PREPARED FOR
THE CITY OF FORT LAUDERDALE

Engineering Services for Comprehensive Utility Strategic Master Plan

RFQ# 246-11426 | JUNE 16, 2014

STATEMENT OF QUALIFICATIONS

MWH®

BUILDING A BETTER WORLD

SECTION **PAGE**

June 16, 2014

City of Fort Lauderdale
City Hall, Division of Procurement Services
100 N. Andrews Avenue, Room 619
Fort Lauderdale, FL 33301

Subject: Request for Qualifications
RFQ # 246-11426 Engineering Services for Comprehensive Utility Strategic Master Plan
(CCNA – Consultants' Competitive Negotiation Act)

Dear Purchasing Manager and Members of the Selection Committee:

MWH has reviewed Fort Lauderdale's Request for Qualifications for Engineering Services for Comprehensive Utility Strategic Master Plan (CUSMP) in detail and has assembled a proposal that highlights experience that we believe is ideally matched to the services you require.

We bring a Team with a unique understanding of the issues, challenges, and solutions that must be addressed over the upcoming years to provide the City with an environmentally sound and sustainable future. We understand the need to align the City's CUSMP with the City-wide Strategic Plan and Sustainable Action Plan. We have carefully reviewed the Scope of Services and are aware of several key directives that support the CUSMP. Specifically we have identified the following use areas:

Reduce the City's Water Consumption by 20% – MWH has for nearly 20 years used Maddaus Water when Clients need water conservation panning assistance. We are confident that Maddaus' national experience will pay dividends to the city.

Reduce Inflow and Infiltration (I&I) in the Collection System – MWH brings the most extensive I&I management experience in the country. Over the past 20 years MWH has specialized in I&I reduction and management across the Southeast with programs in Houston, Fort Worth, Baton Rouge, New Orleans, Cape Coral, Atlanta and Miami-Dade. In the case of New Orleans and Miami-Dade, we have been helping these Clients since the mid-90s and Atlanta for a decade. In each case, achieving measurable results is our goal.

Maximize the Benefits of Reclaimed Wastewater – MWH has worked with Clients across Florida to develop reclaimed water system, tailored to their community's needs. With each plan, our goal to maximize the Client's return on investment, not simply checking a regulatory box. Hallandale Beach is an example where we combine the use of existing infrastructure to achieve required reuse levels, but to preserve Biscayne wells under threat of saltwater intrusion.

Reduce Solids and Improve Overall Solids Management – MWH along with our key teaming partner Carollo Engineering, Inc., brings real world experience with the latest strategies on reduction of solids and solids management. When optimizing biosolids management, our approach is to view the entire process as an energy factory with the goal to extract the maximum useful energy from the process.

Reduce Energy Consumption and Green House Gases – *Drs. Joseph Jacangelo, Mohammad Badruzzaman, and Joan Oppenheimer with MWH Research co-authored Urban Water-Cycle Energy Use and Greenhouse Gas Emissions, AWWA Journal February 2014. Our team is working with cutting edge strategies with communities across the country and will bring these strategies to Fort Lauderdale.*

Water Sustainability and Security – Water utilities managers worry most about the quality of the product produced and distributed to thousands of people daily. Second to quality is availability of the raw water. Fort Lauderdale, like other communities who rely heavily on the Biscayne aquifer, now must develop strategies to sustain that supply and expand for the future. MWH recently published *C-51 Independent Cost Estimate and Financial Analysis* and our team is better versed in the details for this project and strategies for a regional solution than anyone else.

In addition to a strong experienced team, we bring:

A Strong Local Project Manager, Task Managers and Local Key Team Members – Our Project Manager, Task Managers and Key Team Members are local with extensive regional experience. We also have included two Fort Lauderdale firms on our team, Cordova and CTA, both who have extensive local knowledge. Our team members understand the importance of such matters as sea level rise and sustainability and share your goals for developing strategies to effectively adapt to the future conditions.

Firm Legal Name, Point of Contact, Fax and Email Address:

MWH Americas, Inc
Harold Aiken, PE
Phone: 954-846-0401
Fax: 954-846-0424
Email: harold.aiken@mwhglobal.com

Support from Experts Worldwide – MWH, as a global consulting firm, has access to engineers and scientists who are available to provide advice and ideas in developing effective strategies around sea level rise and greenhouse gas reduction. Our offices in the UK are actively addressing both issues and may provide the City insight as to successes and failures.

Strong Applied Technology Experience – We specifically included Revere Controls, Inc. to our team for SCADA support because of the excellence they have provided our Clients across the Southeast. We have also included our MWH Asset Management team to provide any range of service required. This team understands how to maximize the asset management value to the Clients.

Experience in the 15 Precepts of Effectively Managed Utilities – MWH has a team that specializes in working with utilities to improve overall management effectiveness. Most recently the team completed an analysis with Mobile Area Water and Sewer System that provided steps for improvement and which was embraced by their governance board.

We are enthusiastic about this project and appreciate the opportunity to present our Statement of Qualifications. We look forward to the chance to present our ideas for assisting the City with the challenges you face and ultimately helping you better serve your customers. In the meantime, please contact me if you have any questions or require additional information.

Sincerely,
MWH

Becky Hachenburg, PE, PMP
Vice President

Harold Aiken, PE
Vice President

BID/PROPOSAL SIGNATURE PAGE

How to submit bids/proposals: Proposals must be submitted by hard copy only. It will be the sole responsibility of the Bidder to ensure that the bid reaches the City of Fort Lauderdale, City Hall, Procurement Services Division, Suite 619, 100 N. Andrews Avenue, Fort Lauderdale, FL 33301, prior to the bid opening date and time listed. Bids/proposals submitted by fax or email will NOT be accepted.

The below signed hereby agrees to furnish the following article(s) or services at the price(s) and terms stated subject to all instructions, conditions, specifications addenda, legal advertisement, and conditions contained in the bid. I have read all attachments including the specifications and fully understand what is required. By submitting this signed proposal I will accept a contract if approved by the CITY and such acceptance covers all terms, conditions, and specifications of this bid/proposal.

Please Note: All fields below **must** be completed. If the field does not apply to you, please note N/A in that field.

Submitted by: _____ June 16, 2014
(signature) (date)

Name (printed)
Harold V. Aiken Title: Project Manager

Company: (Legal Registration)
MWH Americas, Inc

CONTRACTOR, IF FOREIGN CORPORATION, MAY BE REQUIRED TO OBTAIN A CERTIFICATE OF AUTHORITY FROM THE DEPARTMENT OF STATE, IN ACCORDANCE WITH FLORIDA STATUTE §607.1501 (visit http://www.dos.state.fl.us/).

Address: 490 Sawgrass Corporate Parkway, Suite 300

City Sunrise, Florida State:
Zip 33325

Telephone No. (954) 846-0401 FAX No. (954) 846-0424 Email:
harold.v.Aiken@us.mwhglobal.com

Delivery: Calendar days after receipt of Purchase Order (section 1.02 of General Conditions):
510 Days

Payment Terms (section 1.04): Lump Sum Total Bid Discount (section 1.05):
N/A

Does your firm qualify for MBE or WBE status (section 1.09): MBE N/A WBE N/A

ADDENDUM ACKNOWLEDGEMENT - Proposer acknowledges that the following addenda have been received and are included in the proposal:

Addendum No. 1	Date Issued 5/22/2014
Addendum No. 2	Date Issued 6/10/2014
Addendum No. 3	Date Issued 6/10/2014

P-CARDS: Will your firm accept the City's Credit Card as payment for goods/services?

YES _____ NO X

VARIANCES: State any variations to specifications, terms and conditions in the space provided below or reference in the space provided below all variances contained on other pages of bid, attachments or bid pages. No variations or exceptions by the Proposer will be deemed to be part of the bid submitted unless such variation or exception is listed and contained within the bid documents and referenced in the space provided below. If no statement is contained in the below space, it is hereby implied that your bid/proposal complies with the full scope of this solicitation. HAVE YOU STATED ANY VARIANCES OR EXCEPTIONS BELOW? BIDDER MUST CLICK THE EXCEPTION LINK IF ANY VARIATION OR EXCEPTION IS TAKEN TO THE SPECIFICATIONS, TERMS AND CONDITIONS. If this section does not apply to your bid, simply mark N/A in the section below.

Variances:

N/A

revised 11-29-11

City of Fort Lauderdale • Procurement Services Division
100 N. Andrews Avenue, 619 • Fort Lauderdale, Florida 33301
954-828-5933 Fax 954-828-5576
purchase@fortlauderdale.gov

ADDENDUM NO. 1

RFQ 246-11426
COMPREHENSIVE UTILITY STRATEGIC MASTER PLAN

ISSUED 5/22/14

1. This addendum is being issued to make the following change:

The proposal due date has been changed to **JUNE 16, 2014**

The last day for questions has been changed to June 2, 2014

All other terms, conditions, and specifications remain unchanged.

James T. Hemphill
Sr. Procurement Specialist

Company Name: MWH Americas, Inc.
(please print)
Bidder's Signature: Harold V. Aiken
Date: June 16, 2014

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ADDENDUM NO. 2

RFQ 246-11426
Comprehensive Utility Strategic Master Plan

ISSUED 6/10/14

1. Questions and Answers that were submitted.

Question and Answers for Bid #246-11426 - Comprehensive Utility Strategic Master Plan

Question 1
Are there any companies who's previous work would preclude them from submitting on this Master Plan? **(Submitted: May 19, 2014 11:56:39 AM EDT)**

Answer

- No **(Answered: May 19, 2014 2:46:41 PM EDT)**

Question 2
1. Are the Tabs and Cover/Back of the submittal included in the 50 page count limit requirement?

2. Indicating there is Memorial Day Holiday, is it possible to get a 1-2 week extension on the due date?

3. What tab/section does the ?local preference? go under?

4. In Tab 4 ?Qualification of the Project Team?, it is suggested to add a brief resume. Do you want us to duplicate the resume already provided in the SF330 required in section3? **(Submitted: May 23, 2014 4:42:53 PM EDT)**

Answer

- 1. - No they will not be counted in the City's 50 page preference.
- 2. - Due date was extended (see addendum 1)
- 3. - You may place it as your last submittal - be sure it reference it in your table of contents.
- 4. - Duplication is not necessary. **(Answered: May 27, 2014 10:14:20 AM EDT)**

Question 3
Section IV, 3-Qualifications of the Firm ? Is the SF 330 required for the prime firm only or is more than one SF 330 acceptable since there maybe multiple sub-consultants as part of the team with specific qualifications? **(Submitted: Jun 2, 2014 4:15:01 PM EDT)**

Answer

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- Your option. **(Answered: Jun 3, 2014 11:37:10 AM EDT)**
- The sub-consultants are part of your project team and their information / SF330s should be in the section related to Qualifications of the Project team **(Answered: Jun 10, 2014 8:07:55 AM EDT)**

Question 4
Section V ? The Non-Collusion statement indicates that it should be signed, but there does not seem to be a signature line. Does this statement need to be signed? **(Submitted: Jun 2, 2014 4:16:36 PM EDT)**

Answer

- You may sign the bottom of the page. **(Answered: Jun 3, 2014 11:37:10 AM EDT)**

Question 5
Section V ? Evaluation /Selection Process, Scoring during presentation is not clear. How will presentations be scored? Will the final scoring be inclusive of the proposal and presentation or independent of proposal? **(Submitted: Jun 2, 2014 4:18:42 PM EDT)**

Answer

- Independent of proposal. **(Answered: Jun 3, 2014 11:37:10 AM EDT)**

All other terms, conditions, and specifications remain unchanged.

James T. Hemphill
Sr. Procurement Specialist

Company Name: MWH Americas, Inc.
(please print)
Bidder's Signature:
Date: June 16, 2014

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ADDENDUM NO. 3

RFQ 246-11426
Comprehensive Utility Strategic Master Plan

ISSUED 6/10/14

This Addendum is being issued to make the following change:

1. The following requirement shall be added to the RFQ Section III-Scope of Services under PROJECT DESCRIPTION, 2nd paragraph. (New language is underlined and bolded). Note: this should be found on page 14 of most specifications packages downloaded from BIDSYNC.:

For consideration for the CUSMP, CONSULTANT teams must demonstrate proficiency in their Statement of Qualifications in the fields not limited to the following: Water resources planning, civil engineering, electrical engineering, energy conservation and efficiency, environmental engineering, sustainable planning and design for utilities, hydrodynamics and pipeline system modeling, municipal organizational structure, finances and municipal and regulatory law. **In addition, the lead firm for the CUSMP effort shall specialize in Civil Engineering and have a current valid Certificate of Authorization from the State of Florida Board of Professional Engineers.**

All other terms, conditions, and specifications remain unchanged.

James T. Hemphill
Sr. Procurement Specialist

Company Name: MWH Americas, Inc.
(please print)
Bidder's Signature:
Date: June 16, 2014

SECTION 3

MWH Overview

MWH, globally driving the wet infrastructure sector, is leading the world in results-oriented management, technical engineering, and construction services to create a better world. The wet infrastructure sector we serve encompasses a full range of water-related projects and programs ranging from water supply, treatment and storage, dams, water management for the natural resources industry and coastal restoration, to renewable power and environmental services.

With a rich legacy that dates back to 1820 and today with more than 7,000 employees in 135 offices on six continents, our global team includes program managers, business consultants, engineers, geologists, operators, scientists, technologists and regulatory experts who provide solutions to the world's most challenging wet infrastructure projects. Our philosophy of strategically-based offices with local staff provides our clients superior service, world-class expertise, and regional knowledge.

The MWH team is driven to meet today's challenges, dedicated to innovation and committed to mastering and applying emerging technologies to create client-focused results. We have engaged in the engineering, construction, financing, and management of some of the world's largest and most technically significant wet infrastructure projects for our client base of more than 4,000 municipalities, governments, multi-national corporations, and industries.

We rank at the top of the wet infrastructure sector

Honored for excellence by top industry institutions and publications such as Engineering News-Record, we are consistently ranked as a top firm in the wet infrastructure sector. A complete list of our industry rankings is available at www.mwhglobal.com.

#3 Top 20 – Water
#3 Top 20 - Sewer/Wastewater
#18 Top 500 Design Firms

Source: Engineering News-Record Top 500 Design Firms Issue, April 2011

#2 Top 20 Wastewater Treatment Plants
#2 Top 25 in Water Supply
#2 Top 15 in Sanitary and Storm Sewers
#2 Top 15 in Transmission Lines and Aqueducts
#3 Top 15 in Treatment and Desalination
#3 Top 25 in Sewerage and Solid Waste

Source: Engineering News-Record Top 500 Design Firms Sourcebook, July 2010

MWH's Florida History

Established in Florida since 1968, MWH currently operates nine Florida offices, including Sunrise, Tampa, Sarasota, Miami, West Palm Beach, and Ft. Myers. Our Florida operation directly employs nearly 70 professionals, including some of the best water and wastewater engineers in the state. We believe that solutions arise from looking at things from a different perspective. By drawing on the wide variety of our employees' life experiences, personalities, and cultural backgrounds, MWH delivers creativity and innovation to our Florida clients. We have worked with and continue to serve many of the utilities in the region, including Broward County, Fort Lauderdale, Sunrise, Hollywood, Miramar, Tamarac, Oakland Park, North Lauderdale, Lauderhill, Hallandale Beach, Margate, Plantation, Pompano Beach, Wellington, West Palm Beach, Palm Beach County Water Utilities Department, Stuart, Miami-Dade Water and Sewer Department, and North Miami Beach.

Local Address:
490 Sawgrass Corporate Parkway, Suite 300
Sunrise, Florida 33325
Phone: (954) 846-0401; Fax: (954) 846-0424
Website: www.mwhglobal.com

Contact Person:
Harold Aiken, PE
Vice President
Email: harold.aiken@mwhglobal.com

Our History with Fort Lauderdale

MWH has historically performed a variety of projects for the City of Fort Lauderdale including:

- ✓ 7 MG Storage Tank at Five Ash Water Treatment Plant;
- ✓ Design and Permitting of ASR Well at Five Ash Water Treatment Plant ;
- ✓ ASR Well Alternative Use Evaluation to use as Blending Well;
- ✓ Pipeline design to recharge Prospect Wellfield; and
- ✓ 36 inch Force main and 48 inch Water main on 17th Street Causeway Crossing of Inter Coastal Waterway.

MWH Knows Municipal Utilities

MWH has a portfolio of extensive integrated utility planning experience that spans from master planning, operational, financial, regulatory and emergency planning. Master planning for capital improvements and rehabilitation and renewal projects has been a part of MWH's Florida history of excellence. MWH has completed numerous utilities planning projects. Many of these projects addressed such issues as how to increase a limited long-term water supply source, regulatory compliance, facilities planning, capacity needs assessments, system redundancy, prioritization and replacement of aging infrastructure, and other strategic planning issues. Our engineers focus on the technical complexities associated with operating water and wastewater facilities.

MWH with its proven comprehensive utility planning abilities can offer this vital service to the City that fits the available funding from different sources.

MWH provides a level of expertise in water, wastewater, infrastructure, and master planning that is difficult to match in any other organization in the world. We have earned a reputation as one of the world's leading global multi-discipline, full service environmental engineering and consulting firms and we will leverage this locally for the City of Fort Lauderdale.

Extensive Master Planning Experience

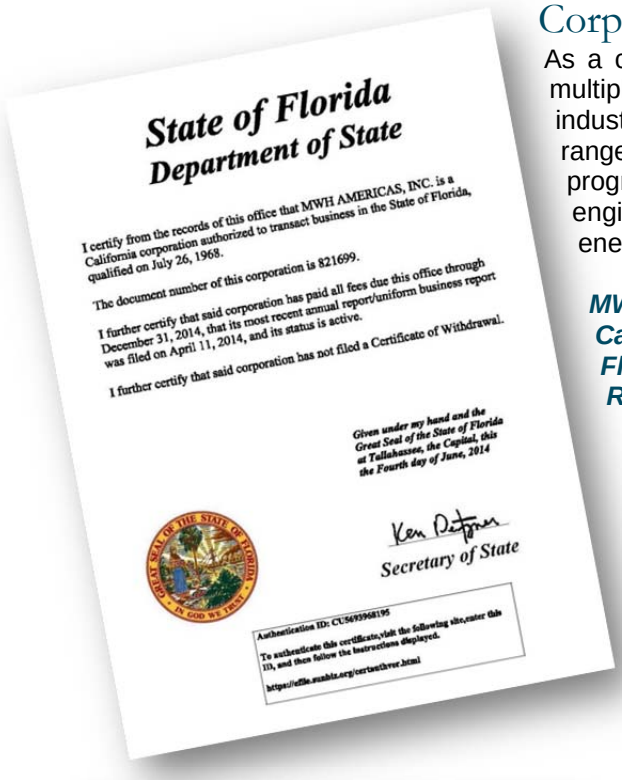
MWH has prepared more than 400 master plans and feasibility studies for wastewater, water, storm drainage, and industrial waste systems – many of which are similar in size to the City of Fort Lauderdale. Several examples of these projects can be found in the Standard Form 330 Section F of this Statement of Qualifications. We thoroughly understand the holistic need of the City and provide planning solutions by evaluating a variety of options that fit the City's need. MWH has proven experience in planning within Southeast Florida and has completed the Palm Beach County Raw Water Master Plan (2001), the City of Cape Coral Facilities Plan (2004), Marco Island Water and Wastewater Master Plan (2005), and the City of Sunrise Water and Wastewater Master Plan (2008). Along with master plans, MWH has in-depth regulatory planning experience that includes consumptive use permit planning, water supply facilities planning, reuse feasibility planning, planning during rate study development and bond feasibility evaluation, and planning for disaster recovery. MWH is at the forefront in rebuilding New Orleans post Katrina disaster. Our utility planning projects have included a full-range of assignments, as shown in the following table.

