities. The same observation holds for WASA's management and its stakeholders. Likewise, the project team involved in this study included strong functional skills in management, finance, organization, environmental health and safety and public administration, combined with substantive experience as regulators, advocates, consultants and utility operators. Given the broad range of skills and experience from all involved in the study, there was a ready consensus with regard to findings and conclusions:

- The governance structures in place for WASA have functioned well, given the lack of precedent faced by WASA's Board of Directors. These governance structures have enabled WASA's Board to accomplish substantive and acknowledged operational improvements and to dramatically improve WASA's financial condition.

- The Board of Directors has acted cohesively, with general unanimity on major issues, reflecting willingness to compromise on tactics while focusing on long-term goals and understanding the "art of the practical" in terms of the inevitable tensions between and among the jurisdictions served by WASA.

- WASA has benefited from a high degree of stability and relatively low turnover on its Board of Directors, and has recruited and retained capable senior managers to oversee the day-to-day operations of the Authority. The current chairman of the Board has been in that position for more than five years, and several members of the Board have served since (or almost since) the Authority was created. The synergy of "good" board members and "good" management has allowed WASA to operate in an increasingly efficient and business-like manner.

- There is an inherent vulnerability in the composition of the Board of Directors, given the political nature of the nominating and appointing authorities, and the "best" response to this vulnerability is to develop suggestions for nominating and appointing authorities as to the mix of talents and experience needed on the Board. The Board should also develop incentives and public information efforts to present service on WASA's Board as a desirable public service contribution by talented individuals.

- Given the widespread agreement that integration of water supply, treatment and distribution is a needed step in WASA's continuing focus on customer service, WASA should initiate the preliminary studies and discussions to acquire control over the production of its treated water, realizing that this may be a multiyear effort, and must be predicated on WASA's continuous efforts to capitalize on its emerging strengths. The most practical vehicle for acquiring control over the production of potable water is a long-term lease rather than outright ownership; this is a result of some of the complexities and restrictions in federal law and oversight requirements that would be affected by changes in ownership of the Aqueduct.

- WASA should encourage the transfer (return) of stormwater programs and infrastructure to the District of Columbia government, the holder of the relevant permit. This will allow the District of Columbia to have the ability to ensure compliance with stormwater requirements by DC agencies more readily than can WASA, based on WASA's existing legislation.

- WASA has the capability to provide capital financing for improvements to the Washington Aqueduct and has the demonstrated capability to manage such large capital projects. WASA does not presently possess the staff resources to operate the Washington

Aqueduct and would most likely have to contract to operate the Aqueduct until such time as WASA hires and trains the additional staff necessary to operate the Aqueduct.

- As part of its efforts to acquire control over the production of treated water, the WASA Board of Directors should discuss the multiplicity of issues and challenges related to this transaction, including methods to assure continued excellent quality of service to those jurisdictions served by the Aqueduct who are not currently served by WASA.

- There is a specific need for both succession planning and executive development programs at WASA. Some work has been done in this area, but substantial additional efforts may be required.

- Based on sound corporate governance and the currently advisory strictures of the Sarbanes-Oxley Act (which applies only to publicly traded companies and not to public sector entities such as WASA, but whose relevant requirements are being adopted by some public sector entities), WASA's Board of Directors may need to establish or modify existing organizational structures to provide for direct reporting to the Board by WASA's internal audit function.

- WASA's rates and charges for the provison of sercie are currently developed on a basis consistent with industry practice, however major anaticpated capital projects for both Blue Plains and the District's wastewater collection system make the clear presentation of the development of rates and charges an extremely important near-term activity. The Board should engage in a dialog with stakeholders as to the "best" ratemaking process for retail rates in the District of Columbia, with the explicit stipulation that allocation of "whoesale" costs allocated or charged to the various jurisdictions by WASA shall not be subject to any additional review or regulation.

During the course of the study, other issues indirectly related to governance were identified, and most of these issues can be addressed via the negotiations related to extending and revising the Intermunicipal Agreement (IMA) of 1985, including WASA's process for cost allocation, the allocation of capacity at Blue Plains and mechanisms to address disputed bills from WASA to its wholesale customers. While not specifically a finding or conclusion related to this study, the periodic review of governance is a desirable effort by every Board of Directors in both public and private sectors, and should occur on a regular basis.

4. Recommendations

Based on the findings and conclusions presented above, our recommendations to WASA's Board of Directors are straightforward:

- Develop advisory guidelines for nominating and appointing authorities to facilitate the inclusion of the appropriate mix of skills and backgrounds for future Board members.

- Study and develop legislative language that would permit compensation for non-government employees who serve on WASA's Board of Directors, to enhance and assure the continuing availability and interest of high-quality private citizens in service on WASA's Board.

- Seek to clarify legislation that addresses the responsibility to prepare revenue estimates and authority over WASA's CFO.

- Pursue acquiring control of WASA's treated water supply (the Washington Aqueduct), but probably as long-term leasehold and not as a purchase; be flexible in adopting human resource policies that will encourage retention of the Aqueduct's current operational staff, and consider contracting with the Army Corps of Engineers to operate the Aqueduct under WASA's direction for sometime into the future. Such an approach would allow WASA time to recruit and train an appropriate staff to operate the Aqueduct.

- Investigate the option of WASA functioning as a holding company, including examination of the structure and form that such a holding company might take. While a consensus on such structure and form was not within the scope of this study, there are a number of options that WASA could adopt, including the use of a single board of directors, multiple boards of directors, advisory boards or some combination of boards and committees. This becomes more important should WASA acquire control over its source of drinking water.

- Develop and implement a succession plan and expand efforts related to executive development programs for WASA's senior staff.

- Adopt relevant aspects of Sarbanes-Oxley, including the reporting relationship of the current Internal Audit function.

- Undertake a review of governance at least every ten years and an operational review at least every five years.

5. Next Steps

There are several immediate actions that should be taken by the Board of Directors:

- Appoint a Water Supply Committee of the Board, and charge this committee with developing a plan to acquire control of WASA's water production, including identification of the stakeholders, the potential issues involved (legal, political, environmental, financial, operational, etc.), the legal and political steps involved in such an undertaking, a time-phased workplan including a critical path, estimates of the costs involved and establishment of a process to enable monitoring of the process by the full Committee and the full Board. To the extent that WASA's senior staff could handle some of the work related to this project, the workload of the Board and its members related to this subject would be lightened.

- Appoint a Membership Committee to the Board, with responsibility and authority to develop advisory guidelines to be provided to nominating and appointing authorities, to facilitate the identification of needed skill sets for Board vacancies as they may occur. Alternatively, a few Board members, working with WASA's Human Resources / Labor Relations Committee might be able to handle this work.

- Direct WASA's General Counsel, working with the Governance Committee of the Board, the General Manager and (possibly) outside experts to investigate enabling WASA to re-structure itself as a holding company with appropriate membership on the Board of Directors for each of its operating entities as well as for the (parent) holding company itself. Alternatively, consider the use of advisory boards for each of the operating entities.

- Direct WASA's General Manager to develop and deliver by a date certain: (1) a Succession Plan for all key personnel; and (2) an enhanced Executive Development Plan that identifies the gaps or weaknesses in the "bench strength" of WASA's key management functions and responsibilities, including numbers and qualifications for additional skills or resources needed.

A. UNDERSTANDING AND BACKGROUND

A.1 – Description of the Project

WASA - THE BOARD OF DIRECTORS AND ITS EXECUTIVE STAFF

The District of Columbia Water and Sewer Authority has had several incarnations prior to its current status, including operating as the Department of Environmental Services and later as the Water and Sewer Utility Administration within the District of Columbia Department of Public Works. In 1996, the District of Columbia government, suburban Maryland and Virginia jurisdictions and the federal government collaborated to create the District of Columbia Water and Sewer Authority (WASA), an independent agency of the District of Columbia. This was the culmination of efforts to create such an entity that started in the early 1990s.

The WASA organizational structure enables the Authority to respond quickly to changes in customer needs and new regulatory requirements, to create its own regulations and policies for procurement, human resources and finance, sell bonds and negotiate its own contracts and labor agreements. WASA is lead by an eleven member Board of Directors (with eleven alternate members). The Board members are appointed to represent the District (six members) and the suburban jurisdictions (five Board members) that receive wastewater treatment service from the Blue Plains Regional Wastewater Treatment Plant. The non-District Board members represent Prince George’s and Montgomery counties in Maryland and Fairfax County in Virginia. Daily operations at WASA are conducted under the leadership of a General Manager who reports to the Board of Directors.

WASA’s WATER AND WASTEWATER SERVICES

WASA provides retail water and wastewater services to its residential and commercial customers in the District, with rates for these services set by the Authority's District of Columbia Board Members. Wholesale wastewater treatment is provided to portions of Montgomery and Prince George’s Counties in Maryland and portions of Fairfax and Loudoun Counties in Virginia, as well as to the Town of Vienna, Virginia. These suburban jurisdictions are billed for the full cost of their use of the WASA facilities and services based on a funding formula established in the Blue Plains Intermunicipal Agreement of 1985, as amended. The Authority buys its drinking water from the Washington Aqueduct, which is owned and operated by the U.S. Army Corps of Engineers. WASA conveys treated drinking water to customers located throughout the District.

WASA provides drinking water and wastewater treatment services to more than 500,000 residential, commercial and governmental customers in the District of Columbia, and also collects and treats wastewater for 1.6 million customers in Montgomery and Prince George's Counties in Maryland and Fairfax and Loudoun Counties in Virginia. WASA also operates the largest advanced wastewater treatment plant in the world, the Blue Plains Regional Wastewater Treatment facility, with a capacity of 370 MGD.

WASA's GOVERNANCE STUDY

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PROJECT DEFINITION OF "GOVERNANCE"

Early in the project, the Governance Committee and consulting team took the time to develop a definition for "governance" for use throughout the study. This was an important early milestone since there were varying definitions and experiences with the term "governance." For the purposes of the study, the project team developed an agreed upon definition for "governance" to ensure internal team alignment and for use in the interview process and in presentations to the Governance Committee:

> "Governance" – The internal and external legal and management structures, control of assets and resources, authorities and arrangements that define and constrain WASA including the establishment of policies, efforts to assure clear accountability and provide proper oversight."

OVERVIEW OF THE GOVERNANCE STUDY'S TECHNICAL APPROACH

The project team invested considerable effort in reviewing available information including the 2000 COG study. As an initial step in the project, the team developed an Internet-based data and report repository to pull together in one location all the relevant WASA reports and data along with providing a central location for copies of key working papers prepared during the course of the study by project team members. At the very start of the project, the team met with the WASA Governance Committee to develop a consensus on the scope of the project and a shared understanding of the expectations as to the deliverable products and services. A similar meeting was also held with the WASA General Manager to secure his input and advice on the study. During the course of the study, periodic review meetings were held with the Governance Committee and with the General Manager and his project representatives. These meetings provided invaluable assistance in steering the project to meet the expectations of the WASA Governance Committee. As part of the review of documents, the Board of Directors strategic plan was reviewed in depth to determine the Board's understanding of and approach to the key strategic issues on the horizon for WASA. In addition, the Board's mission, vision and values statement was studied and research was conducted to determine the depth of its penetration into the WASA organization. Most importantly, key documents such as the following were reviewed by the project team to establish a sound foundation for the study:

- Legal requirements, authorities and restraints created in the Federal legislation (PL 104-184), The District of Columbia Water and Sewer Authority Act of 1996.

- District of Columbia Law 11-111, Section 43-1677(g) (1), the Water and Sewer Authority and Department of Public Works Reorganization Act of 1996.

- Blue Plains Intermunicipal Agreement of 1985, as amended

- WASA By-Laws, Rev. 12-4-03.

- 2004 DCWASA Long Term Control Plan Consent Agreement.

The project team conducted extensive interviews to obtain information and input on WASA governance. Interviews were conducted with WASA Board members and alternates, with elected officials and with key WASA executive staff including the General Manager. Additionally, interviews were conducted with key WASA stakeholders. The project team also interviewed and studied outside authorities and other organizations to determine if their governance policies and structures might be applicable to WASA. A special effort was also undertaken to learn from other major water and wastewater utilities serving large metropolitan areas. Through the interview process, and the study of WASA documents, the project team analyzed current WASA policy and procedures, the organizational structure and the internal distribution of responsibilities and other important governance areas.

The project team then developed a series of potential models for re-structuring WASA and reviewed them with the Governance Committee on several occasions. The team developed criteria to use in evaluating the individual models but it was decided that it was impossible to establish defendable weights for each of the criteria.

The project team concurrently identified a series of actions for potential governance improvements at WASA. At the Committee's request, the list of potential improvements was separated into two lists, those requiring legislative amendment and those which could be implemented by the Board.

The project team then proceeded to develop formal recommendations. In addition, the team developed for the Committee a list of "Next Steps."

A.2 – Description of WASA Today

EVOLUTION OF WASA AS A MODEL UTILITY

WASA's Board of Directors has established a strategic vision for WASA to become THE best water and wastewater utility. This is a challenging goal for any utility and perhaps an even more ambitious goal when considering the challenges that faced WASA when it was formed in 1996.

Water and wastewater services were previously supplied to District of Columbia customers by the Water and Sewer Utility Administration (WASUA) of the Department of Public Works of the Government of the District of Columbia. WASUA was operated as an enterprise fund, with segregation of WASUA's revenues and expenses from other District accounts. In the late 1980's and early 1990's, the District was enveloped in a major financial crisis and the District "borrowed" considerable cash reserves (approximately $85 million) from WASUA. In addition, hiring freezes were established for all District organizations. Wastewater compliance issues soon became exacerbated at the Blue Plains wastewater treatment facility, and long-deferred maintenance on the water distribution system and wastewater collection system were adversely affecting customer service.

Needed capital investments were being deferred, as was necessary maintenance on the water distribution system and wastewater collection system. For example, needed infrastructure maintenance and improvements (e.g. customer service systems, meter maintenance and replacement, etc.) did not receive the attention that any prudent utility operating truly independently would have devoted to its property, plant and equipment. In addition, WASUA was operating under the District's personnel, procurement, and management practices that may not have been entirely appropriate for a major utility. Major environmental issues such as biosolids management affected both the District of Columbia and suburban users of blue plains, serving as one of the catalysts for the creation of WASA.

The net result was that WASUA was operating in a mode that impeded assurance of effective and efficient service to its customers into the indefinite future, and environmental regulators were extremely concerned about threats to the Anacostia River and the Chesapeake Bay. It was out of this utility crisis that WASA was born.

WASA was created to assure long-term efficient and effective provision of vital drinking water and wastewater services which would be insulated from the challenges facing the District of Columbia government. WASA was given the authority to adopt operating and capital budgets, establish rates and fees and issue debt. WASA was also authorized to adopt its own personnel and procurement procedures and negotiate its own labor agreements. The progress made by WASA since its inception less than ten years ago is a substantive testament to the leadership of its Board of Directors, the steady hand of its General Manager and the hard work of WASA's employees. WASA has evolved from a troubled beginning to become a respected and responsible forward looking utility poised to successfully meet the future challenges which lie on the horizon.

WASA has restored financial integrity and gained the confidence of the financial community through responsible financial management. Customer service has been measurably improved and the number and severity of complaints has declined. WASA has responsibly met the environmental challenges it has faced, many of which are legacies of the past failure to invest new capital funds and conduct proper system maintenance. WASA has met the lead crisis with a commitment to vastly improve the drinking water distribution system by replacing old lead service lines.

We view WASA as a "model" for other utilities and we believe WASA is making substantial progress on its journey to become THE best utility. An anecdotal example of this progress is the adoption of the term "the WASA model" by the World Bank in describing the desirable operating and financing characteristics of water utilities. WASA's Board of Directors deserves credit for not accepting the status quo and instead seeking to further improve WASA's governance through this study.

CURRENT GOVERNANCE PRACTICES AT WASA

Sound and proper governance comes in many forms. It involves policy, structure, timely communications and reporting, independent auditing, measurement and formal Board governance policies and procedures among other things.

At the initiation of the project, we first focused on the "high level" elements of sound governance which include:

- Legal Authorities – The Board has a solid legal basis for its activities, and has adequate and clear authority to carry out its responsibilities.

- Financial Stewardship – The Board oversees annual independent financial audits that help ensure financial integrity and the existence of sound financial polices and procedures.

- Governance Backbone – The Board has in-place by-laws and documents all of its meetings and decisions. All Board meetings are open to the public.

- Long-Range Strategic Vision – The Board has developed a strategic plan and is committed to periodically updating the plan.

- Working Relationship – There is a sound working relationship between the Board and the GM.

- Monitoring Performance – The Board assesses the performance of the GM, and has started the process of formally monitoring accomplishment of the Strategic Plan.

- External Communications – WASA is working to expand its external communications and has made substantial progress on developing sound working relationships with its customers and regulators.

WASA has addressed and executed governance in each and all of the areas identified above, and has managed to accomplish significant progress in its ten years of existence. A review of WASA governance is the basic subject of this study. In the various sections of the report that follow, we provide our detailed analyses of current governance at WASA and our recommendations for improvement.

ENHANCED / CLARIFIED INDEPENDENCE AND LEGISLATIVE CHANGES

The obvious governance issue that requires clarification is that of authority over WASA's chief financial officer (CFO) and clarification as to the responsibility to prepare revenue estimates. WASA's Board of Directors should seek to clarify this critical governance issue.

Other independence-related issues that were identified during the course of the study included WASA's authority relative to procurement and personnel policies and procedures, and the ability of WASA to negotiate wages and fringe benefits as part of the same agreement. WASA has exercised its legal authority to establish and implement its own procurement and personnel systems. WASA's ability to concurrently negotiate wages and benefits is limited by WASA's agreement to the composition of the differing bargaining units for wages and for benefits.

All of the above-mentioned issues are addressed in some detail in other sections of this report.

A.3 – WASA as It Sees Its Future

A mission, vision and values (MVV) statement is an important strategic document for an organization. It outlines the basic business of the enterprise, its aspirations for the future and the manner in which the organization will deal with its key stakeholders. WASA'S Board of Directors has promulgated a mission, vision and values statement. The Board of Directors has also developed a strategic plan for WASA which establishes strategic objectives for the period of 2003 – 2005, and in early December 2005 approved an updated strategic plan.

BOARD OF DIRECTORS' VISION FOR THE AUTHORITY

A vision statement for an organization should provide a compelling view for the future that provides a clear image of the future success of the organization. A vision statement should stretch the organization well past its current performance level and clearly describe a challenging, exciting future state of the organization. WASA's Board of Directors has created the following vision statement to steer the long-term direction of the Authority:

> "WASA IS THE INDUSTRY LEADER AND ENVIRONMENTAL STEWARD IN PROVIDING EXCELLENT WATER SERVICE AND WASTEWATER COLLECTION AND TREATMENT SERVICES FOR ALL CUSTOMERS."

The Board has clearly staked out a challenging goal for WASA to become a national leader and to actually become "THE" water and wastewater industry leader.

The Board is correct in charging WASA leadership and staff to provide excellent services to its customers. The importance of this task, both today and in the future, cannot be over emphasized. Quite often boards and/or authorities forget that the fundamental job of a utility is to perform the day-after-day "blocking and tackling" which provides safe and efficient water and sewer services to its customers.

The Board also visions that WASA will be a steward of the environment while providing excellent services to its customers. This is very important element of the vision statement given WASA's prominence as a major discharger to the Anacostia and Potomac Rivers and the Chesapeake Bay. The Board is clearly articulating that environmental performance should not be compromised as WASA executes its other important responsibilities.

