

**MACQUARIE INFRASTRUCTURE AND REAL ASSETS**

ALLENTOWN, PA WATER AND SEWER CONCESSION

REQUEST FOR QUALIFICATIONS RESPONSE

*AUGUST 17, 2012*



MACQUARIE

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August 17, 2012

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RE: Response of Request for Qualifications (“RFQ”)

Dear Mr. Shearer and Mr. Brockman,

Macquarie Infrastructure and Real Assets Inc. (“MIRA”) is pleased to submit this qualification submission and requested responses to Public Financial Management, Inc. (“PFM”), advisors to the City of Allentown, PA (the “City”), for the potential long-term concession lease of the City’s water and sewer systems (the “City Systems”).

MIRA would be delighted to have the opportunity to partner with the City under a long-term concession arrangement (the “Concession”), and to provide financing, management, and stewardship services in accordance with the Concession (the “Project”).

Our RFQ response provides an overview of MIRA and its capabilities. MIRA has experience across multiple types of assets and serving in various roles as a sponsor and developer, asset manager and operator of utility assets. MIRA is the ideal partner and Concessionaire for the City for the Project and is eminently capable of funding all payments due to the City under the proposed concession structure.

Due to its financial integrity and breadth of experience, MIRA is highly confident in its ability to meet the City’s objective of receiving a highly competitive, fully committed, binding proposal for the Concession with a substantial upfront payment under the City’s stipulated time-frame.

If you have questions in relation to this submission, please do not hesitate to contact one of us directly.

Best Regards,

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# 1. EXECUTIVE SUMMARY

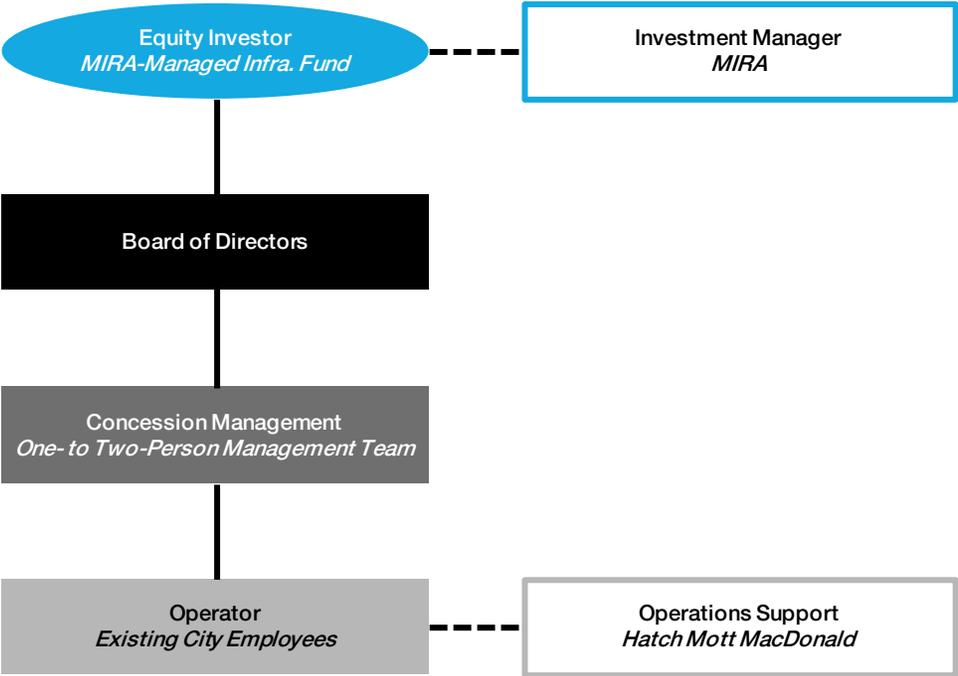
## 1.1 Overview

MIRA is pleased to provide this submission to the City in response to its Request for Qualifications. MIRA believes that its financial capacity and in-depth expertise working with utility assets makes it the ideal partner for the City with respect to the Concession. MIRA greatly looks forward to the opportunity to work with the City and PFM on this project.

## 1.2 Proposer Information

The value that the City places upon the dedicated and experienced staff in its Water Resources Department and competence of that staff, as evidenced by the quality of the City’s current water and wastewater operations, fits perfectly into the management structure that MIRA uses for substantially all of its infrastructure businesses around the globe. As explained further herein, MIRA will arrange financing of the Concession and then oversee the investment through a board of directors. The board of directors will include MIRA representatives with substantial and relevant experience operating or overseeing utility assets like the City Systems and one resident of the City with relevant board experience and who is a recognized leader in the community. The City Systems will be operated by the existing staff supplemented by senior executives dedicated to the City Systems, all overseen by the board of directors. Hatch Mott MacDonald (“HMM”) will provide technical advice.

MIRA’s envisioned structure of the Concession is as follows.



### 1.2.1 Equity Investor

MIRA manages more than \$38 billion in equity in infrastructure assets globally. The value of MIRA-managed infrastructure represents more than three times the size of the nearest competitor infrastructure

investor. With approximately 350 experienced professionals in 18 countries, MIRA is recognized worldwide for its dominant position within infrastructure investing. MIRA-managed funds own 100 portfolio businesses worldwide, including 16 utility businesses.<sup>1</sup> The water utility businesses in MIRA-managed funds include:

- **Thames Water.** Thames Water is the UK's largest water and wastewater services company supplying 2,600 million liters (687 million gallons) of tap water daily to 9 million customers across London and the Thames Valley.
- **Aquarion.** Aquarion provides potable water service to over 200,000 metered customer accounts through subsidiaries in Connecticut, Massachusetts, and New Hampshire. Aquarion is the largest investor-owned water utility in New England and among the ten largest in the U.S.



Other regulated utility businesses that MIRA-managed funds own in the U.S. include:

- **Puget Energy.** Puget Energy is Washington State's largest electric and gas utility, with a 6,000-square-mile service area stretching across 11 Washington counties, primarily in the Puget Sound region. Puget Energy serves 1.1 million electric customers and more than 750,000 natural gas customers.
- **Duquesne Light.** Duquesne Light Company provides electric distribution and transmission services to approximately 587,000 customers in the greater Pittsburgh metropolitan area and southwestern Pennsylvania.
- **HAWAII GAS.** HAWAII GAS is Hawaii's only government franchised full-service gas company, manufacturing synthetic natural gas for most of its utility customers on Oahu, distributing propane to utility and non-utility customers throughout the state's six primary islands, and producing renewable gas products from agricultural feedstocks. HAWAII GAS serves approximately 35,200 utility and 33,300 non-utility customers.



Each of MIRA's U.S. utilities is managed using the same structure proposed for the City Systems. Specifically, each has a board of directors overseeing competent management teams located in the communities being served. Further, the Puget Energy and Duquesne Light boards of directors include business leaders residing in the utilities' respective service areas. MIRA believes that this approach:

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<sup>1</sup> As of March 31, 2012

- Keeps decision-making close to customers and communities served
- Provides management broad authority to develop and execute business plans
- Brings structure to the shareholder/owner/management relationship
- Clarifies objectives and how they will be achieved
- Aligns interests of shareholders and management
- Provides a clear basis for management compensation

### **1.2.2 Concession Management**

For the purpose of administering the concession, MIRA proposes that a management team of one or two individuals with experience in the operation and maintenance of water and/or wastewater facilities at an executive-level would be positioned to provide oversight, direction and, supervision to the current operations and maintenance staff. These personnel are likely to have the following characteristics:

- Experienced in the management of an urban water and wastewater system of a magnitude similar to that of the City's
- Licensed to operate in Pennsylvania
- Lives in the City or within reasonable commuting distance
- Open, transparent leadership style
- Track record of achieving high levels of customer service, employee health and safety, environmental performance, and efficiency in past management roles

### **1.2.3 Operator**

MIRA recognizes the value that the experienced staff of the City's Water Resources Department brings to the Concession. The City's staff has proved itself to be highly competent in the operation and maintenance of the water and wastewater systems. The City has commended its current staff and their competence has been recognized through frequent awards commemorating excellent performance. In order to continue this track record in the years ahead, MIRA proposes, as explained in Section 1.2, to utilize the existing management and staff of the City's Water Resources Department as the principal source of technical capability for the City Systems.

### **1.2.4 Operations Support**

Additional technical support will be provided by Hatch Mott MacDonald ("HMM"). HMM is a leading North American consulting engineering firm with offices located nearby in Philadelphia. HMM has over 300 staff located within 75 miles of the City, and over 100 highly experienced water and wastewater professionals who can respond quickly and efficiently to any situation that may arise and who will be available to work closely with Allentown's management and operations and maintenance staff.

HMM's core business is water and wastewater engineering services. However, the staff at HMM include not only licensed engineers, but also highly trained individuals with the highest grade water and wastewater operating licenses. HMM's resources includes staff who have held former positions such as:

- Water and Sewer Public Works Director
- General Superintendents
- Chief Engineer
- Vice President of Operations of public and private utilities.

### **1.2.5 Customer Service**

MIRA strives for Customer Service excellence in the utilities that it manages, and our utility portfolio companies have the awards to prove our commitment. Our Aquarion business has achieved the lowest rate of customer complaints per 1,000 customers served of any Connecticut utility for the past five years. We regard customer service as a critical function in the operation and maintenance of any utility system. We rigorously measure customer service performance through metrics consistently applied, such as call center performance, billing accuracy, and customer satisfaction. It is proposed that the project team will work to ensure the needs of the public continue to be satisfied and the City System's performance is improved upon as technological advances allow increased levels of service.

### **1.2.6 Risk Management, Safety, and Security**

Enterprise-wide risk management is a central feature of MIRA's culture and is extended to all infrastructure business owned by MIRA-managed funds. Each business manages risk through a risk matrix that identifies each risk, assesses its probability and consequences, and documents mitigation plans and responsibilities.

Employee health and safety is a key element of risk management at MIRA and each of MIRA's portfolio infrastructure businesses. Each MIRA business has a documented safety program that identifies workplace hazards, sets best practices, trains employees to mitigate hazards, promotes employee engagement, tracks leading and lagging indicators, and requires external reviews of major incidents.

HMM is experienced and capable of assessing the risks to water, wastewater, and other public infrastructure, as well as in planning for and supporting emergency response to a range of threats. HMM's staff are familiar with and have employed the Risk Assessment Methodology for Water and the Vulnerability Self-Assessment Tool Methodology for Water and Wastewater systems. HMM has a well developed safety culture within the firm that encompasses both the firm's internal operations as well as our project-related activities. The firm has a formal safety program, which includes training, audits, communication, hazard assessment, and recordkeeping. The program is supported by three full-time safety coordinators, as well as a series of safety committees.

### **1.2.7 Capital Improvements**

HMM has prepared numerous long term planning reports for both water and wastewater facilities. These have included capital improvement plans to address anticipated regulatory changes and service area growth. These planning documents have generally included priority listings and cost estimates to allow the plan to be readily incorporated into capital funding plans, grant and loan applications, and budgets.

MIRA is committed to investing in capital improvements at each of its utility portfolio companies and has either sustained or increased capital expenditure levels at its utility portfolio companies during its period of ownership.

## **1.3 Financial Capability**

### **1.3.1 Financial Capacity to Make Upfront Payment, Maintain the Concession Assets**

MIRA's financial strength and stable capital structure support its ability to make a substantial upfront payment to the City and ensure its ability to maintain the City Systems in accordance with the City's expectations.

In the U.S., MIRA currently manages two privately held infrastructure funds, Macquarie Infrastructure Partners ("MIP I") and Macquarie Infrastructure Partners II ("MIP II"), and one public infrastructure fund, Macquarie Infrastructure Company ("MIC"). MIP I and MIP II operate and invest in a diversified group of infrastructure businesses located in the United States and Canada and have \$5.6 billion of combined

equity capital commitments. MIC owns, operates, and invests in a diversified group of infrastructure businesses providing basic, everyday services to customers in the United States. MIC is traded on the New York Stock Exchange under the ticker "MIC" and currently has an equity market capitalization and enterprise value of \$2.0 billion, respectively.<sup>2</sup>

### **1.3.2 Ability to Raise Financing**

MIRA is capable of raising debt and equity in almost any capital market environment. MIRA has access to not only its own internal funds team from which to access equity capital, but also strong relationships with many equity investors in infrastructure projects of this nature. In particular, MIP II has approximately \$160 million of committed but un-invested equity capital, a portion of which may be used to fund the City's concession payment, depending on the timing of the City's concession process. MIRA's U.S. utility portfolio companies have raised over \$12 billion in debt financing since June 2006, a time period that saw some extremely difficult financing conditions.

## **1.4 Confidentiality and Data Use Agreement**

MIRA is pleased to provide a mark-up of the Confidentiality and Data Room Usage Agreements as an attachment to this RFQ response. MIRA has endeavored to keep its proposed changes to the Confidentiality Agreement at a minimum.

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<sup>2</sup> As of August 16, 2012.