Water	Wastewater	Utility-Wide
Integrated Utility Planning	Integrated Utility Planning	SCADA and Control Systems
Demand Forecast	Flow Forecast	Asset Management
Water Supply Planning	Pumping and Transmission System Modeling	Electrical Engineering
Wellfield Evaluation and Planning	Infiltration and Inflow Evaluation	Civil Engineering
Consumptive Use Permitting	Treatment Process	Environmental Engineering
Hydraulic Distribution Modeling	Effluent Disposal	Sustainable Planning/Climate Change/Sea Level Rise
System-wide Water Quality Improvements	Reuse Planning, Design and Implementation	Regulatory Review
Treatment Process	Optioneering	Organization Structure
Storage Tank and High Service Pumping	Biosolids Management Planning	
Solids Management		
Water Conservation		
Water and Wastewater		
Energy/Operational Optimization		
Capital Improvements Plan		
Grant Funding		
Financing		

Corporate History

As a company, MWH has grown in part through the combination of multiple engineering firms with successful histories in the engineering industry. The result is a robust consulting firm that now offers a broad range of expertise to our clients for construction management, program management, and a full spectrum of capabilities for engineering, planning and design services for environmental, energy, and infrastructure projects.

MWH is a global corporation incorporated in the state of California and registered as a legal entity in the State of Florida. Professional licenses and Local Business Tax Receipt are provided herewith.



State of Florida
Department of State

I certify from the records of this office that MWH AMERICAS, INC. is a California corporation authorized to transact business in the State of Florida, qualified on July 26, 1968.

The document number of this corporation is 821699.

I further certify that said corporation has paid all fees due this office through December 31, 2014, that its most recent annual report/uniform business report was filed on April 11, 2014, and its status is active.

I further certify that said corporation has not filed a Certificate of Withdrawal.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Fourth day of June, 2014

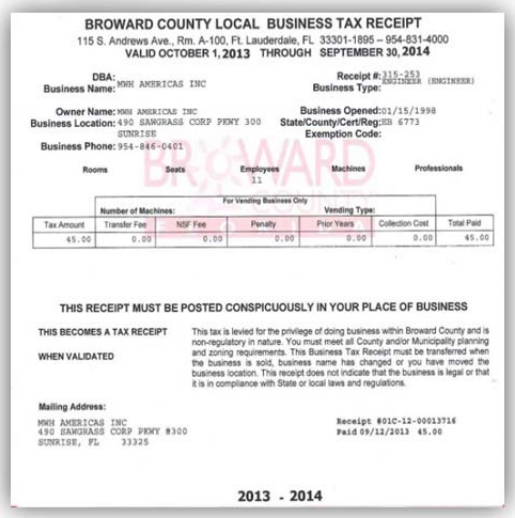
Secretary of State

Authentication ID: CU5693968195

To authenticate this certificate, visit the following site, enter this ID, and then follow the instructions displayed.

https://efile.sunbiz.org/certauthver.html

State of Florida
Board of Professional Engineers
Attests that
MWH Americas, Inc.
FBPE
is authorized under the provisions of Section 471.023, Florida Statutes, to offer engineering services to the public through a Professional Engineer, duly licensed under Chapter 471, Florida Statutes.
Expiration: 2/28/2015
Audit No: 228201504368
Certificate of Authorization
CA Lic. No: 6773



BROWARD COUNTY LOCAL BUSINESS TAX RECEIPT
115 S. Andrews Ave., Rm. A-100, Ft. Lauderdale, FL 33301-1895 – 954-831-4000
VALID OCTOBER 1, 2013 THROUGH SEPTEMBER 30, 2014

DBA:
Business Name: MWH AMERICAS INC
Receipt #: 315-253
Business Type: ENGINEER (ENGINEER)
Owner Name: MWH AMERICAS INC
Business Location: 490 SAWGRASS CORP PKWY 300 SUNRISE
Business Opened: 01/15/1998
State/County/Cert/Reg: EB 6773
Exemption Code:
Business Phone: 954-846-0401

Rooms	Seats	Employees	Machines	Professionals
		11		

For Vending Business Only
Number of Machines:
Vending Type:

Tax Amount	Transfer Fee	NSF Fee	Penalty	Prior Years	Collection Cost	Total Paid
45.00	0.00	0.00	0.00	0.00	0.00	45.00

THIS RECEIPT MUST BE POSTED CONSPICUOUSLY IN YOUR PLACE OF BUSINESS

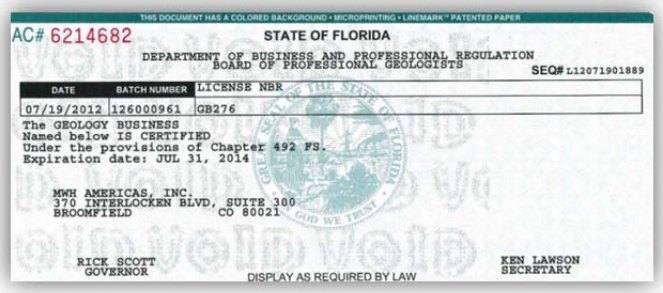
THIS BECOMES A TAX RECEIPT WHEN VALIDATED

This tax is levied for the privilege of doing business within Broward County and is non-regulatory in nature. You must meet all County and/or Municipality planning and zoning requirements. This Business Tax Receipt must be transferred when the business is sold, business name has changed or you have moved the business location. This receipt does not indicate that the business is legal or that it is in compliance with State or local laws and regulations.

Mailing Address:
MWH AMERICAS INC
490 SAWGRASS CORP PKWY #300
SUNRISE, FL 33325

Receipt #01C-12-00013716
Paid 09/12/2013 45.00

2013 - 2014



THIS DOCUMENT HAS A COLORED BACKGROUND • MICROPRINTING • LINEMARK™ PATENTED PAPER
AC# 6214682
STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
BOARD OF PROFESSIONAL GEOLOGISTS
SEQ# L12071901889

DATE	BATCH NUMBER	LICENSE NBR
07/19/2012	126000961	GB276

The GEOLOGY BUSINESS
Named below IS CERTIFIED
Under the provisions of Chapter 492 FS.
Expiration date: JUL 31, 2014

MWH AMERICAS, INC.
370 INTERLOCKEN BLVD, SUITE 300
BROOMFIELD CO 80021

RICK SCOTT
GOVERNOR
DISPLAY AS REQUIRED BY LAW
KEN LAWSON
SECRETARY

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
BOARD OF ARCHITECTURE & INTERIOR DESIGN

LICENSE NUMBER
AA26001487

The ARCHITECT CORPORATION
Named below IS CERTIFIED
Under the provisions of Chapter 481 FS.
Expiration date: FEB 28, 2015

MWH AMERICAS, INC.
370 INTERLOCKEN BLVD # 300
BROOMFIELD CO 80021

RICK SCOTT
GOVERNOR
ISSUED: 02/18/2013 SEQ # L13021800001477
DISPLAY AS REQUIRED BY LAW
KEN LAWSON
SECRETARY

Relevant Project Experience

MWH has selected from our extensive list of planning projects, those that that establish our qualifications for various aspects of the Comprehensive Utility Strategic Master Plan (CUSMP). Show cased in the included projects and worthy of note, MWH offers unique experiences to the City in the areas of comprehensive planning to include water, wastewater, reuse, hydraulic modeling, biosolids management, infiltration and inflow, operational optimization (energy, chemicals and resource efficiencies), asset management, SCADA and controls system, and sustainable planning to address climate change and sea level rise. The best way to show our relevant experience is to let our projects speak for themselves. The following table highlights examples of MWH's relevant project experience. ***A complete Standard Form 330 immediately follows this section which further details of MWH's relevant project experience.***

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Project Experience Matrix

			WATER										WASTEWATER									WATER/ WASTEWATER				UTILITY-WIDE							
Similar Projects	Client	SF330 Project Page No.	Integrated Utility Planning	Demand Forecast	Water Supply Planning	Wellfield Evaluation and Planning	Consumptive Use Permitting	Hydraulic Distribution Modeling	System-wide Water Quality Improvements	Treatment Process	Storage Tank Evaluation	Water Conservation	Integrated Utility Planning	Flow Forecast	Pumping and Transmission System Modeling	Infiltration and Inflow Evaluation and Reduction	Treatment Process	Effluent Disposal	Reuse Planning, Design and Implementation	Optioneering	Biosolids Management Planning	Energy Optimization	Capital Improvement Plan	Grant Funding	Financing	SCADA and Control Systems	Asset Management	Electrical Engineering	Civil Engineering	Environmental Engineering	Sustainable Planning	Regulatory Review	Organization Structure
MWH Project References																																
Sunrise Master Plan and Related Engineering Services	City of Sunrise, Florida	44	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sunrise Program Management	City of Sunrise, Florida	45	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓						✓	✓	✓	✓	✓	✓	
Water and Wastewater Master Plan	City of Cape Coral, Florida	46	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓		✓	
Utility Master Plan	Marco Island, Florida	47	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓								✓	✓		✓	
Optimization of Wastewater Lift Stations for Reduction of Energy Usage and Greenhouse Gas Emissions	Water Environment Research Foundation	48																												✓		
Central District Wastewater Treatment Plant – Renewal and Replacement Program	Miami-Dade Water and Sewer Department, Florida	49												✓	✓		✓	✓	✓		✓							✓	✓	✓	✓	✓	
Reclaimed Water Filtration Plant and Wastewater Reuse Study	City of Pompano Beach, Florida	50		✓				✓					✓	✓			✓	✓	✓							✓		✓	✓	✓	✓		
Water Treatment Plant Upgrades	City of West Palm Beach, Florida	51								✓	✓															✓		✓					
Enterprise Asset Management (EAM) Program	Richmond Department of Public Utilities, Virginia	52																									✓					
Clean Water Atlanta Program	Atlanta Department of Watershed Management, Georgia	53												✓	✓	✓														✓	✓	
MWH Team References																																
Pinewoods Reverse Osmosis Water Treatment Plant Expansion Design Build	Lee County Utilities, Florida	54				✓				✓	✓																	✓				
Nitrification Action Plan	Palm Beach County, Florida	55							✓	✓	✓																					
Port Everglades - Various GIS Projects	Public Works & Transportation Department, Florida	56					✓								✓																	
Utility Analysis Zone Improvement Program (UAZ) 124	Broward County Water and Wastewater Services, Florida	57						✓							✓																	
Professional Services Contract	City of Sunrise, Florida	58																								✓						
Broward County Regional Reuse Master Plan	Broward County, Florida	59																	✓											✓		
Lohmeyer Wastewater Treatment Plant Effluent Disposal Pump Station Rehabilitation	City of Fort Lauderdale, Florida	60																✓								✓		✓				
Water Conservation Technical Evaluation	Palm Beach County Utilities, Florida	61		✓								✓																				
Other MWH Similar Project Experience*																																
Port Everglades - Various GIS Projects	City of Santa Barbara, California	N/A		✓								✓																				
Conservation Analysis for Long-Term Water Supply Plan	City of Santa Barbara, California	N/A		✓								✓																				
Water Supply Facility, Hydraulic Model, Master Plan	City of Pompano Beach, Florida	N/A	✓	✓	✓	✓	✓	✓											✓				✓								✓	
Peak Flow Program	Miami-Dade Water and Sewer Department, Florida	N/A												✓	✓	✓							✓			✓					✓	
Wastewater System Hydraulic Network Model	Margate, Florida	N/A												✓	✓								✓									
Falkenburg Advance Water Treatment (AWT) Expansion	Hillsborough County, Florida	N/A															✓	✓					✓			✓		✓				

* Other similar projects included are to display experience only and are not included in the Standard Form 330.

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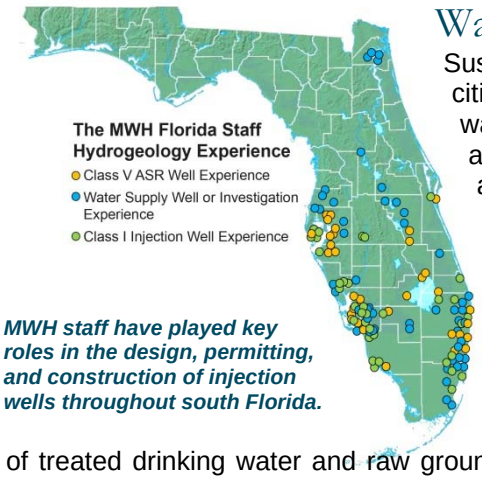
MWH has completed numerous utilities planning projects. Many of the previously described projects addresses issues as how to increase a limited long-term water supply source, what is the best option for reuse given options such as surface water disposal, ground water recharge, grey water for irrigation, harvesting offset benefits in supply side, how to best sequence projects with competing needs and ever changing drivers be it regulations, economy, or natural effects such as rain/draught. Our engineers use a wholistic approach with focus on technical complexities. Below is the glimpse of our firms' capabilities as it relates to the City of Fort Lauderdale's need for Comprehensive Utility Strategic Master Plan (CUSMP).

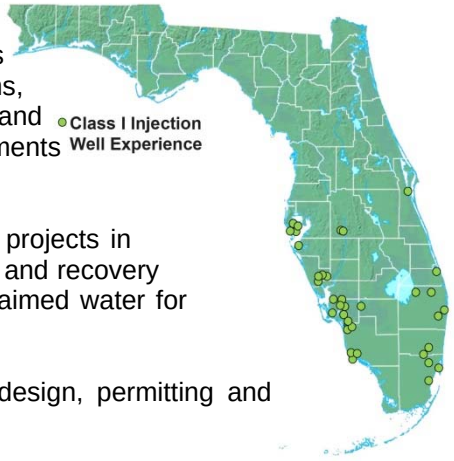
Comprehensive Utility Master Planning has been a part of MWH's Florida history of excellence.



MWH staff have played key roles in the design, permitting, and construction of injection wells throughout south Florida.

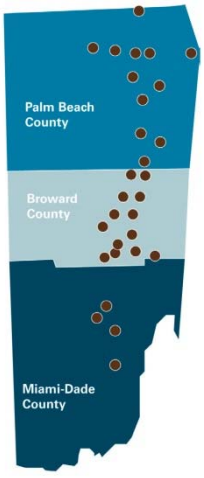
Water Resources

Sustainability of City of Fort Lauderdale's long-term water supply has been citizens concern since the inception of visioning initiatives. MWH provides water resources planning, design, permitting, analysis, feasibility studies, and related activities for federal, state, and local governments, and private clients. We have assisted our clients with the development of new systems, expansion of existing systems, and compliance with regulatory requirements from the State.



MWH has completed over 65 ASR projects in more than 10 states for the storage and recovery of treated drinking water and raw groundwater for public water supply and reclaimed water for irrigation and reuse supply.

MWH is the leader in injection well facilities design. Our staff has provided design, permitting and construction services for over 40 deep injection wells throughout Florida.



Water Use Permits

MWH has obtained Water Use Permits for over 30 utilities in Southeast Florida. We understand the regulations, the stakeholder interests, and the procedures involved in obtaining water use permits. Our water use permitting experience for local water supply projects is extensive, spanning over 30 years and beginning with Broward and Palm Beach Counties; clients who achieved many permit firsts.

- ✓ Palm Beach County - Otained the first 20-year water use permit ever given by the SFWMD in 2000.
- ✓ City of North Miami Beach - Obtained 20-year Water Use Permit that included three different treatment methodologies (lime softening, nano-filtration, reverse osmosis). The first utility in Miami-Dade County to provide for Alternative Water Supply from the brackish Floridan Aquifer.
- ✓ City of Sunrise - Obtained 20-year Water Use Permit under the new Lower East Coast (LEC) Water Supply Plan and Regional Water Availability Rules adopted in February 2007.

MWH has obtained water use permits for some of the largest water supply systems in southeast Florida.

Computer Modeling

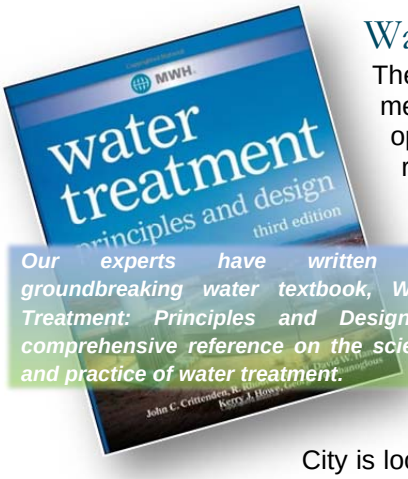
The City of Fort Lauderdale has a need to update both hydraulic distribution and wastewater transmission system model. MWH engineers, hydrogeologist and geoscientists, are experienced in the development and analysis of water distribution, collection systems, force main systems and aquifer models.

MWH is an industry leader in computer modeling for water system hydraulics and water quality. Our staff is experienced in selecting appropriate software for creating computer models, evaluating model results, and developing and integrating databases. We help you maximize your success through a combination of industry-

savvy veterans and engineers as well as leading GIS and modeling specialists, best-in-class methodologies, proven tools, and in-depth implementation know-how. We have recently performed hydraulic modeling for the City of Miramar, City of North Miami Beach, City of Cape Coral and the City of Sunrise.

City of Margate, Hydraulic Modeling

MWH developed a distribution, transmission and storage systems model using MWHSoft InfoWater software and existing data from City's GIS system. Analysis was performed under steady state and extended period simulation (EPS) for different flow scenarios. System improvements were recommended for canal crossing to provide redundancy and system reliability. Areas with potential fire flow restrictions were identified were connectivity solutions were offered to resolve the issue. Recommendations for additional force mains were made to improve the pressures in the system.



Our experts have written the groundbreaking water textbook, Water Treatment: Principles and Design, a comprehensive reference on the science and practice of water treatment.

Water Treatment

The City has Five Ash Lime Softening Water Plant (70 mgd) and Peele Dixie membrane treatment plant (20 mgd) and is seeking for improved water quality, operational enhancements through efficiency in energy, chemical and resources and reliability. MWH has designed more than 680 water treatment plants with capacity ranging from less than 1 to over 1,000 mgd. Our company provides expertise from conventional treatment to membrane filtration to ozonation. MWH experts have been designing large, conventional water treatment facilities for more than 60 years.

Wastewater Treatment

The City of Fort Lauderdale has G. T. Lohmeyer Wastewater Treatment Plant. As part of proactive maintenance goal within City's Sustainable Action Plan, the City is looking for infrastructure improvements that can result in efficient energy standards. In the past decade, MWH has designed and managed the construction of more than 255 water and wastewater treatment plants, 200 reservoirs, 250 pump stations and thousands of miles of pipeline around the world. These projects have ranged in size from $100,000 to over $3B in total capital costs.