We regard the Board's vision statement as an excellent long-term directional signal for the entire WASA organization. We agree that it is essential that WASA provide excellent services while concurrently protecting the Anacostia and Potomac Rivers and ultimately the Chesapeake Bay. Consistent with the Board's vision, we also see a positive future opportunity for WASA to assume a more visible role in protecting area waters.

BOARD OF DIRECTORS' MISSION STATEMENT FOR WASA

A mission statement should be a precise definition of the key responsibilities of the organization. A mission statement should clearly describe the purpose and function of the organization. WASA's Board of Directors has adopted the following mission statement for the Authority:

> "THE MISSION OF WASA IS TO SERVE ALL ITS REGIONAL CUSTOMERS WITH SUPERIOR SERVICE BY OPERATING RELIABLE AND COST-EFFECTIVE WATER AND WASTEWATER SERVICES IN ACCORDANCE WITH BEST PRACTICES."

We find that the Board's mission statement for WASA correctly points to the main purpose of the WASA organization … to provide superior and reliable utility service to its customers. We particularly like the inclusion of the concept of service reliability in the mission statement. We also applaud the Board for its commitment to employing best practices that are essential if WASA is to be efficient and maintain reasonable rates for the long-term future.

We believe the Board's focus on "cost-effective" services might conjure different views among individual customers and stakeholders but we believe it is an appropriate part of the mission statement. The WASA organization must be grounded in the reality that its customers have finite budgets and increasing utility rates are just one of a host of increasing costs that it customers are facing.

BOARD OF DIRECTORS' VALUES FOR WASA

The Board has established the following values statement to guide the daily efforts of WASA's staff. The values statement also communicates expectations to WASA's customers and external stakeholders. In the values statement, the Board pledges that WASA will be:

- "Respectful, responsive, and sensitive to the needs of our customers and employees.
- Ethical in professional and personal conduct.
- Vigilant to ensure optimal health, safety and environmental outcomes.
- Dedicated to teamwork, mutual cooperation and appreciation.
- Committed to equity, trust and integrity in all we do."

We find that the values statement is on point in terms of providing clear and concise guidance to direct the daily efforts of the organization. We believe that the values statement captures nearly all the attributes that WASA must demonstrate to meet the needs of its customers, gain their respect and move positively forward to achieve the Board's vision that WASA become "THE" water and wastewater industry leader.

It is commendable that the Board has captured the importance of WASA being sensitive and responsive to its employees and we applaud the positive expectations it creates for customers and external stakeholders. The values statement, first and foremost, focuses the WASA organization on maintaining organizational and personal conduct that will ensure positive interactions with WASA customers and stakeholders. It establishes that WASA management will be committed to positive interactions with WASA employees, who are critically important to the ultimate success of the enterprise. The values statement also points to the essential need for ethical actions and the need to ensure optimal environmental and safety outcomes. The values statement also correctly points to the need for teamwork, trust and integrity in everything undertaken by WASA and its employees. One possible addition to the WASA values statement would be a statement that WASA be an innovator and leader in the development of industry best practices.

STRATEGIC PLANNING

A strategic plan serves as a beacon to guide an organization through sometimes troubled and challenging waters. It should compel an organization to maintain focus upon its most important priorities and/or objectives regardless of the daily challenges it faces.

A strategic plan is a management and governance tool that also provides long-term direction to the day-to-day activities of an organization. A strategic plan allows a Board of Directors to charge the chief executive of the organization with a series of performance goals. A strategic plan can also help an organization ensure top-to-bottom alignment such that the entire enterprise is working toward the same set of goals and is employing just one “playbook.”

The Board of Directors adopted its most recent strategic plan for the organization in November 2005. The plan outlines the Board’s view of the critical priorities WASA must address to meet its responsibilities to its customers and external stakeholders. There is a clear Board of Directors commitment to achieving the objectives of the strategic plan:

> *“The Board is committed to assisting management and staff in accomplishing the objectives in this plan as WASA continues to work to become not just a local or regional model, but to achieve world-class status.”*

The WASA strategic plan is different from many strategic plans adopted by other utilities. First, many utility strategic plans are initiated in a “bottoms-up” planning process and not a “top-down” methodology. We applaud the active participation of a Board of Directors in the strategic planning process but we also see many advantages to increasing employee involvement in the development of the strategic plan. We feel that this type of planning methodology has an advantage in that key employees get an opportunity for input at the formative stage of plan development. We believe that this can aid implementation since employees feel it is “their plan” and not a top-level dictate.

Another major difference in the WASA strategic planning process is that the WASA Board of Directors made a conscious decision to develop a concise, streamlined strategic plan and not to develop a verbose strategic plan similar to that sometimes adopted by other utilities.

The Board’s strategic plan addresses the timeframe from 2005 to 2007. The plan was developed through a facilitated process in which the input of Board members and WASA management were solicited and melded into the strategic plan for the Authority. It is not clear how many stakeholders participated in the process or what level of WASA staff had input to the planning process.

The Board identified four strategic focus areas for the WASA strategic plan:

- Customer and Community Service.

  "WASA is committed to understanding, serving, and responding to the needs of its diverse customers and stakeholders. WASA will utilize state-of-the-art technology to monitor, measure and manage customer expectations, and reach out to improve relationships with stakeholders and the public."

- Organizational Effectiveness.

  "WASA will ensure the effectiveness of the organization by creating and maintaining a safe, productive, highly competent, diverse workforce. WASA will through partnerships with stakeholders maintain a professional, high-functioning, ethical work environment and culture."

- Environmental Quality and Operations.

  "WASA will provide excellent environmental stewardship, meet and surpass regulatory standards and manage the Authority's infrastructure effectively."

- Finance and Budget.

  "WASA will maintain a sound financial position by optimizing operational and capital programs and exploring additional revenue sources, while maintaining fair and equitable rates."

We believe the Board of Directors has done an excellent job in defining the key strategic focus areas. The Board realigned the WASA committee structure to support the ultimate achievement of these strategic goals. Each WASA committee was asked to adopt a set of goals, objectives and measures to achieve the Board's strategic goals. A total of eighteen goals spanning four focus areas were established in the 2005-2007 WASA Strategic Plan. They range from monitoring performance to "meeting or surpassing customer service objectives and environmental and regulatory priorities at the lowest possible cost."

Our testing within the WASA organization indicates that the General Manager keeps the strategic objectives before the WASA staff in his annual employee presentation and as part of the workplan process. It appears that some departments, but not all, review the strategic goals with employees and all departments actually establish performance objectives based on the Board's strategic goals.

We believe that there are some areas for improvement in WASA's strategic planning process. While elements of sound planning exist, the current process can be fine tuned.

A.4 – Current External Environment

The external environment facing a utility is an important factor affecting the ultimate success of the enterprise. In addition, the external environmental setting is an important aspect in evaluating and establishing sound governance practices for an organization.

As part of the study, we have reviewed the external environment in which WASA operates and identified the key external driving forces facing the Authority in the years ahead. These external driving forces will need to be thoughtfully incorporated into WASA's strategic plan and, most importantly, must be taken into account in reviewing WASA's current governance procedures and policies. WASA has certainly made major efforts to address the external forces that affect the agency, and WASA has progressed from a position of being constantly in a "reactive" mode to one from which it can be "pro-active." We believe the following represent the key external drivers facing WASA:

- **Need for ever improving customer service.**

  To remain successful and to increase external credibility WASA must constantly seek new and better methods to serve its customers. To borrow from an automobile advertisement, WASA must demonstrate in its daily actions that they believe "The Customer is Job 1." A customer survey will be completed in 2006, and WASA should follow up on any issue identified in the data collected during this survey.

- **Demand for improved strategic planning**

  A properly developed and implemented strategic plan achieves organizational alignment around the key priorities for the organization. It also serves as a beacon to light the path to organizational success. We believe improved strategic planning is essential to the future success of WASA.

- **Need for improved environmental performance.**

  The environmental demands facing the Authority are significant and will only become tougher in the years ahead. WASA must expect ever tightening drinking water standards and more demanding water quality improvement requirements. WASA must strive to be a responsible steward of the environment and earn the respect of customers and external stakeholders. Some of WASA's major programs and projects that reflect these pressures are its CSO long-term capital program and the lead service line replacement program.

- **Drive for cost-effective and reasonable rates.**

  We expect that there will be ever increasing demands for controlling utility rates which is impossible given the costly environmental challenges which lie on the horizon for WASA. Establishing and defending utility rates will become a very major activity for WASA and its Board of Directors in the future. We see a significant need for WASA to enhance and expand its existing efforts to build a base of understanding about the challenges and costs it will face in the next ten years, and to educate and inform its customers about its efforts to control costs, such as its AMR program and O&M cost reduction efforts.

- **Commitment to ever improving technology and best practices.**

  We believe WASA must be committed to adopting best practices and it must continually invest in improved technology if the Authority is to become a world-class utility and ensure efficiency in its operations. WASA has begun to implement new information management systems, and is in the early stages of implementing an asset management program.

- **Need for improved communications both externally and internally.**

  We live in an era of expanding public interest and yesterday's communications philosophy is clearly doomed to failure. We believe WASA must strive to become a better and more willing communicator.

- **Need to expand and improve WASA's visibility in the communities it serves.**

  We believe WASA must assume a higher and a more visible profile within its service area and the Authority must seek new opportunities to positively interact with its customers and external stakeholders.

- **Value of WASA employees and the need to develop and nurture their talents.**

  We believe that the WASA staff is the Authority's most important asset. WASA must continue to invest in training and preparing its staff to address the ever-increasing demands the utility will face in the years ahead.

- **Value of independent auditing and benchmarking to improve WASA performance.**

  We see significant value and governance benefits in performing independent financial and operational audits of WASA programs and in external benchmarking as a way to identify and implement best practices.

PUBLIC EXPECTATIONS OF BOARD GOVERNANCE

There is an essential link between sound governance and an organization achieving its strategic objectives.

A Board of Directors is responsible for ensuring sound governance within the organization. The Board must ensure that the proper policies and procedures are in place to assure proper governance. The Board must exercise an adequate amount of independent oversight to ensure that its policies and procedures are working as intended. Some basic principles of sound governance which are expected by customers and external stakeholders are as follows:

- Governance is not a "back burner" issue that is only addressed during a crisis.
- The Board of Directors is responsible for establishing appropriate policies and procedures and providing sound governance and oversight to the organization.
- The Board must demonstrate through its actions and words that governance is important to the continued success of the organization.
- The CEO of the organization is a partner with the Board on governance matters and a key teammate in the success of the endeavor.
- There must be a visible level of respect between the Board and the CEO and both the Board and the CEO must exhibit leadership abilities.
- The primary role of the CEO is daily execution of the organization's mission but he (or she) should also have an active role in the governance of the organization.
- A clear understanding of roles and responsibilities between the Board and the CEO is essential to avoid excessive CEO ownership or Board slippage into irrelevance.
- A sound Board member development process, and a continuing education process, must be in-place.
- Succession planning for the Board and the CEO must be conducted and updated as appropriate.
- Board members must avoid interference in the daily operations of the enterprise.
- Board, CEO and organizational performance should be measured regularly and a corrective process available where necessary.
- Private sector corporate Boards of Directors have recently come under significant and highly visible governmental and shareholder fire for not properly executing their governance responsibilities. Major governance flaws have been uncovered at companies such as ENRON, Adelphia Communications, Tyco and at other corporations at which the Board has not properly carried out its oversight responsibilities and/or where the Board had either explicitly or tacitly relegated excessive control to the CEO.

Congress has reacted to the crisis in investor confidence by enacting the Sarbanes-Oxley Act. This comprehensive legislation establishes a myriad of requirements to ensure that the public, shareholders and regulators receive accurate and complete information about the financial health of the corporation, and that adequate internal controls are in place to ensure the ability of the Board to exercise its fiduciary role. Integral to assuring adequate financial reports is the existence and enforcement of adequate management controls.

At this time, there is no companion legislation to Sarbanes-Oxley that targets public sector entities, but the SEC has had informal discussions relative to imposing the appropriate aspects of Sarbanes-Oxley on public sector entities via the continuing disclosure requirements related to tax-exempt debt. While many aspects of the Sarbanes-Oxley Act clearly do not clearly apply to a public sector entity, the principles underlying the legislation contain many valuable governance principles that can be adopted by authorities.

We view no difference between the need to provide accurate and complete financial information to shareholders with the need to provide similar types and quality of data to utility customers and stakeholders. The failure of a utility Board to implement and enforce adequate governance and oversight can threaten the health of a community or adversely affect the economic development of a region. For this reason, we highly recommend to our clients that they voluntarily incorporate relevant portions of the Sarbanes-Oxley Act requirements into their formal governance policies and procedures.

Some examples of potentially relevant Sarbanes-Oxley Act requirements which are not legally mandated for a public sector entity such as WASA, but which can enhance governance by a utility's Board of Directors are listed below. WASA has made substantive efforts to publish and publicize financial and operational data, and has made extensive use of its website to publish meeting notices and agendas, minutes of meetings, financial reports, and other information for its customers and stakeholders. Those items marked with an asterisk (*) are areas in which WASA has taken action (which varies in extent depending on the specific item) towards implementation as follows:

- Board requirement to actively and independently review the existing financial controls and policies to ensure they are complete and sound.

- Establish a Board of Directors Audit Committee, which has the freedom and the authority to undertake financial, operational, management and compliance reviews at its own discretion. *

- Conduct an annual independent audit under the direction of the Board of Directors Audit Committee with a full report to the entire Board. *

- Establish an Internal Audit function for the organization, with the Internal Audit function reporting directly to the Board of Directors or a committee of the Board. (WASA has an internal audit function that reports to the General Manager, but meets periodically with the Audit Committee of the Board.) *

- Staff or fund a Board of Directors audit function, reporting to the Audit Committee, which is independent from the CEO and the CFO of the organization.

- The Board Audit Committee should pre-approve the scope, timing and conduct of all independent audits. *

- Board should require the establishment of a confidential complaint mechanism (e.g., hotline). Create a Board process to review and act upon employee complaints or questions brought forward by employees, vendors, regulators or contractors. *

- Board requirement that management establish internal financial and governance controls and annually attest to the adequacy of the controls and procedures.*

- Board requirement that the CEO and the CFO, in connection with the annual financial audit, certify that they have reviewed the report, the report does not contain any untrue information, the report accurately portrays the material aspects of the financial conditions and that they have examined the internal governance controls and certify the soundness of the internal controls. *

- Board requirement that the independent financial auditors attest to the adequacy of the internal control assessment made by management. *

- Board adoption of a code of ethics for the Board, the CEO, the CFO and any other senior officer(s).

- The Board should ensure that at least one member of the Board Audit Committee be a "financial expert."

- The Board should require that a formal certification ("the financial statements fairly present in all material aspects," or some similar language) by the CFO accompany all monthly or periodic financial reports to the Board.

CURRENT AND EMERGING GOVERNANCE BEST PRACTICES: POLICIES AND PROCEDURES

There were several issues identified during the study that can logically be referred to as policy and procedural in nature. We have grouped this information into broadly-defined areas of policy and procedure.

Delegation of Authority:

The Board is responsible for everything that the Board has not clearly delegated to someone else. Therefore, it is an essential element of good governance for the WASA Board to create and maintain a complete and up-to-date Delegation of Authority document in which it is documented what responsibilities and authorities are delegated by the Board, and to whom. The Board, however, is never excused from responsibility even for authorities it has delegated. Accordingly, the Board must maintain diligent oversight that all its responsibilities are being met, whether delegated, or not.

Worksessions:

The Board is responsible for acquiring and maintaining a complete understanding of WASA's business, including its strategy, finances, operations, customer relations, human resources, external stakeholders and risks. The complexity of these issues demands more attention than is possible in the course of regular Board of Directors meetings. It is a best practice for the Board to establish a schedule of in depth work sessions to increase the Board's understanding of these matters and facilitate thorough discussions among the Board and with staff.

Executive Sessions:

Executive sessions (closed meetings involving Board members) are of several types:

1. Board meets with management (e.g., to discuss legal or personnel matters).
2. Board meets with management and external advisors (e.g., to discuss reorganization, downsizing, retirement incentives).
3. Board meets alone with external advisors without management present (e.g., for the external auditor's management report).
4. Board meets alone (e.g. to discuss General Manager's performance, deal with Board member concerns about organizational issues).

The latter two types of executive session are increasingly viewed as essential to well-functioning boards. Type 3 meetings are now required for corporate boards in response to the Sarbanes-Oxley Act. WASA's Board currently holds executive sessions falling into Types 3 and 4 above. Executive sessions of WASA's Board of Directors are governed by District of Columbia law. Given the emphasis on Board oversight that is reflected in the Sarbanes-Oxley Act, and the potential expansion of similar requirements to issuers of tax-exempt debt (such as WASA), it is likely that there may be more frequent need for executive sessions of WASA's Board.

Agendas:

The key purposes of Board meetings are for the Board to inform itself, and to make and document decisions.

Serious attention to both Board and Committee agendas is a crucial practice of successful boards. Among current best practices for agendas are:

- Establishing a clear understanding between the Board and management as to what regular and exceptional matters will come to the Board for action, e.g. to meet legal requirements, follow-up on a Board-approved actions, or inform the Board.

- Agreeing on the timing for materials to be provided to the Board. Delivery of late documents during meetings must be minimized.

- Assuring that the Board understands its obligation to ask for whatever information it needs for informed decision-making, and to do this on an ongoing basis.

- Producing Board documents that are appropriately concise, clear and free of jargon.

- Assuring that summarized material is balanced, meaning that it is an accurate portrayal of the full underlying detail.

- Utilizing a "2 meeting rule" for big decisions, that is, items presented at one meeting are not voted upon until the next meeting. The purpose of the rule is assuring time for the Board to fully consider and discuss an issue before it is decided.

Board Member Training:

The training of Board members is not a one-time activity, but rather a process of continuous education and improvement. The Board's needs for ongoing education about WASA and its business can be accomplished by holding regular Worksessions in addition to regular Board meetings, as described above. Among these Worksessions may be an annual cycle of reviews of elements of the strategic plan, described further, below.

The following are some specific options for enhanced Board education:

- Designating an Orientation Committee of the Board to mentor and assist new members to become informed and effective as soon as possible.

- For new Directors, an escorted introductory tour of all major WASA facilities with senior management.

- Periodic briefings from management or legal counsel concerning recent developments in governance practices. Such briefings are also opportunities to remind Directors of the need for personal engagement and maintaining an attitude of inquiry and skepticism.

- For all Directors, a cycle of periodic site visits to WASA facilities, including plant, maintenance, and distribution facilities, and administrative offices including customer services, human resources, procurement, and so on. Such visits convey interest by the Board in WASA operations, inform the Board of on-the-ground conditions and increase opportunities for direct feedback to the Board from employees.

- Inviting Board members to individually visit WASA facilities. This requires striking a balance between Board access to facilities vs. appropriate safety and security.

- Encouraging attendance by Board members at regional industry conferences, such as the AWWA Chesapeake Section and the Maryland/DC Utilities Association. While national conferences are also valuable, the time requirements are greater and opportunities for attracting public scrutiny somewhat higher.

WASA has implemented some of the preceding activities for orienting, training and developing its Board members, but could do substantially more. Of course, there is also the issue of how much time volunteer unpaid Board members should be expected to devote to Board activities.