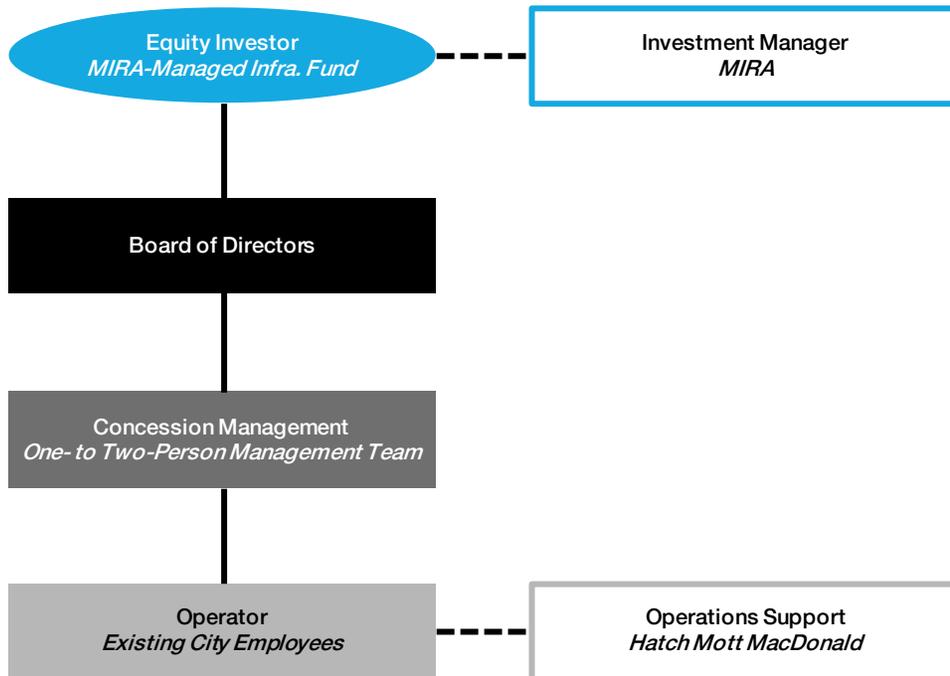
## 2. PROPOSER INFORMATION

### 2.1 Description of Prospective Proposer

The prospective proposer consists of the following members.

Role	Participant
Equity Investor	A MIRA-Managed Infrastructure Fund <i>(To Be Identified)</i>
Board of Directors	Andrew M. Chapman (Chair) <i>(see Section 2.2.1.2 for biography)</i> Alicia Moy <i>(see Section 2.2.1.3 for biography)</i> Resident Direct <i>(To Be Identified)</i>
Concession Management	One- to Two-Person Management Team <i>(To Be Identified)</i>
Operator	The City's Water Resources Department
Operations Support	Hatch Mott MacDonald

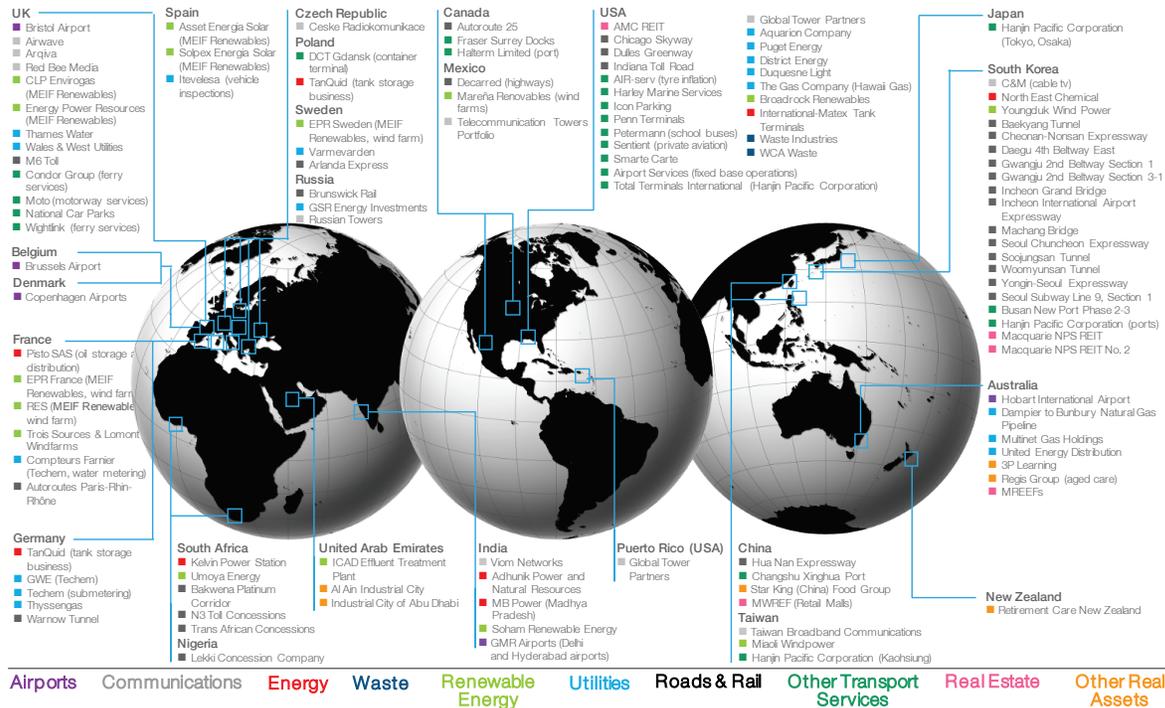
An organizational diagram of the envisioned structure of the prospective proposer can be seen below.



## 2.1.1 Equity Investor (A MIRA-Managed Infrastructure Fund)

### 2.1.1.1 MIRA Overview

MIRA manages more than \$38 billion in equity in infrastructure assets globally. The value of MIRA-managed infrastructure represents more than three times the size of the nearest competitor infrastructure investor. With approximately 350 experienced professionals in 18 countries, MIRA is recognized worldwide for its dominant position within infrastructure investing. MIRA-managed funds own around 100 portfolio businesses worldwide.<sup>3</sup>



MIRA is a global market leader in investing in infrastructure and infrastructure-like businesses across the world. MIRA has extensive existing infrastructure holdings of water, wastewater, and energy utilities, roads, rail, airports, parking, marine terminals, and other essential assets. Investments are actively managed by a global team of asset professionals with deep expertise in managing businesses in their respective sectors.

<sup>3</sup> As of March 2012

Every day approximately 100 million people use essential services provided by MIRA-managed businesses. This includes over 200,000 passengers at MIRA-managed international airports and over 1 million vehicles per day on MIRA-managed roads. In addition, 20 million households are linked up to utilities owned or managed by MIRA, including over 5 million water and/or wastewater customers.

	<b>AIRPORTS</b> 89+ million passengers per annum		<b>WATER / WASTEWATER</b> 5+ million households
	<b>ROADS</b> 1.2+ million vehicles per day		<b>GAS</b> 22+ million households
	<b>RAIL</b> 82+ million passengers per annum		<b>COMMUNICATIONS</b> 130+ million people through television, telephone, and radio infrastructure
	<b>FERRIES</b> 6+ million passengers per Annum		<b>ELECTRICITY</b> 2.7+ million households
	<b>SEA PORTS</b> 3+ million standard container units handled per annum		<b>AGED CARE / RETIREMENT VILLAGES</b> 7,600+ beds and 1,100+ units
	<b>CAR PARKS</b> 215,000+ car spaces		<b>EMPLOYEES</b> 69,000+ across the portfolio businesses

As of March 31, 2012

MIRA is a wholly-owned subsidiary of Macquarie Group Limited (ASX:MQG), a global provider of banking, financial advisory, investment and fund management services. Founded in 1969, the Macquarie Group now employs more than 14,200 people across 70 locations in 28 countries, has \$339 billion under management, and has a market capitalization of approximately \$9 billion.<sup>4</sup> Macquarie Group Limited is rated A3/Stable by Moody's Investors Service, A-/Stable by Fitch Ratings, and BBB/Stable by Standard & Poor's. As a publicly traded company, Macquarie Group Limited is owned by a diverse range of institutional and retail investors.

### 2.1.1.2 Values

MIRA and Macquarie Group Limited share six values that guide how we do business and conduct ourselves on an every-day basis. The six values are:

- **Integrity.** Our success depends upon the maintenance of our reputation for honesty and integrity and our ability to fulfill our promises.
- **Client Commitment.** Central to the success of Macquarie is our commitment to our clients. They are the core of our business and our recognition of this drives us to serve them with unswerving dedication.
- **Strive for Profitability.** We seek to achieve consistently superior profitability by providing exceptional value to our clients and we take pride in our profit record.

<sup>4</sup> As of March 31, 2012

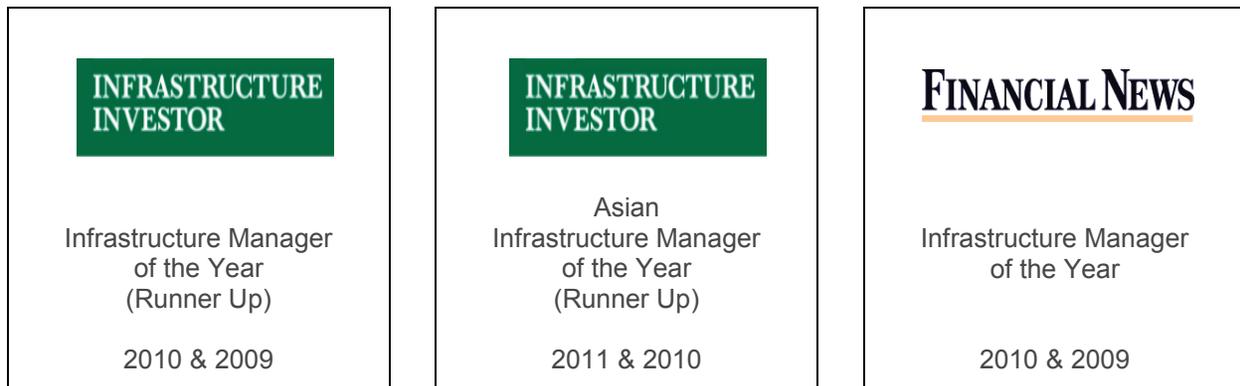
- **Fulfillment for Our People.** Our work environment allows all employees to reach their full potential, both personally and professionally.
- **Teamwork.** We must work together as a team to achieve exceptional outcomes.
- **Highest Standards.** Highest standards underpin all that we do. Superior returns are only achieved through the best work, which requires excellence, innovation, and creativity.

MIRA brings these values to bear in each of our portfolio investments, and we would look to do so in the case of the Project if we were to become the steward of the City Systems.

### 2.1.1.3 Recent Awards

MIRA has been recognized by its peers as a pioneer and thought-leader in the infrastructure sector. MIRA’s position as a leading investment manager to the sector has been supported by numerous industry accolades and awards.

 <p>Largest Infrastructure Direct-Investment Program</p> <p>2012, 2011 &amp; 2010</p>	 <p>Largest Infrastructure Asset Manager Globally</p> <p>2012, 2011 &amp; 2010</p>	 <p>Best Infrastructure Fund Manager</p> <p>2012</p>
 <p>Best Real Estate Fund Manager</p> <p>2012</p>	 <p>Asia Pacific Infrastructure Deal of the Year</p> <p>2011</p>	 <p>Most Admired Infrastructure Equity Financier</p> <p>2011</p>



### 2.1.2 Approach to Investment Management

MIRA promotes a decentralized approach to the management of its portfolio businesses, but oversees its investments using a consistent and disciplined framework. We refer to this approach as the “picture in a frame.”

In the “picture” is the business. The business consists of customers, systems and processes, employees, communities served, and capital specific to that business. Each business is led by the best management team available, living in the communities served, and on the ground, running the business, every day. We believe that leaders closest to customers, employees, and communities served are best positioned to make leadership decisions. Business leaders have broad authority to execute business plans (see below) and are compensated for doing so.

Around the business is the “frame,” or the MIRA investment management team. The “frame” comprises:

- **Governance.** Consists of the process necessary to oversee a business. The governance process is implemented through a formal board structure because North American management teams recognize the value of boards and because effective board process is well understood. Board process is documented through meeting agendas, timeframes for distribution of board materials, committees (e.g. audit, compensation, and business planning), committee charters, and annual meeting planners. Boards meet at least six times annually. Each business operates pursuant to board-approved delegated authorities and has internal and external audit processes.
- **Business Planning.** Each business has a five-year business plan that states operational and financial expectations and how such expectations will be achieved. Such plans serve to align management, board, and shareholders. Business plans are developed by management, deliberated by the board or appropriate board committee, and adopted by the full board. Plans address major strategic initiatives including growth objectives, capital programs, financing plans, and operating initiatives. Plans fully document who will do what and when, and plans state the expected financial and operational results.
- **Performance Reporting.** Each business reports monthly to a board committee on progress against objectives and management initiatives agreed in the business plan. The consistency of reporting over time minimizes ad hoc data requests.
- **Risk Management.** Each business maintains a risk matrix which lists:
  - 1) What can go wrong
  - 2) The rough probability and consequence of that occurring
  - 3) The mitigation plan
  - 4) The post-mitigation risk

5) The person on the management team who owns the mitigation

In business, the first casualty can be the plan. Rarely, but sometimes, MIRA get in the “picture.” Such interventions are time-bound and specific to a task to which we can add value. Examples have included IT system implementations, refinancings, and tax structuring.