Our wastewater experience is all encompassing, and includes collection systems, treatment facilities, residuals management and handling, odor control and air pollution. Our designs have included primary treatment, biological secondary treatment, and tertiary treatment involving a variety of unit operations. MWH has designed facilities for sequencing batch reactors, enhanced biological nutrient removal, membrane bioreactors, ballasted flocculation, tertiary filtration, disinfection systems including chlorine, UV and advanced oxidation technologies (UV/UV-peroxide, UV/Ozone), odor control, and sludge handling.

We have planned, designed and managed the construction of more than 500 wastewater treatment facilities ranging in size from 0.25 mgd to over 800 mgd with a constructed value in excess of $30B.

Reuse and Water Reclamation

The City of Fort Lauderdale has an objective to identify and implement wastewater reuse opportunities within the Sustainable Action Plan. MWH is pioneer in wastewater reuse projects locally, regionally and globally. We provide our clients with a wide array of reuse service offerings including feasibility, planning, alternative evaluation, treatment, public outreach, and alternative water supply. We have experience ranging from satellite or centralized treatment plants for irrigation, surface water recharge, ground water recharge, ASR wells for reuse, pilot studies and have the capability to provide full range of reuse planning to the City.

MWH designed and constructed at one point, the largest wastewater reuse facility in Broward County, the Pompano Beach Water Reclamation Facility at 7.5 mgd. MWH's reuse design experience in south Florida is one of the largest encompassing more than a total of 40 mgd in reuse treatment plant designs and 180,000 feet of reclaimed water mains.

As part of Water Reuse Research Foundation, MWH is evaluating the impacts of reuse water on surface water bodies; the results of this study will have significant impact to any utility anticipating purple pipe irrigation systems as part of their long term water management plan. MWH is the lead author for the Reuse Foundation's study that examines disinfection requirements for satellite water recycling facilities against California standards, recognized as one of the most comprehensive sets of high effluent water treatment process requirements.

Solids Management

The City of Fort Lauderdale's Strategic Plan 2018 has an objective to use sludge from water and wastewater operations more effectively. MWH experts provide a full range of biosolids services, including biosolids master planning, design, permitting, air emissions, environmental monitoring and construction management support. Recent project elements include:

- ✓ Sludge Thickening
- ✓ Digestion (aerobic, anaerobic, thermal hydrolysis)
- ✓ Temperature-phased digestion
- ✓ Thermal drying
- ✓ Co-combustion with municipal solids wastes
- ✓ Dewatering
- ✓ Odor Control and Disposal Methods

MWH investigates the most promising options for biosolids handling at facilities with expertise on sludge digestion, thickening, dewatering drying, storage and conveyance. MWH has team of experts that study the impact of the proposed changes to biosolids regulations in Florida.

MWH's Ongoing Local Projects are in Alignment with Goal 2, Objective 6 of City of Fort Lauderdale's Strategic Plan 2018

- ✓ MWH is working with City of Sunrise and City of Pompano Beach to identify and implement wastewater reuse opportunities.
- ✓ MWH is developing regional solutions in Broward County for C-51 to develop long-term water supply strategies for utilities.
- ✓ MWH is working to develop a solution for Salinity Barrier using Reuse Water for aquifer recharge for the City of Hallandale Beach.

The MWH project team designed a new centrifuge dewatering and thermal drying facility for Hillsborough County, which now allows the County to sell its pelletized biosolids product to regional growers as a fertilizer.

City of Margate, Lime Sludge Dewatering Facility Feasibility Study (2012) - *MWH conducted a study to determine the feasibility of constructing a lime sludge dewatering facility at the existing Water Treatment Plant. The objectives of the study were to provide an overall water savings to the WTP to offset the need for alternative water supplies and provide improved dewatering to lower maintenance and disposal costs. Existing technologies were evaluated including belt filter presses, mechanical presses, and vacuum presses. MWH provided a recommendation for the most suitable technology, preliminarily sized the facility, provided conceptual general arrangement drawings, and developed a site plan for the proposed facility. A technical memorandum was developed to present the evaluation and provide recommendations.*

Transmission and Pumping Systems

MWH has a vast portfolio of experience nationally, regionally and locally that spans from design and construction of raw water, treated water, gravity mains, forcemain and reuse pipelines as well as different types of pumping systems.

MWH engineers have designed numerous major pipeline systems, including more than 5,000 miles of pipelines with diameters up to 144 inches. We have also installed pipelines under some of the most adverse conditions—surface congestion, underground utilities, rugged terrain and unstable or corrosive soils. Designs have included open trench, tunnel, jacking, sub-marine and other types of installations.

MWH has designed over 1,000 water and wastewater pumping stations, with capacity up to 550,000 gpm and total connected horsepower up to 66,000. This work includes new pump stations, rehabilitation and/or expansion of existing stations and large pumping plants associated with water and wastewater treatment facilities.

MWH has designed and installed 520,000 feet of sewer gravity pipe, 180,000 feet of sewer forcemain, 270,000 feet of water transmission pipeline, 180,000 feet of reclaimed water mains and 22 sewer pumping stations within south Florida over the past seven years.

MWH conducted the Miami-Dade $1B Wastewater Capital Improvement Program to reduce sewage overflow as required by federal and state regulations. Wet weather sewage overflows were reduced by 90% in volume.

Infiltration and Inflow

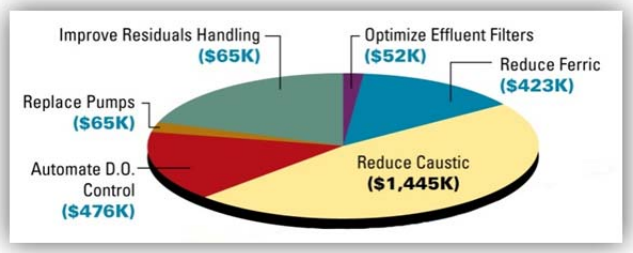
We understand that the City has a goal to be a sustainable and resilient community, and its number one objective is to proactively maintain its infrastructure. The City has a goal to reduce the number of sewage overflows annually and is looking to reduce excessive infiltration and inflow. MWH has a dedicated wetweather practice group who assist clients with combined and separate sewer overflow issues. Our wetweather practice expertise includes combined sewer overflows, storage, inflow and infiltration, pipelines/sewers/pumping stations, data collection/asset survey and sanitary sewer overflows.

MWH managed the largest sewer rehabilitation program in the U.S., the Greater Houston Wastewater Program. This program included a number of specialized tasks focused on sewer system rehabilitation and maintenance, including a Sanitary Sewer Rehabilitation Demonstration Project, development of standard products criteria and post-construction evaluation of rehabilitation methods and materials.

Energy and Operational Efficiency

The City of Fort Lauderdale is seeking efficient operations of its facilities using chemicals, energy and resources more efficiently. MWH provides Resource Efficiency Management (REM) services designed to accomplish a fundamental purpose for our clients: reduce their on-site capital and operating expenses due to inefficient resource use. In accomplishing this we provide facilities with green and sustainable projects, certifications and regulatory compliance.

Through the REM approach, MWH delivers improved efficiencies while reducing cost and risk. We do this by optimizing the use of energy, water and other resources, while minimizing waste and harnessing available financial incentives for sustainable products. MWH excels not only at providing full engineering and construction services, but also at assisting our clients in capturing the maximum level of financial incentive to realize a more attractive rate of return on their projects.



MWH recently conducted operational optimization for the City of Atlanta's four Water Reclamation Centers by eliminating chemicals, reducing energy costs and maximizing existing resources. With this the City of Atlanta realized annual operating savings of $3M- an eight month payback period.

MWH was recently awarded "Water and Wastewater Utility Energy Research Roadmap" project from the Water Research Foundation. Water/wastewater utilities are increasingly looking for innovative, cost effective, sustainable ways of energy costs, energy consumption, and greenhouse gas (GHG) emissions reduction. The objective of the project is to develop a roadmap for energy research that will include a list of prioritized research, development, and demonstration projects on energy management for water and wastewater utilities. For this project, we have 32 partner utilities across the Country.

Water Research Foundation REM projects awarded to MWH:

- ✓ *Optimization of Energy and Water Quality Management System, Denver, Colorado*
- ✓ *Drinking Water Pump Station Design and Operation for Energy Efficiency, Denver, Colorado*
- ✓ *Optimization of Wastewater Lift Stations for Reduction of Energy Usage and Greenhouse Gas Emissions, Alexandria, Virginia*

The MWH Team has an extensive background and experience in analyzing and reviewing environmental legislation and regulations.

Permitting

Among the challenges facing utilities across the State of Florida is the task of complying with current and future water, wastewater, and UIC regulations. Our long-term local presence and extensive project experience in Florida has helped us forge sound professional relationships with state and local government agencies. We carry a broad portfolio of local permitting experience.

We have aided utilities through compliance, expansion, storage, treatment, water quality, and wastewater quality issues. Our knowledge of Florida Department of Environmental Protection (FDEP) procedures and policies allows us to efficiently manage permit preparation and compliance tasks. Our South Florida water supply development projects have required extensive communication with the South Florida Water Management District (SFWMD) over the past 35 years and we have maintained communication with the District's staff throughout the rule and policy changes over the last decade.

Sustainability: Our Commitment to Creating a Sustainable Future

MWH's sustainability efforts, as a whole, are formally structured around MWH's Climate Change Commitment. Inspired in part by our invitation to participate in the Clinton Global Initiative, MWH developed a multi-year, multi-faceted Climate Change Commitment aimed at combating climate change and raising awareness of its causes and effects. MWH also became a member of The Climate Group and the US EPA Climate Leaders.

Carbon Footprint

MWH looked in the mirror and analyzed, measured and devised strategies to get our own house in order. We have set a target to cut our carbon emissions by 15 percent – an ambitious yet achievable goal. MWH has adopted ways to make our air travel more sustainable, and made a $1.5 million capital investment to improve our video conferencing capabilities.

In the US, MWH consults municipal utilities with regards to the risks and opportunities of carbon and the nuances of the market criteria and standards of the Chicago Climate Exchange and other carbon standards.

MWH managers also lead the teaching of the vast aspects of sustainability, including courses at institutions such as the University of Cambridge, Colorado State University, University of Wisconsin-Madison, the University of Michigan, University of Colorado and more.

Our Award Winning Green Technology for Sustainable Integration Alewife Wetlands Restoration, Cambridge, MA

MWH earned a '2014 National Recognition Award' from the American Council of Engineering Companies (ACEC) for the Alewife Wetlands Restoration and Stormwater project in Cambridge, Massachusetts. Since 1998, MWH has been involved with this unique project involving the separation of stormwater and other matter in the Alewife sub-watershed of the Mystic River watershed as part of a multi-million dollar wetlands restoration. MWH utilized 21st century 'green technology' for the sustainable integration of stormwater with the natural environment to create an environmental marvel. MWH has recently completed the development of the Charles River model (including reservoir routing and dam operations) for the city of Cambridge, MA.

Institutional and Financial Planning

MWH firm maintains a staff of engineers with particular expertise in the preparation of institutional, economic, and revenue programs including federal/state loan grant programs, prospective preparation for the municipal financing market, and economic feasibility reports in support of bond issues. The firm has successfully completed over 100 analytical and statistical financial studies of water and wastewater systems. As part of its facility plans, MWH has prepared financial and revenue plans in accordance with the latest federal and state requirements in states where special local requirements exist. These plans have been prepared in careful consultation with the client and with other levels of involved government, thereby assuring that the means and approach for funding that portion of the project which is not grant eligible (and for creating a revenue program for payment of annual debt service and operation and maintenance costs) are acceptable to all parties concerned with the financial success of the project. Many of the water and wastewater system master plans we have completed in recent years have also required implementation plans including scheduling, financing, and development of systems for cost allocations to the ultimate system customer.

MWH has the following financing and funding capabilities:

- ✓ Identify funding options including federal and/or state grants and loans, short- and long-term bond financings, and equity-based pay-as-you-go funding (using existing reserves,
- ✓ Impact fees revenues and net revenues from wastewater service charges).
- ✓ Provide evaluations necessary and suitable for state loan applications and documentation.
- ✓ Develop a water, wastewater, and reuse finance and revenue program computer model to indicate and verify planning assumptions, financing options, revenue requirements, and impacts on various classes of customers.
- ✓ Estimate additional capital costs that may be necessary to ensure level of service, consistent with the City's wastewater plan.
- ✓ Estimate and summarize O&M, administrative and overhead costs to be incurred by or payable by the enterprise.
- ✓ Compare and evaluate appropriate funding options, including apparent impacts on ratepayers.
- ✓ Use market-appropriate factors to estimate annual costs associated with financed capital, including forms of instrument, interest terms, maturities, and security and marketing covenants.

Grant Assistance

MWH has successfully supported our client's efforts to obtain local, state, and federal grant funding for numerous projects. MWH maintains a staff of engineers with particular expertise in the preparation of institutional, economic, and revenue programs including federal/state loan grant programs, prospective preparation for the municipal financing market, and economic feasibility reports in support of bond issues. As part of its facility planning offers, MWH has prepared financial and revenue plans in accordance with the latest federal and state requirements in states where special local requirements exist.

Over the past decade alone, MWH has led or played a significant role in securing financing for more than $12 billion in municipal public works programs. This has included bond financing, state revolving fund loans, regional governance grants and loans, federal grants under a number of programs, and a variety of alternative financing methods.

State-wide:

- ✓ *Federal funds for City of Tampa Bay Water - $5M grant*
- ✓ *Federal funds for City of Sunrise - $1M grant*
- ✓ *SFWMD AWS funds for City of Sunrise - $1.5M cost share*
- ✓ *SFWMD funds for Tampa Bay Water - $200 M grant*
- ✓ *Florida legislative appropriations - $10M*
- ✓ Buy America Bonds for City of Sunrise - $50M
- ✓ Broward County funds for City of Pompano Beach - $200K cost share

National:

- ✓ *Ohio EPA and Redevelopment Agency funds for Ohio clients (Cleveland, North Royalton, NEORSD) - $560M bonds and low-interest loans*
- ✓ *USEPA and State Revolving funds for California clients (Los Angeles, San Diego, Sacramento) - $10B grants, bonds, and low-interest loans*
- ✓ *USEPA and LDEQ funds for Louisiana clients (Baton Rouge, Iberville Parrish, Jefferson Parrish) - $9M grants*

Asset Management

MWH has a center of excellence for Enterprise Asset Management (EAM) in its Broomfield, CO office. Our experienced local team is familiar with the both the current EAM market and the specific asset management needs of water-centric organizations like Northern Water. The team leverages a combination of standard approaches and lessons learned to produce concise, right-sized work products that help utilities and City's extract the most value from their EAM investments.

The table shown lists a selection of our recent Asset Management consulting and improvement programs for US clients. The projects cover a range of support services including:

- ✓ Asset Management Vision and
- ✓ Objectives Setting
- ✓ GAP Analysis and Benchmarking
- ✓ Business Process Reengineering
- ✓ EAM Evaluation and Implementation
- ✓ IT Master Planning
- ✓ GIS Integration
- ✓ SCADA
- ✓ Work and Maintenance Management
- ✓ Asset Registers and Data Capture

MUNICIPALITY	STATE	ANNUAL OPERATING BUDGET	COMPLETION DATE	FINAL COST
Fort Collins Utilities	CO	$175M	On-Going	$2.3M
US Air Force	Worldwide	*	On-Going	$18.3M
Baltimore DPW	MD	$385M	On-Going	$8M
Richmond DPW	VA	$335M	On-Going	$374K
Prince William County Service Authority	VA	$62M	On-Going	$1.6M
Newport News Waterworks	VA	$81M	2012	$400K
City of Rockford	IL	$49M	2012	$800K
City of Henderson	NV	$95M	On-Going	$2.5M
San Francisco Public Utilities Commission	CA	$75M	2008	$150K
Dallas Water Utilities	TX	$564M	2007	$1.3M
City of Denver Public Works	CO	$132M	On-Going	$225K
City of Atlanta, Dept of Watershed Management	GA	$155M	2008	$1.3M
Little Rock Wastewater Utility	AR	$70M	2008	$225K
Arapahoe County Water and Wastewater Authority	CO	$113M	2007	$115K

SCADA Evaluation

MWH's in-house staff includes approximately 50 full- time, dedicated professionals who specialize in SCADA, instrumentation and control (I&C), communication, and information management. We have over 35 years of experience providing study, design, support engineering, and startup services related to facility control, I&C, SCADA, and information systems. During that time, MWH completed more than 250 projects involving control, SCADA system applications, I&C, communication, and telemetry systems to support our clients in water production, treatment, transmission, storage, and distribution, and wastewater treatment and collection. These projects have ranged from controlling a single well, booster, or lift station pump station to the automatic operation of large system networks serving municipal populations as large as 14 million in areas that exceed 2,500 square miles.

MWH's SCADA designs include data transmission by various communication media including telephone, radio, microwave, metallic circuit, cable television, fiber optic cable, and satellite. Our SCADA capabilities reflect the depth of experience required to understand and control complex process interrelationships and provide an operator-oriented approach to control of these processes.

MWH uses the latest field-proven, open-architecture hardware and software in developing the best fit for water and wastewater control, SCADA, and automation systems. Our engineering staff has access to this latest technology, which they apply to effectively control specific equipment and processes. In addition, our engineers are experienced in all aspects of automated control for a wide range of water related control processes as well as data acquisition, communication, computer-based control, monitoring displays, data management, and information systems. MWH's capabilities and experience in these areas reflect the depth of experience required to understand and control complex process interrelationships and to provide an operator-oriented approach to control and monitor of these processes.

SA Water Benefits Realization

Reporting	$150K
Process Efficiency	$750K
DOT	$500K
CAPEX	$500K
Renewals	$500K
Water Loss	$400K
Rights Events	$100K
Anomolies	$50K
WQ Events	$30K
Reactive/Preventive Maintenance	$100K
Maintenance Planning	$50K
Total Potential Saving	≥$3M/Annum

MWH recently completed a successful South Australia Water project that utilized best practices in developing hydraulic models and SCADA data management.

The following Standard Form 330 details MWHs qualifications, proposed team, resumes of key personnel and example projects.

ARCHITECT - ENGINEER QUALIFICATIONS

PART I – CONTRACT-SPECIFIC QUALIFICATIONS

A. CONTRACT INFORMATION

1. TITLE AND LOCATION	
Engineering Services for Comprehensive Utility Strategic Master Plan, Fort Lauderdale, Florida	
2. PUBLIC NOTICE DATE	3. SOLICITATION OR PROJECT NUMBER
May 14, 2014	Request for Qualifications RFQ # 246-11426

B. ARCHITECT-ENGINEER POINT OF CONTACT

4. NAME AND TITLE		
Mr. Harold Aiken, PE, Vice President		
5. NAME OF FIRM		
MWH Americas, Inc.		
6. TELEPHONE NUMBER	7. FAX NUMBER	8. E-MAIL ADDRESS
(954) 846-0401	(954) 846-0424	harold.aiken@mwhglobal.com

C. PROPOSED TEAM

(Complete this section for the prime contractor and all key subcontractors.)