Annual Board Self-Review:

It is current best practice for a board to undertake a candid and rigorous annual self-review of its internal processes and its performance as a board. The purposes are to identify opportunities for improvement and take actions to address any deficiencies found. For example, problems may be rooted in information flow, or lack of it.

In addition to directly improving Board performance, the annual review models continuous improvement behavior for the rest of the organization. The Board is currently initiating a formal process to measure WASA's performance against its strategic plan.

Board Involvement in Organizational Strategy:

The era is gone in which boards simply accept strategies formulated entirely by management. Boards have increased understanding now that approving strategy and assuring the execution of strategy are key responsibilities of organizational boards.

Current best practices with regard to strategy include:

- Establishing and publicizing Board expectations for strategic thinking and continuous improvement

- Reviewing and approving the strategic planning *process* (developed by management) including involvement of stakeholders, evaluation of risks, and measurement of outcomes

- Participating in strategic planning according to the agreed process. It is not always practical or necessary for everyone on a large board to participate in strategic planning meetings. However, whatever degree of involvement is approved by the Board needs to be followed.

- Considering designation of a standing Strategic Planning committee of the Board

- Monitoring organizational results against plans on a regular basis.

- Approving material modifications to the strategic plan. An *announcement* by management of a "strategic shift," would be deemed a red flag.

- Discussing strategic issues on an ongoing basis, for example: changed conditions, changed availability of assumed resources, environmental developments or customer feedback. The entire strategic plan does not need to be reviewed all at once. A common approach is to divide the review into an annual schedule covering all elements of the plan.

- Publicizing the strategic plan. It is a benchmark of quality for a strategic planning process that both management and the Board agree to have it posted on the organization's website.

WASA's Board has some level of involvement and participation in almost every one of the best practices identified above, but should regularly review its use of these practices.

B. FINDINGS

B.1 – Summary of the 2000 Regionalization Study

The stated purpose of the 2000 Regionalization Study was to meet requirements of 1996 District of Columbia Law 11-111, Section 43-1677 (g)(1):

> "… [To] determine the feasibility of establishing the Authority as an independent regional authority and to make recommendations for the ongoing relationship of user jurisdictions to the Authority."

The DC WASA Board of Directors designated a Privatization and Regionalization Committee [subsequently renamed the Regionalization Committee] to supervise the Study. The Committee stated (report, pg. 17) that:

> "This law requires the Committee to consider a fundamental or 'threshold' question: 'Would sufficient benefits result from changing the current DC-WASA governance structure to that of a regional authority model?'"

In addition to meeting the legislative requirement, the Committee said DC-WASA

> "should give serious consideration to the potential enhancements that might be provided by establishing DC-WASA as an independent regional authority…as part of ensuring the best value for its customers."

The Committee contracted with the staff of the Metropolitan Washington Council of Governments (COG) for technical analysis to support the Study, specifying that this analysis was to:

- Focus on determining feasibility of an independent regional authority, and
- Not to make recommendations.

COG adhered assiduously to these twin requirements throughout the report. Confirmation of this is found in the Summary, Findings and Conclusions section of the Study report (pg. 19):

> "Considering all the issues together, it is the fundamental conclusion of the report that the response to the threshold question, of whether there are sufficient benefits that would result from creation of an independent regional authority to manage the assets of DC-WASA, is inherently a policy judgment of the parties."

Accordingly, the Study did not attempt to determine the net benefits, if any, of creating an independent regional authority. Instead, it focused on providing a "factual information base" concerning practical issues expected to be encountered if policymakers decided to go forward with creating an authority.

Work elements of the 2000 Study included:

- Conducting a national survey to identify examples of regional authorities
- Identifying eight "base case" models of regional authorities for initial analysis
- Creating an analysis framework of four groups of key issues: legal, governance, technical and financial
- Examining the legal mechanism of an interstate compact
- Identifying subject areas [seven] likely to be the focus of extensive negotiations during the formation of a regional authority: asset transfer, board composition, employees, relationship to the District government, regulatory policy, agreements/contracts and time/resource commitments for negotiations

Summary of Study Findings

The 2000 Study reached the following analytical findings:

- It was a key Context of the 2000 Study that DC-WASA had in its first 3 years substantially resolved a number of acute problems extant at its inception in 1996.

- No new major facilities or facility interconnections were inherently required for existing water and sewer utilities in the region to be operated under a new regional authority.

- If an interstate regional authority were created, in all likelihood it would be the first public interstate water and sewer authority in the nation.

- Creation of an independent regional authority would be possible via several legally and technically feasible alternatives, for example, an interstate compact.

- A regional authority could be *structured* in various ways. The Study analyzed:
  Base case - existing WASA, no change
  Basic Regional Authority - existing WASA facilities under a regional structure
  Blue Plains Regional Authority - Blue Plains facilities only, with or without the Potomac Interceptor [2 models]
  Expanded Regional Authority – incorporating combinations of facilities from the Washington Aqueduct and/or the Washington Suburban Sanitary Commission [4 models]

- Detailed financial models were outside the scope of the Study; however, financial figures were estimated on an "order of magnitude basis" for the potential combinations in the report (Table 9).

- Regional and political negotiations to create an independent regional authority would require significant investments of time and resources to address extensive issues expected to arise.

- For the WASA Board itself, time and resources devoted to regional negotiations would compete with applying these energies toward additional improvements for the existing DC-WASA.

Summary of Study Conclusions

In its introduction to the 2000 Regionalization Study report, the Regionalization Committee said,

> "While an interstate compact authority may be technically and legally feasible…a number of very substantial legal, governance, technical and financial issues had been identified."

The Committee reached the following Conclusions:

- Creation of a regional authority would be time and resource intensive, requiring 1 to 3 years for completion, during which time the WASA General Manager and senior staff would unavoidably be distracted from their basic mission.

- Regional models involving the return of some WASA functions to the District of Columbia could create significant burdens on the District government.

- It is critical to WASA's continued success that it continues to have financial and management independence.

- WASA was at the time of the 2000 Study still a young organization; it was appropriate then to allow the existing structure further time to evolve before considering alternatives.

The Committee also concluded that the 2000 Study report, as completed and when confirmed by the WASA Board of Directors, would fulfill the legislative mandate of DC Law 11-111.

Summary of Study Recommendations

The Regionalization Committee made these Recommendations to the DC-WASA Board:

1. Retain the current WASA governance structure, but also "consider several of the structural alternatives in the regional authority models while still retaining the existing structure."

2. Preserve WASA's financial and management independence, taking steps to preserve the degree of independence necessary for its dual mission of serving the residents of the District and its regional partners.

3. Revisit the WASA governance structure no later than 2005 in recognition that it is prudent to periodically re-examine approaches for achieving goals and best meeting the needs of the District and the Washington region.

4. Adopt formally and transmit the 2000 Study report and appendices to the Mayor, District of Columbia Council, other member jurisdictions, relevant Congressional Committees, and Members of the Congress.

Board of Directors Resolution #01-05 Addressing the 2000 Study

On a vote of 11 to 0, WASA's Board of Directors adopted Resolution #01-05 on January 4, 2001, accepting the 2000 Regionalization Study report and in it the Regionalization Committee's Recommendations. The final report was transmitted by Chairman Gerstell to Mayor Anthony Williams and others on February 1, 2001.

Changes in WASA Governance Drivers Since the 2000 Study

The Context section of the 2000 Study noted that conditions had improved dramatically during WASA's first three years of existence. It mentioned especially that WASA had assembled a first-rate senior management team, had gained the confidence of the bond markets, had established its own procurement and personnel systems, and was delivering services to wholesale and retail customers at a reasonable cost while meeting and exceeding regulatory requirements.

The context for the current Governance Study includes the continuation of significant positive trends. There has been stability and continuity in both the chairmanship of WASA's Board and in the General Manager's position. A continuing and increasing emphasis on customer service has been formalized. WASA now has in place monthly billing, a AA- bond rating, six months of operating cash reserves, an automated meter reading (AMR) system, a new telephone system, training programs for operator certification, career development and adult literacy, best-in-class elements for asset management including GIS and document management, an expanding internet presence [dcwasa.com], comprehensive safety programs based on OSHA standards, vastly improved vehicle maintenance, and monthly performance metrics for operations, maintenance and other activities.

Also important in the Context are some important continuing challenges, many dealt with elsewhere in this Governance report. Among the challenges that remain are increasing stakeholder trust, improving customer and community satisfaction, completing the lead water line replacement program, and meeting multi-year capital expenditure requirements for Combined Sewer Overflow (CSO) mitigation and addressing an aging infrastructure.

B.2 – Legal Environment for WASA

WASA is an independent authority created by statute. As a result, WASA's governance is largely dictated by its enabling legislation. This chapter briefly summarizes the history of WASA's enabling legislation. The governance changes recommended in other sections of this report are then discussed in terms of this legislation.

In some respects, it appears that WASA has not fully exercised its existing authority. Governance could be improved in some respects without legislative changes. In other respects, WASA's enabling legislation is silent on key aspects of governance. Legislation addressing these issues could improve governance. Finally, to improve WASA's governance, certain provisions of WASA's enabling legislation would need to be modified.

LEGAL AUTHORITY ESTABLISHING WASA

WASA's enabling legislation is the Water and Sewer Authority Establishment and Department of Public Works Reorganization Act of 1996, as amended, D.C. Code §§ 34-2201.01 et seq. As discussed in more detail herein, WASA is also affected by various federal appropriations acts.

Another legally binding document that has substantive impact on WASA is the Master Indenture of Trust related to WASA's revenue bonds.

AREAS IN WHICH WASA HAS NOT FULLY EXERCISED ITS EXISTING AUTHORITY

WASA can take certain steps to improve its governance without changing its enabling legislation.

1. Personnel Matters. Some interviewees stated that WASA is subject to the personnel system that applies to the District of Columbia government. They expressed the view that WASA's performance could be improved by making WASA independent of that personnel system. WASA is effectively independent of DC's personnel system, and has been for some time.

WASA was established "as an independent authority of the District government." D.C. Code § 34-2202.02(a). It is subject to all laws applicable to offices, agencies, departments and instrumentalities of the District government -- with certain exceptions. D.C. Code § 34-2202.02(b). One major exception concerns personnel matters. Most provisions of the District of Columbia Government Comprehensive Merit Personnel Act of 1978 do not apply to the Authority, after (a) the Authority establishes a personnel system; and, (b) rules and regulations pertaining to the Board's duties have been promulgated. D.C. Code §§ 34-2202.15, 34-2202.17(b). WASA has established its own personnel system. WASA has considerable authority to revise its personnel system should issues or problems arise. WASA employees who were hired by its predecessor agencies prior to 1987 fall under federal retirement / benefits programs, while employees hired post-1987 are covered by WASA's retirement / benefit programs.

2. Procurement. Some interviewees stated that WASA is subject to the procurement system that applies to the District of Columbia government. They expressed the view that WASA's performance could be improved by making WASA independent of that procurement system. WASA has independently developed and adopted its own procurement system

As stated above, WASA is subject to all laws applicable to offices, agencies, departments and instrumentalities of the District government -- with certain exceptions. One exception concerns procurement. The District of Columbia Procurement Practices Act of 1985 does not apply to the Authority after (a) the Authority establishes a procurement system; and, (b) rules and regulations pertaining to the Board's duties have been promulgated. D.C. Code §§ 34-2202.14, 34-2202.17(b). WASA has established its own procurement system. WASA has considerable authority to modify its procurement system should the need arise to do so.

3. Inter-jurisdictional Agreements. WASA's enabling legislation allows it to "enter into contracts with the District, the United States, Maryland, or Virginia, or their political subdivisions, other public entities, or private entities for goods and services as needed to achieve its purposes." D.C. Code § 34-2202.03(10). More expansive use of such inter-jurisdictional agreements could be an effective means of dealing with some issues.

4. Board Development Program. The Authority is governed by a Board of Directors comprised of 11 members. D.C. Code § 34-2202.04(a)(1). WASA's enabling legislation appears broad enough to allow the Board to implement an orientation program for new board members, and/or an on-going program to inform directors about the workings of WASA and developments in the water and wastewater industry. [See earlier comment on Board member training in Section A.4.]

5. Independent Reports for the Board. As stated above, the Authority is governed by a Board of Directors. The Board is aided by its General Manager, who is the chief administrative officer of the Authority. The Board is also aided by its other officers, employees, or agents. WASA's enabling legislation appears broad enough to give the Board authority to retain consultants to perform compliance audits and other studies for the Board; the Board does not need to rely solely on staff to provide it with information, nor does the Board need to rely solely on staff to review studies and reports before delivery to the Board. While the Board has authority to retain its own consultants and advisors, such action should be the exception rather than the rule, and the Board's authority in this area should be exercised only in rare or unusual circumstances.

6. Management Development and Succession Plan. WASA's Board is required to employ a General Manager, who is the chief administrative officer of WASA. D.C. Code § 34-2202.06. WASA is not legally required to employ a Deputy General Manager, or to otherwise provide for succession in the event of a sudden vacancy in key positions, such as the General Manager. Nevertheless, WASA's enabling legislation appears broad enough to allow WASA's Board to direct the General Manager to employ a Deputy General Manager and/or other personnel who could fill a sudden vacancy in a key management position.

7. Increased Participation By Stakeholders. As stated above, the Authority is governed by a Board of Directors, assisted by a General Manager, and other officers, employees, or agents.

Nevertheless, WASA's legislation appears broad enough to allow the Board to use advisory committees or other mechanisms for soliciting the input of stakeholders.

8. Improved Transparency of Decisions. Similarly, WASA's legislation appears broad enough to give the Board, its General Manager and other employees, the flexibility to use mechanisms that make WASA's decision-making process open to the public.

GOVERNANCE GAPS IN THE EXISTING LEGISLATION

WASA's enabling legislation is silent on certain key aspects of governance. Amending the legislation to address these points would improve WASA's governance.

1. Timeliness of Appointments. WASA's enabling legislation currently requires the Mayor to appoint six Board members who are residents of the District, with the advice and consent of Council. The Mayor's nominations are submitted to Council, which has 90 days (excluding recess days) to review and approve the nomination. If the Council does not approve the nomination by resolution within this 90-day review period, the nomination is deemed disapproved. D.C. Code §34-2202.04(a)(2). Failure to timely fill Board vacancies for "District' seats on the Board creates challenges for WASA, such as the ability to muster a quorum for "District only" issues that require a vote of the Board. [It should be noted that WASA staff, at the request of the Board, is currently researching and documenting the history and duration of all Board vacancies that have occurred.]

The Mayor must also appoint five persons recommended by the other participating jurisdictions. One such Board member is recommended by Fairfax County, Virginia; two such Board members are recommended by Montgomery County, Maryland; and two such Board members are recommended by Prince George's County, Maryland. There is currently no deadline in WASA's enabling legislation for the Mayor to nominate Board members from the District or to appoint persons recommended by the other participating jurisdictions. To establish such a deadline, WASA's enabling legislation would need to be amended.

2. Qualifications for Board Members. WASA's enabling legislation requires six Board members to be residents of the District. The act contains no additional requirements for Board members. To establish qualifications for some or all Board members, WASA's enabling legislation would need to be amended. Various types of requirements / guidelines / advisories are included in the legislation affecting other boards and commissions similar to WASA's; some entities have stipulations that are hortatory in nature; few have specific / limiting requirements.

AREAS FOR POTENTIAL LEGISLATIVE CHANGE

Certain changes are necessary in WASA's enabling legislation in order to improve WASA's governance.

1. Transfer of Storm Water Programs and Infrastructure to the District. WASA's enabling legislation was amended in 2001 to establish a Storm Water Administration within WASA. This administration is responsible for monitoring and coordinating the activities of all District

agencies (including WASA) required to maintain compliance with an NPDES permit issued to the District of Columbia in 2000. D.C. Code § 34-2202.06a(a). District agencies are required to comply with the permit. Id. Some agencies have cooperated to a greater or lesser extent with the Storm Water Administration, and WASA faces challenges in enforcing compliance. WASA's enabling legislation should be amended to transfer authority over the Storm Water Program (and related infrastructure) to another agency.

2. Clarify Authority over WASA's Chief Financial Officer. WASA's enabling legislation gave it the authority to hire and fire officers, employees and agents. D.C. Code § 34-2202.03(4). Subsequent federal appropriations acts for the District of Columbia, however, have been construed by some readers as giving the District of Columbia's Chief Financial Officer authority over WASA's CFO, which would effectively take essential activities of the WASA CFO such as development of revenue estimates away from control by WASA. The Board of Directors should seek to clarify this legislation as it pertains to these specific responsibilities.

3. Allow the Army Corps of Engineers to Borrow Money Again. The Safe Drinking Water Act Amendments of 1996, with its Aqueduct related provisions known as the "Improvements Act," gave the Army Corps of Engineers temporary authority to borrow funds for capital improvements at the Aqueduct. Pursuant to the Improvements Act, the Corps was authorized to borrow from the Treasury of the United States amounts required for the years 1997, 1998 and 1999 to carry out capital improvements to the Aqueduct – *on the condition that each of the Wholesale Customers entered into Water Sale Agreements with the Corps*. The Army Corps of Engineers should again be authorized to borrow money from the United States Treasury to finance improvements at the Washington Aqueduct, on the same terms and conditions as were set forth in the Improvements Act. If the Army Corps had the ability to borrow to finance capital improvements to the Aqueduct, it would allow a more orderly financial planning process by WASA (as well as by Arlington County and the City of Falls Church), who could incorporate the repayment of its share of Aqueduct debt into WASA's budgeting process in an orderly way.

It should be noted that as projects are increasing in size and scope, they are creating large costs for WASA's customers. If the Corps is not allowed to directly finance improvements, then modifications should be made to the current pay-as-you-go arrangements to decrease the burden on WASA's customers. WASA has been discussing options (such as transferring dollars on a phased basis, using Treasury Notes or providing the Corps with a bank line of credit) with senior management at the Corps, the Aqueduct, Congressional staff, and the Office of Management and Budget (OMB).

4. Modify Federal Law Pertaining to Primacy, as it Pertains to the Aqueduct. EPA Region III has primary oversight and enforcement responsibility for public water systems in the District. This regulatory responsibility is termed "primacy" under the Safe Drinking Water Act ("SDWA"). Primacy for a safe drinking water program may be delegated to a state or to the District, but the District does not have primacy. To receive primacy, the District would need to meet certain requirements laid out in the SDWA and its implementing regulations, including the adoption of drinking water regulations that are at least as stringent as the Federal regulations and a demonstration that it can enforce the program requirements.

Due to the Federal Government's "Unitary Executive Theory", many believe that "[w]here federal government agencies are the liable parties, EPA enforcement authority is at its weakest because EPA will not bring a judicial enforcement action against a sister federal agency." Simply put, this theory requires the "federal family" to speak with one voice and precludes EPA from suing a sister agency (such as the Corps). If ownership of the Aqueduct were transferred to WASA, EPA would not face this constraint. If the Aqueduct is transferred to WASA, the SDWA should be amended to exempt the Aqueduct from the primacy oversight of the District of Columbia.

B.3 – Interviews with Board Members and WASA Management

Each member of the Board and key members of WASA senior management were interviewed by members of the project team. In advance of the interviews, the team developed a standard interview protocol to ensure consistency and completeness during the actual interviews.