MIRA believes that the “picture in a frame” approach:

- Keeps decision-making close to customers and communities served
- Provides management broad authority to develop and execute business plans
- Brings structure to the shareholder/owner/management relationship
- Clarifies objectives and how they will be achieved
- Aligns interests of shareholders and management
- Provides a clear basis for management compensation

### **2.1.3 Concession Management (To Be Identified)**

For the purpose of providing managerial support to the City’s current operating team, MIRA proposes that a management team of one or two individuals with experience in the operation and maintenance of water and/or wastewater facilities at an executive level would be positioned to provide oversight, direction and supervision to the current operations and maintenance staff. These personnel would have the following characteristics:

- Experienced in the management of an urban water and/or wastewater system of a magnitude similar to that of the City’s
- Licensed to operate in Pennsylvania
- Lives in the City or within reasonable commuting distance
- Open, transparent leadership style
- Track record of achieving high levels of customer service, employee health and safety, environmental performance, and efficiency in past management roles

### **2.1.4 Operator (The City’s Water Resources Department)**

MIRA proposes to utilize existing operations and maintenance staff of the City’s Water Resources Department as a principal source of technical capability. The City’s current staff has proved itself to be highly competent in the operation and maintenance of the water and wastewater systems. The City has commended its current staff, and their competence has been recognized through frequent awards commemorating excellent performance. MIRA recognizes the value that the City’s staff brings to the concession and proposes to take full advantage of this valued asset.

### **2.1.5 Operations Support (HMM)**

Additional technical support will be provided by HMM. Please refer to Section 2.6.2 for additional information on HMM.

## **2.2 Roles of Team Members and Key Personnel**

### **2.2.1 Equity Investor (A MIRA-Managed Infrastructure Fund)**

MIRA’s Project team is structured in the following manner.

## Senior Management Support

Chris Leslie

*Senior Managing Director, CEO of Macquarie Infrastructure Partners*

## Project Management

Andrew Chapman

*Senior Managing Director, Head of Utilities Group, Integrity Officer*

## Execution and Ongoing Investment Management Team

Alicia Moy

*Senior Vice President—Utilities Group*

Benjamin Morris  
*Senior Associate—Utilities Group*

Jay Kim  
*Analyst—Utilities Group*

### 2.2.1.1 Senior Management Support



#### **CHRIS LESLIE**

***Senior Managing Director, CEO of Macquarie Infrastructure Partners***

Macquarie Infrastructure and Real Assets

New York Office

Chris is a Senior Managing Director at MIRA in New York and a member of the North American Executive Committee. Additionally, Chris is the Chief Executive Officer of MIRA's flagship North American unlisted infrastructure funds, MIP I and MIP II, which together have \$5.6 billion committed to U.S. and Canadian infrastructure projects. Chris has more than 19 years of experience in infrastructure and has participated in numerous transactions in various jurisdictions. His direct experience includes the development and/or acquisition of gas pipelines, gas and electricity distribution systems, toll roads, airports, heliports, fixed base operations, water and wastewater systems, cell phone towers and power generation businesses.

Since moving to the U.S. in 1999, Chris has led a number of significant transactions in the infrastructure sector, including: MIP I's take-private of Duquesne Light, a regulated electric utility in Pennsylvania in 2007; MIP I's acquisition of Global Tower Partners, the largest private cell tower owner in the United States in 2007; and MIP I and MIP II's \$7 billion take-private of Puget Energy, the largest regulated gas and electric utility in Washington state in 2009. Prior to the establishment of Macquarie Infrastructure Partners I in 2006, Chris played an integral role in Macquarie Essential Assets Partnership's ("MEAP") creation of AltaLink to acquire the electricity transmission business of TransAlta Utilities in Alberta in 2003 and MEAP's acquisition and refinancing of the Michigan Electric Transmission Company in 2003.

Chris holds a Bachelor of Commerce with Honors from the University of Melbourne and is a member of the Institute of Chartered Accountants in Australia.

### 2.2.1.2 Project Management



**ANDREW CHAPMAN**

***Senior Managing Director, Head of Utilities Group, Integrity Officer***

Macquarie Infrastructure and Real Assets

New York Office

Andrew serves as the asset director for MIRA's U.S. utility investments and is a recognized leader in private investor investment management operation in water and wastewater businesses. Prior to his career at MIRA, Andrew served in several high-ranking positions with prominent regulated water/wastewater companies

Andrew joined MIRA in 2006 serving as a utility sector expert, drawing on his operational experience with specific expertise in utilities. Andrew serves on the board of directors of Puget Energy and is chairman of the board of directors of Duquesne Light and Aquarion. In addition, he also served as interim CEO of Duquesne Light in 2010.

Andrew has more than 27 years of experience managing and financing infrastructure investments in the United States. Prior to joining Macquarie, Andrew served as Vice President of Strategy and Regulation for American Water, which provides water and wastewater services in 23 states. In 2003, he served as president of the National Association of Water Companies. Additionally, Andrew served both as Chief Financial Officer and President of Elizabethtown Water Company, a NYSE-listed water utility, from 1989 until 2003. During Andrew's tenure at Elizabethtown Water Company, the company earned ISO-9001 and ISO-14001 quality certifications and increased earnings per share by 35%. Andrew led the sale of Elizabethtown to Thames Water in 2000 and later combined Elizabethtown Water Company with New Jersey American Water, forming a company serving a population of more than 2 million. From 1985-1989, Andrew directed all capital funding activities for the State of New Jersey and its numerous independent authorities.

Andrew is the former chairman of the board of New Jersey Future, a state-wide organization advocating open space preservation and redevelopment of New Jersey's cities and towns.

### 2.2.1.3 Execution and Ongoing Investment Management Team



**ALICIA MOY**

***Senior Vice President, Utilities Group***

Macquarie Infrastructure and Real Assets

New York Office

Alicia has over ten years experience working for the Macquarie Group in New York, including over seven years asset management experience in the utility and energy sectors. Alicia joined Macquarie in September 2001 after two years in investment banking in the financial sponsors group at Morgan Stanley.

In 2009, Alicia added to her responsibilities when she took over the asset management of Aquarion, the largest privately owned water utility in New England on behalf of MIP I. Alicia's utility regulatory experience includes involvement with the state regulatory approval for the acquisition of TGC by MIC in June 2006. She also managed several rate case proceedings for HAWAII GAS and Aquarion.

Alicia currently sits on the boards of HAWAII GAS and Aquarion. Alicia has a Masters in Finance degree from INSEAD and a Bachelor's of Business Administration degree specializing in Finance and Marketing from the University of Miami.

At Macquarie, she was involved in a number of project finance transactions. From 2002 to 2003, Alicia worked on cross border leasing transactions in excess of \$1 billion relating to infrastructure businesses in the electricity, rail and water sectors. In 2004, Alicia was involved in the establishment of investments for Macquarie Infrastructure Fund Adviser, LLC and responsible for the fundamental analysis of the infrastructure and utility sectors with a specialization in North America. She was also involved with the initial public offering of MIC in December 2004 where she ultimately became asset manager for MIC's district energy business, as well as the asset manager for HAWAII GAS when acquired by MIC in 2006.

### **2.2.2 Concession Management (To Be Identified)**

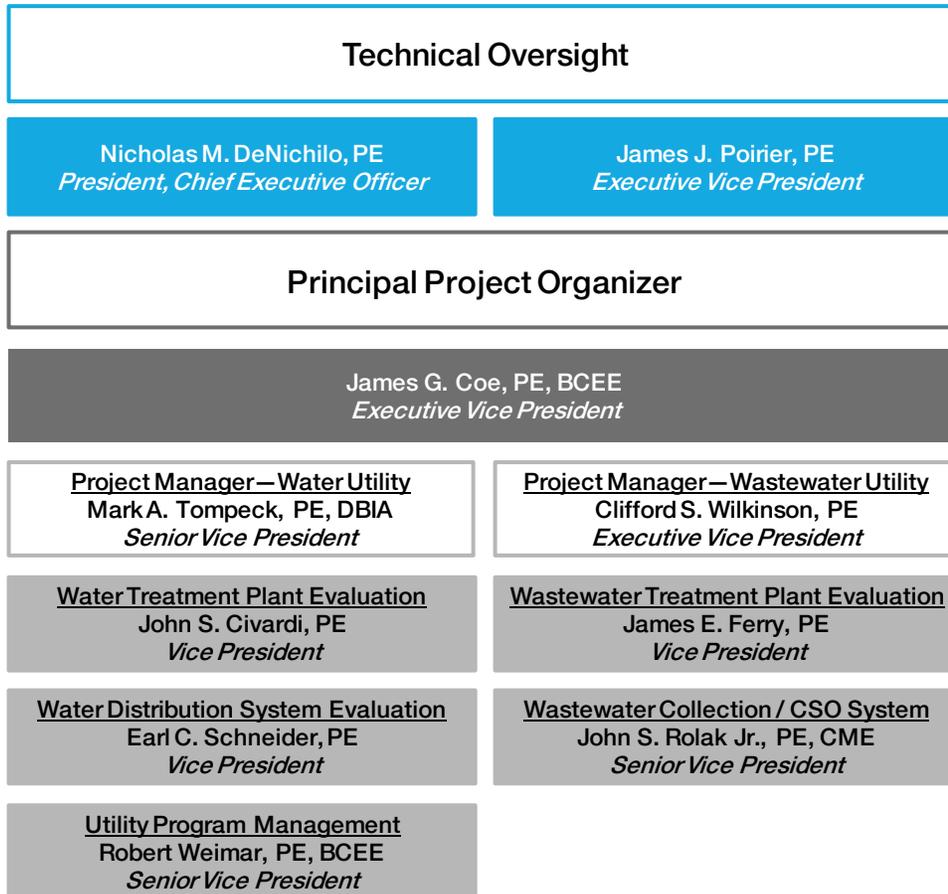
Please refer to *Section 2.1.2*.

### **2.2.3 Operator (The City's Water Resources Department)**

MIRA proposes to utilize existing operations and maintenance staff of the City's Water Resources Department as a principal source of technical capability.

## 2.2.4 Operations Support (HMM)

HMM's Project team is structured in the following manner.



### 2.2.4.1 Technical Oversight



**NICHOLAS M. DeNICHILLO**  
**President/ Chief Financial Officer**  
 Hatch Mott MacDonald  
 Millburn Office

Mr. DeNichilo was appointed President of HMM in 1998 and became a member of HMM's Board of Directors in 2003. Previously, he was Senior Vice President and Principal-in-Charge of the firm's Water Supply Management Group, in responsible charge of all projects undertaken by the group, including water facilities studies, planning, design, and construction engineering services. His extensive experience in the field of water supply and hydraulic engineering is supplemented by his involvement in the detailed planning, structural evaluation, design (new and rehabilitation), and construction engineering of sanitary sewer systems, flood control projects, and wastewater treatment facilities. Mr. DeNichilo's clients include municipalities, authorities, and public and private utilities throughout the eastern United States. From 1998-1999, Mr. DeNichilo served as Chair of the New Jersey Section of the American Water Works Association.

As head of the Water Supply Group, Mr. DeNichilo's project management responsibilities encompassed the following: surface water treatment; groundwater treatment; analysis of groundwater and surface water supply and quality; design of new water transmission facilities, including booster stations, storage tanks and transmission mains; hydraulic evaluations of existing water systems; design, testing and rehabilitation of wells; feasibility studies for new water facilities (treatment plants, booster stations, transmission, distribution, storage); regional studies for water systems; present worth analysis of existing water systems; water rate studies; startup and operation of pumping stations and water treatment plants; and evaluation of contamination of ground and surface water supplies.

Mr. DeNichilo has had responsible charge of detailed design and construction of water supply, distribution, storage, and treatment facilities. His role as a Project Manager on principal projects to date include water system planning and water supply systems, as well as the design of pumping stations, wells, well stations, and water treatment facilities for various communities including the Cities of Orange and New Brunswick, Freehold Township, and the Southeast Morris County Municipal Utilities Authority. He has been involved in the preparation of studies and reports as well as the design of groundwater and surface water treatment facilities. Furthermore, he has served as Project Manager for the design of many transmission and distribution mains, elevated and ground level storage facilities, water supply interconnection facilities and metering facilities.

Mr. DeNichilo has served as HMM's Principal-in-Charge for many large scale water transmission mains and pumping facilities. These projects have included the detailed evaluation of proposed pipeline routes, cost evaluations of pipeline materials, transient analysis, detailed pipeline design, pump station siting, surge suppression system design, and pumping station design, permitting and construction administration.

Pipeline/transmission main projects have ranged in size from 12-inch to 54-inch diameter, with a total length of design/construction exceeding more than 100 miles during the last 20 years. Mr. DeNichilo has also been responsible for the design and construction administration for many pumping stations ranging in size from 1 MGD to 60 MGD. These projects have included variable speed controls and sophisticated hydraulics/surge suppression systems.

#### **2.2.4.2 Principal Project Organizer**



**JAMES G. COE**  
***Executive Vice President***  
Hatch Mott MacDonald  
Millburn Office

Mr. Coe has extensive experience in the planning, design, construction and project management of a variety of civil and environmental engineering projects, including municipal and industrial wastewater treatment and disposal, hydraulic infrastructure evaluation, combined sewer overflows ("CSOs"), Municipal and Authority Engineering Services, and associated field services. He has managed numerous wastewater collection and treatment, water supply transmission and treatment, stormwater management, and roadway reconstruction projects for municipalities and utilities authorities. Projects have ranged from feasibility studies to detailed design and construction services.