	(check)			9. FIRM NAME	10. ADDRESS	11. ROLE IN THIS CONTRACT
	PRIME	J-V PARTNER	SUBCON-TRACTOR			
a.	X			MWH Americas, Inc. [x] CHECK IF BRANCH OFFICE	490 Sawgrass Corporate Parkway Suite 300 Sunrise, Florida 33325	Consultant
b.			X	Carollo Engineers, Inc. [x] CHECK IF BRANCH OFFICE	3440 Hollywood Boulevard Suite 465 Hollywood, Florida 33021	Subconsultant
c.			X	Cordova Rodriguez & Associates, Inc. [ ] CHECK IF BRANCH OFFICE	6941 SW 196th Avenue Suite 28 Pembroke Pines, Florida 33332	Subconsultant
d.			X	Craven Thompson & Associates, Inc. [ ] CHECK IF BRANCH OFFICE	3563 NW 53rd Street Fort Lauderdale, Florida 33309	Subconsultant
e.			X	Hillers Electrical Engineering, Inc. [ ] CHECK IF BRANCH OFFICE	23257 State Road 7, Suite 100 Boca Raton, Florida 33428	Subconsultant
f.			X	Maddaus Water Management, Inc. [ ] CHECK IF BRANCH OFFICE	105 Zephr Place Danville, California 94526	Subconsultant
g.			X	Revere Control Systems, Inc. [x] CHECK IF BRANCH OFFICE	3810 Drane Field Road, Suite 16 Lakeland, Florida 33811	Subconsultant

D. ORGANIZATIONAL CHART OF PROPOSED TEAM

[X] *See Section 4 of SOQ*

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Harold Aiken, PE	**Project Manager**	40	20
15. FIRM NAME AND LOCATION *(City and State)*	MWH Americas, Inc., Sunrise, FL		
16. EDUCATION *(Degree and Specialization)*		17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*	
MS, Engineering; BSCE, Engineering		Professional Engineer Civil - Florida, North Carolina, Texas	

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Aiken is a Vice President with MWH and has serviced in a principal role for the past 20 years. His consulting experiences include Master Planning, Resource Planning, Capital Improvements Planning, Financial Planning, and Strategic Planning. Prior to his joining MWH, Mr. Aiken worked in the public sector as the Director Engineering, Planning and Operations and as General Manager for the WCRWSA . He also served as the Chief of Permitting for the SWFWMD and was involved in the early development of Florida Water Law and its application in today's environment.

19. RELEVANT PROJECTS

a

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
C-51 Independent Cost Estimate and Financial Analysis, Palm Beach County, Florida	PROFESSIONAL SERVICES	2013-2014
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Mr. Aiken led a team of specialists in reviewing the 30 percent C-51 reservoir design, evaluating the design's conformance with USACE and SFWMD design criteria. The team also developed an OPCC for both phases of construction so the potential participants have independent confirmation of the cost to construct. The team then ran a series of cost models to provide relative cost for project participation

b

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Hallandale Saltwater Intrusion Barrier, City of Hallandale Beach, Florida	PROFESSIONAL SERVICES	2013-Ongooing
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Mr. Aiken has developed a concept to use an existing drainage well system in the City as a salinity barrier by introducing highly treated reclaim water into the wells and creating a hydraulic barrier in the shallower aquifer. Treating the reclaim water to Broward County standards poses challenges that are being addressed using MicroNiche™ technology in an effort to provide a cost effective solution.

c

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
City of Sunrise Utility Master Plan, City of Sunrise, Florida	PROFESSIONAL SERVICES	2006-2008; 2000-2001
	CONSTRUCTION	NA

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Mr. Aiken led the team to provide a robust plan for the City's utilities that could provide a path forward for future capital improvements and system renewal and replacement. The Master Plan included future population projections and diurnal analysis coupled with projections for flows and loads. The Plan included plant inspections and condition assessments of key structures and equipment. This resulted in a comprehensive 15 year plan for utility investment.

Prior to the 2008 update, Mr. Aiken led a team that prepared a partial Master Plan that evaluated the newly acquired SW Ranches water and wastewater facilities. This analysis aided the City in planning future uses of the facilities.

d

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
South Florida Water Management District, West Palm Beach, Florida	PROFESSIONAL SERVICES	2004-2008
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Mr. Aiken led a combined team of district staff and consultants to plan, fund, design, and construct the Everglades Acceler8 Restoration Projects. Activities included working closely with ACOE in matching Preliminary Design Reports with Acceler8 planned projects to assure the functional intent was met and to provide better cost estimating and funding strategies.

e	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	Greater Houston Wastewater Program, Houston, Texas	PROFESSIONAL SERVICES	1994-2000
		CONSTRUCTION	N/A
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE	[X] Check if performed with current firm	
	Mr. Aiken led Master Planning the Northside, Sims Bayou and Scott Street service areas. These areas included service to approximately 2 million people and 575 MGD of wastewater flow. The planning included modeling, combined with sanitary sewer overflow records to develop a series of projects that would achieve compliance with an EPA consent order. The plan resulted in about 250 projects of more than a $750M. This plan was quickly converted to designs with construction and full operation by 1999. Consent decree compliance was achieved and operational optimization occurred the last 12 months.		
f	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	Regional Water Supply Needs and Sources Update Report. West Coast Regional Water Supply Authority, Clearwater, Florida	PROFESSIONAL SERVICES	1979-1982
		CONSTRUCTION	N/A
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE	[X] Check if performed with current firm	
	Mr. Aiken served as the Director of Engineering, Planning and Operations and oversaw the development of the Regional Master Plan referred to the Needs and Sources Study. This report projected the population and water demands for the tri-county region as well as presented options for meeting those future demands. This served as the basis for the Agency's capital investment program and consumptive use permitting.		
g	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	Regional Water Supply Needs and Sources 1985-1986 West Coast Regional Water Supply Authority, Clearwater, Florida	PROFESSIONAL SERVICES	1985-1988
		CONSTRUCTION	N/A
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE	[X] Check if performed with current firm	
	Mr. Aiken served as the Director of Engineering, Planning and Operations and oversaw the development of the Regional Master Plan referred to the Needs and Sources Study. This report projected the population and water demands for the tri-county region as well as presented options for meeting those future demands. This served as the basis for the Agency's capital investment program and consumptive use permitting.		
h	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	Southwest Florida Water Management District, Brooksville, Florida	PROFESSIONAL SERVICES	1977-1979
		CONSTRUCTION	N/A
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE	[X] Check if performed with current firm	
	Mr. Aiken managed the Consumptive Use Permitting division of the agency. Permitting was a new responsibility for the agency and Mr. Aiken was responsible for formulating the rules and procedures that were used to evaluate permit requests. He helped develop the staff, provided hydrologic training and assisted in development of early groundwater models that became the standard tool used across the State in evaluating the potential impacts resulting from permitting water resources.		

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Mohammad Badruzzaman, PhD, PE	**Energy/Operational Efficiency**	15	9
15. FIRM NAME AND LOCATION *(City and State)*	MWH Americas, Inc., Sunrise, FL		

16. EDUCATION *(Degree and Specialization)*	17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*
PhD., Civil and Environmental Engineering MS, Civil and Environmental Engineering	Professional Engineer - California

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Dr. Badruzzaman is a research engineer in the MWH Research Group. He has 15 years of experience in applied research that lies at the interface of drinking water treatment, brackish and seawater desalination and energy management. His research has been funded by Water Research Foundation, Water Reuse Research Foundation and Water Environment Research Foundation. His research has centered on energy efficient, and sustainable solutions including: Reduction of energy costs through real-time management of energy tariff structures, implementation of renewable energy sources, energy efficient design and operating principals for electric and gas driven pumping systems and water foot printing to understand the water-energy nexus.

19. RELEVANT PROJECTS

a

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Water Research Foundation, Denver, Colorado	PROFESSIONAL SERVICES	2014
	CONSTRUCTION	On Going

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Principal Investigator - Dr. Badruzzaman has partnered with 32 water utilities and industry participants to investigate innovative, cost effective and sustainable ways to reduce energy costs, energy consumption and greenhouse (GHG) emissions. The goal is to develop demonstration projects for energy management in the water and wastewater utilities

b

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Water Research Foundation, Denver, Colorado	PROFESSIONAL SERVICES	2014
	CONSTRUCTION	On Going

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Principal Investigator - Dr. Badruzzaman has partnered with 20 water utilities to investigate the operational options to reduce energy uses and greenhouse emissions in drinking water systems. The results will include recommendations for reducing energy consumption not simply energy costs.

c

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Water Research Foundation, Denver Colorado	PROFESSIONAL SERVICES	2013
	CONSTRUCTION	2014

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Principal Investigator - Dr. Badruzzaman led the investigation in understanding the direct and indirect uses of water within a water system and how to conserve water throughout the utility supply chain. The output includes information for the utility as well as information for educating the public on water conservation.

d

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Water Research Foundation, Denver, Colorado	PROFESSIONAL SERVICES	2010
	CONSTRUCTION	2012

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Engineer -The tools developed to quantify energy usage, greenhouse gas (GHG) emissions, and other environmental impacts can vary widely in terms of performance indicators, input and output metrics, and applicability to water industry processes. Dr. Badruzzaman is working on this project to survey process model and impact assessment tools in use in North America, Europe, South Africa, and Australasia

e

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Water Reuse Research Foundation, Denver, Colorado	PROFESSIONAL SERVICES	Ongoing
	CONSTRUCTION	

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Principle Investigator - Dr. Badruzzaman is leading this project with a global team consists of multidisciplinary experts and sixteen partners consisting of water utilities and industry participants. The overall goal of this project is to provide a better understanding of the application of liquid natural gas (LNG) for self-generation of power and/or for the operation of gas driven engines for large water treatment plant pumping.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Thaddeus Buckley, GC	**Optioneering**	20	2
15. FIRM NAME AND LOCATION *(City and State)*	MWH Constructors, Sunrise, Florida		

16. EDUCATION *(Degree and Specialization)*	17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*
MBA, Business Administration BS/BSc, Economics and Finance	Certified General Contractor - Florida

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Designated DBIA Professional, Construction Association of South Florida, Mechanical Contractors Association, Southeast Desalting Association, American Membrane Technology Association, Association of General Contractors of America

19. RELEVANT PROJECTS

a

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Project Executive, Peele-Dixie Membrane Plant, Ft. Lauderdale, Florida	PROFESSIONAL SERVICES	2008
	CONSTRUCTION	

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [ ] Check if performed with current firm

Project Executive: This $27.3 million project entailed the construction of the 12-mgd Membrane Softening Water Treatment Facility at the existing plant which was built in 1926. In addition to the Membrane Facility, the project involved building Generator and Chemical Buildings and installed four Membrane Process Skid Units each with (77) Pressure Vessels. The major components of the work included the installation of one 300 HP variable speed membrane feed pump, four raw water cartridge filters, a new high service pump station with five 250 HP vertical turbine high service pumps, three 60 HP transfer pumps, a new chemical tank farm, a metering pump building, and two 1750 kva emergency diesel generators.

b

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Fiveash Water Treatment Plant Upgrades – Phase 1, Ft. Lauderdale, Florida	PROFESSIONAL SERVICES	2008
	CONSTRUCTION	

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [ ] Check if performed with current firm

Project Executive: This $12.5 million project upgraded the entire water treatment plant's instrumentation and control system from the existing pneumatic control system to the state-of-the-art PLC and fiber optic control system. The project also involved replacing the main plant's core control system, installing four new lime slakers with new controls and instrumentation, two 200 HP high service pumps, new polymer distribution system with four new polymer feed pumps, a new lime sludge thickening tank with three submersible pumps, a new aqueous ammonia storage tank and pump building with two 10,000 gallon steel storage tanks and four metering pumps, and miscellaneous valves and control upgrades throughout the plant

c

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Fiveash Water Treatment Plant Filter Rehabilitation, Ft. Lauderdale, Florida	PROFESSIONAL SERVICES	2009
	CONSTRUCTION	

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [ ] Check if performed with current firm

Project Executive: This $2.4 million project entailed the rehabilitation of six of the existing 22 filters at the Fiveash Water Treatment Plant under the WaterWorks 2011 program. During the completion of the contract work, the City of Fort Lauderdale increased our scope of work from six to ten filters. Each of the ten filter rehabilitations included removal of the existing filter internals, including the underdrain system, media and surface wash piping. The inside concrete surfaces of all rehabilitated filters were refinished and prepared for the new underdrain and media installation. A new 316 stainless steel surface wash system was installed in each filter, and each pair of rehabilitated filters was tested, disinfected, and placed back into operational service within six weeks of being taken out of service.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Lynette Cardoch, PhD, Leed AP	**Sustainable Planning, Utility Wide**	20	7
15. FIRM NAME AND LOCATION *(City and State)*	MWH Americas, Inc., Denver, Colorado		

16. EDUCATION *(Degree and Specialization)*	17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*
A.B., Biological Anthropology M.A., Marine Affairs and Policy PhD. Department of Oceanography and Coastal Sciences Fulbright Scholar, Ecological Economics	LEED AP

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

LEED AP, Board of Advisors for Harvard/Zofnass Institute for Sustainable Infrastructure

19. RELEVANT PROJECTS

a

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Central District Wastewater Treatment Plant Engineering Approach for Climate Adaptation and Resiliency Plan , Miami, Florida	PROFESSIONAL SERVICES	Ongoing
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Technical Leader, Dr. Cardoch is presently the technical leader to formulate a plant-level climate adaptation and resiliency plan for the Central District Wastewater Treatment Plant (CDWWTP), its regional pump stations and associated forcemains. CDWWTP, the largest and most exposed of the three County plants and may serve as a case study for further development into other critical infrastructure including other treatment plants and local pumping stations as applicable. The purpose is to develop a framework to create a definition of resilience and climate adaptation that can be applied to CDWWTP during planning, design, and operations of critical infrastructure assets. This task involves generating agreement on acceptable levels of risk and risk tolerance, and associated levels of service during regular operations as well as extreme events.

b

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Conditions Assessment and Asset Inventory, Miami-Dade County Water and Sewer Department (WASD), Miami, Florida	PROFESSIONAL SERVICES	2012
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Technical Advisor, Dr. Cardoch served as a technical advisor to the development of the standardized system and the delivery of the project in 2008 and again for the update in 2012. The 2012 update served as a basis of identification of critical project needs in consent decree negotiations with the US EPA in 2013. We developed a criticality assessment with utility relevant evaluation factors. These included items such as downstream/cascading effects, permit / process compliance, and reliability. Sea level rise is an issue.

c

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Framework & Metrics for Green Projects Implementation, City of Doral, Florida	PROFESSIONAL SERVICES	2009
	CONSTRUCTION	

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Technical Manager, Worked with the City of Doral to determine a baseline set of metrics around which the city of Doral can measure success and progress toward green projects implementation. This framework will serve as a set performance metrics and reporting protocols that could serve as the foundation of a systematic approach to help the city of Doral reach their sustainability goals. The metrics and protocols provided a unified terminology and understanding around green project community development.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Rosana D. Cordova, PE, Leed AP, AICP	**Reuse Implementation**	27	14

15. FIRM NAME AND LOCATION (City and State)	Cordova Rodriguez & Associates., Inc., Pembroke Pines, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)	17. CURRENT PROFESSIONAL REGISTRATION (*State And Discipline*)
BS, Civil Engineering BS, Architectural Engineering	Professional Engineer - Florida; American Institute of Certified Planners (AICP); Leadership in Energy and Environmental Design Accredited Professional (LEED AP)

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Chair of the Broward County Central Examining Board for Engineering; VP of Smart Growth Partnership; APA Florida Sustainability Committee; Education Chair, USGBC, South Florida, Broward Chapter; Past-Chair, Broward Section, American Planning Association; Fluent in Portuguese and Spanish; DBE; SBE; WBE

19. RELEVANT PROJECTS

a

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
Broward County Regional Reuse Mater Plan	PROFESSIONAL SERVICES	2012-2014
	CONSTRUCTION	N/A
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE	[X] Check if performed with current firm	

This project created a platform to coordinate a regional approach to reclaimed water planning and maximize cost-effective reclaimed water development within Broward County. The project goal was to create a living document that could be easily adapted as reclaimed water needs and drivers change over time. Our specific duties included research to provide current facility reuse operations data including review of reports related to water, wastewater and reuse water within the County, municipalities, specialty districts and service providers; Prepared cad files of the exsiting wastewater systems for several municipalities in order to convert into GIS; analyzed data to research items that met criteria and created kml's to display within the Google Earth platform.

b

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
Water Supply Facilities Work Plan, City of Aventura, Florida	PROFESSIONAL SERVICES	2008
	CONSTRUCTION	N/A
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE	[X] Check if performed with current firm	

Preparation of the City's Water Supply Facilities Work Plan, which identified and planned for the water supply sources and facilities needed to serve existing and new development within the jurisdiction. The work addressed the development of traditional and alternative water supplies, service delivery, and conservation and reuse programs. The Work Plan addressed background, data and analysis, projects, Capital Improvement Element, schedule, and review of goals, objectives and policies. Services also included the preparation of Comprehensive Plan Amendments in order to adopt the Plan and incorporate revisions to the elements of the Comprehensive Plan. The Plan was adopted in 2008.

c

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
Miami-Dade Water & Sewer Department Water Allocation Study	PROFESSIONAL SERVICES	2008-2009
	CONSTRUCTION	N/A
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE	[X] Check if performed with current firm	

Services included the collection, review and analysis of water consumption data for the various land uses listed in Chapter 24 of the Miami-Dade County Code. Water usage was analyzed in each service area and recommendations were provided for updating the various allocations in Chapter 24 of the Code as necessary. The County's GIS database was used as well as the County's Property Appraiser's database. These were combined with the Customer Information System which contains the water usage information for each meter and the Certificate of Use database. This allowed for the review of the actual use of the building such as number of chairs or doctors as required for the units used in Chapter 24.

d

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
Fort Lauderdale/Hollywood International Airport Terminal 4, Broward County, Florida	PROFESSIONAL SERVICES	2003-2008
	CONSTRUCTION	2007-2008
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE	[X] Check if performed with current firm	

This project included assistance in the preparation of design and construction documents for miscellaneous landside projects in the expansion of Terminal 4 of the airport. Services included site plan design, paving, drainage, water and sewer, pavement marking and signage and permitting. It also included construction observation and project close-out documentation.
One of the miscellaneous projects was for a baggage expansion area for the Terminal which included relocating water and sewer mains and regarding and drainage for the improvements to the area.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Sangeeta Dhulashia, PE, PMP	**Task Manager, Wastewater Treatment**	19	11
15. FIRM NAME AND LOCATION *(City and State)*	Sunrise, Florida		

16. EDUCATION *(Degree and Specialization)*	17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*
MS, Environmental Engineering, BE, Chemical Engineering	Professional Engineer - Florida (Environment), PMP

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Publications with FWRC, AWWA, WEFTEC, and WateReuse

19. RELEVANT PROJECTS

a

(1) TITLE AND LOCATION *(City and State)* **Section F, Project**

Pump Station Improvement Program for MDWASD, NOVA Consulting, Miami, FL

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	2014
CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Ms. Dhulashia is serving a role of senior advisory committee to validate remedial action plan for 109 pump stations that are under consent decree. Ms. Dhulashia is managing a team of engineers that are performing validation of previously prepared remedial plans by the Departments. The validation efforts entail multitude of data from SCADA, field, historic as-built information, and analysis from the department. This project is time sensitive since there are stations that affect development moratorium, corrective action in timely manner is needed as the development is spurring in Miami.