At the start of each interview, the study purpose was explained and the interviewee was advised about the uniform procedures and safeguards established by the project team. Interviewees were advised that the interview notes would only be shared among the project team and that it was our intent to hold such notes confidential (except as otherwise may be required by law, e.g. statutes, regulations, subpoenas, discovery requests and court orders). The interviewees were also assured that their comments would not be presented in the report in such a manner that it could directly be attributed to them (unless they subsequently granted approval for us to make such attribution). A total of fourteen members (and alternates) of the Board of Directors were interviewed by the project team. A total of eight members of WASA senior management staff were also interviewed as part of the study. The only Board member not interviewed was an individual who was in the process of resigning from the Board.

The standard questions used in the interviews generally dealt with identifying areas of WASA's current governance which have worked well in the past or that could be improved. Interviewees were asked to focus on this question "wearing the hat" of a local government official, a committee member and as a person concerned with broader perspective of WASA's service mission for the entire region.

Many (most) of the members of the Board of Directors and members of senior management who were interviewed agreed as to the governance issues and challenges facing WASA. There was almost universal agreement that the CFO legislation needed clarification, that WASA should acquire control of its treated water supply and that the re-negotiation of the Blue Plains IMA were key challenges. There were also some areas of difference and disagreement among interviewees. The issues related to governance have been folded into the body of this report; other issues that may be of interest but that are not governance-related are not addressed in this report.

CHALLENGES FACING WASA IN THE FUTURE

As part of the interviews, WASA senior staff and Board members were asked what major challenges they saw on the horizon.

- **There will be significant rate impact from required capital investments.**

  Several Board members expressed concern about the impact of the capital investment program, especially on retail rates in the District of Columbia.

- **Renegotiation of the Blue Plains IMA is a major challenge.**

WASA Board members and staff all felt that the re-negotiation of the Blue Plains IMA will be a very major challenge facing WASA.

- **Integration of the Washington Aqueduct into WASA will be a challenge.**

  Several Board members and WASA staff identified the integration of the Washington Aqueduct into WASA as a major future challenge if WASA proceeds with an acquisition or lease of the assets.

- **The enormity of the capital improvement program will provide major challenges.**

  WASA staff identified the enormity of the future capital investment program as a major challenge facing WASA.

- **Controlling District flows into Blue Plains will present a major challenge.**

  Several Board members expressed concern about the District's flow into the Blue Plains treatment facility.

- **Tightening environmental requirements will impact WASA.**

  Several Board members stated that the environmental requirements facing WASA were likely to further tighten over time despite the current compliance program.

- **Recent consent orders will cause major impacts.**

  WASA staff stated that management of the existing consent orders required a major investment of management resources.

SUGGESTED ENHANCEMENTS TO GOVERNANCE

WASA Board members and staff were in agreement that "nothing is broken at WASA." There was also agreement that significant progress has been made in the last ten years and that the Board and the General Manager have both done an excellent job. Areas identified for governance improvements were legislative changes, Board policy changes and clarification of certain responsibilities. These topics are addressed in detail in other sections of this report.

B.4 – Interviews with WASA Stakeholders

The project team together with WASA senior management identified more than two dozen regional governmental and non-governmental officials whose organizations are external stakeholders of WASA. These included members of the District of Columbia Council, current and former regional officials of the District of Columbia, Montgomery and Prince George's Counties in Maryland, Arlington and Loudon Counties, and the City of Falls Church in Virginia, the U.S. EPA, Washington Aqueduct, Army Corps of Engineers, water and sewer utilities, non-governmental/civic organizations, and the Metropolitan Washington Council of Governments. Each was invited by WASA to meet with the Governance Project team in a face-to-face interview on a confidential basis as described in Chapter B.3., above. We were successful in obtaining interviews with 18 stakeholders, approximately two-thirds of those invited. We were unable to schedule interviews with some stakeholders, although none of those contacted explicitly declined to meet with us.

Similar to the interviews with members of the Board of Directors and WASA management, the interviews with external stakeholders produced some areas of broad agreement (e.g., that WASA has made significant operating and financial improvements since it was created) and some areas of difference among stakeholders.

B.5 – Comparable Agencies and Authorities

Four authorities with representation from several jurisdictions across state lines were selected for evaluation to determine what lessons might be learned to enhance the governance of DCWASA. Even though these are not water and sewer utilities, it is thought that this commonality with DCWASA could provide some instructive points. The selected agencies are:

- The Washington Metropolitan Area Transportation Authority (WMATA)
- The Metropolitan Washington Airports Authority
- The New York Metropolitan Transportation Authority, and
- The Port Authority of New York and New Jersey.

OVERVIEW OF AUTHORITIES

Washington Metropolitan Area Transportation Authority (WMATA)

The Washington Metropolitan Area Transit Authority (WMATA) is the regional authority responsible for managing and overseeing local transportation in the Greater Metropolitan Washington area. WMATA operates the second largest rail transit system in the country and the fifth largest bus network in the United States. It provides services to the District of Columbia as well as suburban areas of Virginia and Maryland, including Arlington, Fairfax, and Falls Church in Virginia and Prince Georges and Montgomery Counties in Maryland. It operates a fleet of 1460 buses and 86 metro rail stations, serving more than 3.5 million people. Ridership exceeded 336 million in 2004.

WMATA was created February 20, 1967, by authorization of Congress. It began construction of the rail system in 1969 and acquired four regional bus authorities in 1973. It operates under an interstate compact, an instrumentality of the District of Columbia, State of Maryland and Commonwealth of Virginia. WMATA was specifically created to "plan, finance, construct and operate a comprehensive mass transit system for the Washington Metropolitan area." It operates as an independent entity.

WMATA is governed by a board consisting of six voting and six alternate members, with Maryland (through the Washington Suburban Transit Commission), Virginia (through the Northern Virginia Transportation Commission) and the District of Columbia (through the Council of the District of Columbia) each appointing two voting and two alternate positions. Board members serve without compensation but may be reimbursed for necessary expenses.

The purpose of the WMATA Compact is to create a regional instrumentality, as a common agency of each signatory party, empowered, in the manner hereinafter set forth, (1) to plan, develop, finance and cause to be operated improved transit facilities, in coordination with transportation and general development planning for the Zone, as part of a balanced regional system of transportation, utilizing to their best advantage the various modes of transportation, (2) to coordinate the operation of the public and privately owned or controlled transit facilities, to the fullest extent practicable, into a unified regional transit system without unnecessary duplicating service, and (3) to serve such other regional purposes and to perform such other regional functions as the signatories may authorize by appropriate legislation.

Key elements of the Authority's organizational structure reflect a Chief Operating Officer for Bus Services, a Chief Operating Officer for Rail Services, and a Chief Engineer, all reporting to a Deputy General Manager for Operations who reports to the Authority's Chief Executive Officer. Various other administrative officers report to the CEO as well.

Metropolitan Washington Airports Authority (MWAA)

Created in 1985, with the consent of Congress, the Metropolitan Washington Airports Authority (MWAA) succeeded the Federal Aviation Administration as the operator of two local airports owned by the Federal Government. Enacted through two pieces of legislation – District of Columbia Airports Authority Act of 1985 (as amended) and Ch. 588 Virginia Acts of Assembly of 1985 (as amended) – the airports were transferred to the Authority on June 7, 1987 by the US Government for an initial term of 50 years. On June 17, 2003 the agreement was extended 30 years to June 6, 2067. The airports are leased to the Authority. Title to both remains with the Federal Government.

MWAA covers operation and management of Dulles and National Airports (Baltimore-Washington International Airport is owned and operated by the State of Maryland). The Authority is self-supporting through aircraft landing fees, fees from terminals and other rentals as well as revenue from concessions. No taxpayer dollars are used to fund Authority operations. MWAA has over 1200 full and part time employees.

The Airports Authority is governed by a board of 13 members, appointed as follows:

- Five by the Governor of Virginia
- Three by the Mayor of DC
- Two by the Governor of Maryland
- Three by the President of the United States, with the advice and consent of the Senate.

Board members serve staggered 6 year overlapping terms without compensation. They establish policy and appoint the Authority's Chief Executive Officer, who is responsible for day-to-day operations of the facilities.

Key elements of MWAA's organizational structure reflect a Vice President and Airport Manager for each of the two airports and a Vice President for Public Safety, all reporting to the Executive Vice President and Chief Operating Officer who, in turn, reports to the President and Chief Executive Officer. Various administrative vice presidents report to the CEO as well.

Metropolitan Transportation Authority (MTA)

The Metropolitan Transportation Authority (MTA) is the largest public transportation provider in the Western Hemisphere, serving 14.6 million people over 5,000 square miles in New York City, Long Island, southeastern New York State and Connecticut. The MTA moves more than 2.3 billion rail and bus customers a year. It is a public benefit corporation chartered by the New York State Legislature in 1965.

The MTA is governed by a 17-member Board, nominated by the Governor, with four recommended by the New York City mayor and one each by the county executives of Nassau, Suffolk, Westchester, Dutchess, Orange, Rockland and Putnam counties. Members are appointed for six year terms. Members representing Putnam, Rockland, Orange, and Dutchess Counties collectively cast one vote. The Board also has six rotating nonvoting seats, three held by members of the Permanent Citizens Advisory Committee which serves as a voice for users of MTA transit and commuter facilities, and three held by representatives of organized labor. All Board members are confirmed by the New York State Senate. The entire Board is responsible for the general oversight of the management and operations of the entire MTA.

The MTA is a public benefit corporation of the State of New York responsible for an integrated mass transportation system for the City of New York and the surrounding communities. The agencies that compose the MTA are:

- New York City Transit Authority
- Staten Island Rapid Transit Operating Authority (Part of NYC Transit Department of Subways)
- Long Island Rail Road Company
- Metropolitan Suburban Bus Authority (Long Island Bus)
- Metro-North Commuter Railroad Company
- Triborough Bridge and Tunnel Authority

- MTA Capital Construction Company
- MTA Bus Company

The New York City Transit Authority and the Triborough Bridge and Tunnel Authority are subsidiary corporations of the MTA. Title 11 of the New York State Consolidated Laws created and governs the MTA. Title 9 created and governs the New York City Transit Authority while Title 3 refers specifically to the Triborough Bridge and Tunnel Authority. The Board of the MTA also is the Board of the two subsidiary corporations. Each of the three entities has the power to issue bonds supported by various revenue streams. In 2004, the MTA had assets of $43.9 billion, net assets of $17.6 billion, revenues of $8.9 billion and a capital program of $3.88 billion. Key elements of the Authority's organizational structure reflect a president of each of the seven operating companies reporting to an Executive Director who reports to the Chairman.

The Port Authority of New York and New Jersey (PANY/NJ)

Established on April 30, 1921, the Port Authority of New York and New Jersey was the first interstate agency ever created under a clause of the Constitution permitting compacts between states with Congressional consent. The original mandate of the agency was to promote and protect the commerce of the bi-state port and to undertake port and regional improvements not likely to be financed by private enterprise or to be attempted by either state alone.

The Port Authority has a service area of 3900 square miles with a population of 17 million. This area consists of the five boroughs of New York City: Manhattan, Brooklyn, Queens, Staten Island and The Bronx; the four suburban New York counties: Nassau, Rockland, Suffolk, and Westchester; and the eight northern counties of New Jersey: Bergen, Essex, Hudson, Middlesex, Morris, Passaic, Somerset and Union.

The mission of the Port Authority is to identify and meet the critical transportation and infrastructure needs of the bi-state region's businesses, residents, and visitors; provide the highest quality, most efficient transportation and port commerce facilities and services that move people and goods within the region; provide access to the rest of the nation and to the world; and strengthen the economic competitiveness of the New York – New Jersey metropolitan region.

Key financial highlights of the Authority and its constituent properties/operations are:

Gross Operating Revenues	$2.9 billion
Capital Expenditures	$1.3 billion
Assets	$19.4 billion
Net Assets	$7 billion

Service/Facility	Revenues (thousands)
Aviation	
John F. Kennedy International Airport	$753,558
Newark Liberty International Airport	$629,851

LaGuardia Airport	$258,237
Teterboro Airport	$26,387
Downtown Manhattan Heliport	$1,825
AirTrain JFK	Not provided separately
AirTrain Newark	Not provided separately
Port Authority Trans-Hudson	
PATH Rail Transit System	$83,927
Journal Square Transportation Center	$1,871
Real Estate & Development	
The Legal Center (Newark)	$3,401
The Teleport	$20,446
Ferry Transportation	$621
Essex County Resource Recovery Facility	$62,527

Service/Facility	Revenues (thousands)
Bathgate Industrial Park	$4,125
Industrial Park at Elizabeth	$863
Waterfront Development	
Queens West Waterfront Development	$1,407
The South Waterfront at Hoboken	$7,421
World Trade Center	$122,935
Tunnels, Bridges & Terminals	
George Washington Bridge	$328,128
George Washington Bridge Bus Station	Included in GWB
Lincoln Tunnel	$114,918
Port Authority Bus Terminal	$27,532
Holland Tunnel	$88,105
Bayonne Bridge	$21,209
Goethals Bridge	$83,860
Outerbridge Crossing	80,184
Port Commerce	
Auto Marine Terminal	$8,175
Brooklyn Port Authority Marine Terminal	
Brooklyn Piers	$4,108
Red Hook Container Terminal	$2,395

Elizabeth-Port Authority Marine Terminal	$57,237
Port Newark	$64,407
Howland Hook Marine Terminal	$4,870
Greenville Yard	$294

It is important to note that the Port Authority leases the three major airports in the New York City area (LaGuardia, Kennedy, and Newark) from the Cities of New York (LaGuardia and Kennedy) and the State of New Jersey (Newark). We examined the lease governing the Newark Airport and determined that upon expiration of the lease, the Port Authority is required to "give up, surrender and deliver to the City the demised premises including all the buildings, structures and improvements, together with, all furniture, equipment and other personal property contained therein and used exclusively in connection with the operation of the Newark Marine and Air Terminals, the intent being that when the demised premises are returned to the City such premises shall be in good condition for marine and air terminal purposes, depreciation, obsolescence and ordinary wear and tear excepted, and free and clear of any and all liens, debts or encumbrances of whatsoever kind, nature or description."

The Governor of each state appoints six Commissioners to the agency's Board of Commissioners, each appointment subject to the approval of the respective state senate. The twelve Commissioners serve as public officials without remuneration. The Governors may veto the actions of the Commissioners. Within the Port District, the Port Authority undertakes projects and activities in accordance with the Port Compact of 1921 and amendatory and supplemental bi-state legislation. The Board of Commissioners appoints an Executive Director to effect its policies and manage day-to-day operations. Commissioners serve until reappointment or the appointment of a successor.

Key elements of the organization of the Authority reflect that each of the lines of business (e.g., aviation, rail, port commerce) reports to a Chief Operating Officer who reports to an Executive Director. The COO is a peer of several administrative officers who also report directly to the Executive Director (e.g., the Chief Financial Officer, the General Counsel, and the Chief Administrative Officer).

Potential Models for WASA

Two of the authorities reviewed, WMATA and the Port Authority of New York and New Jersey (PANY/NJ) operate under interstate compacts. The other two operate under legislation passed by local jurisdictions. MWAA was created by two pieces of legislation passed by the District of Columbia and the Commonwealth of Virginia with the consent of Congress. The MTA was created by legislation passed by New York State.

In each of the authorities reviewed, each major operating entity or line of business has the equivalent of a chief operating officer. This appears to facilitate decision making.

MWAA leases Reagan National Airport and Dulles Airport from the federal government. PANY/NJ leases JFK, LaGuardia, and Newark Airports from local jurisdictions. These arrangements are significant because they suggest that expansion by WASA could include leased facilities and particularly leased facilities owned by the federal government (the Aqueduct).

Boards of two authorities, WMATA and PANY/NJ have equal representation from the jurisdictions involved. MWAA and the MTA have unequal representation by the jurisdictions, reflective of the disproportionate stakes that the jurisdictions have in the operations of those entities. In the case of the MTA, four of the counties represented on the Board collectively have a single vote compared to four votes representing New York City and one vote each representing the other two counties involved. This amounts to fractional representation on the part of some of the counties. Additionally, the MTA has six non-voting members, three representing users and three representing organized labor.

Looking at these authorities that operate across jurisdictional lines as models, it is clear that WASA has considerable flexibility as it considers its current governance structure and as it looks to revise that structure to expand its operations.

B.6 – Comparison with Selected Water / Wastewater Agencies

The project team has interviewed several external interstate, multi-jurisdictional organizations and identified best practices and organizational elements potentially applicable to WASA. There are no known water and wastewater utilities operating in the United States which are truly comparable to WASA. While there are large and sophisticated utilities, none are the size of WASA, operate the nation's largest advanced wastewater treatment (AWT) plant, have the interstate service responsibilities of WASA and have multi-jurisdictional boards. For informational purposes, information about two local utilities (Fairfax County Water Authority and Washington Suburban Sanitary Commission [WSSC]) is also presented.

The project team has reviewed several major water and wastewater utilities as part of the study to identify potential similarities and differences between WASA and the other major utilities.

Dallas Water Utility

The City of Dallas water and wastewater program is led by a Director. There are five functional management groups reporting to the Director: Business and Customer Operations, Water Operations, Wastewater Operations, Capital Improvement Operations and General Expense and Debt Services.

The Business and Customer Operations function is responsible for accounting, financial and budget support in addition to customer relations, billings, and collections.

The Water Operations function is responsible for operating and maintaining the water supply facilities.

The Wastewater Operations function is responsible for collecting, transporting, and treating domestic and industrial wastewater.

The Capital Improvements Operations function plans, designs, engineers, constructs and inspects the capital improvements projects.

The General Expense and Debt Service function provides overall financial support to the Department in areas where the expenditures are not directly tied to the day to day operational and overhead aspects of the department. These include street rental, funds transfer, cost reimbursement and debt service commitments.

Denver Water Board

Denver Water provides water services to the Denver metropolitan area as directed by a Board of Water Commissioners. The Board is appointed by the Mayor of Denver. A Manager, who reports to the Board, is appointed by the Board to lead the day to day activities of the Denver Water organization. This individual also serves as Secretary to the Board.

Denver Water does not have responsibilities for wastewater operations or services. Denver Water is a separate entity from the City of Denver. It derives its authority from a Charter issued by the City and County of Denver. Denver Water has the authority to issue its own debt.

Structure of Denver Water Board

Denver Water has six major divisions reporting to the Manager:

- Public Affairs Division
- Operations & Maintenance Division
- Planning Division
- Finance Division
- Legal Division
- Engineering Division

Additionally, the following functions also report directly to the Manager: Internal Audit, Human Resources, Information Technology and the Intergovernmental Affairs Coordinator.

The Public Affairs Division is responsible for media relations, community relations, customer service and water conservation. The stated function of the Division is to deal with issues, persons and entities outside of Denver Water.

The Operations & Maintenance Division is responsible for water compliance, water transmission and distribution, and maintenance. The Division is also responsible for operating the water supply infrastructure, establishing operating policies, maintaining compliance, and maintaining the distribution system along with the storage and treatment facilities.

The Engineering Division is responsible for the design, construction and engineering management of all infrastructure improvements.

The Planning Division is responsible for water resources planning, general organizational planning and water rights. The Division is also responsible for identifying and planning for the future water and facility needs of Denver Water and protecting available options to meet future needs.

The Finance Division at Denver Water is responsible for budgeting, accounting, treasury operations, rate administration, purchasing and document administration. The Division is also responsible for the management of financial resources, and acting as the disbursing agent for the organization.