Mr. Coe has been the appointed Township Engineer of Jefferson Township and Bethlehem Township, as well as the Authority Engineer for the Bernards Township Sewerage Authority and the Raritan Township Municipal Utilities Authority.

Mr. Coe has prepared municipal wastewater management plans and feasibility studies relating to wastewater, water supply, and stormwater infrastructure. He has assisted clients in the preparation of cost estimates, project budgets, rules, regulations, rate studies, sewer use ordinances, grant applications,

and other administrative support functions. He has prepared expert reports providing technical opinions on matters of legal controversy and has testified before many municipal agencies including planning boards, sewerage authorities, and municipal utilities authorities.

Mr. Coe has been HMM's Principal-in-Charge for several CSO control projects. This work has included major planning, design, and construction projects for the cities of Bayonne, Paterson, East Newark, Harrison, North Bergen, Ridgefield Park, and Elizabeth. These projects included over 100 CSO sites with discharges ranging from 4 to 800 MGD.

Mr. Coe has managed the design of water and wastewater facilities for various municipalities, sewerage authorities, water companies, and privately-owned utilities including Bernards Township and Warren Township Sewerage Authorities, Bedminster and West Orange Townships, and the City of Orange, New Jersey. His responsibilities included supervising the preparation of plans and specifications, administering construction contracts, providing engineering support during construction, and supervising inspection services. Projects involved major sewer system expansions and rehabilitation, upgrading of treatment facilities, and design of comprehensive collection systems.

Mr. Coe has prepared plans and specifications for major water transmission and distribution facilities. These projects have included the design of a large diameter (48-inch diameter) water transmission main to reinforce the connection between the Elizabethtown Water Company and the City of Newark system, and an emergency pipeline connecting Lake Hopatcong with the Rockaway River.

Mr. Coe has been in charge of stormwater management projects including major storm sewers and channel improvement projects for Scotch Plains Township, South Plainfield Borough, New Providence Borough, and Millburn Township. He also prepared a comprehensive stormwater management report for the Warren Township Planning Board and Scotch Plains Township.

#### **2.2.4.3 Project Manager—Water Utility**



**MARK A. TOMPECK**  
***Senior Vice President***  
Hatch Mott MacDonald  
Millburn Office

Mr. Tompeck has a broad range of engineering experience in the area of water supply. As a Senior Vice President in HMM's Water Division and the firm's Water Practice Leader, he has worked on projects involving feasibility studies, design, preparation of contract plans and specifications, and construction supervision for projects including treatment facilities, wells, pipelines, pumping facilities, and storage tanks. He has developed expertise in many areas of water supply engineering covering all aspects of projects ranging from planning and design to permitting and construction engineering.

Mr. Tompeck also has extensive general civil and municipal engineering experience, including the review of developer plans, drainage designs, water and sewer system designs, roadway designs, and building designs. He has served as Project Manager on a wide variety of projects involving the design and construction of treatment plants, pumping stations, chemical storage/feed facilities, water and sewer pipelines, storage tanks, and wells. He has provided project management for large and small projects (ranging in size from \$500,000 to \$67 million) involving both new construction and rehabilitation of existing facilities, completing them on time and within budget.

Mr. Tompeck's water treatment design and construction engineering experience covers a variety of treatment scenarios and technologies, including iron and manganese removal, hardness treatment, micro/ultra-filtration, reverse osmosis, ozonation, ultraviolet ("UV") disinfection, Volatile Organic Compounds ("VOC") and radionuclide removal, and taste and odor treatment. He has designed numerous

chemical storage and feed systems, residuals handling/treatment systems, filtration systems, and instrumentation and control systems for surface water and groundwater supply treatment facilities.

Mr. Tompeck has also designed many water storage facilities and has been extensively involved with the study/evaluation and subsequent rehabilitation of both steel and concrete storage facilities. Work has included detailed field inspection and testing, preparation of evaluation reports, preparation of plans and specifications, and construction administration.

Mr. Tompeck has extensive experience with the State Revolving loan program and has assisted numerous clients with obtaining low interest loans. He has been responsible for the preparation of Drinking Water State Revolving Fund (“DWSRF”) documentation including preparation of project report, planning documents, and other loan documentation requirements.

Mr. Tompeck also has experience with residuals handling and wastewater system projects, including dewatering and treatment facilities, pumping stations, and sewer systems. He has been responsible for the design of various sewer system improvements, including new sewers and rehabilitation/upgrading of existing sewers.

Mr. Tompeck’s experience also includes the study, evaluation, inspection, upgrading, and rehabilitation of dams to remediate seepage conditions and improve dam stability. Recommended designs have included the installation of inclined rock anchors, replacement of inoperative sluice gates, and chemical grouting of embankment areas. He has also been responsible for the preparation of Emergency Action Plans (EAP), Operation and Maintenance Manuals, and Formal Inspection Reports.

#### **2.2.4.4 Project Manager—Wastewater Utility**



**CLIFFORD S. WILKINSON**

***Executive Vice President***

Hatch Mott MacDonald

Millburn Office

Mr. Wilkinson has extensive experience in the design and construction of new wastewater facilities, as well as expansion and modifications for the upgrade of existing facilities. As Principal-in-Charge of Facilities Design Services for municipal and industrial wastewater, he was responsible for project coordination, project scheduling, and quality control/quality assurance. His other responsibilities included oversight of HMM's design and drafting support groups, including drafting/CADD, structural and architectural design, electrical design, instrumentation and control system design, and facilities design engineering.

Mr. Wilkinson's experience includes the management of wastewater treatment feasibility studies, design reports, development of detailed design drawings, and preparation of specifications. He is also experienced with construction phase engineering of both large and small wastewater treatment and conveyance facilities, as well as the activities involved in the start-up and troubleshooting of wastewater treatment facilities. He has provided Resident Engineering services during the construction of numerous pumping and treatment facilities, responsible for process, HVAC, plumbing, and architectural inspection. He supervised construction and demolition activities, monitored project progress, prepared payment estimates, and provided Contractor, Engineer, and outside agency coordination, as well as coordination of plant start-up and operating activities.

Mr. Wilkinson is the Project Manager for a significant expansion of the Mid-Halton Wastewater Treatment Plant, for the Regional Municipality of Halton, Ontario. The initial expansion of the plant will increase its capacity from 20 MGD to 33 MGD. The project also contemplates a future expansion phase which will further increase plant capacity to 49 MGD. Project expansion elements include, but are not limited to, an

expanded North Pump Station, new influent flow distribution chamber, new headworks containing screenings removal and two vortex grit removal units, four new primary clarifiers, two new aeration tanks, four new final secondary clarifiers, new UV disinfection facility for the entire plant capacity, new ferric, caustic, and sodium hypochlorite chemical feed facilities, and a new anaerobic digester and ancillary bio-solids improvements. In addition, the project includes the design of a new 6.1 kilometer (3.6 mile) outfall tunnel into Lake Ontario with dispersion field. Design is fast-tracked due to the need to bring the facility on-line so as not to disrupt development in the Region.

## 2.3 Operator

Please refer to *Sections 2.1.2* and *2.2.3*.

## 2.4 Contact Person

The City will have a single day-to-day point-of-contact in the Project Manager, Alicia Moy, to direct any questions during the process. All future communication with the City and MIRA should be directed to:

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<b>Name:</b>	Alicia Moy
<b>Title:</b>	Senior Vice President
<b>Organization:</b>	Macquarie Infrastructure and Real Assets, Inc.
<b>Address:</b>	125 West 55th Street, New York, NY 10019
<b>Telephone Number (Office):</b>	+1 (212) 231-1824
<b>Telephone Number (Mobile):</b>	+1 (646) 267-1984
<b>Facsimile Number:</b>	+1 (212) 231-1717
<b>E-Mail Address:</b>	alicia.moy@macquarie.com

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## 2.5 Controlling Interests

### 2.5.1 MIRA-Managed Infrastructure Fund

MIRA manages both closed- and open-ended infrastructure funds. Typically, the ownership interests in the infrastructure funds that MIRA manages are widely dispersed amongst pension funds and other institutional investors that are domiciled both in the U.S. and abroad. No single shareholder generally holds a controlling interest in a MIRA-managed infrastructure fund.

### 2.5.2 MIRA

As described in *Section 2.1.1.1*, MIRA is a wholly-owned subsidiary of Macquarie Group Limited (ASX:MQG), a global provider of banking, financial advisory, investment and fund management services. Macquarie Group Limited is publicly traded on the Australian Securities Exchange under the ticker “MQG”. As of the date of submission of this RFQ response, Macquarie Group Limited’s largest shareholder, at approximately 7% of the company’s total shares outstanding, is the Macquarie Group Employee Retained Equity Plan. No single shareholder holds a controlling interest in Macquarie Group Limited.

### 2.5.3 Government Strategy Group

Government Strategy Group is a subsidiary of Progressive Capital International, Inc., which is 100% controlled by Kenneth DeRoberts.

## 2.5.4 HMM

Hatch Mott MacDonald LLC, a Delaware limited liability corporation, is a wholly-owned subsidiary of Hatch Mott MacDonald Holdings, Inc., a Delaware corporation, which in turn is a wholly-owned subsidiary of Hatch Mott MacDonald NY, Inc., a New York corporation, which in turn is a wholly-owned subsidiary of Hatch Mott MacDonald Group, Inc., a Delaware corporation. The common stock of Hatch Mott MacDonald Group, Inc. is 40% owned by Hatch Associates, Inc., a Canadian corporation, 40% owned by Mott MacDonald International, Ltd., a corporation of the United Kingdom, and 20% owned by senior executives of the HMM companies. No natural person has more than a ten percent (10%) ownership interest in Hatch Mott MacDonald Group, Inc. or any of its subsidiary companies.

## 2.6 Expected Advisors to MIRA

### 2.6.1 Government Strategy Group

Government Strategy Group (“GSG”) is a management consulting firm comprised of a team of experienced senior managers and policy makers from various levels of government. This mosaic of talent provides our clients with dynamic service. Our engagements are crisply executed with high level precision and expertness.

Strategic planning and thinking is at the core of GSG’s work product. The GSG team works proactively and builds long-term plans, which are excellent management tools. GSG’s guidance enables its clients to make well-informed, educated decisions. Services include:

- Financial Management Consulting
- Financial Restructuring & Reorganization
- Optimizing Efficiency through Technology
- Privatization, Outsourcing, Shared Services & Consolidation
- Operations and Personnel Management
- Outsourced Management Services
- Rate Studies

### 2.6.2 HMM

HMM will be providing technical support during the Due Diligence Process and will provide ongoing technical support during the concession period.

HMM is a leading North American consulting engineering firm (ranked No. 35 in ENR’s Top 500 Design Firms) with offices located nearby in Philadelphia, PA and our Corporate offices only 70 miles away from Allentown in Millburn, NJ, HMM can respond quickly and efficiently to any situation that may arise. HMM is a full-service firm with over 2,400 staff in north America and over 300 staff located within 75 miles of the City, and over 100 highly experience water and wastewater professionals in the area available to address any emergent need. In addition to HMM’s North America resources, HMM can draw on the resources of our parent companies and their 24,000 staff worldwide.

In addition to experienced water and wastewater design professionals, HMM also has a number of staff with extensive management and operating experience with very large public and private utilities who will be available to work closely with Allentown’s management, operations and maintenance staff.

- Review and assess the general operating condition of the various operating facilities (sewage pumping stations, sewers, wastewater treatment facilities, wells, raw water intake, water

treatment plant, water distribution system, water storage tanks, vehicles, maintenance equipment, operations offices, etc.)

- General overview of current water and sewer demands with comparison to water supply, treatment plant and discharge capacity ratings.
- Assessment of future growth within the existing service areas over a 50-year planning horizon.
- Assessment of the reliability of the existing facility capacities and capabilities to meet current and future demand projections.
- Review water supply and wastewater effluent quality and determine status of regulatory compliance of water and wastewater treatment plants.
- Review of existing budget and long-term capital improvement plans and assess the adequacy of the level of proposed capital funding.
- Development of capital improvement costs to address significant identified deficiencies to meet current or future operating conditions.
- Potential for improving operation efficiency from consolidation of operations, process improvements and infusion of newer technology.
- Estimate value of assets based on industry accepted practices.
- Assessment of Condition of Existing Facilities
  - Age of facility and last major upgrade
  - Water and Wastewater treatment plant and pumping station performance and capacity
  - Overview of the general condition of buried assets based upon available operating information and interviews with operations staff
  - Structural review of buildings, tanks and process equipment
  - Electrical review of major components – switch gear and standby power facilities
  - Adequacy of Maintenance and administrative offices.
  - Preparation of a summary report documenting our observations, findings and conclusions.

During the concession period HMM will be available to provide the following services on an as needed basis:

- Troubleshooting water and wastewater operations problems in cooperation with operating staff.
- Assistance with operating/discharge permit renewal and regulatory reporting
- Assistance with negotiation of consent orders, permit conditions, and other matters with regulatory agencies
- Periodic preparation of a capital improvement plans with priority list and cost estimates.
- Design of capital improvement projects.
- Engineering services during construction of capital improvements
- Maintenance of a Geographic Information System (GIS) containing all water and wastewater assets.
- Assistance with development of an asset management plan for water and wastewater facilities, both above grade and buried.