b

(1) TITLE AND LOCATION *(City and State)* **Section F, Project**

Water and Wastewater Capital Improvements Program, City of Sunrise, FL

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	2010-CURRENT
CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

As a Technical Services Manager, Ms. Dhulashia has been providing planning, concept development, technical review, project management oversight (60 plus projects) and consultant management services (5 firms) to the City for a $440M 20-year capital improvements plan for variety of projects including water, wastewater, reuse, pipeline projects. Ms. Dhulashia provides progressive planning services to the City and works on an annual basis with the City staff to re-evaluate the planning of the project, categorization and performs prioritization for the City by working with the City staff as City's staff extension. Ms. Dhulashia works with the City on daily basis to perform flow projections, scheduling, budgeting, permitting, reuse planning, collection and distribution system planning and provides all facets of planning services support to the City. Ms. Dhulashia works with the City staff to plan the City's capital improvement plan annually and works on impact fee update, feasibility report for bonds and comprehensive plan updates at it pertains to utility engineering.

c

(1) TITLE AND LOCATION *(City and State)* **Section F, Project**

General Engineering Services, City of Sunrise, FL

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	2008
CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Manager for several projects including Consumptive Use Permit, Park City Water Main Replacement Design 2010, Engineering Feasibility Report for Bond 2009, Water Supply Facilities Plan 2008, Integrated Water and Wastewater Master Plan 2008, Asset Management and Program quick start, MBR Pilot study for enhanced nutrient removal 2007, Water Supply Issue Statement, Hydraulic Model Update 2005, Connection Fee Update 2005 and 2009, Utility Facilities Valuation 2006. Ms. Dhulashia is experience in running large teams to deliver wet infrastructure projects ranging from planning to design and construction.

d

(1) TITLE AND LOCATION *(City and State)* **Section F, Project**

Wastewater Systems Improvement Program, Atlanta, GA

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	Ongoing
CONSTRUCTION	Ongoing

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Contract Manager – managed a $500M contract for Atlanta, Georgia's $3B wastewater systems improvement program. The program included the construction of improvements to three WWTP, the evaluation and rehabilitation of gravity sewers and seven combined sewer overflow facilities and improvements to 14 pump stations. Managed a team evaluating the condition of the city's sanitary sewers. Responsibilities included schedule and cost management, progress reporting, change management, specification development oversight, providing guidance on warranty-related items.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Glenn Fawcett	**Asset Management**	22	16
15. FIRM NAME AND LOCATION *(City and State)*	MWH Americas, Inc. Broomfield, CO		

16. EDUCATION *(Degree and Specialization)*	17. CURRENT PROFESSIONAL REGISTRATION (State and Discipline)
BS, Civil Engineering; MS, Engineering (Information Systems)	Institute of Engineers - New Zealand

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

ACENZ, Future Leader Award 2003; IPENZ, Young Engineer Award 2004

19. RELEVANT PROJECTS

a

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Enterprise Asset Management Improvement Program, Richmond DPU, Virginia	PROFESSIONAL SERVICES	Ongoing
	CONSTRUCTION	N/A
(3) BRIEF DESCRIPTION AND SPECIFIC ROLE	[X] Check if performed with current firm	

Assessment of current asset management business processes, identification of gaps and development of business improvement charters to address people/process/technology aspects. Responsible for progressing improvements to incident management, workforce mobility, planned maintenance and FMEA.

b

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Expansion of EAM System, Public Works Department, Brunei	PROFESSIONAL SERVICES	2013
	CONSTRUCTION	N/A
(3) BRIEF DESCRIPTION AND SPECIFIC ROLE	[X] Check if performed with current firm	

Project Director responsible for the US$12.0M implementation of IBM's EAM solution for the Public Works Department as a whole. Maximo was moved to a single multi-site installation at the National eGovt Centre and accessed across four Departments of JKR (Roads, Water, Wastewater, Drainage)
The project included:

- Business process analysis, needs assessment and improvement planning
- Asset collection for roads and 3-waters reticulation (GIS) and facility assets using as-builts and GPS surveys
- Configuration of Maximo and ArcGIS on virtualized servers at national data center.
- Development of reliability centered maintenance plans for critical assets
- Developing forward maintenance plans
- Institutional strengthening and support (for 2 years post-project)

c

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Implementation of Hansen 8 AMS, Queenstown Lakes District Council, New Zealand	PROFESSIONAL SERVICES	2008
	CONSTRUCTION	N/A
(3) BRIEF DESCRIPTION AND SPECIFIC ROLE	[X] Check if performed with current firm	

Project Manager for the US$700k implementation of the Hansen AMS for the management of maintenance for civil infrastructure. Includes system integration with Maximo, KBase and AquaLink. The project included:

- Business process analysis, needs assessment and improvement planning
- Management of IT vendor contract
- Definition of asset register and integration plan
- Communication to executive team.

d

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Balanced Scorecard and Project Management Initiatives, MWH, New Zealand	PROFESSIONAL SERVICES	N/A
	CONSTRUCTION	N/A
(3) BRIEF DESCRIPTION AND SPECIFIC ROLE	[X] Check if performed with current firm	

Global project team member for implementing internal Project Management framework (PMI-based) across MWH (over 7,000 staff). Development of Balanced Scorecard initiative for NZ business to provide KPI monitoring of business health.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Becky Hachenburg, PE, PMP	**Task Manager**	19	18
15. FIRM NAME AND LOCATION *(City and State)*	MWH – West Palm Beach, FL		

16. EDUCATION *(Degree and Specialization)*	17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*
MS, Industrial and Systems Engineering BS, Environmental Engineering	Professional Engineer – Florida, Project Management Professional (PMP)

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

19. RELEVANT PROJECTS

a

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
West Palm Beach Surface Water Treatment Plant, City of West Palm Beach, Florida	PROFESSIONAL SERVICES	On-going
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Client Service Manager - Ms. Hachenburg is the client services manager responsible for staff resourcing, overall project financial performance, and client satisfaction of the City's 47-mgd surface water treatment plant. For this project, MWH has replaced gaseous chemical systems with liquid systems for improved site safety, oversaw construction of the plant's automation, a new electrical generator and switchgear building, a new FPL power feed, pilot testing for MIEX progressed to Palm Beach County Dept. of Health permit application submittal and procurement documents, a new mixing and metering header, drought management planning, Profibus conversion, high service pump evaluation and refurbishment, condition assessment, and filter media evaluations.

b

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Disinfection System Evaluation (WUD 11-117), Palm Beach County, Florida	PROFESSIONAL SERVICES	2012
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Manager - PBCWUD had concerns with the safety and ongoing operations costs associated with their five onsite hypochlorite generator (OSG) systems. PBCWUD was considering switching from the OSG units to bulk hypochlorite delivery and as their primary disinfection process and commissioned MWH to provide a comparative evaluation based on technical, economic, and non-economic factors. The activities included surveying facilities with OSG units across the US, visiting facilities, and performing economic evaluations. Ms. Hachenburg was responsible for the daily coordination of this project, technical review of deliverables, and presentations and meetings with PBCWUD.

c

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
North Lee County Water Treatment Plant, Lee County Utilities Department, Florida	PROFESSIONAL SERVICES	2004
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Manager/Engineer-of-Record – Ms. Hachenburg was project manager and Engineer-of-Record for the Lee County reverse osmosis water treatment plant (RO WTP). This project included lower Hawthorne production well design and construction, a 5-mgd RO WTP including cartridge filtration, chemical pretreatment, degasification and odor control, post-treatment chemical addition, a 5-MG ground storage tank, a high-service pumping station, transmission main and injection well design, permitting, and construction. Ms. Hachenburg's responsibilities included process design, coordination with subconsultants and four company offices, client relations, and cost control. All design work was performed in 3D.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Paul Hillers, P.E.	**Electrical Engineering**	33	20
15. FIRM NAME AND LOCATION *(City and State)*	Hillers Electrical Engineering, Inc, Boca Raton, Florida		
16. EDUCATION *(Degree and Specialization)*		17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*	
BSEE, Electrical Engineering; MSEE, Electrical Engineering		Professional Engineer - Florida	

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Institute of Electrical and Electronic Engineers (IEEE), Instrument Society of America (ISA)

19. RELEVANT PROJECTS

a

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Broward County 3C Water Storage Tank, Broward County, Florida	PROFESSIONAL SERVICES	2011
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Manager – Hillers Electrical Engineering performed electrical systems engineering for the replacement of the 3C Water Storage Tank and accompanying high service pumps with ancillaries. Our task included a new FPL service, switchgear, ATS, MCC variable frequency drives, lighting, grounding, conduits, cables, etc.

b

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Broward County 1A Water Treatment Plant, Broward County, Florida	PROFESSIONAL SERVICES	2010
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Manager – Hillers Electrical Engineering performed electrical systems engineering for the 1A Water Storage Tank new hypochlorite and recarbonation system. Our task included a new distribution panel, VFD's, lighting, grounding, conduits, cables.

c

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Broward County 2A Water Treatment Plant, Broward County, Florida	PROFESSIONAL SERVICES	2012
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Manager – Hillers Electrical Engineering performed electrical systems engineering for the 2A Water Storage Tank new hypochlorite and recarbonation system. Our task included a new distribution panel, VFD's, lighting, grounding, conduits, cables.

d

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Conserv II Water Reclamation Facility Master Pump Station and Flow Equalizer Pump Station, City of Orlando, Florida	PROFESSIONAL SERVICES	2010
	CONSTRUCTION	2012

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Manager – Provided electrical design and construction inspection services for construction of a new Master Pump Station and converting existing Master Pump Station to Flow Equalization Pump Station at City of Orlando – Conserv II Water Reclamation Facility. Project included construction of new Master Pump Station (MPS) and associated instruments and control panels, new odor scrubber systems, new equalization tank and new electrical building.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Kristin Hink, EIT	**Demand Forecast**	6	6
15. FIRM NAME AND LOCATION *(City and State)*	MWH – Sunrise, Florida		

16. EDUCATION *(Degree and Specialization)*	17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*
BS, Environmental Engineering	Engineer-in-Training (EIT) - Florida

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Ms. Hink specializes in water and wastewater process design, hydraulic analysis, pilot testing and operations, and hydraulic modeling for water and wastewater systems. Ms. Hink has experience gathering and synthesizing data, assisting in the preparation and analysis of engineering studies, reports, piloting, construction management, and design. She is also affiliated with the MWH Young Professionals Group, American Society of Civil Engineers, American Membrane Technology Association, Southeast Desalting Association, and Engineers Without Borders-USA.

19. RELEVANT PROJECTS

a

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Professional Program Management Services for City's Water and Wastewater Capital Improvement Program, Sunrise, Florida	PROFESSIONAL SERVICES	Ongoing
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Engineer, Project Manager, and Technical Service Coordinator - Professional Program Management Services for City of Sunrise, Florida Water and Wastewater Capital Improvement Program (CIP). Program management activities include engineering and support services such as planning, organizing, and executing activities required for delivery of the City's CIP which includes implementation of various water, wastewater, reuse, planning, modeling and pipeline projects. Ms. Hink also worked directly with the City to develop a reuse distribution system plan, cost-to-benefit analysis, and planning level cost estimate. Ms. Hink gathered and geo-located consumptive use permits (CUP), identifying CUP users within the City's service area nearest the City's Wastewater Treatment Plant, and helped build a reuse distribution piping system using ArcGIS. Ms. Hink performed an analysis of pipe sizes to generate a cost-to-benefit analysis accounting for potential off-set credits to the City's CUP, implementation phasing plan, and timeline of reuse customer connections. Ms. Hink also worked as project manager to coordinate efforts performed by other consultants which includes groundwater modeling to determine consumptive off-set credits, design and implementation of a reuse water treatment facility and distribution system, and development of an appropriate rate structure to help fund the reuse distribution system plan.

b

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Hydraulic Water Distribution & Wastewater Collections System Model, Margate, Florida	PROFESSIONAL SERVICES	2011
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Engineer - Ms. Hink served as project engineer for the City of Margate hydraulic and wastewater distribution model collection. Her responsibilities included data evaluation and development of a hydraulic water distribution model using Infowater® software, as well as the evaluation of the hydraulic model results. Ms. Hink assisted in the development of a technical memorandum addressing distribution system improvements and recommendations.

d

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Sunrise Master Plan, Sunrise, Florida	PROFESSIONAL SERVICES	2008
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Engineer - Ms. Hink served as project engineer for the alternative water supply evaluation and water storage, transmission and distribution chapters of the Sunrise Master Plan. Responsibilities included hydraulic modeling of water distribution systems and producing write up and figures for reports on the future water supply plans for the City of Sunrise.

e

(1) TITLE AND LOCATION *(City and State)* **Section F, Project**	(2) YEAR COMPLETED	
Project Engineer, Water Reclamation Facility 30% Design, Miami, Florida	PROFESSIONAL SERVICES	2008
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Engineer -Ms. Hink served as project engineer for the Miami-Dade Water and Sewer Department on the process design of a 1 MGD Water Reclamation Facility at the Central Dade Wastewater Treatment Plant This plant utilizes high level disinfection including microfiltration and reverse osmosis. Her responsibilities included hydraulic analysis for the 30% design for pressurized and gravity systems, pipe and tank sizing, basis of design report, and preliminary design drawings. She also assisted with the procurement process for microfiltration/ultrafiltration systems by assisting with market research and with the development of a Request for Information (RFI) and vendor questionnaire.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Nan Johnson	**SCADA and Control Systems**	20	7
15. FIRM NAME AND LOCATION *(City and State)*	Revere Control Systems, Inc., Birmingham, Alabama		
16. EDUCATION *(Degree and Specialization)*	17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*		
BS, Computer Science			
18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*			
Project Management Professional (PMP)			

19. RELEVANT PROJECTS

a	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	SCADA Professional Services, Sunrise, Florida	PROFESSIONAL SERVICES	N/A
		CONSTRUCTION	2012
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE	x Check if performed with current firm	
	SCADA Professional services including configuration, maintenance, troubleshooting, diagnostics, programming upgrades, documentation, & training. Provided engineering direction including design, evaluation and services.		
b	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	SCADA Professional Services, Auburn, Alabama	PROFESSIONAL SERVICES	N/A
		CONSTRUCTION	In progress 2015
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE	x Check if performed with current firm	
	SCADA Professional services including configuration, maintenance, troubleshooting, diagnostics, programming upgrades, documentation, & training. Provided engineering direction including design, evaluation and services.		
c	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	Sweeney Water Treatment Plant Expansion, Wilmington, NC	PROFESSIONAL SERVICES	N/A
		CONSTRUCTION	2012
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE	x Check if performed with current firm	
	Control System Design, Programming, Installation and Startup, Project management and coordination.		
d	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	SCADA Control System Professional Services, Statesboro, Georgia	PROFESSIONAL SERVICES	N/A
		CONSTRUCTION	In progress
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE	x Check if performed with current firm	
	Control System Design, Programming, Installation and Startup, Project management and coordination		
e	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	Ina Road WRF GMPU Upgrade, Pima County, Arizona	PROFESSIONAL SERVICES	N/A
		CONSTRUCTION	2014
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE	x Check if performed with current firm	
	Instrumentation and Controls Design, manufacturing, Testing, Startup, and Commissioning, Project Manager- Coordination and Direction of Project team.		

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Neil Johnson, PG	**Water Supply/CUP**	23	15
15. FIRM NAME AND LOCATION *(City and State)*	MWH – West Palm Beach, FL		

16. EDUCATION *(Degree and Specialization)*	17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*
MS, Geology/Minor, Civil Engineering BS, Geology	Professional Geologist (PG) – Florida Certified General Contractor – Florida Water Well Contractor – Florida

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Johnson has 23 years of experience as a project manager, hydrogeologist, geologist, driller, geotechnical inspector, and environmental technician. His experience includes construction observation, testing and rehabilitation of production, Class I injection and aquifer storage and recovery wells, regulatory assessments, and groundwater resource investigations, He also has worked extensively with groundwater/surface water interaction and SALT monitoring networks.

19. RELEVANT PROJECTS

a

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Sunrise Master Plan and Hydraulic Modeling, Sunrise, Florida	PROFESSIONAL SERVICES	ongoing
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Hydrogeologist - Mr. Johnson prepared or provided senior technical review for several sections within the Master Plan including Raw Water Supply and Alternative Water Supply. Mr. Johnson managed the development of the Floridan Aquifer analytical model. Mr. Johnson also assisted in the development of the Regional Biscayne Aquifer numerical model.

b

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Cocoa Beach ASR Well Permitting, Design, and Construction Management, Cocoa Beach, Florida	PROFESSIONAL SERVICES	2012
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Technical Lead/Project Manager – Mr. Johnson prepared application materials and supporting technical evaluations to apply for a Class V Group 9 Reclaimed ASR System. The scope included an area of review study, a regional hydrogeological evaluation, ASR well design, and permit application materials to construct a Class V ASR well system. The test production well was designed to inject up to 2 mgd of reclaimed water into a non-underground source of drinking water aquifer (i.e., >10,000 mg/L TDS). Mr. Johnson prepared the permit application materials and design and bidding documents, provided engineering services during construction, progress reporting, construction management, and regulatory coordination with the FDEP throughout testing.

c

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Eastern Hillsboro Class V Aquifer Storage and Recovery Well System, Palm Beach County Water Utility Department, Palm Beach County, Florida	PROFESSIONAL SERVICES	2003
	CONSTRUCTION	2003

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Lead Hydrogeologist - Mr. Johnson was responsible for all various aspects of the permitting, design, construction, and testing of a 5 mgd raw water aquifer storage and recover (ASR) well and associated storage zone and surficial monitoring wells. The ASR well is capable of storing raw groundwater from the WTP 9 Hillsboro Canal Wellfield and recovering it for treatment or to recharge the Hillsboro Canal. In addition, Mr. Johnson worked with PBCWUD in obtaining the Water Quality Criteria Exemption for the injected water.

d

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Broward County WTP 1 Floridan Aquifer Production Well Siting, Permitting, Design, and Construction Management – Lauderdale Lakes, Florida	PROFESSIONAL SERVICES	2013
	CONSTRUCTION	2014

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Lead Hydrogeologist – Mr. Johnson has been working with Broward County WWS since 2010 to evaluate, perform site selection, permit, design, and construct two Floridan aquifer test wells at the County's District 1 WTP site. As part of the WTP Expansion project, Mr. Johnson is completing the design and permitting of a Class I Concentrate Injection Well to serve an RO WTP.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Jane McLamarrah, PhD, PE	**Infiltration/Inflow Task Manager**	37	12
15. FIRM NAME AND LOCATION *(City and State)*	MWH Americas Inc., Clemson, SC		

16. EDUCATION *(Degree and Specialization)*	17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*
PhD, Civil Engineering	Florida, Georgia, South Carolina, Texas, Wisconsin

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Past Chair, WEF Private Property Virtual Library; Past Chair; Other Disciplines NCEES Fundamentals of Engineering Examination Committee; Multiple publications