The Legal Division represents Denver Water in all legal proceedings and provides legal advice to the Board, the Manager and the various divisions.

Denver Water Board Services

Denver Water serves about 1,000,000 customers in the Denver metropolitan area. It has 155,254 customer accounts within the City and County of Denver. The system has 2,608 miles of water mains, 18 pump stations and 15,000 fire hydrants.

Denver Water operates three water treatment plants with a combined capacity of 715 million gallons per day.

Detroit Water and Sewerage Department

The City of Detroit Water and Sewerage Department is the third largest water and wastewater utility in the United States. The Department is governed by a seven-member Board of Water Commissioners whose members are appointed by the Mayor of Detroit.

The Department is led by a Director who is supported by a Deputy Director with five Assistant Directors leading the five major operating groups. The five major operating groups are: Engineering Services, Asset Maintenance, Financial Services, Wastewater Operations and Water Supply Operations. As indicated above, Detroit has separate Assistant Directors leading water supply and wastewater operations.

The following functions are also designated as part of the executive management team at the Detroit utility: Human Resources Manager, Public Affairs Manager and the Contracts and Grants Manager.

East Bay Municipal Utilities District (EBMUD)

The East Bay Municipal Utility District supplies water and provides wastewater treatment for parts of Alameda and Contra Costa counties on the eastern side of San Francisco Bay in northern California.

EBMUD's water system serves approximately 1.3 million people in a 325 square mile area extending from Crockett on the north, southward to San Lorenzo (encompassing the major cities of Oakland and Berkeley), eastward from San Francisco Bay to Walnut Creek, and south through the San Ramon Valley.

The wastewater system serves approximately 640,000 people in an 83 square mile area of Alameda and Contra Costa counties along the Bay's east shore, extending from Richmond on the north, southward to San Leandro.

EBMUD policies are crafted by a seven member Board of Directors, elected by wards for four-year terms. EBMUD has approximately 2,000 full-time employees governed by the administrative direction of an appointed General Manager and management staff.

Each Board member serves on one or more Board committees. The committees review and make recommendations with regard to matters of major interest. These matters are then discussed by the full Board at a regular meeting. Standing committees of the Board include Finance/Administration, Planning, and Legislative/Human Resources.

Board members also represent EBMUD on the Upper Mokelumne River Watershed Authority, the Dublin San Ramon Services District/EBMUD Recycled Water Authority (DERWA), Oakland Chamber of Commerce, Coliseum Complex Committee, the Special District Associations of Alameda and Contra Costa Counties, EBMUD/East Bay Regional Park District Liaison Committee and the upcountry Liaison Committee.

EBMUD's revenues come from a variety of sources, including sales of water and hydroelectric power, meter service charges, sewage treatment charges, a wet-weather facilities charge and property taxes.

Fairfax County Water Authority

Fairfax County Water Authority is Virginia's largest water utility. More than 1.3 million people in the Northern Virginia communities of Fairfax, Loudoun, Prince William and Alexandria depend on Fairfax Water for drinking water.

Chartered by the Virginia State Corporation Commission as a public, non-profit water utility, Fairfax Water operates four water treatment plants with a combined capacity of 262 million gallons per day. The plants include the Corbalis Treatment Plant operating on the dependable and free flowing Potomac River in the northwestern area of Fairfax County, and three plants located on the impounded Occoquan River in the southeastern area. The three Occoquan plants are to be replaced by a new, state-of-the-art water treatment plant, currently under construction. Water is distributed throughout Fairfax Water's service area through more than 3,000 miles of water mains.

Fairfax Water produces an average 130 million gallons of water per day. Over 217,000 accounts in Fairfax County comprise about 60 percent of total water sales. Approximately 40 percent of total water sales are wholesaled to Loudoun and Prince William Counties and the City of Alexandria.

Fairfax Water is organized into the divisions of Finance, Maintenance and Asset Management, Transmission and Distribution, Planning and Engineering, Support Services, and Water Quality and Production

Fairfax Water is governed by a ten-member Board of Directors, composed of Fairfax County citizens, appointed by the elected Board of Supervisors of Fairfax County. A General Manager, supported by a senior staff of engineering and business professionals, manages the day-to-day operations of Fairfax Water.

Massachusetts Water Resources Authority (MWRA)

MWRA is a public authority established by an act of the Massachusetts Legislature in 1984 to provide wholesale water and sewer services to 2.5 million people and more than 5,500 large industrial users in 61 metropolitan Boston communities. MWRA inherited operations and facilities beginning in 1985 from the Metropolitan District Commission, a century-old department of state government. As an independent authority, MWRA funds its operations primarily through user assessments and charges.

MWRA has the power to adopt budgets, enter into contracts, incur debt (subject to statutory department limit) and assess total costs on customer communities. MWRA is governed by an 11-member Board of Directors who are appointed by the Governor or directly or indirectly by elected officials in MWRA customer communities. The Board is comprised of the following:

- State Secretary of Environmental Affairs (chair) appointed by the Governor
- Representatives of two watershed areas appointed by the Governor
- Three representatives of the City of Boston appointed by the Mayor of Boston
- Three representatives of the MWRA Advisory Board appointed by the MWRA Advisory Board
- One representative from Quincy and one representative of Winthrop (municipalities that host major facilities appointed by the Governor), upon Quincy and Winthrop recommendation

An MWRA Advisory Board was created to represent the interests of MWRA service area communities in the 1984 Enabling Act that established the MWRA. Members include the chief elected official and a designee from each of the 60 cities and towns serviced by the Authority, along with a member of the Metropolitan Area Planning Council (MAPC) and six gubernatorial appointees representing various interests. The Advisory Board reviews and comments on MWRA capital and current expense budgets, as well as MWRA practices and policies. In addition, the Advisory Board appoints three members to the MWRA Board of Directors and serves as a liaison between the communities and the MWRA.

San Francisco Public Utilities Commission (SFPUC)

The regional water system provides water to 2.4 million people in San Francisco, Santa Clara, Alameda and San Mateo counties. 85 percent of the water delivered to SFPUC customers comes from Sierra Nevada snowmelt stored in the Hetch Hetchy reservoir situated on the Tuolumne River in Yosemite National Park. The Hetch Hetchy water travels 160 miles via gravity from Yosemite to the San Francisco Bay Area. The remaining 15 percent of water comes from runoff in the Alameda and Peninsula watersheds. This “local” water is captured in reservoirs located in San Mateo and Alameda Counties. The entire system delivers approximately 260 million gallons of water per day to its customers.

The regional system consists of over 280 miles of pipelines, over 60 miles of tunnels, 11 reservoirs, 5 pump stations and 2 water treatment plants. The local water system provides distribution and storage for water and fire protection within the City and County of San Francisco. The local water system includes 14 reservoirs, 9 water tanks, 17 pump stations and 1,250 miles of transmission lines and water mains within the City.

The clean water system provides the City with wastewater collection, treatment and disposal. The wastewater collection, treatment and disposal system consists of a combined sewer system (which collects both sewer and storm water), three water pollution control plants and two effluent outfalls to the San Francisco Bay and to the Pacific Ocean.

The combined sewer system reduces pollution in the San Francisco Bay and Pacific Ocean by treating urban runoff that would otherwise flow to the Bay and Ocean. The collection system consists of approximately 900 miles of pipe throughout the City.

The SFPUC treats and discharges approximately 84 million gallons per day of treated wastewater during dry weather to the San Francisco Bay and Pacific Ocean. During wet weather, with additional facilities and increased operations, the plants can treat approximately 465 million gallons of combined flows per day.

SFPUC currently has a Commission comprised of five commissioners. Commission meetings are scheduled on the second and fourth Tuesdays of each month. Other groups in SFPUC include Public Utilities Revenue Bond Oversight Committee, Rate Fairness Board and Citizen's Advisory Committee.

Washington Suburban Sanitary Commission (WSSC)

Washington Suburban Sanitary Commission is among the 10 largest water and wastewater utilities in the country, serving 420,000 customer accounts and providing water and sewer services to 1.6 million residents. WSSC serves a nearly 1,000 square mile area and currently employs more than 1,500 people (a reduction from previous staffing levels of about 2,200, resulting from a "right sizing" program and business process re-engineering in the 1990s).

WSSC's water is supplied by 4 reservoirs with total holding capacity of 14 billion gallons: Triadelphia, Rocky Gorge, Little Seneca and Jennings Randolph. WSSC maintains 2 water filtration plants: the Patuxent with a max 56 mgd and the Potomac with max 285 mgd. These plants produce an average of 167 million gallons per day (MGD) of safe drinking water. There are 6 wastewater treatment plants within WSSC's system: Western Branch, Piscataway, Parkway, Seneca, Damascus and Hyattstown, with a total capacity to handle 74.1 million gallons of wastewater per day. The Blue Plains Water Pollution Control Plant handles as much as an additional 169 MGD under a cost sharing agreement with the WSSC. WSSC's system also includes more than 10,000 miles of water and sewer mains.

WSSC has seven teams being overseen by a general manager and deputy general manager: Customer Care, Engineering and Construction, Production, Finance, Information Technology, Mission Support, and Strategic Systems Management. WSSC currently has a Commission comprised of six commissioners.

COMPARISION OF OTHER LARGE UTILITIES TO WASA

There are many similarities between WASA and the other water and wastewater organizations reviewed in this analysis. They are all overseen by a Board or Commission that is appointed by local elected officials, or overseen directly by a City or County council or commission. All the organizations employ over 1,000 employees (except for Fairfax Water) with the City of Detroit being the largest employer with 2,800 staff.

No clear trend exists concerning the employment of a Deputy Director. This is likely due to the unique needs of each utility, possible lack of uniformity in titling and other factors.

It would appear that WASA is, however, more thinly staffed at the senior management level than the other utilities. While WASA has three senior managers reporting to its GM (two Deputy General Managers and one Assistant General Manager), all the other organizations have a much higher number of senior managers. For example, Detroit has five Assistant Directors, each leading a major functional area of responsibility. MWRA has an executive director responsible for implementing programs, policies and procedures at the direction of the Board with four divisions with separate directors. The other agencies each have multiple divisions with senior level managers. The other organizations also have additional senior leaders reporting directly to the head of each organization clearly stretching the span of control. Detroit has three and Denver has five additional senior support personnel reporting to the CEO.

Some of the significant differences between WASA and the other organizations are as follows:

- With the exception of MWRA, operations and engineering are separate functions in the other utilities.
- Water supply and wastewater functions are separate functions in six of the eight other utilities (Denver Water and Fairfax Water have no wastewater responsibilities).
- Human Resources and IT report directly to the CEO in the other organizations.
- Public Affairs or External Affairs functions report directly to the CEO in the other utilities.
- WASA faces the largest capital improvement plan of any of the utilities studied.

While WASA does not have the largest single current year capital budget of all the compared utilities, the size of its forecasted lifetime capital improvements plan (approximately \$4.0 - \$5.0 billion) is much larger than those of the other utilities and it clearly sets WASA apart from them. Detroit has a capital program that compares the closest with WASA’s with about \$3.0 – \$3.5 billion. The rest of the compared utilities’ capital programs pale in comparison with WASA’s. Additionally, the WASA capital program is further set apart from all other utilities in terms of its size, complexity and the penalties for failures.

COMPARISON OF WASA TO OTHER MAJOR UTILITIES

	DC WASA	DALLAS	DENVER	DETROIT	EBMUD	FAIRFAX	MWRA	SFPUC	WSSC
Board Governance?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Separate Water & Wastewater?	No	Yes	N/A	Yes	Yes	N/A	Yes	Yes	Yes
Employees	1,200	1,600	1,100	2,800	2,000	400	1,300		1,500
Operating Budget ($ millions)	$ 270	$ 416	$ 107	$ 336	$ 353	$ 56	$ 211	$ 181	$ 466
Service Area (square miles)	725	699	338	1,071	408				1,000
Population Served (millions)	2.10	1.21	1.18	4.00	1.94	1.3	2.50	2.40	1.63
Water Lines (miles)	1,300	4,639	2,600	100		3,000	275	1,250	5,300
Annual Capital Program ($ millions)	$ 203 *	$ 236	$ 89	$ 433	$ 177	$ 63	$ 224	$ 75	$ 265

* - The WASA capital improvements program will be extremely large over the next 15 years as it addresses CSOs, tighter discharge standards for the Chesapeake Bay (BNR/ENR), lead service line replacements and other infrastructure needs.

B.7 – WASA'S Relationship With the Washington Aqueduct

BACKGROUND

Facilities of the Aqueduct

The Washington Aqueduct ("Aqueduct") is a system of federal facilities that collects raw water, treats the water, and then transports the resulting potable water to storage facilities and into the distribution mains of its wholesale customers. These facilities operate 24 hours a day, 365 days a year.

The Aqueduct has raw water intake facilities on the Potomac River at Great Falls and Little Falls, Maryland. Raw water from the Potomac River is treated at one of the two Aqueduct water treatment plants, Dalecarlia and McMillan. These treatment plants, which are located in the District of Columbia ("District" or "DC"), have a combined production capacity of 350 million gallons per day ("mgd"). Informed sources indicate that, if necessary, the plants could produce 420 mgd.

The Aqueduct also owns and operates two 12-mile gravity conduit systems with a combined 200 mgd capacity, a 525 mgd raw water pumping station, a 480 mgd finished water pumping station, three booster pumping stations, seven finished water storage reservoirs, and many large diameter transmission mains.

The Aqueduct sells water to its Wholesale Customers. The Aqueduct's Wholesale Customers use this water to provide drinking water to approximately one million citizens living, working, or visiting in its service areas. For example, WASA supplies water to the residents and businesses within the District and to several Federally-owned facilities that are not located within the District (such as the Pentagon, Fort Myer, Arlington Cemetery, the National Park Service, and the National Geospatial-Intelligence Agency facilities in Maryland). During Fiscal Year 2006, it is estimated that the Aqueduct will pump an estimated 62 billion gallons of purified water to its Wholesale Customers.

Governance of the Aqueduct

The Aqueduct is owned by the Federal Government. The Chief of Engineers for the U.S. Army Corps of Engineers ("Corps") has statutory responsibility for the Aqueduct, which is directly operated and managed by the Baltimore District of the Corps. The Baltimore District has a Washington Aqueduct Division" that currently employs approximately 200 people who are all federal civil service employees.

In order to foster a stable and mutually beneficial partnership among the Wholesale Customers, the Corps entered into a Memorandum of Understanding ("MOU"), on May 5, 1998, with the Wholesale Customers. The MOU establishes the organization, rules, and procedures for a "Wholesale Customer Board" and its relationship with the Corps and the Aqueduct.

The Wholesale Customer Board serves as the mechanism for the Wholesale Customers to jointly communicate and work with the Corps on issues concerning, *inter alia*, the cost, quality, and availability of the water furnished by the Corps and the operation of the Aqueduct, as well as other matters of mutual concern regarding the Aqueduct. For example, the Wholesale Customer Board gives customers the opportunity to review budgets for the Aqueduct. It should be noted that the Wholesale Customers worked with Congress in the late 1990s in an unsuccessful attempt to codify the terms of the MOU into federal law.

Financing of the Aqueduct

As a federal entity, the Aqueduct has no independent ability to borrow funds (i.e., issue debt). All funding for construction, operations, maintenance, and capital improvements comes from either Congressional appropriations or from revenues generated by selling drinking water to the Wholesale Customers under Water Sales Agreements.

The Aqueduct was originally built (in the 1850s) with federal funds and the Corps supplied raw water to the White House and the Capitol complex. From 1927 to 1983, the Aqueduct received financing for most of its construction costs through Treasury loans to the District. Congress authorized the Washington Aqueduct to sell and deliver water to Arlington County, Virginia, and the City of Falls Church, Virginia in 1926 and 1947 respectively. In 1983, the District discontinued its request for Treasury loans and instead issued bonds until the Tax Reform Act of 1986 prevented the District from allocating more than five (5) percent of bond proceeds to "private activities" which included federal programs such as the Aqueduct. Once the Aqueduct became ineligible to receive proceeds from the District's tax-exempt bonds sales, the Corps entered into a pay-as-you-go relationship with the District. The Corps directly billed the Wholesale Customers quarterly for capital improvement projects. This arrangement was made a formal part of the 1990 DC Appropriation Act and lasted until 1995, when the District's mounting financial problems made it impossible for the District to make several consecutive water payments to the Aqueduct.

The Safe Drinking Water Act Amendments of 1996, with its Aqueduct related provisions known as the "Improvements Act," created an exception to the Corps' inability to borrow funds for capital improvements. Pursuant to the Improvements Act, the Corps was authorized to borrow from the Treasury of the United States amounts required for the years 1997, 1998 and 1999 to carry out capital improvements to the Aqueduct – *on the condition that each of the Wholesale Customers enter into Water Sale Agreements with the Corps*.

Currently, WASA finances its Aqueduct projects with pay- as- you- go financing. For the pay- as- you- go projects, the Corps requires WASA to remit cash in an amount equal to the total project cost in advance of advertising contracts, and these funds are transferred immediately to a Corps/U. S. Treasury account at zero return to WASA. In the past, this has not been a significant issue to WASA as the level of projects to be undertaken was relatively small. However, these projects are beginning to increase in size and scope, and are creating a large cost for WASA's customers to bear. Congressional action could correct the financing problem in a number of ways (such as transferring dollars on a phased basis, using Treasury Notes or providing the Corps with a bank line of credit). In other contexts, payment to an interest bearing escrow account has avoided any Anti-Deficiency Act violations without precluding the earning of interest during drawdown of the account for expenditures.

Water Sales Agreements with the Aqueduct

The Aqueduct charges a rate based on Water Sale Agreements with the Wholesale Customers. Each Water Sales Agreement requires each Wholesale Customer to pay its pro-rata share (based on water purchases) of (a) the principal and interest owed on the capital amounts borrowed by the Corps, and, (b) the operating costs of the Aqueduct. For example, WASA purchases approximately 75 percent of the water produced by the Aqueduct and therefore is responsible for 75 percent of the Aqueduct's operating and capital costs.

The Water Sales Agreement between WASA and the Corps ends on September 30, 2023 but is subject to automatic renewal. It can be terminated with six (6) months advance notice. However, by its terms, the Water Sales Agreement can only be terminated upon the payment of the Corps' debt and satisfaction of other conditions.

Review of Recent Actions and Studies Related to Possible Transfer of the Aqueduct

1993 Study of Aqueduct Options:

In the early 1990, instrumentation failures and errors due to management oversight at the Aqueduct led to turbidity problems. In response to boil-water orders, the Corps commissioned a study on the "Financing and Ownership Options" for the Aqueduct. This Study was not intended to produce a recommendation. Instead, it identified a range of seven options for the ownership and/or control of the Aqueduct. Two of these options (Options 3 and Option 4) relate to ownership and operation by a non-Federal public entity, such as WASA. These options differ only in the mechanisms used to finance capital improvements: Option 3 uses Federal financing (e.g., Treasury notes and grants) and Option 4 uses bond financing.

1993 Partnership Proposal:

Following the issuance of the Study on Financing and Ownership Options, American Water Works Company approached the Corps with a proposal to create a public-private partnership to carry out capital improvements and on-going maintenance and operation at the Aqueduct. In essence, American Water Works proposed that the Federal Government retain ownership of the Aqueduct, but lease it to a private entity on a long term basis, so the private entity could build the necessary improvements, and manage and maintain the facilities. The Corps did not respond to this proposal.