- Training water and wastewater staff on technical matters to improve competence and career development.
- Updates of growth estimates and timing of system upgrades and expansion.

## 2.7 Comparable Projects

### 2.7.1 MIRA

MIRA is uniquely dependent upon the trust it forges with local communities. In order to build and maintain that trust, MIRA has executed its responsibilities with care. Our representative experiences, as detailed below, demonstrate a strong commitment to the environment. MIRA’s infrastructure experience also shows a deep understanding of utility assets in particular, including water and sewer assets.

#### 2.7.1.1 Comparable Investments

##### Thames Water

###### Overview

<b>Financial Close Date</b>	December 1, 2006
<b>Transaction Type</b>	Private Sale



A MIRA-led consortium acquired the United Kingdom’s largest water and wastewater public utility, Thames Water, which serves over 8 million water customers and 13 million wastewater customers. The £8 billion transaction involved 20,000 miles of water mains and 40,000 miles of sewers, in addition to 100 water treatment works and 351 sewage treatment works. Subsequent operations led to dramatically improved water conservation. This was accomplished by reducing leakage by 8.4%, achieving environmental consent on all sewage works, and improving security of supply by 159.1% in the first year of ownership through capital spending and management incentives. The first year of ownership also saw an 18.8% reduction in main bursts due in part to a 40.6% increase in capital spending.

##### Aquarion

###### Overview

<b>Financial Close Date</b>	April 30, 2007
<b>Transaction Type</b>	Private Sale



A MIRA-led consortium successfully acquired Aquarion in 2006. Aquarion provides water and related services to nearly 700,000 people in Connecticut, New York, Massachusetts, and New Hampshire. Aquarion is one of the 10 largest privately owned water utilities in the United States, and its utility assets consist primarily of water mains, pump stations, treatment facilities, and reservoirs. As owners, Macquarie successfully implemented integrated all utility operations, including the field activities and customer service/billing, under one integrated system, thereby facilitating improved customer service and productivity. Aquarion has since registered the lowest number of complaints per customer forwarded to the Connecticut Department of Public Utility Control for all utilities in Connecticut every year since the acquisition.

## Puget Energy

### Overview

<b>Financial Close Date</b>	February 6, 2009
<b>Transaction Type</b>	Take-Private



A MIRA-led consortium acquired Washington-based Puget Energy and its utility subsidiary Puget Sound Energy (“PSE”). PSE is Washington State’s oldest and largest regulated energy utility, supplying electricity and gas to more than 1.4 million customers. The consortium agreed to provide \$5 billion of capital investments within five years of the acquisition to secure future energy supply and delivery infrastructure and so that PSE could maintain its position as an environmental steward and a long-time employer and corporate citizen in Washington.

## Duquesne Light

### Overview

<b>Financial Close Date</b>	May 31, 2007
<b>Transaction Type</b>	Take-Private



A MIRA-led consortium successfully acquired Duquesne Light in 2007. Duquesne Light owns and operates a regulated electricity transmission and distribution network that serves 587,000 residential, commercial, and industrial electric customers across two counties in and around Pittsburgh, Pennsylvania. During MIRA’s ownership period, Duquesne Light has pursued an ambitious transmission capital expenditure plan, the Duquesne Transmission Enhancement Plan (“DTEP”). DTEP consists of eight required and 14 voluntary transmission upgrade projects. DTEP plant in service at December 31, 2011 was \$230.7 million, with an additional \$26.5 million capital outlay expected in 2012. Also during MIRA’s ownership period, Duquesne Light filed a distribution rate case with the Pennsylvania PUC (“PAPUC”) in 2010, seeking to recover increased pension costs, bad debt expense, and the impact of reduced load. In January 2011, Duquesne Light filed a settlement agreement for a \$45.7 million rate increase that was in line with MIP’s business plan. The settlement was approved by the PAPUC and new rates went into effect on April 21, 2011.

## HAWAI’I GAS

### Overview

<b>Financial Close Date</b>	June 6, 2006
<b>Transaction Type</b>	Private Sale



MIC successfully acquired HAWAI’I GAS in 2006. HAWAI’I GAS, doing business as HAWAI’I GAS for select products and services, is Hawaii’s only government franchised full-service gas company. HAWAI’I GAS manufactures synthetic natural gas for most of its regulated utility customers on Oahu, distributes propane to utility and non-utility customers throughout the state’s six primary islands, and produces renewable gas products from agricultural feedstocks. During its ownership period, MIC has increased TGC’s EBITDA from \$26 million \$47 million in five years by implementing a rigorous rate case planning process, which resulted in a 2009/2010 rate increase of \$9.2 million, and developing a forecasting method to proactively manage margins. MIC also has diversified TGC’s fuel strategy by developing a fuel supply strategy and implemented contingency plan around local refinery risk, increasing imported propane from 15% to 50% of supply, and initiated a pilot renewable gas project burning animal fats. Lastly MIC has improved TGC’s management capabilities by in-sourcing and restructuring the finance team, by initiating customer segmentation analysis and building-out the company’s marketing and sales function, and by providing more transparency on long-term capital expenditure plans to enable better prediction of costs and project accountability.

### **2.7.1.2 Case Study: Aquarion**

Aquarion is a water utility with operations in Connecticut, Massachusetts, and New Hampshire and is one of the ten largest privately owned water utilities in the U.S. Aquarion provides water distribution and other related services to more than 200,000 residential, commercial and institutional customers, other utilities for resale, and facilities for private and public fire protection.

Aquarion was acquired in 2007, by a consortium of investors including two of MIRA's North American funds, MEAP and MIP I, from Kelda Group, a United Kingdom water utility that was looking to focus on its home market. Since the MIRA-led acquisition, Aquarion substantially improved its operating processes, customer service and efficiency, and increased its earning asset base. Specifically, in 2007, Aquarion implemented SAP's enterprise-wide operating system, which supported full integration of customer-facing and field processes. The new systems substantially improved customer service by making field-related information (e.g. service outages, maintenance work, etc.) available to call center personnel, thereby eliminating call transfers and customers call-backs. Further, call center personnel are able to schedule field work using the new system. Operating efficiency improve as well by providing detailed field asset records to field personnel via wireless devices, eliminating multiple data entry with respect to field maintenance work, and development of metrics to track field productivity. One result of this process improvement is better customer service—Aquarion's Connecticut subsidiary has achieved the lowest rate of customer complains of any Connecticut utility (per 1,000 customers) for the past five years.

Additionally, Aquarion continues to grow by acquiring small adjacent water utilities. For example, since 2010 Aquarion has acquired six water utilities contributing \$3.1 million of rate base and 2,682 additional customers. In February 2012, Aquarion entered into an agreement to acquire United Water's regulated operations in Connecticut for \$38 million. Filings have been made with the Connecticut Public Utilities Regulatory Authority to request regulatory approval of the acquisition, which is expected to be complete in late 2012. This acquisition will add approximately 7,000 new customers and will represent approximately 5% of Aquarion's expected 2012 rate base. Since MIRA's acquisition of Aquarion, the company has consistently achieved positive EBITDA growth and generated steady cash flows through expansion of its rate base via small acquisitions and capital investment.

A challenge faced by water utilities, including Aquarion, is the need to replace aging infrastructure, which requires sufficient returns on capital expenditures while at the same time providing reliable and safe services to the customers. Aquarion, together with MIRA, has met this challenge by maintaining strong relationships with the regulators and remaining focused on high quality customer service and strong operational performance.

## **2.7.2 HMM**

### **2.7.2.1 Case Study: DC Water Program Management and Engineering Support of Operations**

DC Water provides domestic and fire protection service to the District of Columbia serving a population in excess of 500,000 people. DC Water is responsible for the retail distribution of water with average daily demands of approximately 135 MGD. The water system is comprised of approximately 1,300 miles of mains in seven pressure zones. Storage for system equalization and fire fighting is provided in 9 storage reservoirs and tanks. DC Water also maintains and operates four pump stations and approximately 36,000 valves and 9,000 hydrants.

Since 2001 HMM has been providing overall Program Management of the water distribution system including planning, engineering design, and engineering design management services, and Master Plan and Operations reviews/updates in support of DC Water's on-going capital improvement program ("CIP").

HMM is providing on-site management assistance as well as off-site technical support assisting DC Water with the implementation of its \$350 million CIP. In addition to assisting DC Water with the implementation of the CIP, HMM is also undertaking a comprehensive pipe condition assessment program of the entire

distribution system; updating and expanding DC Water's hydraulic model(s) to include all distribution mains and incorporate water quality functionality in response to terrorist threats; providing resident inspection services and oversight; as well as providing DC Water with assistance with day-to-day engineering tasks.

The wide range of on-going projects includes a combination of improvements to antiquated operating facilities including the upgrade of the 310 MGD Bryant Street Pumping Station; replacement of the 80 MGD Anacostia Pumping Station; upgrades to the Fort Reno Pumping Station; a multi-year large and small valve replacement program; and a comprehensive program of pipeline rehabilitation and replacement.

In 2009 HMM completed the Water System Facilities Plan Update that included an evaluation of major system components and recommended over \$1 billion in CIP projects through 2030. Also, HMM completed the external and internal inspections of all eight DC Water underground water storage reservoirs that account for over 60 million gallons of storage.

HMM has provided assistance to DC Water with the lead service replacement program including: development and operation of lead recirculation pipeloops to study the effects of phosphate addition for corrosion control; hydraulic analysis to determine the effects of flushing on water quality in the distribution system; and development of a lead service replacement program to cost-effectively meet DC Water's accelerated lead service replacement program.

#### **2.7.2.2 Case Study: Trenton Water Works – Engineering and Operations Support**

Trenton Water Works ("TWW") is a Division within the City of Trenton's Department Public Works. It provides water service to approximately 215,000 people through 63,000 metered customers within the City of Trenton, Ewing, Hamilton, Hopewell, and Lawrence Townships.

TWW obtains its entire supply from the Delaware River which is treated at TWW's 60 MGD Water Filtration Plant. TWW's distribution system is divided into 4 pressure zones to maintain adequate pressure and fire flows to its customers. Water is transferred to these pressure zones by High Lift Pumps at the Water Filtration Plant and three Booster Pumping Stations. Distribution storage includes the 100 million gallon ("MG") capacity Pennington Reservoir and six storage tanks (total capacity approximately 5.6 MG) in the High Service and Booster 3 Pressure zones. The distribution system includes approximately 650 miles of water main, some which date back to the 1860s.

HMM's involvement with TWW dates back to 1994 and includes completing a comprehensive Water System Master Plan; design and inspection of numerous water distribution system improvements including cleaning and cement-mortar lining; internal joint seal repairs; new transmission mains; new Mechanical Dewatering Facility (MDF) to eliminate all wastewater discharges to the Delaware River; upgrades to the Central Pumping Station; plans for covering the 100 MG open finished water reservoir; and numerous other projects. To date, HMM has been responsible for the design and inspection of over \$75 million of capital improvement projects. In addition to design and operation support services, HMM was also retained by TWW to operate the MDF for an 18 month period and train TWW staff in its use and operations.

TWW had several incidents that had drawn the attention of NJDEP to scrutinize the operation of the water utility. These incidents included operational problems with the Central Pumping Station; loss of production capacity at the Water Filtration Plant; valve malfunction at the Pennington reservoir, resulting in cautionary warnings to customers; and a potential Legionella occurrence at Mercer County Geriatric Center, drawing attention to water quality and chlorine residual levels in the distribution system. These occurrences, coupled with the upcoming construction at the Pennington Reservoir, required careful operation of the water system, as the reservoir was being taken out of service for upgrades, including a cover. This prompted the NJDEP to require the City to undertake a comprehensive review of the entire water utility operations; to evaluate alternative forms of operation; and provide on-site technical staff with

operations experience to evaluate the current operating condition of the water filtration plant, and provide training and guidance to existing staff.

In order to address these concerns, the City engaged Hatch Mott MacDonald. In addition to providing a highly experienced licensed operator to provide oversight and guidance to existing operations staff, HMM was engaged to review the overall operations of the water utility including:

- Administration and Accounts Payable
- Engineering
- Meters
- Construction and Maintenance
- Billing and Collections
- Trenton Water Works Financial Status; and
- Review Alternative Forms of Utility Organization

### **2.7.2.3 Case Study: Elizabeth, NJ – Sewer System Professional Services**

The City of Elizabeth owns both sanitary and combined sanitary/storm sewer systems serving a population in excess of 125,000 people. The wastewater collection system consists of more than 150 miles of sewer of which approximately 70% is combined and contains 34 combined sewer overflows (“CSOs”). The combined sewer system ranges in age from 50 years to an excess of 115 years old. The circular pipe and brick sewers range in diameter from 8 inches to 90 inches plus various egg-shaped sewers up to 47 inch wide by 76 inches tall. Approximately 100 miles of the system consists of sewers 18 inch diameter or less.