19. RELEVANT PROJECTS

a

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Atlanta Integrated Utility Plan, Atlanta, Georgia	PROFESSIONAL SERVICES	On-going
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

MWH was retained to develop a project optimization model incorporating a customized triple bottom line analysis to prioritize recommended capital improvement projects for the City's water, wastewater and stormwater systems. The model was developed in general accordance with the EPA's recent Integrated Planning Framework guidance, but was designed predominately to create a roadmap for effective utility management rather than to gain flexibility under the City's consent decree with EPA. The project included review of DWM's draft strategic plan and recently completed master plans for the three utilities. The model includes defined financial limitations as well as individual project schedule constraints. Dr. McLamarrah led the development effort for the TBL criteria, conducted all background data analysis, scored the projects for the model, authored the report and presented results to the client.

b

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Miami-Dade CMOM Self Assessment	PROFESSIONAL SERVICES	2011
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Dr. McLamarrah served as the lead engineer evaluating MDWASD's Capacity assurance, Management, Operations and Maintenance (CMOM) programs as required by EPA Region 4. The goal of the CMOM Self Assessment was to determine how these programs should be modified in order to more effectively address SSOs and improve system performance. MDWASD had initially planned to do the self-assessment with internal staff, but later recognized a need for external expert assistance. The CMOM Self Assessment formed the basis for MDWASD's most recent federal consent decree.

c

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Sims Bayou Master Plan, Houston, Texas	PROFESSIONAL SERVICES	2006
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

The Sims Bayou service area is one of the oldest developed areas of the City of Houston serving 220,000 people over 30,000 acres in southeastern Houston. MWH undertook the service area master plan to mitigate impacts of growth, leverage existing infrastructure, reduce SSOs and develop a hydraulic modeling prototype. The comprehensive evaluation of the existing infrastructure allowed the model to reliably replicate known problems and performance and, more importantly, to predict unknown problems that were then field verified. This required significant field investigation of gravity sewers, testing and calibration of lift stations, and flow and rainfall monitoring. MWH was able to correlate a significant fraction of the dry weather SSOs to cleaning and pipe renewal needs. The City implemented recommended cleaning and pipe renewal and was able to reduce dry weather SSOs. Dr. McLamarrah developed the recommended corrective actions and authored the final report.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Jason Mumm	Financing	22	8
15. FIRM NAME AND LOCATION *(City and State)*	MWH Americas, Inc., - Denver, Colorado		
16. EDUCATION *(Degree and Specialization)*		17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*	
MBA, Business Administration BS/BSc, Economics and Finance		Certified Valuation Analyst (CVA) - Colorado	

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

He is currently the chairman for the Joint Publications Committee of the Rocky Mountain Sections of the AWWA and the Water Environment Association. He is a frequent author in the water/wastewater industry, writing on subjects related to utility management and financial practices.
Services offered by Jason include utility financial planning and related financial analyses, bond due diligence support, utility ratemaking, cost-of-service studies, valuations and opinions of value, rate design, impact/development fee studies, and other related services.

19. RELEVANT PROJECTS

a

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Utility Financial Planning, Cost-of-Service Studies and Rate Designs, City of Santa Fe, New Mexico	PROFESSIONAL SERVICES	Ongoing
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Manager: Mr. Mumm led efforts that averted a bondholder class-action lawsuit. He continued to assist this community in establishing its water and wastewater utilities' financial plans, rates, and tap fees (utility expansion charges). Jason also assisted the City in a number of additional projects related to expansion of water supplies, negotiations with wholesale customers, and revision of various policies and guidelines. For the City's rate restructuring efforts, developed the stochastic modeling approach, furthering the analytical framework for water utility ratemaking for the City.

b

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Financial Feasibility and Wholesale Pricing Analysis, Denver Water, Colorado	PROFESSIONAL SERVICES	2013
	CONSTRUCTION	NA

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Manager: Mr. Mumm assisted Denver Water in analyzing pricing scenarios for a joint venture between Denver Water and Aurora Water combining water supply resources with $650M of delivery and treatment infrastructure. This project involved development of regional pricing model using cost-of-service principles as applied to a multi-owner, multi-facility situation. The pricing objectives create a firm and a separate interruptible rate for the project's users, while ensuring appropriate return on investment for the facility's owners. Because the project is not yet completed, the details are confidential.

c

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Utility Financial Plan and Rate Study, City of Sheridan, Wyoming	PROFESSIONAL SERVICES	2012
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Manager: Mr. Mumm developed financial planning models for both of the City's public utilities. These models were used to help the City evaluate the potential impact of renewal and replacement needs on the utilities' finances and customer rates. He prepared a cost-of-service allocation with the information gained from the financial planning models. The allocation specifically addressed the cost burden shared by the City's wholesale customer and demonstrated how that customer's contractual payments were less than that customer's allocated costs.

d

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Wastewater Cost-of-Service, Inverness Water & Sanitation District, Colorado	PROFESSIONAL SERVICES	2012
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Manager: Mr. Mumm assisted the District with developing an independent analysis of a cost-of-service for its portion of a jointly owned wastewater treatment plant. The District owned a portion of the treatment plant having paid nearly $10M in cash in exchange for capacity, but was still a wholesale customer subject to rates and charges developed by the primary owner. He prepared an independent analysis of the plant's costs of service resulting in a 40% reduction to the District's rate after identifying a substantial over allocation of the plant's capital costs

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Lyle Munce, PE	**Treatment Process**	28	8
15. FIRM NAME AND LOCATION *(City and State)*	Carollo Engineers, Inc., Lake Worth, FL		

16. EDUCATION *(Degree and Specialization)*	17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*
MS / Sanitary Engineering BS / Civil Engineering	Florida - Professional Engineer

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Munce, a vice president with Carollo, has 28 years of environmental/civil engineering experience, with an emphasis on municipal water systems. He has served as client manager, project manager, project engineer, quality control coordinator, technical reviewer, and construction manager for numerous multi-disciplinary water related projects.

19. RELEVANT PROJECTS

a

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
WTP 8 Ion Exchange Study, Palm Beach County, Florida	PROFESSIONAL SERVICES	2014
	CONSTRUCTION	TBD

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Principal-in-Charge/Project manager. Carollo performed study phase services to develop and evaluate potential ion exchange (IX) alternatives for organics and color control at WTP No. 8. Carollo evaluated both the high rate fluidized bed IX technology in addition to fixed bed vessel (both on raw and filtered water flow streams). The IX was considered to control the organics and resulting color in the finished water. A 20-mgd fixed-bed vessel system was recommended, which in addition to the existing system will treat the full rated capacity at WTP 8.

b

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Springtree WTP Renewal and Improvements, City of Sunrise, Florida	PROFESSIONAL SERVICES	2012
	CONSTRUCTION	2014

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Contract manager. The study phase of this project included the evaluation of potential improvements for rehabilitation and renewal of a 24-mgd lime softening facility. The systems, processes, and facilities evaluated include: an organics removal system, disinfection rule compliance modifications, solids contact clarifier performance upgrades, sludge dewatering and solids handling upgrades, chemical system upgrades, distribution system pumping upgrades, controls system upgrades, a new administration & controls building, repurposing of an existing Floridan aquifer ASR well as a supply well for RO treatment, demolition of existing filters, drainage upgrades, repiping of ground storage reservoirs, and other renewal upgrades.

c

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Sawgrass 3-mgd RO WTP and Nanofiltration Rerate, City of Sunrise, Florida	PROFESSIONAL SERVICES	2012
	CONSTRUCTION	2013

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Contract manager. Project elements included evaluation of an organics control treatment system with chemical oxidation, pre-filtration, and fixed-bed ion exchange; evaluating conversion of an existing NF treatment train to RO; and the design of an independent 3-mgd RO treatment system, and uprating of existing NF system from 18 to 24 mgd.

d

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
WTP 2 Ion Exchange Treatment System, Palm Beach County, Florida	PROFESSIONAL SERVICES	2010
	CONSTRUCTION	2012

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project manager. Carollo provided design, construction administration, and start-up and commissioning services for a MIEX® Treatment System at PBCWUD's WTP 2. This project included the installation of a magnetic ion exchange treatment system to achieve dissolved organic carbon (DOC) control and color reduction from the source water. In addition to DOC removal and color reduction, the IX system reduced the potential for DBP formation by removing organic precursors and provided the benefits of reducing the chlorine demand in downstream treatment.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Maria Ramirez, PE	Pumping and System Modeling	9	9
15. FIRM NAME AND LOCATION *(City and State)*	MWH – Sunrise, FL		
16. EDUCATION *(Degree and Specialization)*		17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*	
BS, Civil and Environmental Engineering		Professional Engineer - Florida	
18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*			

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
City of Sunrise Master Plan and Hydraulic Modeling, Sunrise, Florida	PROFESSIONAL SERVICES	2009
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Task Manager - Ms. Ramirez performed a model update to reflect the objective of the Master Plan project. The model update included development of future demand projections based on published Traffic Analysis Zones (TAZ) estimates, allocation of future demands, evaluation of boundary conditions and facility representation. She provided recommendations for improvements and operating schemes that were cost effective.

b.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
City of Minot Potable Water Master Plan, Minot, ND	PROFESSIONAL SERVICES	2014
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Assistant Engineer - Ms. Ramirez evaluated Emergency and Operational storage requirements based on the current and future use diurnal water use requirements. Ms. Ramirez used the guidelines of local regulations and industry standards such as the Ten-State Standards and the Insurance Service Office (ISO) for determination of fire flow and storage requirements. Through this evaluation, Ms. Ramirez identified storage requirements for each pressure zone in the system in order to provide adequate storage for existing and build-out demands.

c.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
City of North Miami Beach Water Distribution Model and Fire Flow Fee Evaluation, North Miami Beach, Florida	PROFESSIONAL SERVICES	2006
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Engineer - Ms. Ramirez developed a hydraulic model using H20Map® software. She helped develop a calibration testing plan and performed field activities as well as performed system-wide fire hydrant deficiency analysis and proposed improvements. She assisted in preparation of fire flow evaluation. She also evaluated hydraulic model results and assisted with preparing a technical memorandum that provided distribution system improvements and gave an engineer's opinion of the probable cost.

d.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
Water Supply Facilities Plan, City of Pompano Beach, Florida	PROFESSIONAL SERVICES	Ongoing
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Engineer - Ms. Ramirez assisted in the development of 10-Year Water Supply Facilities Work Plan to improve the coordination of water supply and land use planning. As part of this project, Ms. Ramirez coordinated population and water demand projections with various municipalities within the Utility's service area. Ms. Ramirez assessed current water sources and evaluated the adequacy of these sources to meet the projected demands. Ms. Ramirez performed a review of the permits associated with each water supply facility for comparison to permit limitations on facility capacity with the future demands on the facility. As a result of this analysis, Ms. Ramirez prepared a plan of additional water supply sources to meet projected shortfalls.

e.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
Water Distribution Model, City of Pompano Beach, Florida	PROFESSIONAL SERVICES	Ongoing
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Manager - Ms. Ramirez was responsible for the technical delivery of the water distribution system model evaluation. Ms. Ramirez developed a water hydraulic model, integrated geographic information systems to create the distribution network, performed field reconnaissance, water facilities evaluation, demand analysis for the model inclusions and validation activities. The results addressed distribution system deficiencies and provided recommended improvements.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Chris Reinbold, PE	Water Quality/Infiltration/Inflow	11	6
15. FIRM NAME AND LOCATION *(City and State)*	Carollo Engineers, Inc., Lake Worth, Florida		

16. EDUCATION *(Degree and Specialization)*	17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*
MS, Civil Engineering BS, Civil Engineering	Professional Engineer - Florida Professional Engineer - North Carolina

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Reinbold, an associate with Carollo, has 11 years of experience on projects in five states, mostly in North Carolina and Florida. His work includes study, design, permitting, and construction administration services for treatment plants, pumping stations, pipelines, IX treatment, and chemical systems. He has experience with many advanced technologies, such as designing the world's largest high-rate magnetic IX (MIEX®) system. His continual focus for clients is to seek additional value, savings, or other operational enhancements on each project.

19. RELEVANT PROJECTS

a

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
WTP 8 Ion Exchange Study, Palm Beach County, Florida	PROFESSIONAL SERVICES	2014
	CONSTRUCTION	TBD

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Engineer - Carollo performed study phase services to develop and evaluate potential ion exchange (IX) alternatives for discussion, review, selection, and implementation at WTP 8. Carollo evaluated both the high rate fluidized bed IX technology in addition to fixed bed vessel (both on raw and filtered water flow streams). The IX was considered to control the organics and resulting color in the finished water. A 20-mgd fixed-bed vessel system was recommended, which in addition to the existing system will treat the full rated capacity at WTP 8.

b

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Springtree WTP Renewal and Improvements, City of Sunrise, Florida	PROFESSIONAL SERVICES	2012
	CONSTRUCTION	2014

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Design Manager -This project was executed as three separate bid packages. The first replaced four 15,000-gallon each sodium hypochlorite tanks. The second prepared a procurement bid package and general construction bid package for a 3-mgd RO system. The third involved a new 12-mgd high-service pumping station and operations building.

c

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Preston and Hialeah WTPs GWUDI of Surface Water Upgrades, Miami-Dade, Florida	PROFESSIONAL SERVICES	2011 (50% design)
	CONSTRUCTION	On hold

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Engineer - Preston and Hialeah WTPs Feasibility Study, Miami-Dade Water and Sewer Department, Florida. Reviewed ozone, UV, membranes (microfiltration, ultrafiltration , or nanofiltration), and carbon adsorption as candidate technologies to upgrade the Preston and Hialeah Water Treatment Plants to meet the Surface Water Treatment Rule due to the pending reclassification of the well field supply to groundwater under direct influence of surface water.

d

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Sawgrass 3-mgd RO WTP and Nanofiltration Rerate, City of Sunrise, Florida	PROFESSIONAL SERVICES	2012
	CONSTRUCTION	2013

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Design Manager - During the study phase, fluidized-bed and fixed-bed systems were pilot tested to control organics and color. A fluidized-bed system was recommended. Project elements included evaluation of an organics control treatment system with chemical oxidation, pre-filtration, and fixed-bed ion exchange; evaluating conversion of an existing NF treatment train to RO; and the design of an independent 3-mgd RO treatment system, and uprating of existing NF system from 18 to 24 mgd.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Gerardus (GJ) Schers, PMP	**Task Manager**	23	14
15. FIRM NAME AND LOCATION *(City and State)*	MWH Americas, Inc., West Palm Beach, Florida		
16. EDUCATION *(Degree and Specialization)*		17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*	
MS, Civil Engineering; BS, Civil Engineering		Professional Engineer - Ontario-Canada	
18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*			

19. RELEVANT PROJECTS

a	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	System 1A Reverse Osmosis WTP Expansion, Broward County, Florida	PROFESSIONAL SERVICES	Ongoing
		CONSTRUCTION	N/A
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE	[X] Check if performed with current firm	
	Project Technical Lead – Mr. Schers is the project manager responsible for the implementation of an alternative water source system including a 7-MGD Floridan aquifer Reverse Osmosis water treatment plant expansion for Broward County's IA WTP (lime softening). Completed activities include wellfield siting, investigations, and permitting activities for the concentrate injection well, preliminary engineering of the surface facilities of the production and injection wells, and some conceptual sizing of the treatment plant components.		
b	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	North Reverse Osmosis Water Treatment Plant, Cape Coral, Florida	PROFESSIONAL SERVICES	2010
		CONSTRUCTION	2010
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE	[X] Check if performed with current firm	
	Principal Project Manager - Mr. Schers led the project team providing final designs of the 24 MGD 'Green Field' North RO WTP treating Floridan Aquifer water with elevated levels of TDS and hydrogen sulfide. The design activities included field testing and an assessment of the raw water source and concluded with the location, depth and capacity of the production wells. The designed facilities included new raw water wells, raw water collection and transmission system, water treatment plant utilizing RO process and degasification, drinking water transmission mains, and injection wells for the disposal of RO concentrate.		
c	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	Distribution Water Quality Study, Peace River/Manasota Regional Water Authority, Florida	PROFESSIONAL SERVICES	2014
		CONSTRUCTION	N/A
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE	[X] Check if performed with current firm	
	Project Technical Lead – Mr. Schers just recently completed a study reviewing the water quality in the Authority's regional water supply system, including transmission mains and distribution systems of member governments. Extensive data sets were reviewed to characterize the water quality of the finished waters of production facilities feeding into the regional system and to describe any water quality changes that take place in the system. Based on the characterization of the existing water quality, blending scenarios were developed to predict distribution water quality changes in the future if and when changes are made in production facilities or in operation of the regional system. Recommendations were made to improve the overall distribution water quality and to ensure compliance with all standards.		
d	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	Demand Management Options Study, Jacksonville, Florida	PROFESSIONAL SERVICES	2007
		CONSTRUCTION	N/A
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE	[X] Check if performed with current firm	
	Project Manager - Mr. Schers completed the initial assessment of potential demand management options for the city of Jacksonville, FL. The work included the use of an advanced program to compare cost and impacts of each measure to enable prioritization of promising options.		

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Harold E. Schmidt, Jr., P.E.	**Task Manager**	33	8
15. FIRM NAME AND LOCATION *(City and State)*			

16. EDUCATION *(Degree and Specialization)*	17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*
BE, Civil Engineering MS, Environmental Engineering	Professional Engineer - Sanitary Engineering, - Florida, Virginia, North Carolina

18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

Mr. Schmidt has over 33 years of experience in the planning, design, and construction management for over $500M of wastewater related capital projects. Worked on numerous WWTPs ranging in capacity up to 200 mgd that have ranged in treatment quality from conventional secondary treatment through advanced BNR and membrane facilities. His area of expertise is in advanced biological treatment for removal of nutrients, reclaimed water reuse, and biosolids treatment. Mr. Schmidt has provided input and authored for nearly 40 technical papers, as well as the development of a number of WEF Manuals, including Manual of Practices no. 8 "Municipal Wastewater Treatment Plant Design, no. 21 "Solids Processing Design and Management" and Membrane Systems for Wastewater Treatment.