1995 Negotiations with Fairfax County:

During 1995, at the urging of Rep. Thomas M. Davis, III (R-VA), the Corps began negotiating for the transfer of the Aqueduct to the Fairfax County Water Authority ("Fairfax County"). The primary reason for this suggestion was that the population in the District was shrinking, whereas the population in the Northern Virginia suburbs was growing. Additional water treatment capacity was needed to support the growth in Northern Virginia. The Aqueduct could be connected with Fairfax County's system, reducing the need for additional water treatment plants. This approach was projected to save an estimated $200 million. However, it faced opposition from the other Wholesale Customers and from members of Congress. That opposition ended the negotiations.

1996 Legislation:

Section 306(b) of the Improvements Act encouraged the Wholesale Water Customers to analyze options regarding the ownership, operation, maintenance, and management of the Washington Aqueduct. While Congress "encouraged and granted consent" for the transfer of the Aqueduct to a non-Federal public or private entity, the law stopped short of requiring transfer. The statute mandated that the transfer only take place if the Secretary of the Army determined (1) that the entity to receive ownership had the technical, managerial, and financial capability to operate, maintain, and manage the Aqueduct, and, (2) that the entity taking ownership assumed full responsibility for "performing and financing the operation, maintenance, repair, replacement, rehabilitation, and necessary capital improvements of the Aqueduct… to provide an uninterrupted supply of potable water sufficient to meet the current and future needs of the Aqueduct service area." The transfer also required the "consent of the majority of the customers." By its terms, the proposed transfer was to occur **before** August 6, 1999.

Federal and local officials formed a steering committee in October 1996 to develop a plan for transferring the Aqueduct based on Section 306(d). The steering committee decided not to transfer the Aqueduct to Fairfax County because that approach would save much less money than was originally expected, and because the customer jurisdictions did not want an outside body imposing rate increases on their citizens. Fairfax County reportedly lost interest in the transfer after the customer jurisdictions expressed their opposition to it.

The steering committee decided against transferring the Aqueduct to WASA because of its lack of experience in operating a water treatment facility. It must be remembered that WASA was formed in 1996, the same year that the Improvement Act became effective. The steering committee decided against selling the Aqueduct to a private entity because that approach would reduce the control of local officials. In addition, the members of the committee seemed reluctant to set a price for selling the facilities. Therefore, the Army report mandated by the Act did not recommend a transfer of the Aqueduct. It did, however, result in the aforementioned MOU and water sales agreement. One of the results of the MOU was the establishment of a Wholesale Customer Board which meets periodically to discuss common issues and review Aqueduct budgets. While this Board has no legal standing, it has worked effectively on an informal basis.

2004 Proposal:

In December 2004, the DC Appleseed Center issued a report entitled "Lead in the District of Columbia Drinking Water: A Call for Reform," which, among other recommendations, advocated transferring the Aqueduct to WASA. The Report was not widely circulated or publicized. It is our understanding that environmental groups were split on this recommendation.

Potential Transfer of Aqueduct to WASA

This analysis is a preliminary elaboration of the governance and management issues related to WASA and the Aqueduct addressed in the 2000 Regionalization Study conducted for WASA by the Metropolitan Washington Council of Governments ("COG"). In that Study, it was suggested that the Aqueduct could be acquired by WASA without the creation of a new regional authority (e.g., an interstate compact authority). COG did not, however, use this suggestion as the basis for one of its overall models in the Regionalization Study

The objectives of the instant study are to assess potential changes to WASA which could enhance or improve its governance of services to the area. Therefore, options for management, control and ownership of the Aqueduct in the future, including the possible transfer of the Aqueduct to WASA, must be assessed to determine their impact on good governance. **Drinking water suppliers are generally judged on their ability to produce, and reliably deliver, adequate amounts of clean, safe, potable water to their customers, at reasonable prices, without producing negative environmental externalities.** Thus, proposed improvements in the governance of public water supplies can be measured by determining if they will yield incremental improvements in one or more of the above-stated criteria. That is, making the drinking water safer for consumption; making delivery of potable water to the customer more reliable; reducing the cost of safe potable water; or producing and delivering safe water with less negative impacts on the environment. Reduced costs might be derived from a number of actions, including more efficient and effective administration and management of the water supply system.

Federal Government Views on the Transfer of the Aqueduct

The mission of the Corps is to provide quality, responsive engineering services to the nation. The Corps is involved in a broad range of civil and military projects and missions. The Corps has a long history of ownership and operation of the Aqueduct (1852 to present). However, owning and operating the Aqueduct is a unique activity for the Corps because the Aqueduct directly supplies drinking water to other governmental entities (i.e., the Wholesale Customers).

A consensus does not exist in the United States Army or even within the Corps itself on the transfer of the Aqueduct to WASA or some other entity. Some members of the military and the Corps would support a transfer ownership and operations of the Aqueduct to WASA or some other entity because a transfer would allow the Corps to focus on other fundamental missions. Other members of the military and the Corps would not support a transfer. They believe that the essential functions of the Aqueduct should remain with the Corps, which has responsibly performed those functions since the Aqueduct became operational in the 1850s.

Members of Congress that have expressed views on the subject in the past are also not in agreement on the desirability of transferring the Aqueduct to WASA, privatizing the facility, or transferring it to some other entity.

WASA's Options for the Aqueduct

If there is support for a transfer of the Aqueduct to WASA, it will be necessary to further analyze the details, and the scope, of various options for the transfer. The expansion of WASA's current services to include ownership and/or control of operations of the Aqueduct could be structured in several ways. Among the options preliminarily considered during this study are:

- 1. Maintaining the Status Quo: Leaving the Aqueduct's ownership and operation as is.

- 2. Consolidation with WASA: WASA would be owner and operator of the Aqueduct.

- 3. WASA Ownership or Lease Only: WASA would be the owner or lessee and the Corps would be the operator of the Aqueduct. There are two principal transaction structures that would place ownership of the Aqueduct in WASA and leave the operations of the Aqueduct with the Corps: (1) Asset Sale or Long-Term Lease to WASA with Operations and Maintenance ("O&M") Agreement giving operations back to the Corps; and, (2) Asset Sale to WASA with a Leaseback to the Corps.

- 4. WASA Operations Only: The Corps would be the owner and WASA would be the operator of the Aqueduct. There are two principal transaction structures that would leave the ownership of the Aqueduct in the Corps and place the operations of the Aqueduct with WASA: (1) O&M Agreement giving operations to WASA; and, (2) a Lease to WASA.

Advantages and Disadvantages of Each Option

1. Status Quo Option

Advantages

- By many accounts, status quo is working well. "Don't change what is not broken"

- Viewed by some as neutral provider of potable water to all jurisdictions and customers

- 150 years of operational experience

- Various advantages of federal status, such as tax exemption, federal facility compliance negotiated with other agencies of the federal government

- Unlimited rights to withdraw water from Potomac River

- Priority service and "continuity of operation" for federal government during homeland security crisis or other emergency

Disadvantages

- Fiscal processes for financing capital improvements are cumbersome and costly; Aqueduct cannot issue debt

- Federal government is viewed by some as non-responsive to the needs of the customers

- Separates ownership and management of production and distribution system; therefore, when problems arise, responsibility and accountability are not combined and focused (This can lead to "finger-pointing")

2. WASA Ownership / Lease and Operation

Advantages

- Logical step toward optimal regionalization of water supply

- Combines control of production and distribution of potable water in one authority, placing both responsibility and authority in one place

- Authorized to use debt financing for capital improvements

- Viewed by many as more responsive to customers than federal government

- The Aqueduct has excess capacity up to 420 mgd that could generate revenues for WASA and reduce rates, assuming there is additional demand.

Disadvantages

- WASA has no operational experience in managing or operating water production

- Opposed by certain jurisdictions, environmental groups, and customers as not adequately representing all suburban water interests or environmental values

- Cost considerations in initial transfer or long-term lease include possible payment for the asset to federal government and/or payment to the suburban jurisdictions for their contributions to capital improvements since 1927

- Independence from DC viewed as important for WASA to function as neutral “area provider” of water

- Ownership or lease would be taken subject to certain agreements, consent decrees, and existing water rights allocations unless Congress specified otherwise

- Loss of, or at minimum, disruptive to current experienced federal employees

3. WASA Ownership / Lease, Corps Operates

Combines many of the advantages of Options 1 and 2 and if Corps continues to operate for a certain period; eliminates the disadvantage/criticism that WASA is not an experienced water producer

Depending on the structure outlined in the transfer legislation which would be required, many of the advantages of a "federal" facility (including grandfathering civil service status for current federal employees, tax exempt status etc.) could be retained

4. Corps Ownership, WASA Operates

Depending on the structure outlined in the transfer legislation and documents, Option 4 could achieve some of the advantages of Option 3, such as combining production and distribution of potable water in one place and authorizing WASA (as the tenant) to use debt financing for capital improvements

Combines many of the disadvantages of Options 2 and 3, including the likely criticism that WASA has no operational experience in managing or operating water production

Depending on the structure outlined in the transfer legislation and documents which would be required, many of the advantages of a "federal" facility (including grandfathering civil service status for current federal employees, tax exempt status etc.) could be retained

AREAS REQUIRING FURTHER CAREFUL STUDY

The 1996-97 efforts to transfer the Aqueduct were defeated. Each of these efforts faced various objections or other concerns. It is likely that any future proposal to transfer the Aqueduct will face similar objections. Some of these oft-repeated objections, and other factors that must be considered in making a transfer decision, are discussed below:

In-Stream Pollution Issues and Compliance with Permits

The U.S. Environmental Protection Agency's ("EPA") issued a revised National Pollutant Discharge Elimination System permit to the Corps Aqueduct in March 2003 after extensive litigation regarding solids disposition. This permit sets new discharge limits for discharge to the Potomac River on sediment and aluminum levels; prohibits the discharge of chlorine; and prohibits discharges from February 15th through June 15th while fish are spawning and hatching. The permit is accompanied by a Federal Facilities Compliance Agreement which provides a timetable to comply with the new effluent limits. The Draft Environmental Impact Statement ("DEIS") for a project to recover and dispose of these solids was issued in April 2005.

The public comment period on the DEIS ended in June 2005. The Corps evaluated and incorporated, as appropriate, the comments received into the Final Environmental Impact Statement, which was published in the Federal Register on September 23, 2005. The Baltimore

District Engineer made the implementation decision and executed a Record of Decision on October 28, 2005. After a preferred option is selected and accepted by the U.S. EPA Region III, design and then construction will begin. The deadline for at least one of the six sedimentation basins to be in compliance with the permit effluent standards is March 2008, and all basins must be in compliance by December 31, 2009. The total cost is estimated to be between $90 and $116 million.

Solids were previously allowed to be simply flushed and returned to the River. The current preferred option, as selected in the Record of Decision, for meeting the compliance agreement and schedule requires that the solids be dewatered on site in a newly constructed dewatering facility and trucked away, just as other major water suppliers in the area do. The surrounding community has vowed to fight trucking in court.

Another option considered in the EIS/Record of Decision is to pipe the wastewater containing the solids to WASA for treatment before returning it to the Potomac. WASA has raised significant technical, cost and capacity issues to this option. However, if WASA owned and operated both the water supply plant and distribution system in addition to the waste water treatment plant, the issue of treatment at Blue Plains could be raised again politically or in litigation.

Primacy and Safe Drinking Water Act Issues

The EPA Region III Office in Philadelphia has primary oversight and enforcement responsibility for public water systems in the District. This regulatory responsibility is termed "primacy" under the Safe Drinking Water Act ("SDWA"), and primacy for a safe drinking water program may be delegated to a state or to the District. According to EPA, the regional office's oversight and enforcement responsibilities include providing technical assistance to the water suppliers on how to comply with federal regulations; ensuring the suppliers report monitoring results to EPA by the required deadlines; taking enforcement actions if violations occur; and using those enforcement actions to return the system to compliance in a timely fashion.

SDWA regulatory control of the Aqueduct is with Region III of EPA because the District does not have Primacy. DC Primacy has been discussed and recommended by some groups. If the District obtains primacy WASA would be subject to DC regulatory control.

In instances where a State does not have primacy, the EPA Region is the Primacy Agent for enforcement of the SDWA. To receive primacy, States must meet certain requirements laid out in the SDWA and the regulations, including the adoption of drinking water regulations that are at least as stringent as the Federal regulations and a demonstration that they can enforce the program requirements. Of the 57 States and Territories, all but Wyoming and the District have primacy.

DC Appleseed recommended that the District qualify for "primacy" to enforce effectively the Lead and Copper Rule ("LCR") and to reform the LCR to provide greater protection to the public health. The report stated that Primacy also would allow the District to consolidate responsibility for drinking water management so that agencies and individuals are more accountable. After taking primacy, the District would be required to promulgate regulations; substantial revisions to the LCR could result in drinking water standards for lead in the District that are more stringent than current law.

More stringent standards could impact the cost of operating the Aqueduct. For example, Advanced Disinfectant Treatment, such as the use of Ozone or UV, could be required by the District (or EPA) under the Safe Drinking Water Act at a cost of $10 to $20 million.

Additionally, it should be noted that due to the Federal Government's "Unitary Executive Theory", many believe that "[w]here federal government agencies are the liable parties, EPA enforcement authority is at its weakest because EPA will not bring a judicial enforcement action against a sister federal agency." Simply put, this theory requires the "federal family" to speak with one voice and ordinarily makes it difficult for EPA to sue a sister agency (such as the Corps) without elaborate efforts to resolve the issue within the Executive Branch. This would not be the case with WASA as the owner and/or operator of the Aqueduct.

Cost Considerations

In 1995, Eleanor Holmes Norton, the District's Delegate in Congress, objected to the Fairfax County's Proposal because, among other things, Fairfax County sought ownership of the Aqueduct without compensating the Federal Government or the customer jurisdictions that had funded the Aqueduct for decades. While the Improvements Act encouraged transfer of the Aqueduct and indicated transfer was to be accomplished "without consideration to the federal government," there is no guarantee that that provision, sponsored by a Democratic Administration, would be supported by the present Administration and OMB.

Moreover, the Aqueduct's non-federal customers, other than the District/WASA, which have contributed "equity" towards the Aqueduct, can be expected to demand payment for sharing in the capital improvements of the Aqueduct. The Section 306(b)(2) of the Improvements Act directed that if the Aqueduct was not owned by all of the Wholesale Customers, the owner of the Aqueduct "shall consider the [Wholesale Customer's] historical provision of equity for the Aqueduct."

Homeland Security Issues

The terrorist attacks of September 11, 2001 ("9/11") occurred after Congress proposed transferring the Aqueduct in 1996. The Corps, working with the FBI and the State and City of New York worked on protection of the New York water supply system immediately following attacks. The political support for transfer and/or privatization of federal facilities that are parts of national defense or other critical national infrastructure has decreased since 9/11. The Aqueduct is considered a key component in protecting the entire National Capital area and government buildings during incidents. It is also a key component of "continuity of operations" during such crises. Federal control is considered preferable to many who consider homeland security a top priority.

Water Rights Issues

Since 1857, the Federal Government has exercised an unlimited right to withdraw water from the Potomac River for service to the federal government and DC. In considering transfer of the Aqueduct, water rights issues must be analyzed. Maryland and Virginia have been arguing about the Potomac River since colonial times. This long-standing dispute has produced several cases in the United States Supreme Court. The most recent case, Virginia v. Maryland, 540 U.S. 56, 124 S. Ct. 598, 157 L. Ed. 2d 461, was decided in December, 2003.

The bed of the Potomac is considered to be in Maryland; the border with Virginia is the low water mark on the south side of the river. Nevertheless, the Potomac River is considered a common highway, for the purpose of commerce and navigation, to the citizens of Virginia and Maryland. In addition, the Commonwealth of Virginia, in its sovereign capacity, has the full right to use the Potomac River as may be necessary to the full enjoyment of her riparian ownership, without interfering with navigation or with Maryland's proper use of the river. This right is not subject to Maryland's regulatory authority. As a result, Virginia has the right to withdraw water from the Potomac River and to construct improvements appurtenant to the Virginia shore, free from regulation by the State of Maryland. Similarly, Maryland has the right to withdraw water from the river and to construct improvements appurtenant to the Maryland shore, free from regulation by the Commonwealth of Virginia.

This does not mean that Maryland and Virginia each have complete discretion over their own use of the Potomac River. Federal common law governs interstate bodies of water, ensuring that water is equitably apportioned between the states and that neither state harms the other's interest in the river. Thus, Maryland and Virginia each must comply with the doctrine of equitable apportionment. Additionally, Maryland and Virginia (and others) entered into an agreement with the Secretary of the Army apportioning the waters of the Potomac during times of low flow. They also entered into a Water Supply Coordination Agreement to minimize the potential for triggering allocation mechanism due to low flow levels in the Potomac. Moreover, it should be noted that water withdrawals from the Great Falls and Little Falls, which are located in Maryland, may be regulated by the State of Maryland. The Corps, as part of the Federal Government, is exempt from such state permitting requirements. Such an exemption may not apply to WASA, as the owner and/or operator of the Aqueduct.

Local Accountability and Participation

Any proposed transaction should involve a transparent process and the other Wholesale Customers. This concept is echoed in the objections to prior efforts to transfer the Aqueduct. For example, in 1995, the Corps identified the following as important factors to be considered in transferring the Aqueduct: (a) the representation of customers with the new owner of the Aqueduct; and, (b) the consensus among the customers of the Aqueduct. Similarly, Eleanor Holmes Norton, the District's Delegate in Congress, objected to the Fairfax County Proposal because, among other things, the Army acted unilaterally in negotiating with Fairfax County and failed to include the customer jurisdictions in the discussions.

Additionally, in the MOU, each of the Wholesale Customers expressed a preference for maintaining federal ownership of the Aqueduct (together with continued federal financing of the capital improvements). While that may have changed as WASA's capability has grown, it may remain an issue with some.

Status of Current Aqueduct Employees

Previously, the Corps identified the employment rights of persons working for the Army before the transfer as an important factor to be considered in any transfer of the Aqueduct. In 1996, the rumors surrounding the transfer caused a loss of highly qualified individuals who retired or took other federal jobs. Grandfathering current civil service employees might prevent such problems, particularly if the option calling for continued Corps operation is adopted.

Land Development and Historic Preservation

The Corps has stated that is important that any land related to the Aqueduct continue to be used for drinking water purposes, not commercial or residential development. Physical elements of the Washington Aqueduct system are recognized as national historic landmarks representing the best of engineering and science that our country has produced.

Operational Experience

Under the 1996 Legislation, the steering committee decided against transferring the Aqueduct to WASA because of its lack of experience in operating a water treatment facility. However, WASA has gained a reputation for sound management since its creation 10 years ago.

Legal Title to the Aqueduct

Preliminarily, it must be remembered that WASA does not own the water distribution system in the District. Upon the creation of WASA, the Mayor was authorized to permit WASA (through an intra-District transfer) to use any of the assets that the Mayor considered to be required for WASA's operations. The District has retained "full legal title to, and a complete equitable interest in," all of the assets made available for WASA's use. If ownership of the Aqueduct is being transferred, the transfer may be accomplished in two ways.

First, the legal title to the Aqueduct may be transferred directly to the District. It could then be immediately transferred to WASA (through an intra-District transfer). This would give the District an equitable interest in the Aqueduct and give WASA the right to use the Aqueduct.