Since 1998, HMM has been providing a full array of services related to the collection system including investigation, planning, feasibility studies, engineering design and construction supervision. HMM has developed a Long Term Control Plan for management of the City’s combined sewer discharges. In addition, HMM has provided design and construction phase services for new CSOs solids and floatable control facilities throughout the City in compliance with the Sewage Infrastructure Improvement Act; process and control upgrades to the City’s largest pumping station; structural rehabilitation of 54,000 linear feet of sewer using a combination of traditional and trenchless methods; and conveyance systems upgrades for neighborhoods impacted by wet weather events.

On-going projects include a number of wet weather storage and conveyance improvements throughout the City. The projects range in cost from approximately \$1 million to \$4 million dollars. These improvements include the replacement of failing or undersized infrastructure and storage chambers to reduce surface discharges. In addition to design, HMM is providing resident inspection services and oversight for these projects. Future projects for the City include large scale improvements to the City’s collection system through the historic mid-town area including sewer replacement, relief sewers and upgrades to an existing inverted siphon utilizing trenchless technologies.

### **2.7.2.4 Case Study: City of Newark– Engineering and Operations Support, including Master Planning**

The City of Newark owns and operates water and wastewater systems that provide service to a population of approximately 280,000 persons. Average daily water demands are approximately 77 million gallons per day, with the waste water facilities used convey sewerage to the Passaic Valley Sewerage Commission (“PVSC”) for treatment and disposal. There is over 600 miles of potable water transmission and distribution infrastructure, and the wastewater system include a complex network of separate sanitary, combined sewer, and stormwater infrastructure.

HMM has been serving the City of Newark for more than 40 years and has provided design, system operations oversight, construction engineering, and assistance with facility operations during that time. Given the long-term relationship between Newark and HMM, the City commissioned HMM to perform a holistic assessment of the Department of Water and Sewer Utilities to develop a Strategic Business Plan to identify the requirements for a sustainable business, and to also develop a ten-year Capital Improvement Program (“CIP”). The project included identifying the impact of the proposed CIP on customer rates, and a comparison of the new rates with regional water and sewer rates, and with median household incomes.

In 2002, HMM developed a comprehensive master plan of the water system which evaluated the sources of supply, production and treatment, transmission, distribution, and storage facilities. In 2010, the previous Master Plan was updated with a focus on identifying investment needs by asset class and primary need class. The primary need classes included: regulatory compliance, renewal and replacement of assets, capacity, green energy, reliability, operational efficiency, and safety/security. Renewal/replacement investments in the City were identified to be significant for the ten year CIP based upon a potable water piping system with an average age of over 90 years and a large portfolio of unlined, cast iron water mains with severe tuberculation. In addition, the water treatment plant is now twenty years old, and major process components were identified as nearing the end of their useful life. The overall ten-year CIP includes investments of over \$250 million. As part of the master planning effort, HMM undertook an analysis to identify potential revenue generation and cost avoidance. One of the cost avoidance projects identified (and currently in design), was to reconfigure a pressure zone with some minor piping modifications to reduce overall annual pumping costs by approximately \$480,000. This specialized hydraulic modeling analysis was featured in Bentley’s 2010 Year In Infrastructure.

Over the past twenty years, the City has had a successful program to inspect and renew the aging brick sewers. Although this program has proved successful, the City has identified that more problems are now arising with the non-brick, smaller diameter (24-inch and smaller) sewers in the system. The sewer system master plan identified that a Sewer Assessment and Renewal Program is imperative for sustaining future service in the system. The renewal program will prioritize locations for sewer inspection and condition assessment, with identification of rehabilitation and/or replacement needs. The City is also faced with potential major investments related to a Long Term Control Plan (“LTCP”) for Combined Sewer Overflows (“CSO”). The report identified potential impacts and investment needs for long term CSO controls, although the NJDEP and USEPA have not promulgated any specific treatment requirements to date. The overall ten-year CIP for sewer includes investments of over \$260 million not including LTCP long-term requirements.

In addition to the water and wastewater utility planning and management efforts for the City, HMM has been responsible for the design, permitting, construction oversight, start-up and testing of a wide range of water system improvements including booster pump station rehabilitation and upgrading, water transmission/distribution piping rehabilitation and replacement, water treatment plant upgrades, hydraulic analysis and wastewater system evaluations and improvements, including CSO abatement facilities.

#### **2.7.2.5 Case Study: Municipal Sanitary Authority of New Kensington, PA**

The Municipal Sanitary Authority of the City of New Kensington’s (“MSANK’s”) sanitary sewer collection, conveyance, and treatment system consists of the Logan’s Ferry Road Waste Water Treatment Plant (“WWTP”), approximately 162 miles of sewer lines, three sewage pump stations, and nine flow regulators that provide sewage service to the City of Arnold, the City of Lower Burrell, the City of New Kensington, and portions of the Borough of Plum. The waste water flow to the six MGD WWTP consists of primarily sanitary sewage with some contribution by light industrial dischargers.

On December 11, 2009, the United States Environmental Protection Agency (“USEPA”) entered into an Administrative Order for Compliance on Consent (“AOC”) with the Municipal Sanitary Authority of the City of New Kensington (“MSANK”) to ensure compliance with the USEPA’s Combined Sewer Overflow

Control Policy. The AOC mandated that MSANK develop a Long Term Control Plan (“LTCP”) to reduce CSO occurrences.

The AOC requires MSANK to complete a detailed inventory of the collection system, and construct a hydraulic model to characterize the system’s hydraulic performance. The model will be used to evaluate alternatives to eliminate CSOs and hydraulic bottlenecks.

As the prime consultant, HMM manages field activities and subcontractors, is building a comprehensive Geographic Information System (“GIS”) of the sewer network, creating a hydraulic model to evaluate the performance of the collection system, developing alternatives to reduce CSO events, and using the hydraulic model to evaluate those alternatives.

HMM assisted the Authority in the design, development, and implementation of a comprehensive information management system. HMM provided integrated commercial and custom IT solutions to meet the recommendations outlined in the Information Management Master Plan. The system included:

- Computer Systems Upgrades and Networking
- GIS Implementation
- Financial Systems Selection and Implementation
- Work Order Management System Implementation
- Operations and Maintenance Management Implementation
- Health & Safety Tracking System Implementation

The Headworks and Blower Building Project consisted of construction of a new headworks and secondary aeration blower system for the MSANK wastewater treatment plant. The MSANK wastewater treatment plant services a combined sewer collection system and is fed through an existing 15.5 MGD raw water pumping station. The secondary treatment portion of the plant treats 6.0 MGD of flow with 9.5 MGD of flow receiving primary treatment and disinfection prior to blending with the final effluent from the plant. Concern for safety of plant personnel due to degrading conditions in the existing pumping station necessitated replacement of the current pumping station. This project includes construction of new 30.0 MGD raw water pump station; a new primary screening system; new grit removal facility; new odor control facility; new dual source electrical service; new plant-wide SCADA system; and new plant-wide non-potable and potable water systems.

HMM was also contracted by MSANK to provide design engineering, bidding phase assistance, and construction management services to upgrade the facilities of their Valley Camp Pump Station. In 2009, Design was completed for improvements to the housed equipment, specifically: access security and safety facilities and instrumentation, new dry pit submersible pumps, integration of new variable speed drives, and integration with their remote SCADA system.

Based on increased wastewater flow to the treatment works together with a requirement to reduce extraneous infiltration/inflow in the system, a decision was made to undertake this upgrade of the wastewater treatment plant. HMM also upgraded the anaerobic digestion facilities. The project considered 1) safety and code compliance; 2) permit compliance; 3) operation and maintenance needs; 4) rehabilitation and/or replacement of deteriorated facilities; and 5) plant expansion issues.

As the consulting engineer for the Authority, HMM assists MSANK with implementing and updating the IPP on a regular basis. The IPP currently regulates six Significant Industrial Users and 167 non-significant commercial users.

### **2.7.2.6 Case Study: Greater Cincinnati Metropolitan Sewerage District – CSO/SSO/Asset Management**

The Hamilton Board of County Commissioners is the Owner of Record of the existing Greater Cincinnati Metropolitan Sewerage District, a regional sewerage collection and treatment system. The system is run under contract by the City of Cincinnati MSD, a city agency. As such, MSD is responsible for the operations, maintenance and related capital projects for the entire system.

HMM assists the Hamilton County Administration review the ongoing Program Management activities, Consent Decree compliance, nominal project schedule and financial metrics, and overall project execution quality. HMM's work includes evaluating the primary engineering and related documents that are prepared to comply with the County's Consent Decree, including a Wastewater Improvement Program ("WWIP"). The WWIP, formally adopted as part of the consent Decree in August, 2010 established a set of specific studies, demonstration projects for green infrastructure alternatives, conveyance, storage and treatment projects to abate the CSO, estimated to be 14 Billion Gallons. The initial focus of the WWIP work includes two major studies of alternative CSO abatement strategies, including the use of sustainable and green infrastructure. The Consent Decree also established a Default project to be built by 2018, a 7600 foot long, 30 foot diameter tunnel, associated pump station, and high rate treatment plant.

The MSD approach has focused upon watershed studies to identify the potential for use of non-storage tunnel strategies, in an attempt to reduce the overall Program costs. The initial efforts have included watershed based analysis of alternative stormwater management strategies, including sustainable "Green infrastructure" approaches. MSD also has studied the concept of constructing separate drainage works, to remove stormwater from the existing combined sewer system, restore flows to the local creeks and rivers, and enhance the local urban landscape.

HMM's assessment focuses on the initial conceptual and preliminary design studies. We identify issues and risks that might impact the compliance, overall risks, project/program schedule and program cost. In addition, HMM experts evaluate major project elements for the impact of changes to the CSO abatement required, which ranges from 85% or more reduction in CSO from each outfall.

The County's primary concerns are related to the ultimate impact of the CSO Program to their sewer rates. The current rate increases of about 8 to 10% per year have been estimated to address the current CSO abatement program, and the ongoing \$50 Million Asset Management CIP. HMM, in concert with the team's accounting firm, review the MSD annual Capital Improvement Program, which include the full range of pipe and facilities rehabilitation. Our principle role is to examine the estimate costs and past performance of their programs.

### **2.7.2.7 Case Study: City of New Brunswick – Engineering and Operations Support**

The City of New Brunswick (population 41,500, 5.22 sq. mi.) owns and operates a public water supply, treatment, and distribution system, consisting of three water storage tanks, two raw water and two finished water pumping stations, and a 20 MGD treatment facility, which delivers an average of 12 MG of potable water throughout the City and to a neighboring community. The system dates back to the early 1900s. The City's supply is derived from the Delaware & Raritan Canal and Westons Mill Pond.

As the City's Water Supply Consultant for more than 50 years, Hatch Mott MacDonald (HMM) has assisted the City in the operation, maintenance, and rehabilitation of the system. HMM has provided designs, plans, specifications, cost estimates, bid evaluation, contract administration, resident engineering inspection, and start-up consultation for dozens of projects. HMM also provides day-to-day consulting to ensure that the City remains in compliance with the Safe Drinking Water Act (SDWA) as well as other local, state, and federal water-related rules and regulations.

HMM has performed comprehensive system evaluations and has developed plans to upgrade/ improve the system to meet the City's needs. These studies included water quality, raw water supply and capacity, demand projections, water accountability, interconnections with other systems, transmission and

distribution system conditions/capacity, treatment plant condition/ capacity, compliance with current and proposed regulations, maintenance and storage facilities, hydraulic analysis and water conservation.

HMM has prepared feasibility analyses and subsequent designs for the rehabilitation and upgrading of the treatment plant, which included new bulk chemical feed facilities, rehabilitation of gravity filters, rehabilitation of flocculators and sedimentation basins, a new rapid mix facility, rehabilitation of the raw water basin, high lift pump improvements, a new emergency high lift pump station, and replacement of the original pressure filters with a 12 MGD (expandable to 24 MGD) submerged microfiltration treatment facility.

Other services have included the design of water transmission/distribution system piping, rehabilitation of more than 30,000 feet of water distribution piping, design of new and rehabilitation of existing water storage facilities, and the design of new raw water pumping stations and upgrades to existing pumping stations.

HMM has conducted inspections of the City's four water supply dams for compliance with Dam Safety Standards and has prepared plans and specifications and provided construction phase engineering services in connection with the upgrading of the Westons Mill Pond Dam. Rehabilitation included the installation of pre-stressed inclined rock anchors, sluice gate replacement, stilling pool construction, and other miscellaneous improvements.

#### **2.7.2.8 Case Study: Township of Verona – Engineering and Operations Support**

The Township of Verona owns and operates a public water supply, treatment, and distribution system, and a wastewater collection, pumping and treatment system. HMM has served as the Township's Water Supply and Wastewater Consultant since the early 1980s and has assisted the Township in the operation, maintenance, and rehabilitation of both the water and wastewater systems. HMM has provided designs, plans, specifications, cost estimates, bid evaluations, contract administration, resident engineering inspection, and start-up consultation for dozens of projects. HMM also provides day-to-day consulting to ensure that the Township remains in compliance with the Safe Drinking Water Act ("SDWA"), NPDES as well as other local, state, and federal water and wastewater related rules and regulations.