19. RELEVANT PROJECTS

a

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
C.C. Williams WWTF Master Plan, Mobile, Alabama	PROFESSIONAL SERVICES	2013
	CONSTRUCTION	2014

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Technical Advisor for master plan for the Mobile Area Water and Sewer System CC Williams WWTF. Master planning efforts included a comprehensive inspection and assessment of the infrastructure; characterization of wastes; process modeling; evaluation of treatment technologies – liquid and biosolids (thickening, stabilization and dewatering); impact of existing and pending regulations; energy optimization, and gas production to reduce energy demands and minimize power costs.

b

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
Howard F. Curren Advanced WWTP Biogas Enhancement Study, Tampa, Florida	PROFESSIONAL SERVICES	2013
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Technical Advisor of alternatives to upgrade the biosolids management facilities at the 96 mgd Howard F. Curren advanced WWTF. The project involved the preparation of businesses cases for the continued use of biogas, capital upgrades and operational enhancements potential cost savings associated. An analysis of current biosolids and biogas production; a condition assessment of existing biogas handling system; an evaluation of energy production and requirements, and environmental regulations; along with economic analysis of preferred alternatives.

c

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
Optimization of Wastewater Lift Stations for Reduction of Energy Usage and Greenhouse Gas Emissions Jacksonville, Florida	PROFESSIONAL SERVICES	2012
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Technical Advisor, a study that demonstrated hydraulic model and new generation SCADA integration that controlled the lift station pumping for energy efficient operation. Based on the findings, a guidebook was developed to reduce force main operating pressures and total dynamic head and thereby reduce electrical power consumption.

d

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
Eastside AWT Aeration System Upgrades, Venice, Florida	PROFESSIONAL SERVICES	2010
	CONSTRUCTION	2015

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE

Technical Advisor, for the evaluation of aeration system upgrades to increase capacity and maintain advanced treatment levels. The study resulted in the design and construction upgrades to the grit removal system and biological process (5-stage Bardenpho). The project resulted in rerating the facility from 6.0 mgd to 8.5 mgd and a projected decrease in power of nearly 38%.

e	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
	Wastewater Treatment Facility Program Management, North Port, Florida	PROFESSIONAL SERVICES	2008
		CONSTRUCTION	2011
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE	[X] Check if performed with current firm	
	Technical Advisor, for the program management of the City's $22M capital program at the City's existing WWTF. The facility was re-rated using the BioWin™ wastewater simulation model that increased the treatment capacity from 3.0 mgd to 4.4 mgd with no capital expenditures, and the final design expanded the WWTF to treat 7.0 mgd. The facility was upgraded to an MLE process to provide on-line process control and improved energy management. The project has reduced energy demands by approximately 49% and increased reclaimed water delivered from 32% to over 72%.		
f	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
	Central District WWTF Renewal and Replacement Program, Miami, Florida	PROFESSIONAL SERVICES	2007
		CONSTRUCTION	On-going
	(3) BRIEF DESCRIPTION AND SPECIFIC ROLE		
	Technical Advisor master planning the 143-mgd Central District WWTP from capital programs to optimizing operations. The work included assessment of the existing equipment, prioritized upgrades, an energy audit, process modeling and control to optimize treatment. Projects completed included RAS pump station upgrades, MCC upgrades, anaerobic digestion upgrades and improved gas production; and a reclaimed water system to provide public access reclaimed water to Key Biscayne.		

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
John Visconti, PMP	**Task Manager**	24	24
15. FIRM NAME AND LOCATION *(City and State)*	MWH Americas, Inc., Sunrise, FL		
16. EDUCATION *(Degree and Specialization)*		17. CURRENT PROFESSIONAL REGISTRATION *(State and Discipline)*	
BS, Civil Engineering with minor in Engineering Management		Civil - Massachusetts	
18. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*			

19. RELEVANT PROJECTS

a

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Water and Wastewater Infrastructure Projects Program, Sunrise, Florida	PROFESSIONAL SERVICES	ongoing
	CONSTRUCTION	ongoing

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Project Manager delivering a full range of program management and engineering services associated with the implementation of the City's 5-Year $250 million Capital Improvement Program. Identified reuse, wastewater and water projects include modifications, improvements and upgrades to existing treatment processes, plant facility structures, electrical and control systems, pump stations, injection wells, transmission and distribution pipeline systems, force mains and other infrastructure.

b

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Recovery Program, New Orleans, Louisiana	PROFESSIONAL SERVICES	2010
	CONSTRUCTION	N/A

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Deputy Program Manager, Mr. Visconti led the MWH team providing comprehensive project life-cycle management (e.g. planning, design, bidding and construction phases), communications, data management, and project controls services to aid the City of New Orleans Department of Public Works recovery from the impacts of Hurricanes Katrina and Rita. While the overall Recovery Program included approximately 640 projects valued at $1.55 billion, the work under his direct control included 290 projects valued at approximately $750 million.

c

(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
Department of Public Works Utility Capital Improvement Projects, Cambridge, Massachusetts	PROFESSIONAL SERVICES	2004
	CONSTRUCTION	ongoing

(3) BRIEF DESCRIPTION AND SPECIFIC ROLE [X] Check if performed with current firm

Mr. Visconti served as Project Manager for stormwater and sewer system improvement projects Typical objectives for these projects included improvements to separate combined sewers, eliminate common manholes, eliminate uncontrolled stormwater overflows, reduce inflow to the sanitary sewer system, add new isolation/grit pit structures to aid the City's performance of future maintenance activities, rehabilitate outfalls to the Charles River, and increase the storm drain level of service. Significant utility relocations (e.g. electric, gas, and water) were often required and service interruptions could not be tolerated. The federal and state funding of these projects required regular and proactive interaction with multiple stakeholders from appropriate local and state agencies.

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT	20. EXAMPLE PROJECT KEY NUMBER
	1

21. TITLE AND LOCATION	27 Years' Service	
Sunrise Master Plan and Related Engineering Services, Sunrise, Florida	PROFESSIONAL SERVICES	CONSTRUCTION
	2004 – On Going	NA

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Sunrise, Florida	Timothy Welch, PE	954-888-6037

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

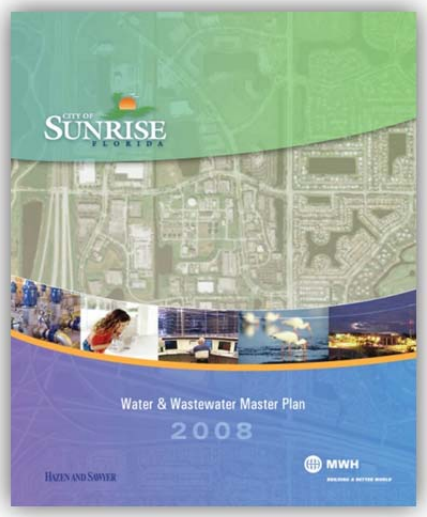
Relevance to CUSMP

- ✓ Population & Flow Forecast
- ✓ Long Term Water Supply Planning
- ✓ Water and Wastewater Treatment
- ✓ Hydraulic Model – Water, Wastewater
- ✓ Reuse Evaluation
- ✓ Operational Efficiency
- ✓ Biosolids Evaluation
- ✓ CIP
- ✓ Financing & Funding

The City of Sunrise provides water and wastewater service to approximately 215,000 people in Broward County encompassing an area of approximately 70 square miles. In addition to the City the utility serves the entire City of Weston, portions of Davie, and SW Ranches.

In October of 2004, the City authorized MWH to prepare an updated *Consumptive Use Permit*, CUP to provide additional water to meet growing demands. The City was delayed by the SFWMD in obtaining its modified CUP until the Regional Water Availability Rule was enacted. The City was granted a 20 year CUP that provided no additional Biscayne water, and required alternative water to meet future sources. This shift from Biscayne source water led to the City requesting MWH provide a comprehensive water and wastewater master plan.

MWH prepared *"Sunrise Water and Wastewater Master Plan"*, which included detailed evaluations of the City's water and wastewater treatment plant facilities and identified those improvements needed through the year 2030. The Master Plan includes population projections, water demand and wastewater flow projections, an evaluation of the existing water and wastewater facilities. The principle objectives of this plan was to evaluate, cost and rank water supply alternatives. Alternative Water Supply (AWS) options were ranked based on the most cost-effective and favorable combination of AWS options for implementation. Based on the City's selected AWS strategy, the remainder of the Master Plan was developed with infrastructure expansion and improvements. Projects were developed with an implementation schedule based on priority of its origin ranging from regulatory, service and growth driven criteria. The results of this Master Plan are intended to be used as the guide for Capital Improvements Planning (CIP), financing and implementation.



Based on the Capital Improvements Plan developed as part of the Master Plan, The City requested MWH prepare a *"Consulting Engineer and Bond Feasibility Report"*. The $300M CIP was planned for a three phase implimentation over a 15 year period. The First phase required a detailed fianical forecast was developed for the water, wastewater and natural gas utilities. The finanical forecast supported issuance of the Uiltiy System Revenue Bonds, Series 2010 Bonds. The sale of these bonds provide about $114M to develop alternative water supplies, increase peaking capabilities, and provide for compliance with the new 4-log disinfection requirements. In addition to the water system improvements, the funds were used to rehabilitate the headworks at the Sawgrass wastewater treatment plant, rehabilitation of the SW Wastewater treatment plant and the addition of high level disinfection that allowed for a doubling of the plants capacity. The City expanded biosolids treatment and enhance the collection and transmission system. The Springtree lime softening plant was rehibilitated along with the biscayne wellfield. The City converted its ASR well to a dual use brackish water system with a 2 MGD RO plant. The City also focused on improvde water system performance with improvements to the distribution system that improved pressure and fire protection.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	MWH Americas, Inc.	Sunrise, FL	Prime Consultant

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
		2
21. TITLE AND LOCATION	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Sunrise Program Management, Sunrise, Florida	Ongoing	N/A

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Sunrise, Florida	Timothy Welch, PE	954-888-6037

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

In 2010, the City of Sunrise selected MWH to provide engineering, consulting and program/project management services. As the City's program manager, MWH currently manages five engineering consulting firms in addition to providing support staff of various levels and skills. The program consists of over 60 projects in various life cycle ranging from concept level to construction closeout phase. MWH provides the City with Comprehensive utility wide planning, permitting, consultant oversight, technical reviews, schedule management, budget controls for a $440 M 20-year CIP.

MWH provides a full range of professional engineering services is being provided to support the City's Utilities Department and to assist the City staff in refinement and implementation of the 2008 Master Plan, future studies and alternative evaluations, engineering support for financing and related engineering duties necessary to support the day to day operations of the utility. In assisting the City, MWH performs various types of planning ranging from organizational management, alternative water supply evaluations, concept level evaluations, project justifications with business cases, project prioritization, evaluating needs versus funding availability, systematic planning for reuse implementation, network modeling for watermain improvement prioritization, lift station and force main improvement prioritization, chemical and energy optimization studies, treatment process evaluation, effluent disposal alternatives, biosolids alternative evaluation and planning and many such utility related planning efforts.

Relevance to CUSMP

- ✓ Population & Flow Forecast
- ✓ Long Term Water Supply Planning
- ✓ Water and Wastewater Treatment
- ✓ Hydraulic Model – Water, Wastewater
- ✓ Reuse Evaluation
- ✓ Operational Efficiency
- ✓ Biosolids Evaluation
- ✓ CIP
- ✓ Financing & Funding

Additionally MWH supports the City with permitting efforts such as minor modifications to Consumptive Use Permit, provides coordination with other private utilities such as FPL, represents the City before FDEP and Health Department for ASR well permitting, IDSE sample locations, provides support for annual reporting to SFWMD for LEC and WSFP updates.

Through our planning service, our approach to demand projections was such that a demand range was developed for future planning horizon to cover the envelope of uncertainties and enable utilities to be adaptive. We assisted the City with formulation of hydraulic network scenario evaluation, review of consultants reports and advised the Utility for future scenario evaluations after the model was updated from H2OMap to WaterGEMS.

As City's extension of staff, MWH requested Floridan withdrawal allocation from the existing ASR well, and was able to direct the design of filtration process so that it can be used as either nano or RO filtration process considering the well would have Biscayne or Floridan water or a combination of both. This well is permitted as Floridan production well by SFWMD and as ASR well by FDEP. MWH assisted the City of Sunrise with the Optimization of their nano-filtration process saving the City approximately $800,000 annually in chemical costs.

MWH also managed five other consulting firms and became an extension of staff to the Engineering Director. Having served in that capacity we have an in-depth understanding of the Utilities Departments TRUE NEEDS.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	MWH Americas, Inc.	Sunrise, FL	Prime Consultant

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT	20. EXAMPLE PROJECT KEY NUMBER
	3

21. TITLE AND LOCATION	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Water and Wastewater Hydraulic Modeling and Master Plan, City of Cape Coral, Florida	2009	N/A

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Cape Coral, Florida	Jody Sorrels	239-242-3227

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

In early 2002, MWH prepared a comprehensive utility master plan to keep pace with increasing demands in one of the country's fastest growing cities. In 2009 MWH completed the hydraulic model development. Major components of the master plan pertinent to City of Fort Lauderdale's needs are as follow:

- Population forecast –Seasonal impacts distribution of development by land use was included. Short term and medium term forecast were used. Sensitivity analysis was performed based on increase and no additional growth.
- Demand/ Flow forecast - True unaccounted losses were developed along with a goal to reduce the unaccounted for water (UFW). Both water and wastewater flow projections were developed. Wastewater Flow projections were developed by computing dry weather flow, rainfall, considering I/I, correlating I/I to rainfall, and using peak factors. Irrigation demands were developed along with a diurnal pattern. Seasonal variation of irrigation demand was also developed.
- Raw Water System – Geology of the area was evaluated along with current wellfield operations, historic flows, water quality, and raw water transmission system. Hydraulic model was developed. Proposed modifications were recommended to construct new wells and rehabilitate existing wells.
- Water Treatment Plants – Existing plants were evaluated for condition of equipment and infrastructure, increase in recovery of existing RO plant was recommended via operational, chemical dosing changes, array modifications. Recommendations resulted in a 3 mgd capacity at an existing Southwest WTP. A new treatment plant of 12 mgd with two new concentrate disposal wells was recommended.
- Wastewater Reuse and Disposal – MWH reviewed reclaim water alternatives, including reuse for irrigation, surface water discharge, considered ASR as method of storing reclaimed water during wet periods, developed worse case reclaimed water production and irrigation water demand for each of its reclaimed water facilities (City had two and a third one was planned for). Flow transfer alternatives from master pump station to different WRF were evaluated. Concept level treatment process units were developed. Class I reliability additions were recommended and capital improvements were planned to include these expansions and repair/rehabilitation of existing process components.
- Biosolids Management – A staged implementation plan was recommended which included a centralized biosolids processing facility in addition to local WRF improvements such as holding tanks, enhanced dewatering, odor control system, and new sludge conveyor improvements. A separate master plan was recommended and developed by MWH where addition of new dewatering centrifuges, conversion of existing tankage to digesters, sludge pumping, sludge receiving station, and new rotary drum (direct) thermal drying system was selected by the City.
- Hydraulic Model - The system model developed by MWH included almost 600 miles of water main, two reclamation plants, and 5 pump stations. One week of field testing and monitoring for verification of the model was performed. The model was used to analyze the existing system for improvements required to meet fire flow requirements, and to plan expansion of the systems infrastructure to meet future demands. MWH created and build a future, all-pipes, model of the City's potable system 80 years into the future including two additional remote storage facilities and a new reverse osmosis water treatment plant. MWH has supported the City with compliance for Initial Distribution System Evaluation (IDSE) and Disinfection Byproduct Rule (DBPR) Stage II.
- Electrical, Instrumentation and Control Systems – MWH performed electrical system review for compliance with EPAs Class I reliability standards, evaluated standby generator power needs, assessed main switchgear and motor control centers, VFDs, and generators. MWH also performed control system assessment, developed design philosophy, recommended new electrical equipment, recommended controls and instrumentation improvements. SCADA network for lift station control system was reviewed for RTU configuration where replacement RTUs, radios, HSQ controllers, use of Modbus/TCP protocol were recommended.
- Schedule and Cost – Recommendations from the above evaluations were scheduled for improvements over a seven year period. Concept level costs were developed by facility. A $236M capital improvements plan was developed.

Relevance to CUSMP

- ✓ Population & Flow Forecast
- ✓ Water Supply & Water Quality
- ✓ Water and Wastewater Treatment
- ✓ Hydraulic Model – Water, Wastewater, Reuse System
- ✓ Infiltration and Inflow
- ✓ Reuse Evaluation
- ✓ Biosolids
- ✓ CIP, Financing & Funding
- ✓ Operational Efficiency
- ✓ SCADA & Controls

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
a.	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
	MWH Americas, Inc.	Cape Coral, FL	Prime Consultant
	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
	MWH Americas, Inc.	Sunrise, FL	Prime Consultant

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
		4
21. TITLE AND LOCATION	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Utility Master Plan, Marco Island, Florida	2004	N/A

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Marco Island, Florida	William Moss	239-394-3880

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

Working with the City of Marco Island, MWH developed a utility master plan that encompasses all facets of water resources, collection, and treatment. Due to a lack of data provided by the previous utility owner, the development of the master plan presented a unique challenge. Relying on specialists throughout the world, MWH provided a comprehensive, rational set of capital improvement recommendations that give the City a road map for the next 20 years.

A comprehensive study of the City's existing wastewater treatment plant included instituting an increased sampling protocol and process modeling of the plant using the BioWinTM software program. For both wastewater and reclaimed water, existing systems were modeled, and recommendations were made based on bottlenecks and efficiency. Once evaluated, MWH recommended a new process for the City in order to best treat the flows and loads at the plant.

Relevance to CUSMP

- ✓ Population & Flow Forecast
- ✓ Water Supply & ASR Wells
- ✓ Water & Wastewater Treatment
- ✓ Operational Efficiency
- ✓ Reuse Evaluation
- ✓ Storage Tank Evaluation
- ✓ Project Prioritization & CIP

For the water resources planning, MWH evaluated multiple scenarios that may impact the City's utilities. MWH studied the Marco Lakes raw water system, existing brackish production wells, and the feasibility of reclaimed aquifer storage and recovery (ASR) wells. MWH made recommendations to the City in order to provide adequate water resources and increase the efficiency of the City's current system.

For the master plan collection systems, MWH developed a sewage system strategy that encompasses the entire City. Currently, only 40 percent of the City's residents are connected to a centralized wastewater collection system. The collection systems master plan included the evolution of four sewer technologies including vacuum, grinder pump, septic tank effluent pumping, and conventional gravity sewer. Two distinct areas of the City were chosen to be representative of differences in topography and lot size to make the cost estimates as accurate as possible. After an evaluation of cost and non-cost advantages and disadvantages, MWH recommended to the City that a conventional gravity system would be the best option for the City.

Reclaimed aquifer storage and recovery feasibility was also evaluated as part of the Master Plan. While it was determined that the proposal might be feasible, the City has decided to defer the expenditure until after critical decisions can be made by the SFWMD that will impact the project's necessity.

In addition to the development of the master plan, MWH facilitated and attended meetings regarding issues at existing plants as well as information gathering meetings related to the future development and direction of Marco Island Utilities.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	MWH Americas, Inc.	Sunrise, Florida	Prime

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
		5
21. TITLE AND LOCATION	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Optimization of Wastewater Lift Stations for Reduction of Energy Usage and Greenhouse Gas Emissions, Jacksonville, Florida	2011	N/A

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Water Environment Research Foundation/Jacksonville Electric Authority, Florida	Darren Hollifield	904-219-7920

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

Relevance to CUSMP

- ✓ Hydraulic Model
- ✓ Energy Efficiency
- ✓ SCADA & Controls
- ✓ GHG Emission Reduction
- ✓ Operational Cost Savings

One of the largest contributions of GHG emissions from wastewater treatment facilities occurs from the pumping regime of lift stations located in flat topographic regions, especially for those in the United States in the southeast and the Gulf of Mexico region. Some of the common energy inefficiencies associated with the operation and control of older wastewater lift stations arise from:

- Lack of widespread implementation of the latest advancements in I&C because lift stations are typically designed to last 50 years and planned for 20 years.
- Problems associated with utilization of oversized pumps since the system is designed for peak loads, while normal operating loads are much smaller.
- Limited two-way communication bandwith via aging networks (radio signal, telephone wire, and copper cables) require data to pass through multiplexers, de-multiplexers and data concentrators located at electrical substations, located miles away from the central control room.
- Conventional low speed data transfer systems often do not allow for enough data through put and the Programmable Logic Controllers (PLC's) does not have enough Random Access Memory (RAM) space to allow for any type of optimization scheme.
- Utilities that have lift stations (hundreds) distributed across a wide geographic area require a technician to physically travel to all of the lift stations individually to make a simple one-line program change.