Second, the legal title to the Aqueduct may be transferred directly to WASA. Under its enabling legislation, WASA may (a) undertake any public project, acquisition, construction, or any other act necessary; and, (b) acquire by purchase, gift, lease, or otherwise any real and personal property of every kind and character, or any interest therein. These sections enable WASA to have an equitable interest, and the right to use the Aqueduct.

Nevertheless, it should be noted that upon the dissolution of WASA, all rights, property and assets of WASA will be transferred automatically to the District. Given the broad wording of this provision, the automatic transfer should include the assets originally transferred to WASA by the District and any after-acquired rights, property or assets of WASA (such as the Aqueduct). Some may object to the potential of the Aqueduct being owned by the District either after a direct transfer or after the dissolution of WASA.

C. CONCLUSIONS

C.1 – Areas Identified for Improved Governance

This section of our report focuses on those topics and areas in which opportunities for improved governance at WASA were found.

CONCLUSIONS

1. WASA should consider expansion of its current scope of services by acquiring control or ownership of a leasehold interest in and/or greater management control over, the Aqueduct.

2. The two governance reasons most often-cited in support of WASA's ownership and/or control of the Aqueduct are: (1) combining the water production and distribution authority and responsibility within WASA would streamline management and focus accountability for the production and delivery of high quality potable water; and, (2) providing a mechanism for the rapid financing of needed capital improvements that is not handicapped by cumbersome federal fiscal processes would increase efficiencies.

3. The most often-cited objection to WASA's ownership and/or control of the Aqueduct is WASA's lack of experience in potable water production systems, the potential costs of acquiring the facilities, and opposition by certain suburban customers.

4. WASA needs to review the options for the transfer of the Aqueduct and consider the advantages and disadvantages of each, before selecting an option.

5. Broadly speaking, changes in water production must be evaluated by asking the following: Will the change enhance government's ability to produce, and reliably deliver, adequate amounts of clean, safe, potable water to their customers, at reasonable prices, without producing negative environmental externalities? In other words the evaluation factors for any proposed change of governance must include a consideration of the impact of the proposed change against the following criteria: financial considerations (costs), customer service, environmental protection, practicality of the changes and public and political acceptability.

6. In undertaking a review of transfer options, WASA should conduct an additional investigation into the areas and issues identified herein that will require careful study. These areas and issues may impact the selection of an option for implementation. As part of this investigation, WASA should actively solicit the views of government officials, the Pentagon, the Corps, the other wholesale customers, members of Congress, and environmental groups before selecting an option so that the potential "stakeholders" can have a role in determining the preferred course of action.

C.2 – Identification of Potential Governance Models

During the course of the study, numerous suggestions were made and various alternative governance structures, mechanisms and practices were identified for WASA. Organizing the suggestions and alternatives into groups based on common characteristics produced four general categories or "models," which can be broadly described as follows:

- Status Quo ("As Is") – in many instances, the data reviewed and the comments received during interviews produced various shadings of comment that centered around the belief / opinion that WASA's governance structure is fine the way it is, and needs no changes.

- Current Model with Improvements ("Upgraded WASA") – many of the findings and observations fall into the category that WASA's governance is basically sound, but that minor changes / improvements / enhancements are needed or desired.

- Expanded Use of Intermunicipal Agreements ("Expanded IMA") – some of the interviewees and some of the data suggested that a simple way to improve WASA's governance (especially if control of the Washington Aqueduct were envisioned) was to expand the use of inter-municipal agreements (IMAs), similar to the mechanism used to allocate capacity and costs related to Blue Plains.

- Interstate Compact ("Compact") – some of the data and some of the interviewees indicated that an independent regional agency (similar to WMATA or MWAA) would be the preferred alternative to WASA as now structured. Such an entity would require some form of an interstate compact.

Each of these four "models" (and some of the variations on each model) is described in a separate section of this chapter.

C.3 – Criteria Selected to Evaluate the Models

PROCESS EMPLOYED TO SELECT CRITERIA

The project team during the course of interviews with the Board of Directors, WASA management and stakeholders asked interviewees how the consulting team should view the various alternative governance structures that might be identified during the study. From the suggestions furnished by interviewees, supplemented by the experience and education of the project team, we developed a fairly extensive list of broadly stated evaluation criteria. From this larger list of criteria, we consolidated some categories and eliminated some categories.

The list of general evaluation criteria was developed prior to the identification of alternative governance models. This approach was taken to minimize the possibility of inserting bias into the evaluation criteria (i.e., selecting or not selecting specific selection criteria so as to increase or decrease the likelihood of selecting a specific governance alternative)

IDENTIFICATION OF EVALUATION CRITERIA USED IN THE STUDY

The general categories of evaluation criteria selected to measure governance alternatives for WASA are as follows:

- Financial – What impact would the governance alternative have on WASA's cost of service? How much would costs increase if this alternative were adopted vs. what is the improvement in governance resulting from this alternative?

- Customer Service – Would there be any impact on customer service if this alternative were implemented, and what would that impact be?

- Environmental – What if any environmental impact might occur if this alternative were adopted and implemented?

- Practicality – Is this alternative administratively feasible, and what impact might it have on administrative costs?

- Public Acceptability – Is this alternative likely to be acceptable to the public?

LEGAL AND REGULATORY CONSIDERATIONS

Are there any legal or regulatory impacts if this alternative were adopted and implemented?

STRUCTURAL AND POLICY CONSIDERATIONS

If this alternative were adopted, what changes would we have to make to the management structure of WASA, and are there any related policies that would have to be modified?

INTEGRATION CONSIDERATIONS

If this alternative were adopted and implemented, would it be compatible with existing and related WASA policies and practices? Where are the areas of inconsistency, and will there be changes integrating any policy changes into current WASA practice?

C.4 Status Quo Model ("As Is")

The basic governance model would be to make no substantive changes, but to simply continue doing things the way they have "always been done." Any changes would be effected by changes in management practices or by negotiated agreement.

DESCRIPTION OF THE MODEL

The simplest governance model for WASA would be to make no real changes, but to live with the current governance model. This alternative is essentially the baseline against which all other governance models will be compared. The key features of this mode are as follows:

- No changes in either federal or District of Columbia legislation would be necessary; WASA would continue to live with the ambiguity in the legislation.

- WASA would continue to have a relationship with the District of Columbia that was not precisely defined and that would evolve over time, similar to the concept of "case law' being used as building blocks to define the requirements of a situation.

- No changes would be necessary in the size or membership of the Board of Directors if WASA were to acquire control of the Washington Aqueduct; concerns and needs of the two "outside" customers of the Aqueduct (Arlington County and the City of Falls Church) would be addressed via the contracts between those jurisdictions and the Aqueduct.

BENEFITS OF THIS MODEL

If the "As Is" model were selected, there would be little or no change in WASA's governance; every participant's expectations would be familiar, and no party's situation would be diminished.

No legislative action would be required; this could provide insurance against unplanned "improvements" that might be made to WASA's governing legislation. When legislative amendments are proposed, the results sometimes include unrelated provisions. Riders or requirements can (and are) added to legislation that can have unintended and sometimes negative consequences.

COMPELLING ARGUMENTS FOR NO CHANGE

This alternative would be the easiest to adopt, and would require the least cost in terms of political activity and uncertainty.

C.5 – Current Model with Improvements ("Upgraded WASA")

One of the groupings of alternative governance structures identified for WASA centers around the observation that the basic legal and management underpinnings of WASA are sound, and that adopting modest incremental improvements to the legal and management structures of WASA is all that is necessary or desirable. For ease of discussion, we have termed this collection of suggested improvements the "Upgraded WASA" model.

DESCRIPTION OF THE MODEL

This governance model would leave the basic District and Federal legislation and management structure of WASA in place, and would adopt and cause to be enacted those changes to the relevant existing legislation and regulation over time in a gradual and incremental manner. This approach is intended to effect necessary or desired changes in a non-threatening and non-disruptive manner that would not discourage public acceptability, upset financial markets or (most importantly) impair WASA's ability to accomplish its day-to-day operating objectives in an efficient manner. The model would require several steps:

- Development of an agreed-upon list of improvements or changes to the current governance of WASA

- Development of a "critical path" setting forth the relationships between and among the desired improvements, including the elapsed time needed for each improvement, the dependency of each improvement on other changes, an estimated cost (in terms of both WASA Board and management time as well as specialized outside experts) and identification of responsibility for each improvement ("task")

- Establishment of a special committee of the Board to oversee such improvements

- Development of a process to monitor, report and correct the implementation of the planned improvements

IDENTIFICATION OF POTENTIAL GOVERNANCE IMPROVEMENTS

During the course of the study, a fairly extensive compilation of desired or needed governance changes was developed. These improvements ranged from the mundane and administrative (offer annual briefings to the legislative bodies of the jurisdictions served by WASA) to the significant (change the Internal Revenue Code to allow the Washington Aqueduct to borrow funds). Some of the changes can be effected by the action of the WASA Board of Directors without approval or concurrence from any outside entity (e.g., have the Internal Audit function report directly to the Board of Directors) and some changes might require legislative action (eliminate the ability of the District of Columbia to eliminate WASA by retiring or defeasing all WASA debt and transferring all operational responsibility to the District government).

BENEFITS OF THIS APPROACH

This model allows for the evolutionary and gradual introduction of needed changes in WASA's governance without the turmoil and political uncertainty that can accompany radical changes in governance. It also allows the Board of Directors to proceed with change at a pace with which the Board is comfortable. An additional benefit of this approach is that over time substantive improvements can be made without the appearance of any major change at all, thus reducing the threat of uncertainty to the parties affected by changes.

DANGERS OF THIS APPROACH

The most obvious danger of this approach is that needed or desired improvements will never be effected, since they can be delayed or deferred indefinitely without acknowledging that this has happened. The other danger inherent in this approach is that major needed changes will be ignored or avoided by focusing on easier, less challenging changes.

VARIATIONS ON THE MODEL

There are an almost endless number of governance variations that could be effected under the "Upgraded WASA" model, but two variations that surfaced during the study attracted more discussion and attention than others:

- WASA as Holding Company
- WASA as Wholesaler Only

Each of these alternatives is discussed below

WASA as A Holding Company

One of the obvious challenges of acquiring ownership or control of the Washington Aqueduct is gaining the confidence of other existing wholesale Aqueduct customers. Both Arlington County and the City of Falls Church will seek assurances that they will continue to receive the treated water needed to serve their customers. They will also need assurance that WASA will be responsive to their interests and those of their customers. The project team explored a creative series of options including the transformation of WASA into a holding company. While no consensus was attempted or reached on the desirability of the various holding company options, they are presented in this report as resource materials to guide and stimulate future discussions. Some of the options identified could include:

- Rename WASA (the name "Metropolitan Washington Service Authority" [MWSA] is used as a "place holder.")
  - board of directors representing the jurisdictions served (number of votes or weighted votes to be determined; alternatively, current Board structure could be expanded)
  - veto authority over boards of "subsidiaries"

- Create three operating subsidiaries / "business units":

- Washington Aqueduct (water production and treatment)
- Blue Plains Regional Wastewater Treatment Plant (wastewater treatment)
- District of Columbia Water and Sewer Authority (retail water distribution and wastewater collection in the District of Columbia)

- Washington Aqueduct
  - serving District of Columbia, Arlington, Falls Church
  - authority to set wholesale rates for water charged uniformly to all customers)
  - wholesale water rates exempt from challenge by regulators in each and every jurisdiction to which WASA provides service

- Blue Plains Regional Wastewater Treatment Plant
  - serving District of Columbia, Fairfax, Montgomery, Prince George's and Loudoun Counties
  - authority to set wholesale rates for wastewater treatment charged uniformly to all customers
  - wholesale wastewater treatment rates exempt from challenge by regulators in each and every jurisdiction to which WASA provides service

- "New" DC Water & Sewer Authority
  - providing retail service in the District of Columbia
  - authority to set retail rates for water and sewer service in the District
  - incorporate wholesale water and sewer rates from Aqueduct and Blue Plains as cost element of retail rates, with wholesale rates exempt from challenge by regulators
  - current WASA customer service function becomes part of retail entity

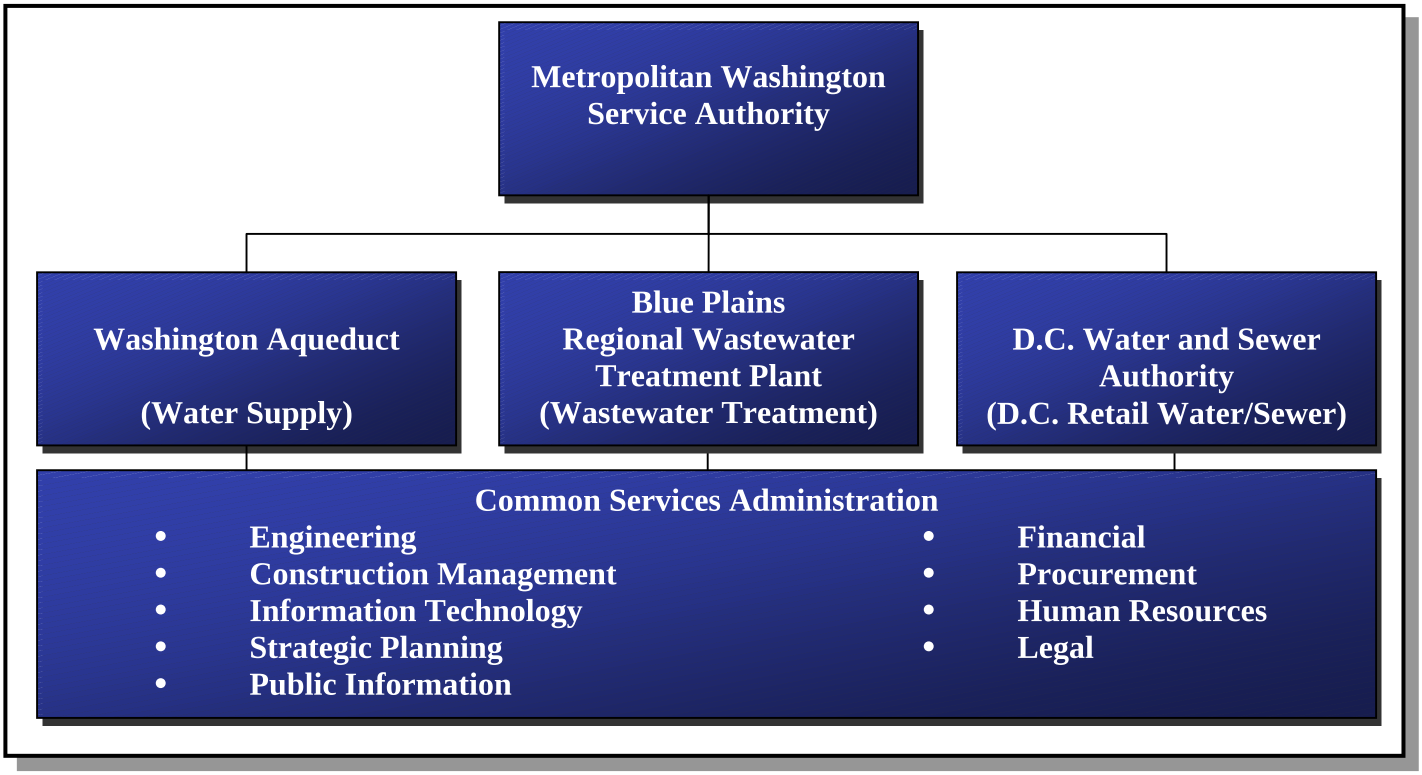
- Common "cost center" service departments to support all three operating entities:
  - Engineering
  - Construction management
  - Information technology
  - Strategic planning
  - Finance and budget
  - Procurement
  - Human resources
  - Legal
  - Public information

This approach is illustrated in the diagram on the following page.

Suburban customers such as Arlington County and the City of Falls Church could be considered wholesale customers, and their concerns could be addressed via negotiated wholesale contracts (similar to the approach used by Fairfax County with the Alexandria Sanitation Authority in which Fairfax is treated as a major wholesale customer and the Upper Occoquan Sewage Authority, in which Fairfax is a member of the UOSA board but does not have proportional representation on the UOSA board.). Another alternative would be to expand the current WASA

Board of Directors model by having directors who voted on Blue Plains issues only, Aqueduct issues only, DC issues only as well as voting on "WASA-wide" issues.

WASA STRUCTURED AS A HOLDING COMPANY



WASA as a Wholesaler Only

This variation would be much like the holding company concept, except that ownership and operation of the water distribution and wastewater collection systems in the District of Columbia would be transferred to the District government or to another authority or agency set up for this purpose. This approach would allow the wholesale agency to focus solely on water production and treatment and wastewater treatment, without the substantive (and important) distraction of the retail operations.

COMPOSITION, SELECTION AND RETENTION OF BOARD MEMBERS

One of the recurring themes heard during the study was a concern for maintaining the quality and level of involvement of members of the Board of Directors as WASA moves forward. From its inception until the present, WASA has been blessed with what is generally agreed to as board members of good quality and generally relevant backgrounds. There has also been substantial continuity in Board membership and in Board leadership. However, the political appointment process carries with it the inherent risk that future political leaders might either intentionally or unintentionally appoint less qualified or less involved board members to WASA's Board of Directors, and there is little that can be done to mitigate this situation.

Board selection must focus on WASA's needs and circumstances for the next 5 to 15 years. This may be derived in part from the strategic plan, information from an annual self-review by the Board of its own current performance, and from the input of external advisors. The ideal recruitment process will "cast a wide net" and select the most qualified candidates available.

Diversity of perspectives on the Board:

Valuable diversity on WASA's Board goes beyond age, gender, and ethnicity, for example:

- Geographic representation
- Representatives of stakeholder groups, e.g., commercial and retail customers, wholesale customers, local businesses, builders
- A mix of ages to include both wisdom and fresh ideas
- A variety of personality types, including both detail thinkers and strategic thinkers
- A range of professional skills and backgrounds sufficient to oversee the full range of WASA responsibilities, for example, engineering, finance, environmental science, public relations, governmental affairs
- A mix of experience inside and outside the water/sewer industry. This includes "real outsiders" who may be in a better position than others to ask basic questions and bring outsider perspectives to Board discussions
- Ability to function as part of a team

To some extent, a minimum amount of diversity is built into WASA's Board by virtue of the nomination and appointment process. Further valuable diversity could be effected by having WASA's Board of Directors create a set of guidelines for nominating officials to assure a mix of necessary and desirable skills among the directors from the various jurisdictions represented on the Board, as well as a representation of public and private sector individuals.

Threshold Guidelines for Board membership:

Appropriate minimum requirements include:

- Demonstrated high ethical standards, integrity and character
- Interested and engaged
- Willing and able to commit the necessary time

- Without personal or professional conflicts of interest
- Independent thinking
- Sound business judgment
- Relevant knowledge and experience
- Intelligence and wisdom
- Interpersonal skills
- Financial literacy including understanding of financial reports

The ability to devote necessary amounts of time can be a deterrent to service on WASA's board, especially for board members who are employed in the private sector. Reasonable amounts of compensation for board members employed in the private sector could be one way to induce service on WASA's board. Another incentive might be the expectation of attendance at and participation in education and training conferences and seminars offered by the appropriate industry groups:

- American Water Works Association
- Water Environment Federation
- American Public Works Association
- Association of Metropolitan Water Agencies
- Association of Metropolitan Sewer Agencies

In addition, entities such as USEPA, the National League of Cities, the National Association of Counties and others periodically offer useful training programs.