With respect to the wastewater system, HMM has performed the full range of engineering services covering the collection, pumping, and treatment systems. Studies have been undertaken to evaluate the sources of infiltration and inflow into the systems and HMM has subsequently designed improvements for the replacement and rehabilitation of interceptor and collector sewers. HMM has performed detailed process and alternatives analysis for the upgrading of the wastewater treatment plant to provide tertiary treatment. HMM subsequently designed a major upgrade to the treatment plant including new oxidation ditches, return/waste activated sludge pumping facilities, final clarifiers, microscreens, post aeration, and UV disinfection. The upgraded facility included a laboratory facility and complete plant SCADA control system. As part of a separate project, a new raw wastewater pump station was also designed. HMM has provided construction observation, start-up, commissioning and on-going technical/field support for all wastewater projects.

HMM services for the water system have included hydrogeological investigations and the development of two water supply wells. HMM designed water treatment (VOC and chemical feed) systems for the two wells and provided construction, start-up, and testing services for the well supply systems. In addition, HMM has evaluated and designed rehabilitation improvements to three water storage tanks. HMM has undertaken detailed hydraulic analysis of the water distribution system, including hydrant flow and coefficient testing that was used as a basis for a phased program to rehabilitate unlined cast iron water mains. Approximately 60% of the entire Township water distribution system was rehabilitated using conventional cleaning and cement mortar lining.

HMM continues to provide the Township with on-call services to support daily operations, maintenance and regulatory monitoring of both the water and wastewater system.

## 2.8 References

### 2.8.1 MIRA

MIRA is pleased to provide PFM, as advisor to the City, with the following references to attest to our qualifications as an investment manager. Each of these individuals is aware of the submission of this response to the Project's Request for Qualifications and is expecting to be contacted by PFM to serve as a reference for MIRA.

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<b>Name:</b>	Jeffrey Kissel
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<b>E-Mail Address:</b>	JKissel@hawaiiigas.com

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### 2.8.2 HMM

HMM is pleased to provide PFM, as advisor to the City, with the following references to attest to its qualifications as an operator of water and waste-water assets. Each of these individuals is aware of the submission of this response to the Project's Request for Qualifications and is expecting to be contacted by PFM to serve as a reference for HMM.

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<b>Name:</b>	David McLaughlin, PE
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<b>E-Mail Address:</b>	cmadorma@elizabethnj.org
<b>Name:</b>	Mr. Dan (Skip) Roew, Jr.
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### 3. TECHNICAL CAPABILITY

As explained above, MIRA intends to manage the City Systems using the same structure effectively implemented with its other infrastructure businesses—fund the concession payment through a MIRA-managed fund, oversee the systems through a board of directors including MIRA personnel with experience operating or overseeing similar investments, appoint one or two on-site executives for day-to-day Concession management; utilize the strengths of the City’s existing team, and retain HMM for technical support.

#### 3.1 Operations and Maintenance Expertise

HMM’s core business is water and wastewater engineering services. However, the staff at HMM include not only licensed engineers, but also highly trained individuals with the highest grade water and wastewater operating licenses. HMM’s resources includes staff that held former positions such as: Water and Sewer Public Works Director; General Superintendents; Chief Engineer, and Vice President of Operations of public and private utilities.

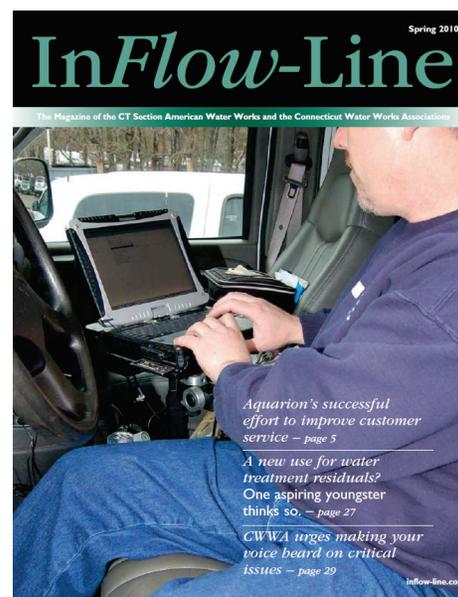
In addition to providing general engineering services, HMM also provides full wastewater operations and maintenance services for a wide range of clients including municipalities, authorities and industries with facilities ranging from small package plants to multi-million gallons-per-day regional facilities. Hatch Mott MacDonald id experienced in the operation and maintenance of water and wastewater system and currently provides Operation and Maintenance services to many private and public sector clients. Currently, HMM operates the Caldwell, NJ wastewater treatment plant, wastewater treatment facilities for the Union Pacific Rail Road at twenty-three sites in nine states, and the City of Passaic and the City of Elizabeth, NJ wastewater collection systems, and the wastewater treatment facilities at 20 prison facilities for the Florida Department of Corrections. HMM has also assisted in the operation and maintenance of many of its clients facilities on an emergency or interim basis.

HMM is also very active in operator training programs for new facilities which have included preparation of Standard Operating Procedures (“SOPs”), Emergency Response plans, and development of Operations and Maintenance (“O&M”) manuals. Furthermore, HMM provides class room instruction for operator licensing, certifications and continuing education.

#### 3.2 Customer Service

Customer service is a critical function in the operation and maintenance of any utility system. It is proposed that the project team will work in concert to assure the needs of the public continue to be satisfied and improved upon as technological advance allow increased levels of service. As an example it is proposed that the recently instituted FirstCall system, which facilitates immediate email or text notification of customers, will be continued. Other innovations like this will be adopted as technology advances.

MIRA strives for Customer Service excellence in the utilities that it manages. As an example of this, for an unprecedented fifth year in a row, Aquarion was awarded the Customer Service Award by the State of Connecticut’s Public Utilities Regulatory Authority (“PURA”) for having the fewest number of customer complaints (five) per thousand customers in the state. Aquarion’s competition for this award included all



water, electric, natural gas, cable, and telephone companies in Connecticut regulated by PURA.

### **3.3 Risk Management, Safety, and Security**

Enterprise-wide risk management is a central feature of MIRA's culture and is extended to all infrastructure business owned by MIRA-managed funds. Each business manages risk through a risk matrix that identifies each risk, assesses its probability and consequences, and documents mitigation plans and responsibilities.

Employee health and safety is a key element of risk management at MIRA and each of MIRA's portfolio infrastructure businesses. Each MIRA business has a documented safety program that identifies workplace hazards, sets best practices, trains employees to mitigate hazards, promotes employee engagement, tracks leading and lagging indicators, and requires external reviews of major incidents.

HMM is experienced and capable of assessing the risks to water, wastewater, and other public infrastructure; and planning and supporting emergency response to a range of threats. HMM has performed vulnerability assessments and/or emergency response plans for 20 New Jersey municipalities, including the Cities of Trenton, Elizabeth, East Orange, and the North Jersey District Water Supply Commission. We have prepared designs for security systems, conducted training, and prepared emergency action plans for dams.

HMM has prepared EPA Risk Management Plans for numerous water and wastewater facilities in eastern Pennsylvania including Plans for Upper Marion Municipal Utilities Authority; City of Easton's Wastewater Treatment Plant and City of Coatesville's Wastewater Treatment Plant. These plans have included air dispersion modeling, process hazard analyses, risk assessments, off-site consequence analysis, pre-start-up safety reviews and inherently safe technology reviews.

HMM prepared an All-Hazard Mitigation Plan for the City of Elizabeth and for the County of Essex. These plans represent comprehensive efforts to perform pre-disaster mitigation planning. The purpose of these plans is to incorporate hazard mitigation principles and practices into local government practices and functions.

In Louisiana, HMM facilitated the development of an Emergency Operations Plan for Region 8 on behalf of the State Office of Homeland Security. HMM also facilitated and coordinated the preparation of Emergency Operations Plans for Jackson Parish and Tensas Parish.

HMM's staff in our Corporate office are familiar with and has employed the Risk Assessment Methodology for Water ("RAM-W") and the Vulnerability Self-Assessment Tool Methodology for Water and Wastewater systems.

HMM has a well developed safety culture within the firm that encompasses both the firm's internal operations as well as our project-related activities. The firm has a formal safety program, which includes training, audits, communication, hazard assessment, and recordkeeping. The program is supported by three full-time safety coordinators, as well as a series of safety committees.

HMM's wastewater operations safety programs include confined space entry, hazard communications, Right-to-Know, OSHA requirements and track safety. For our operating Contract with Union Pacific Railroad ("UPRR"), HMM has developed and utilized SOPs for each project site. Reports consist of Discharge Monitoring Reports ("DMRs"), waste oil disposal records, and monthly operations reports.

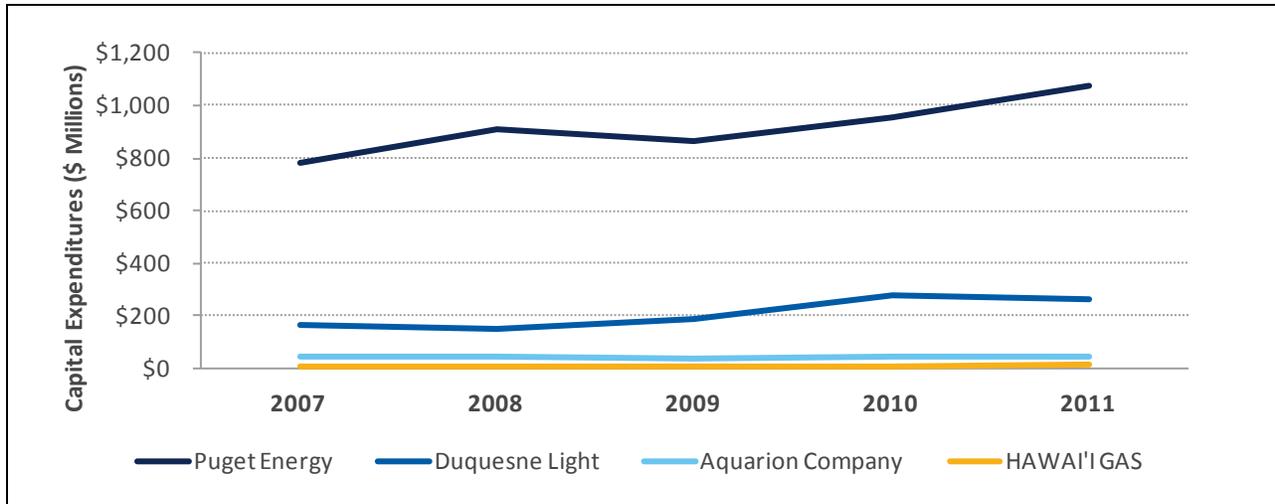
The UPRR/HMM relationship began in 1998 with the award of the Central Region O&M contract and was renewed in 2002 and 2005. In 2009 the contract expanded to include facilities in the western US. The award brings the total value of this relationship to nearly \$20M.

From 1999 through 2011, HMM received over twenty State of Texas Operating Excellence ("Star") awards in the cities of Ft. Worth, Houston and Longview. Star Awards represent zero non-compliance actions on an annual basis.

### 3.4 Capital Improvements

HMM has prepared many long term planning reports for both water and wastewater facilities. These have included Capital Improvement Plans to address anticipated regulatory changes and service area growth. These planning documents have generally included priority listings and cost estimates to allow the plan to be readily incorporated into capital funding plans, grant and loan applications and budgets.

MIRA is committed to investing in capital improvements at each of its utility portfolio companies. The chart below illustrates that MIRA has either sustained or increased capital expenditure levels at its utility portfolio companies during its ownership period of these businesses.



## 4. FINANCIAL CAPABILITY

### 4.1 Financial Capacity to Make Upfront Payment, Maintain the Concession Assets

#### 4.1.1 MIRA

MIRA's financial strength and capital structure stability support its ability to make a substantial upfront payment to the City and ensure its ability to maintain the City Systems in accordance with the City's expectations. MIRA is a leading global asset manager and financial advisor specializing in the infrastructure sector and in infrastructure and real asset funds and customized accounts. MIRA has a team of approximately 350 experienced professionals located in 18 countries managing 29 funds with \$38 billion of equity value under management. MIRA represents 22% of total infrastructure direct investment capital formed over the past five years.

No.	Investor	5-Year Capital Creation Total <sup>5</sup>
1	Macquarie Group	\$30.7 billion
2	Goldman Sachs	\$9.1 billion
3=	Alinda Capital Partners	\$7.0 billion
3=	Industry Funds Management	\$7.0 billion
5	Ontario Municipal Employees Retirement System	\$6.2 billion

#### 4.1.2 MIRA-Managed U.S. Infrastructure Funds

##### 4.1.2.1 MIP I and II<sup>6</sup>

MIP I and MIP II operate and invest in a diversified group of infrastructure businesses located in the United States and Canada. MIP I and MIP II are supported by the global resources of Macquarie Group, a recognized leader in infrastructure investing. MIP I and MIP II are managed by Macquarie Infrastructure Partners Inc., a wholly-owned subsidiary of MIRA.