Superior individual qualifications for board membership:

Desirable additional qualities of Board members include:

- Sense of urgency and willingness to follow-through
- Diplomacy and statesmanship
- Collegiality and "fit" with organizational culture
- Extensive knowledge of accounting and finance
- History of achievement and commitment
- Leadership skills, abilities to motivate and encourage
- Ability to contribute to strategic insight and direction
- Ability to be a resource and mentor to management
- Knowledge of governance, best practices
- Experienced with crises
- Community spirited
- Having a passion to serve

To attract good Board members, membership on the WASA Board must also be attractive to candidates. These days, all candidates expect to be protected from personal financial risk resulting from serving on a board (i.e., Directors and Officers Liability Insurance). Financial pay for Board service is not necessarily a determining requirement, but can be an incentive. Other attractions are:

- Respect for WASA accomplishments
- Professional challenge
- Mental stimulation
- Prestige
- Opportunity to contribute ideas
- Opportunity to make meaningful decisions
- Exposure to best practices and innovation
- Collegial relationships
- Respect and feeling valued
- Giving community service
- Community involvement
- Continuous learning

POSSIBLE CONTROL OR ACQUISITION OF THE WASHINGTON AQUEDUCT

WASA purchases its potable water from the Washington Aqueduct, owned and operated by the US Army Corps of Engineers. The assignment of responsibility for this vital public mission to the US Army goes back to the days when the federal government ran the District of Columbia on a day-to-day basis—a situation which changed with the advent of home rule for the District in the 1970s. The Washington Aqueduct is the only entity of this sort operated by the Army Corps; nowhere else does the US Army serve as the source for potable water for a major U.S. city and its adjacent suburbs.

One of the principal suggestions made repeatedly during the course of this study is WASA's desire and need to integrate the production and treatment of water with its distribution. There is a belief that "vertical integration" of water supply, treatment and distribution could minimize the potential for poor communication that exacerbated WASA's lead service line situation in the recent past. There is concern that water production and treatment is not a core mission for the US Army Corps of Engineers, and that (given the mission and budget priorities currently facing the US Army) resources could be better invested in the many mission critical challenges facing the nation. Another source of concern is the inability of the Aqueduct to issue long-term debt for capital improvements. As a federal agency, the Aqueduct is dependent on Congressional appropriation for its capital funds. While a jerry-rigged "pay as you go" financing scheme has allowed the Aqueduct to make capital improvements via the payment "up front" of capital funds from its customers (WASA, Arlington County and the City of Falls Church), this financing mechanism is not optimum, and requires the Aqueduct's municipal customers to provide funding on a different basis than is typically used by state and local governments.

Acquisition of the Washington Aqueduct by WASA could take a variety of forms involving ownership or control of the Aqueduct:

- Outright transfer or purchase
- Partnership arrangements
- Long-term lease

Benefits and Costs of an Acquisition

The principal benefit of acquiring or controlling the Aqueduct would be assurance that WASA, Arlington County and Falls Church would have an adequate water supply now and in the future. The possibility of transforming the Aqueduct into a water supplier on a more regional scale is also a potential benefit. WASA has done a credible job of upgrading the performance of Blue Plains, but still has major challenges in upgrading the operations of its water distribution and sewer collection systems. There are also substantive negative factors that could impact WASA's desire to acquire or lease the Aqueduct; these negative factors are related to the form of acquisition (e.g., ownership vs. lease), are tactical in nature rather than strategic and do not provide insurmountable barriers to acquisition.

Integration Challenges and Concerns

When transfer of ownership of the Aqueduct was discussed in the past, it created uncertainty and concern for the current workforce of the Aqueduct. If WASA were to acquire ownership or control of the Aqueduct, considerable up front effort would have to be devoted to human resource issues such as compensation and benefits of the Aqueduct workforce vis-à-vis WASA's workforce, the possible gradual transition from Army Corps operation to WASA operation, the possibility of contracting with the Army Corps to initially operate the Aqueduct, coordination of operating procedures and protocols, etc.

If WASA were to decide to pursue the acquisition of the Aqueduct, it would require a multi-year plan and program to implement such a decision. At a minimum, the Army has indicated that it would require a detailed study of the benefits of such a transfer prior to its agreement to support such an action. A preceding section of this report (Section B.7) addresses this topic in some detail.

C.6 – Expanded Use of Inter-Municipal Agreements

One of the governance alternatives identified during the course of the study received some considerable attention: the use of inter-municipal agreements (similar to the Blue Plains Inter-Municipal Agreement of 1985, governing the allocation of capacity at Blue Plains) to effect improvements to or expansion of WASA's operations.

DESCRIPTION OF THE MODEL

The principal topic for which the suggested use of an inter-municipal agreement was posed is the acquisition of the Washington Aqueduct. The challenge of providing acceptable levels of influence and control to Arlington County and Falls Church might be addressed via an IMA similar to the IMA governing the allocation of capacity and some operational issues at Blue Plains.

If WASA were to acquire ownership or control of the Aqueduct, a detailed agreement could be developed that would satisfy Arlington County and Falls Church that their interests would be protected by such an agreement, and they could continue to be major customers of the Aqueduct without having a seat on WASA's Board of Directors.

BENEFITS / LIMITATIONS OF THE MODEL

The most important benefit of this model is that it would appear to solve the problem of satisfying the real or perceived needs of Arlington County and the City of Falls Church without upsetting the balance of membership on WASA's Board of Directors. This approach would also eliminate the need to amend WASA's enabling legislation to add new members to the Board, and would avoid the political pain that would ensue from proposing to change the balance of membership on the WASA Board of Directors.

The limitation of this model is that it could proliferate additional "parallel" governance structures outside the purview and full control of WASA's Board of Directors, similar to the various Blue Plains committees created by the 1985 Blue Plains IMA – an approach which was identified as an undesirable situation by individuals interviewed for this study.

COMPELLING ARGUMENTS FOR / AGAINST THIS APPROACH

WASA clearly has the legal authority to enter into contracts, purchases, leases and other forms of commerce to enable WASA to fulfill its mission. The challenge of the use of inter-municipal agreements for circumstances such as those faced by WASA is that at some point this practical form of a contract becomes in substance an interstate compact and requires the approval and involvement of the Congress, as well as that of the state governments.

C.7 – Interstate Compact Model

The fourth of the groups of alternative governance models identified during the study is the use of an interstate compact – an arrangement constituting a contractual arrangement between two or more sovereign states. An interstate compact is often used when a service or problem involves multiple states. A local example of an interstate compact is WMATA – the Washington Metropolitan Area Transit Authority, created by an agreement between the District of Columbia, the State of Maryland and the Commonwealth of Virginia to provide an integrated solution to public transit needs in and around the nation's capital.

DESCRIPTION OF THE MODEL

While local governments (and sometimes states) create local cooperative agreements on a fairly routine basis, when these arrangements are substantive or cover ongoing (as opposed to one-time or intermittent) activities, an interstate compact is often devised that involves the local (state governments) and the federal government.

BENEFITS OF THIS MODEL

A formal interstate compact creates a legal entity (WMATA, the Delaware River Basin Commission, etc.) similar to a corporation that can contract for goods and services, can be empowered to serve as a regulator, and can generally issue debt. This is in contrast to the use of an inter-municipal agreement, which does not create a legal entity.

As in the case of WMATA, the entity created by an interstate compact can be an operating agency as well as a regulatory agency. In the case of the metropolitan Washington area, any regional entity (as opposed to an entity which is the creature of a specific state or government) is bound to rise to the level of an interstate compact by virtue of the fact that the entity will serve two states plus the District of Columbia. While WASA does provide service across state lines, and was created by parallel acts of Congress and the District of Columbia, WASA is a creature of the District of Columbia, and is governed by the laws of the District of Columbia.

If WASA were to pursue a change in governance to become an entity subject to an interstate compact, it would sever its legal ties to the District of Columbia and become an independent regional agency. Of course, the governments of Maryland and Virginia would exert some influence and control over WASA to the extent provided for in the interstate compact. Public accountability would be accomplished by the process of nominating and appointing members to the WASA Board of Directors, powers which would most likely be divided among the governors of Maryland and Virginia and the mayor of the District of Columbia.

COMPELLNG ARGUMENTS FOR / AGAINST THIS APPROACH

If WASA's Board of Directors were to pursue this form of governance, major changes to WASA's enabling legislation would be required. Under WASA's present governance structure, political control and accountability is held by the participating jurisdictions; if an interstate compact were developed, state officials in Annapolis and Richmond would most likely acquire some degree of control and influence over WASA; this is particularly the case Virginia, where all powers not specifically given to the local governments (i.e., counties or cities) are retained by the commonwealth. This arrangement would not likely be enthusiastically embraced by the local jurisdictions served by WASA.

Another factor to be considered is that the creation of an interstate compact would require congressional action, and Congress might add, remove or modify features and characteristics of legislation introduced on behalf of WASA. Creation of an interstate compact could also require several years of effort; unless Congress is convinced that such a compact is a pressing issue, it might not receive timely consideration by Congress.

C.8 – Other Governance-Related Topics for WASA

During the course of this study, numerous constructive suggestions were made by many individuals, including members of the Board of Directors, WASA's senior management and the various WASA stakeholders. The project team also made independent observations related to areas in which there were opportunities for improvement in WASA's governance. The project organized the suggestions by topic or theme, and narrowed the suggestions to those that focused on governance. There was a plethora of suggestions that related more to operational issues than to governance, and (in an effort to narrow the focus of the study and this report) the operational issues were largely excluded from substantive consideration. Those operational suggestions and observations could be the subject of a separate study.

In this section of our report we present those suggestions that were not readily included in other major groupings.

SUCCESSION PLANNING

WASA's Board of Directors is responsible for ensuring that the organization is properly staffed with the appropriate number and mix of management talents. WASA has been fortunate (and wise) to date in its choice of its senior management team. Several key personnel have been with WASA since the Authority's establishment. The five principal management personnel who oversee WASA day-to-day include the General Manager, the Chief Engineer, the Chief Financial Officer, the Assistant General Manager for Administration and the General Counsel. With the exception of the General Manager, the entire senior management team has experienced turnover within the past few years. One of the obvious gaps that the project team observed (and which was commented upon in the course of interviews) during this study was the lack of a formal succession plan to fill key management positions.

If the current General Manager were to leave the organization or somehow become unable to perform his job duties there is no succession plan in-place to ensure the continued orderly leadership of the organization. We believe this represents a significant governance gap that the Board of Directors should address.

In the business community, all major corporations have formal succession plans that are coupled with a management development plan. This is an expectation of shareholders who expect that the organization will continue to properly perform even if a key executive leaves the company or becomes incapacitated. It is fairly certain that a company's stock price would crater if shareholders learned there was no formal succession plan ready to be implemented or that the company was not grooming its next cadre of leaders. Several of WASA's Board of Directors have indicated their preference for a corporate model of governance, with a strong CEO and a Board that focuses on policy level items rather than day-to-day operational issues.

WASA's stakeholders should expect no less from the WASA Board of Directors than they would expect of a corporate Board of Directors. More than the direct economic impact of a private sector corporation, WASA's mission directly affects public health and safety. This responsibility is directly tied to WASA remaining a smooth running organization even during the loss of senior leadership, especially the General Manager.

WASA's Board of Directors should develop a formal succession plan focused initially on the General Manager's position, and should then expand the succession plan to include all key senior positions. We recognize that Boards sometimes determine that there is no candidate currently employed within the organization immediately capable of serving as the General Manager or in another key capacity. If WASA's Board reaches such a conclusion, it should start a search process to recruit such individuals. The WASA Board may wish to establish a Succession Planning Committee.

EXECUTIVE DEVELOPMENT

Hand-in-hand with succession planning is the need to develop future leaders within the organization. Our review indicates that WASA is "thin at the top," and is not staffed with the number and depth of senior managers found at comparable utilities (even smaller utilities). Part of this situation may be derived from WASA's desire to avoid both the substance and the perception of being top-heavy with administrators and bureaucrats, and a desire to hold down "overhead" costs. Some of the situation may be due to the very strong sense of personal accountability that the study team found existing in the WASA's senior management.

This lack of "bench strength" can be addressed through a formal executive development process. Through this process, key future leaders are identified and they are given new experiences and training necessary to prepare them for increased future responsibilities.

We did not identify a formal in-depth executive development process at WASA, although the organization invests significantly in employee training. The type of executive development program we suggest should be narrowly focused and should be established in conjunction with routine employee training programs.

WASA should conduct an executive talent needs assessment, and then implement an executive development process which is focused on addressing the gaps and needs of key positions and of individuals currently (or potentially) holding these key positions. This program should not be open to everyone and does not replace the current training efforts. Instead, this would be an "invitation only" process which is focused on preparing the "best of the best" at WASA for future leadership positions. WASA's enabling legislation appears broad enough to allow the Board to establish such programs.

D. RECOMMENDATIONS

This chapter sets forth our governance recommendations to WASA's Board of Directors. The subject of governance is inherently qualitative in nature; while some quantitative measures may be employed to assess various aspects of governance, opinion on the subject is ultimately reduced to beliefs tempered with experience. Any reader of this report searching for recommendations for radical or revolutionary change at WASA will be disappointed. In the final analysis, we concluded that most governance functions at WASA are working well or are improving steadily, and that evolutionary not revolutionary improvements are needed.

D.1 – Summary of Findings and Conclusions

WASA's Board of Directors includes a wide range of talent and experience, and represents a broad range of interests and priorities. The same observation holds for WASA's management and its stakeholders. Likewise, the project team involved in this study included strong functional skills in management, finance, organization, environmental health and safety and public administration, combined with substantive experience as regulators, advocates, consultants and utility operators. Given the broad range of skills and experience from all involved in the study, there was a ready consensus with regard to findings and conclusions:

- The governance structures in place for WASA have functioned well, given the lack of precedent faced by WASA's Board of Directors. These governance structures have enabled WASA's Board to accomplish substantive and acknowledged operational improvements and to dramatically improve WASA's financial condition.

- WASA has benefited from a high degree of stability and relatively low turnover on its Board of Directors, and has recruited and retained capable senior managers to oversee the day-to-day operations of the Authority. The current chairman of the Board has been in that position for more than five years, and several members of the Board have served since (or almost since) the Authority was created. The synergy of "good" board members and "good" management has allowed WASA to operate in an increasingly efficient and business-like manner.

- The Board of Directors has acted cohesively, with general unanimity on major issues, reflecting willingness to compromise on tactics while focusing on long-term goals and understanding the "art of the practical" in terms of the inevitable tensions between and among the jurisdictions served by WASA.

- There is an inherent vulnerability in the composition of the Board of Directors, given the political nature of the nominating and appointing authorities, and the "best" response to this vulnerability is to develop suggestions for nominating and appointing authorities as to the mix of talents and experience needed on the Board. The Board should also develop incentives and public information efforts to present service on WASA's Board as a desirable public service contribution by talented individuals.

- WASA should initiate the preliminary studies and discussions to acquire control over its source of treated water, realizing that this may well be a multiyear effort, and must be predicated on WASA's continuous efforts to improve both the substance and perception of its capabilities to manage its present responsibilities. The most practical vehicle for acquiring control over its source of potable water is a long-term lease rather than outright ownership.

- WASA does not presently possess the staff resources to operate the Washington Aqueduct, and will most likely need to contract to operate the Aqueduct for some initial time if WASA acquires control of the Aqueduct .

- As part of its efforts to acquire control over the production of treated water, the WASA Board of Directors should discuss the multiplicity of issues and challenges related to this transaction, including methods to assure continued excellent quality of service to those jurisdictions served by the Aqueduct who are not currently served by WASA.

- WASA should encourage the transfer (return) of stormwater programs and infrastructure to the District of Columbia government, the holder of the relevant permit. This will allow the District of Columbia to have the ability to ensure compliance with stormwater requirements by DC agencies more readily than can WASA, based on WASA's existing legislation.

- There is a specific need for both succession planning and executive development programs at WASA.

- Based on sound corporate governance and principles embodies in the Sarbanes-Oxley Act, WASA's Board of Directors needs to establish or modify existing organizational structures to provide for direct reporting to the Board by WASA's internal audit function.

- WASA's rates and charges for the provison of sercie are currently developed on a basis consistent with industry practice, however major anaticpated capital projects for both Blue Plains and the District's wastewater collection system make the clear presentation of the development of rates and charges an extremely important near-term activity. The Board should engage in a dialog with stakeholders as to the "best" ratemaking process for retail rates in the District of Columbia, with the explicit stipulation that allocation of "whoesale" costs allocated or charged to the various jurisdictions by WASA shall not be subject to any additional review or regulation.

While not specifically a finding or conclusion related to this study, the periodic review of governance is a desirable effort by every Board of Directors in both public and private sectors, and should occur on a regular basis.

D.2 – Recommendations

Based on the findings and conclusions presented above, our recommendations to WASA's Board of Directors are straightforward:

- Develop advisory guidelines for nominating and appointing authorities to facilitate the inclusion of the appropriate mix of skills and backgrounds for future Board members.

- Study and develop legislative language that would permit compensation for non-government employees who serve of WASA's Board of Directors.

- Seek to clarify legislation concerning the responsibility to prepare revenue estimates and the reporting relationship of WASA's CFO.

- Pursue acquiring control of the Washington Aqueduct, but probably as long-term leasehold, not a purchase; be flexible in adopting human resource policies that will encourage retention of the Aqueduct's current operational staff, and consider contracting to operate the Aqueduct under WASA's direction for some time into the future.

- Investigate the option of WASA functioning as a holding company, including examination of the structure and form that such a holding company might take. While a consensus on such structure and form was not within the scope of this study, there are a number of options that WASA could adopt, including the use of a single board of directors, multiple boards of directors, advisory boards or some combination of boards and committees. This becomes more important should WASA acquire control over its source of drinking water.

- Encourage the transfer of stormwater programs and infrastructure to the District of Columbia government, the holder of the relevant permit.

- Develop and implement a succession plan and expand efforts related to executive development programs for WASA's senior staff.

- Adopt relevant aspects of Sarbanes-Oxley, including reporting relationship of the current Internal Audit function.

- Undertake a review of governance at least every ten years and an operational review at least every five years.

D.3 – Next Steps

There are several immediate actions that should be taken by the Board of Directors:

- Appoint a Water Supply Committee of the Board, and charge this committee with developing a plan to acquire control of WASA's water production, including identification of the stakeholders, the potential issues involved (legal, political, environmental, financial, operational, etc.), the legal and political steps involved in such an undertaking, a time-phased workplan including a critical path, estimates of the costs involved and establishment of a process to enable monitoring of the process by the full Committee and the full Board. To the extent that WASA's senior staff could handle some of the work related to this project, the workload of the Board and its members related to this subject would be lightened.

- Appoint a Membership Committee to the Board, with responsibility and authority to develop advisory guidelines to be provided to nominating and appointing authorities, to facilitate the identification of needed skill sets for Board vacancies as they may occur. Alternatively, a few Board members, working with WASA's Human Resources / Labor Relations Committee might be able to handle this work.

- Direct WASA's General Counsel, working with the Governance Committee of the Board, the General Manager and any required outside experts to investigate enabling WASA to re-structure itself as a holding company.

- Direct WASA's General Manager to develop and deliver by a date certain: (1) a Succession Plan for all key personnel; and (2) an enhanced Executive Development Plan that identifies the gaps or weaknesses in the "bench strength" of WASA's key management functions and responsibilities, including numbers and qualifications for additional skills or resources needed.