##### Fund Overview<sup>7</sup>

Total capital commitments	\$5.6 billion
Capital invested/committed	\$5.3 billion
Total number of current investments	15
Total number of limited partners	150+
Total uninvested capital	\$0.3 billion

##### Limited Partner Commitments

##### Portfolio Allocation<sup>8,9</sup>

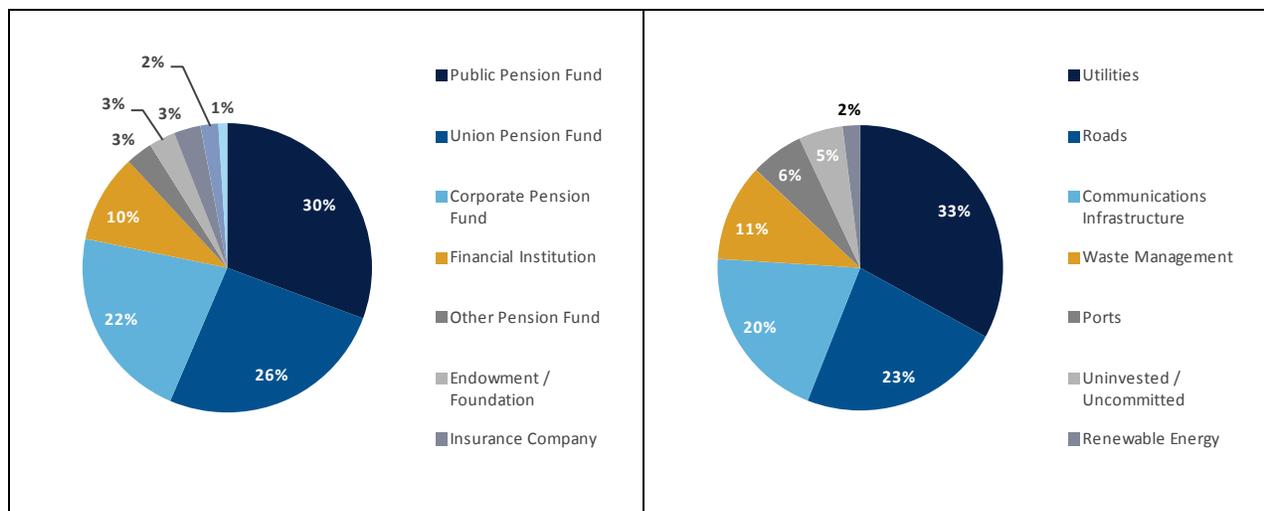
<sup>5</sup> As of 2011

<sup>6</sup> This is not a solicitation of an offer to buy or sell a security.

<sup>7</sup> Information contained herein as of March 31, 2012. MIP I and MIP II are currently closed to new investors.

<sup>8</sup> Includes investment in Elizabeth River Tunnels ("ERT") that closed on April 13, 2012.

<sup>9</sup> Portfolio investment weightings based on the combined committed capital of MIP and MIP II at March 31, 2012.



**Portfolio Investments**



**MIP acquisition date: April 30, 2007**

Aquarion is a water company with regulated operations in Connecticut, Massachusetts and New Hampshire. Aquarion’s operations collect, supply, treat and distribute water to residential, commercial and institutional customers, to other utilities for resale, and to facilities for private and public fire protection. Aquarion currently serves approximately 212,200 metered connections.



**MIP acquisition date: September 13, 2007**

The Autoroute 25 (“A25”) is a 4.5 mile (7.2 kilometer) toll road located in Montréal, Canada. It includes a 1.2 kilometer bridge that links the growing Canadian communities of Laval and the North Shore to Montréal. A25 opened to traffic on May 21, 2011.



**MIP II acquisition date: November 19, 2010**

Broadrock Renewables is portfolio of renewable energy businesses. The existing portfolio consists of two landfill-gas-to-energy facilities, one located in Brea, California (30 miles east of downtown Los Angeles) and another in Johnston, Rhode Island (10 miles west of Providence). Plans are to expand both facilities significantly.



**MIP acquisition date: December 15, 2006**

Chicago Skyway (“Skyway”) is a 7.8-mile toll road located south of Chicago that links the Indiana Toll Road over the Calumet River into a junction with the Dan Ryan Expressway.



**MIP acquisition date: December 15, 2006**

Dulles Greenway is a six-lane, 14-mile toll road that links Dulles International Airport to the city of Leesburg, through Loudoun County, northern Virginia.



**MIP acquisition date: May 31, 2007**

Duquesne Light owns and operates a regulated electricity transmission and distribution network that serves approximately 587,000 electric customers over two counties in and around Pittsburgh, Pennsylvania.



**MIP II acquisition date: April 13, 2012**

Elizabeth River Tunnels is a combined greenfield/brownfield PPP located in the Hampton Roads region of southern Virginia, procured as a 58-year design-build-operate PPP.



**MIP acquisition date: March 21, 2007**

Fraser Surrey Docks ("FSD") is a 132-acre, year-round, container and break-bulk terminal situated 21 miles upstream from the mouth of the Fraser River in British Columbia. Fraser Surrey Docks is held under a long term lease expiring in 2034.



**MIP / MIP II acquisition date: July 30, 2007 / Sept 11, 2008**

Global Tower Partners ("GTP") owns or manages over 6,000 towers and 8,300 rooftop sites across all 50 U.S. states, the District of Columbia, Puerto Rico, Mexico and Costa Rica. GTP leases space on its towers to wireless carriers, who place antennae and associated ancillary equipment on the towers to enable provision of wireless telephony and data services.



**MIP acquisition date: January 16, 2007**

Halterm leases and operates Halterm Container Terminal, a full service, ice-free, deep water, 72-acre marine container terminal and cargo handling facility in the Port of Halifax, Nova Scotia. Halterm is held under a long term lease expiring in December 2040.



**MIP acquisition date: December 15, 2006**

Indiana Toll Road ("ITR") is a 157-mile, limited access toll road that runs east-west across northern Indiana feeding directly into the Chicago Skyway and Ohio Turnpike toll roads at the state borders.



**MIP acquisition date: April 14, 2008**

Penn Terminals is an 80-acre marine terminal and stevedoring company situated on the Delaware River south of Philadelphia. It handles cargo including containers, break-bulk refrigerated products, breakbulk steel products and palletized goods.



**MIP / MIP II acquisition date: February 6, 2009**

Puget Energy is the largest regulated utility headquartered in Washington state, serving approximately 1,080,000 electric and 750,000 gas customers. Puget Energy engages in the generation, transmission and distribution of electricity as well as the transmission and distribution of natural gas.



**MIP II acquisition date: March 23, 2012**

WCA Waste Corporation is a vertically integrated, non-hazardous solid waste management company with operations in the South and Central U.S. WCA operates approximately 500 collection routes out of 25 locations, 24 transfer stations and 22 landfills.



**MIP acquisition date: May 9, 2008**

Waste Industries is a regional, vertically integrated, non-hazardous, solid waste management company. It provides solid waste collection, transfer, disposal and recycling services to customers in the Southeast U.S. Waste Industries services approximately 1,250,000 locations and operates 12 landfills, 36 collection operations, 21 transfer stations, 57 county convenience drop-off centers and 14 recycling facilities.

**4.1.2.2 MIC<sup>10</sup>**

MIC owns, operates and invests in a diversified group of infrastructure businesses providing basic, everyday services, to customers in the United States. Its businesses consist of three energy-related businesses including a gas production and distribution business (HAWAII GAS), a controlling interest in a district energy business (District Energy), and a 50% interest in a bulk liquid storage terminal business (International-Matex Tank Terminals). MIC also owns and operates an aviation-related airport services business (Atlantic Aviation). MIC is managed by Macquarie Investment Management (USA) Inc., a wholly-owned subsidiary of the MIRA.

For additional information, please visit the MIC website at [www.macquarie.com/mic](http://www.macquarie.com/mic).

**Fund Overview<sup>11</sup>**

Exchange:Ticker	NYSE:MIC
Equity Market Capitalization	\$2.0 billion

**Portfolio Investments**



**MIC acquisition date: July 29, 2004**

MIC's airport services business, Atlantic Aviation, operates the largest network of fixed base operations (FBOs) at airports across the U.S. and one heliport in New York City. The operations comprise the largest such network in the U.S. industry and operate at some of the most popular business and recreational destinations in the country. Atlantic provides primarily

<sup>10</sup> This is not a solicitation of an offer to buy or sell a security.

<sup>11</sup> Market data presented as of August 16, 2012.

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fuel and fuel-related services, as well as terminal and hangar operations, to businesses and individuals in the private jet segment of the general aviation industry.

For more information visit: <http://www.atlanticaviation.com>

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**MIC acquisition date: June 7, 2006**

HAWAII GAS operates the only utility (pipeline) gas distribution business and the largest liquefied petroleum gas (tank) distribution business on the Hawaiian Islands. TGC is a producer and distributor of synthetic natural gas and a distributor of liquid petroleum gas on the six major islands of Hawaii. TGC operates approximately 1,000 miles of pipeline serving over 35,200 utility customers. The business also serves an additional 33,000 customers via on-site tanks or portable gas cylinders.

For more information visit: <http://www.hawaiigas.com>

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**MIC acquisition date: May 2, 2006**

MIC owns 50% of the holding company for International-Matex Tank Terminals ("IMTT"). IMTT is one of the largest bulk liquid storage terminal businesses in the U.S. with storage capacity of more than 43 million barrels (including partially owned terminals in Quebec and Newfoundland). Its terminals handle a variety of petroleum, vegetable, tropical and animal-based oil products, as well as commodity and specialty chemicals.

For more information visit: <http://www.imtt.com>

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**MIC acquisition date: July 2, 2004**

MIC's district energy business consists of a 50.01% controlling interest in two operations: Thermal Chicago (Chicago, IL), the largest district cooling system in the U.S., and Northwind Aladdin (Las Vegas, NV). Thermal Chicago provides chilled water used in building cooling systems to over 100 buildings in the downtown loop area of Chicago. Northwind Aladdin provides chilled water for cooling and hot water for heating to a hotel, casino, an adjacent shopping mall and a condominium time-share unit in Las Vegas.

For more information visit: <http://www.thermalchicago.com>

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## 4.2 Ability to Raise Financing

MIRA is capable of raising debt and equity in almost any capital market environment. MIRA has access to not only its own internal funds team from which to access equity capital, but also strong relationships with many of equity investors in infrastructure projects of this nature.

MIRA's U.S. utility portfolio companies have raised over \$12 billion in debt financing since June 2006. Below are specific examples of U.S. debt raised by MIRA and its U.S. utility portfolio companies in a variety of financing environments, as a complement to the description of comparable projects above.

<b>Year</b>	<b>Month</b>	<b>Company</b>	<b>Utility Type</b>	<b>Size</b>	<b>Instrument-Type</b>
2012	August	Aquarion	Water	\$60 million	Senior Secured Notes
2012	August	HAWAI'I GAS	Gas	\$140 million	Senior Secured Bank Facility
2012	August	HAWAI'I GAS	Gas	\$100 million	Senior Secured Notes
2012	June	Puget Energy	Electric / Gas	\$450 million	Senior Secured Notes
2012	February	Duquesne Light	Electric	\$200 million	First Mortgage Bonds
2012	February	Puget Energy	Electric / Gas	\$1,000 million	Senior Secured Bank Facility
2012	February	Aquarion	Water	\$30 million	Senior Unsecured Note
2011	November	Puget Energy	Electric / Gas	\$250 million	Senior Secured Notes
2011	November	Puget Energy	Electric / Gas	\$45 million	Senior Secured Notes
2011	November	Aquarion	Water	\$9 million	General Mortgage Bond
2011	June	Puget Energy	Electric / Gas	\$500 million	Senior Secured Notes
2011	May	Duquesne Light	Electric	\$350 million	First Mortgage Bonds
2011	May	Puget Energy	Electric / Gas	\$300 million	First Mortgage Bonds
2011	May	Aquarion	Water	\$395 million	Senior Secured Bank Facility
2011	April	Aquarion	Water	\$40 million	Senior Unsecured Notes
2011	March	Duquesne Light	Electric	\$900 million	Senior Secured Bank Facility
2011	January	Duquesne Light	Electric	\$66 million	Pollution Control Revenue Bonds
2010	December	Puget Energy	Electric / Gas	\$450 million	Senior Secured
2010	September	Duquesne Light	Electric	\$450 million	Senior Unsecured Bonds
2010	June	Puget Energy	Electric / Gas	\$250 million	First Mortgage Bonds
2010	March	Puget Energy	Electric / Gas	\$325 million	First Mortgage Bonds
2009	September	Puget Energy	Electric / Gas	\$350 million	Senior Secured
2009	March	Duquesne Light	Electric	\$100 million	First Mortgage Bonds
2009	February	Puget Energy	Electric / Gas	\$3,575 million	Senior Secured Bank Facility
2007	October	Aquarion	Water	\$30 million	Senior Unsecured Notes
2007	May	Duquesne Light	Electric	\$1,445 million	Senior Secured Bank Facility
2007	April	Aquarion	Water	\$420 million	Senior Secured Bank Facility
2006	June	HAWAI'I GAS	Gas	\$180 million	Senior Secured Bank Facility
<b>Total</b>				<b>\$12,410 million</b>	

## **5. CONFIDENTIALITY AND DATA ROOM USAGE AGREEMENT**

MIRA is pleased to provide a mark-up of the Confidentiality and Data Room Usage Agreements as an attachment to this RFQ response. MIRA has endeavoured to keep its proposed changes to the Confidentiality Agreement at a minimum.

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