MWH is working with JEA has conceptualized a revised operation of the lift station system via a new control system configuration that will allow data communication directly from the PLC at the lift station to the wastewater central control room. This will potentially eliminate the bottleneck currently found in a 20+ year old technology used in a mux/demux network and data concentrators at satellite operations control centers (SOCC's). This conversion can achieve approximately 20% reduction in energy consumption.

The primary objective of the study is to demonstrate how hydraulic model simulation can be integrated with new generation SCADA programming so that the lift station pumping can be scheduled and controlled from a central location for energy efficient operation. Based on the findings of this study, a guidebook was developed so that designers are able to optimize pumping scenarios with one or more of the following objectives:

- Reduce force main operating pressures and total dynamic head and thereby reduce electrical power consumption;
- Schedule motor and pump on/off operating cycles to increase drive component service life and reduced service calls;
- Reduce facility operating cost by designing system capacity based on optimized system operations (i.e. reduced pumping capacity, force main capacity, peaking flow treatment works capacity); and
- Reduce greenhouse gas emissions from the wastewater facility.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	MWH Americas, Inc.	Tampa, Florida	Prime

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
		6
21. TITLE AND LOCATION	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Central District Wastewater Treatment Plant – Renewal and Replacement Program, Miami, Florida	Ongoing	N/A

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Miami-Dade Water and Sewer Department, Florida	Manuel E. Moncholí	786-552-8352

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

Relevance to CUSMP

- ✓ Wastewater Treatment
- ✓ Operational Efficiency
- ✓ Asset Condition Assessment
- ✓ Prioritization for CIP
- ✓ Biosolids Evaluation
- ✓ Pump Station evaluation and Design

The 143-mgd Central District Wastewater Treatment Plant (CDWWTP) is a high purity oxygen activated sludge facility that discharges its effluent to the Atlantic Ocean. Over the years, MDWASD has been facing capacity challenges with its wastewater systems.

MWH provided comprehensive engineering services to inspect, rehabilitate, and upgrade the infrastructure at the CDWWTP. Many of the assets are near the end of their useful life due to age, corrosive environments, and inadequate resources and funding. MDWASD is under permit compliance and legislative requirements to cease discharges to the Atlantic Ocean by 2025. The field inspections and assessments were performed to in a manner to provide a consistent means of prioritizing asset renewal and replacement. A planning level criticality analysis was performed to identify critical assets and support development of alternatives for larger-scale process changes and upgrades. The analysis provided the basis for development of a five year implementation plan for R&R and upgrades.

MWH was selected by Miami-Dade to provide full support services to the CDWWTP to achieve facility rehabilitation, which is projected to be a 6-year program. To date, following task work orders have been completed on time and within budget.

- Full asset inventory and status report. The inventory was to create and develop a prioritization program to define the CIP.
- Design of the rehabilitation for the four return activated sludge pump stations at Plant 2.
- Design for the rehabilitation and replacement of Motor Control Centers.
- Design of the improvements to the anaerobic digesters at Plant 2 to improve operations and gas production.
- Reclaimed water system upgrades to provide public access reclaimed water to Key Biscayne.
- Master Pump Station 3 design, permitting, bidding and construction management service.
- Influent wastewater characterization study.

Currently, MWH is working with MDWASD in developing a plan to meet the 2025 Ocean Outfall Rule, as well as addressing the Consent Decree from the USEPA and FDEP to prioritize projects that will be implemented to meet the requirements of the Consent Decree. MWH has recently been contracted to perform alternative evaluation followed by 30% design for anaerobic digesters. The alternative evaluation will consists of following items:

- Primary and waste activated sludge screening technologies.
- Waste activated sludge thickening technologies (e.g., gravity belt, centrifuge, etc.) in comparison with the existing conventional gravity thickeners that are currently in operation.
- Sludge pre-conditioning (e.g., hydrolysis, sludge disintegration, etc.).
- Anaerobic Digestion – Process configurations, equipment (covers, mixing, heat exchangers, sludge pumps, etc.) and recuperative thickening.
- Improvements to the gas management systems.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	MWH Americas, Inc.	Miami, Florida	Prime

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
		7
21. TITLE AND LOCATION	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Reclaimed Water Filtration Plant and Wastewater Reuse Study, Pompano Beach, Florida	2002	2002

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Pompano Beach, Florida	Randy Brown	954-545-7044

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

The City of Pompano Beach, Florida retained MWH to provide general engineering services to support the implementation of an overall reclaimed water implementation study, plan, and capital improvement program. The reclaimed water plan was the direct result of an administrative order by the State for the City to reduce the reliance upon groundwater.

MWH began the effort with the development of a reclaimed water master plan. The scope of the master plan included all planning elements such as: service area delineation, demand flow analysis, infrastructure modeling using a hydraulic network model, treatment plant phasing, capital improvement plan development, regulatory analysis and coordination, funding alternatives development, and public relations support. The master plan recommended the expansion of treatment capacity to a total of 7.50 mgd and the construction of a "backbone" transmission system to service golf courses, parks, and residential customers. The master plan also served as the key regulatory support document for the permitting process for both plant and pipeline design and construction. Review was obtained from the local department of the Florida Department of Environmental Protection (Broward County DPEP) and the South Florida Water Management District. In addition, the master plan supported two successful grants filed by MWH on the City's behalf for partial funding of the construction projects from the South Florida Water Management District.

MWH was then hired to prepare a preliminary and final design for the 7.5-mgd reclaimed water filtration plant. The reclaimed water plant is designed to meet the "high level disinfection" requirements of the Florida Department of Environmental Protection and the Broward County Department of Planning and Environmental Protection. These agencies require that the water be filtered to remove solids to less than 2.5 parts per million and chlorine disinfection with at least 1 part per million after 15 minutes of contact time at the peak flow rate. Once the preliminary design report had been accepted by the City and regulatory authorities, the design was initiated.

The Phase I Expansion design to the reclaimed water plant expanded the capacity of the existing 2.5-mgd treatment plant to 7.5 mgd. Also included was the design of the pump cans for future filter feed and distribution pumps in order to increase the capacity to 12.5 mgd.

Phase 1 Expansion includes the following details:

- Expanded filter feed pump station
- Flow distribution structure
- Filtration facilities
- Expanded and new transfer pump stations
- 4-MG ground storage tank and internal chlorine contact tank
- Low pressure distribution system pump station
- Disinfection facilities including chemical feed building with a disinfection storage and feed and coagulant aid feed system
- Electrical distribution room
- Programmable logic controller (PLC) based instrumentation system.

Relevance to CUSMP

- ✓ Master Plan
- ✓ Reuse Evaluation
- ✓ Hydraulic Model
- ✓ Capital Improvement Plan
- ✓ Funding
- ✓ SCADA & Controls
- ✓ Electrical
- ✓ Storage Tank

MWH provided complete design services for all of these components as well as coordinated operational and construction permits with FDEP, Broward County, the City's Building and Planning Department, and the SFWMD.

As the City was under a consent order to reduce groundwater pumping, the schedule of the facility was critical. The design of the plant was completed in six months following notice to proceed.

After the design was complete and permits were obtained, MWH provided complete support services through project bidding including providing a bid recommendation. MWH also provided construction management services including a field inspector and office engineering services (shop drawing and submittal review, payment application review, etc).

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	MWH Americas, Inc.	Sunrise, Florida	Prime

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
		8
21. TITLE AND LOCATION	22. YEAR COMPLETED	
Water Treatment Plant Upgrades **West Palm Beach, Florida**	PROFESSIONAL SERVICES	CONSTRUCTION
	Ongoing	Ongoing

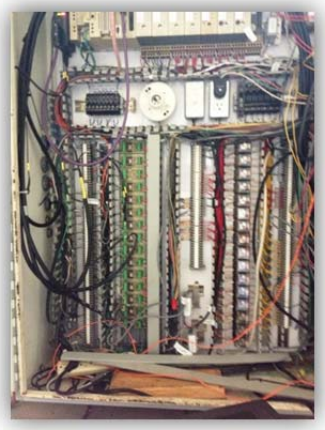
23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of West Palm Beach, Florida	Douglas Chambers	561-822-2275

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

The City of West Palm Beach operates a 47-MGD conventional lime softening surface water WTP. The City selected MWH to design, permit, and provide construction management services for the upgrades to increase the reliability of the City's water supply system and to meet Palm Beach County Consent Order requirements. MWH has completed 25 individual work authorizations under this contract consisting of various studies, bench and pilot testing, design, and construction management projects over the past five years.

Relevance to CUSMP

- ✓ Treatment Process
- ✓ Electrical & Controls
- ✓ High Service Pump Reduction
- ✓ Capacity Increase & Power Reduction



Old Remote Terminal Unit

Existing WTP Condition Assessment for Structural, Mechanical, Electrical, and Controls

MWH conducted an investigation of the City of West Palm Beach's Water Treatment Plant (WTP) structural, mechanical, electrical, and instrumentation and control assets to evaluate the physical and operating conditions in order to provide recommendations for improvements based on long term WTP needs. Detailed mechanical inspections were conducted to document the physical condition of pump and process equipment components. Operational issues were documented based on anecdotal information provided by O&M personnel. Detailed electrical inspections were also conducted on the power supply on site, which is a combination of low voltage (208V and 480V) and medium voltage (4.16kV). One of the outcomes of this investigation was the need to implement a new hardware and software control system, replace several chemical storage systems, and improve dosing, mixing, and controls of all post-treatment chemical.

High Service Pump Modifications

The seven (7) existing high service pumps range in age from 30 to 50 years, with one pump being over 60 years old. These pumps were evaluated to identify opportunities to increase capacity and reduce power consumption, either through operational improvements or equipment modifications. MWH conducted a condition assessment to document any physical deficiencies in the condition of the existing pumps.

Through detailed assessment and evaluation, the City was able to realize cost savings by rehabilitating existing pumps rather than purchasing new pumps and increasing pumping capacity by modifying, with minimal capital investment, the existing pumps to take advantage of existing motors and electrical systems.

High Service Pump No. 7

New Distributive Control System and Programming

Per the City's request, a new constructed distributive control system (DCS) was installed. This DCS consists of three distinct Main Plant Process PLC's and twenty-one (21) remote processors. I/O cabinets were installed utilizing three separate and new fiber optic loops for each PLC.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
a.	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
	MWH Americas, Inc.	West Palm Beach, Florida	Prime
b.	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
	MWH Americas, Inc.	Sunrise, Florida	Electrical, Process Design, Construction Management Support

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
		9
21. TITLE AND LOCATION	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Enterprise Asset Management (EAM) Program, Virginia	Ongoing	N/A

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Richmond Department of Public Utilities, Virginia	Rosemary H. Green	804-317-0283

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

MWH's Management Consulting group is working with the City of Richmond (City) to provide consulting services to develop, establish, and implement an Enterprise Asset Management (EAM) Program for the Department of Public Utilities. The City consists of 63 square miles and has a population of approximately 200,000. The Department of Public Utilities is responsible for providing this region with utility services pertaining to gas, storm water, street lights, water, wastewater, and all affiliated customer service operations.

The two primary goals of implementing an EAM Program are to assess the planning, design, procurement, upgrade, replacement and disposal, of assets at the lowest life cycle cost and to enhance the management practices for making investment decisions concerning the portfolio of DPU assets. It is the City's plan to reach these goals while paying close attention to levels of risk and the positive impact on customer service delivery. This will allow the City to realize operational efficiencies, maintaining compliance, and achieve service level objectives.

Relevance to CUSMP

- ✓ Intent Development
- ✓ Capability Assessment
- ✓ Information GAP Analysis
- ✓ Organization Readiness Assessment
- ✓ Development of Charters

MWH's first task was to work with each utility division to identify current objectives, initiatives, asset management activities and potential barriers to achieving the DPU-wide asset management vision. Next, MWH worked with DPU leadership to develop the vision, business drivers, and strategic objectives of the EAM Program.

MWH ran a number of exploratory workshops to explore the unmet needs pertaining to gaps in AM delivery. From these workshops, MWH consolidated around 20 improvement areas to target as part of a 5-year program. Full actionable "Initiative Charters" were developed for nine near-term initiates as part of a follow-on engagement. The charters included resourcing, scope, objectives and success measure definition. The nine priority improvement areas were:

- Fully Establish Asset Management Operating Unit at DPU Improve Inventorying and Purchasing Processes for Warehouse Materials Management
- Develop a DPU Mobile Strategy
- Improve Rigor around Capital Project Delivery
- Use Business Case Evaluation to Prioritize Capital Expenditures in Water Distribution
- Increase Robustness, Accuracy, and Defensibility of Financial Forecasting and Annual Budgeting Processes for the Water Treatment Plant
- Improve Handling and Resolution Of Customer-Reported Incidents for Distributed Wet Utilities
- Improve Work Order Management for Distributed Wet Assets
- Improve Work Order Management for Water Treatment Plant and Pump Assets
- Establish Hydrant Reliability Program
- Establish Formal Valve Exercising Program for Water Distribution and Water Maintenance
- Improve Gas Utility Training, Knowledge Capture, and Knowledge Reuse
- Improve Records Management for Pressure Test Reports and Tap Records
- Improve Corrective Work Order Management for the Gas System
- Increase Revenue by Improving Small and Commercial Meter Performance
- Modify DIMP to Cover Anticipated DOT PHMSA Pipe Tracing Requirements
- Establish Street lighting Standards
- Improve Efficiency by Updating Streetlight Inventory

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	MWH Americas, Inc.	Broomfield, CO 80021	Prime

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
		10
21. TITLE AND LOCATION	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Clean Water Atlanta Program, Atlanta, Georgia	Ongoing	N/A

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Atlanta Department of Watershed, Atlanta, Georgia	Reginald Wells	404-546-3733

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

A MWH/Khafra joint venture team was selected as program manager for the $3.9B Clean Water Atlanta Program in 2001. MWH focused on developing a strategic financial plan, helped secure funding and re-engineering a "water resources utility." This re-engineering involved reorganizing portions of the City's public works group into a dedicated utility and administrating all fees for services. As part of the effort, MWH created a watershed demonstration project, showing how best management practices can protect watersheds and comply with water quality improvements.

Relevance to CUSMP

- ✓ **Infiltration & Inflow**
- ✓ **Organization Structure**
- ✓ **Strategic Financial Plan**

Over the course of negotiations with USEPA, MWH assisted the City with development and subsequent updates of the FCA. The FCA showed that City residents would be "highly burdened" based on the scope and time frame envisioned by USEPA for the SSO and CSO project elements. The assessment looked at the City's Capital Improvement Program (CIP) and included updates based on market conditions, it considered economic equity where one quarter of all Atlanta residents had an income below the federal poverty level, and it looked at program financing and variations in the bond market.

As the Clean Water Atlanta Program is one the highest-profile wet weather programs of its kind in the nation, public acceptance and financial impact on the community is critical to program success. In addition to extensive CSO control activities that included CSO outfall improvements, relief sewers and tunnels, and sewer separation, the City was required to implement a capacity assessment, management, operations and maintenance (CMOM) program for the City's wastewater collection and transmission systems for SSO control.

The program is on schedule and has been complimented in writing by both Federal Court Judge Thrash and USEPA. As Program Manager MWH team has identified significant cost savings of $850M.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	MWH Americas, Inc.	Atlanta, Georgia	Prime

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
		11
21. TITLE AND LOCATION	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Pinewoods Reverse Osmosis Water Treatment Plant Expansion Design Build, Florida	2005	2008

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Lee County Utilities, Fort Myers, Florida	Thomas Hill	239-694-4038

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

Due to increases in potable water demands in the Pinewoods service area and limited fresh water resources, Lee County Utilities found it necessary to rehabilitate and expand their existing nanofiltration (NF) membrane facility that has been operating since 1990. The Pinewoods WTP was originally designed and built by a developer to treat water from the Surficial and Sandstone Aquifers. Lee County Utilities purchased the Pinewoods WTP in July 1998 and took over plant operation of the plant in July 2003. Carollo was hired to provide design-build engineering services for rehabilitation of the NF WTP, expanding it from 2.1 mgd to 2.3 mgd, and expansion by adding 3-mgd of RO from the brackish Lower Floridan Aquifer. Lee County Utilities elected to rehabilitate and expand the Pinewoods WTP with a design/build (DB) delivery method and selected the DB contractor and engineering team based upon qualifications.

Relevance to CUSMP

- ✓ Water Treatment Process
- ✓ Optimization of Energy
- ✓ Electrical
- ✓ Storage Tank
- ✓ Optimization of Chemicals

Engineering services for this challenging 18-month project schedule were completed in only four months.

Carollo was responsible for the designing and permitting all facilities, which included rehabilitated NF equipment, a new RO process building, a new degasifier and odor scrubber system, a new 1-MG ground storage tank, standby power, and complete rehabilitation of the high service pump station, which was required to remain operational during construction.

Carollo was responsible for the designing and permitting all facilities, which included rehabilitated NF equipment, a new RO process building, a new degasifier and odor scrubber system, a new 1-MG ground storage tank, standby power, and complete rehabilitation of the high service pump station, which was required to remain operational during construction.

Pilot testing was also conducted to demonstrate that less acid could be used to pre-treat the NF water, which contained 16 mg/L of ferrous iron. The study demonstrated that less chemical can be used by raising the pH set point from 5.5 to 6.4. This saved the design/build team the cost of constructing additional storage, and continues to save Lee County the cost of over-using sulfuric acid. During the course of the RO plant expansion, the Owner had identified the need to rehabilitate the existing 1-MG concentrate storage tank. The inside lining had deteriorated and the concrete walls were showing signs of erosion. Carollo provided the D/B contractor with a specification for cleaning and relining the concentrate tank once a change order was initiated. The D/B contractor was able to fabricate a temporary bypass around the storage tank, directly to the deep injection well, which allowed the tank to be taken out of service while the treatment plant continued to produce water.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
a.	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
	MWH Americas, Inc.	Sunrise, Florida	Prime
b.	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
	Carollo Engineers	Sarasota, Florida	Subconsultant

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
		12
21. TITLE AND LOCATION	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Nitrification Action Plan, Palm Beach, Florida	2008	N/A

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Palm Beach County Utilities Department	Brian Shield	561-493-6081

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

Carollo prepared a nitrification action plan for Palm Beach County to outline procedures for preventing, detecting, monitoring, and responding to nitrification episodes, with the overall goal of maintaining consistent target water quality throughout the County's distribution system. Water quality data analyses were also conducted to:

- Assess the extent of nitrification in the distribution system.
- Identify areas where nitrification has historically occurred.
- Determine whether the quality of the water entering the distribution system is conducive to nitrification.
- Examine water quality parameters that have been correlated to nitrification occurrences.
- Propose preliminary trigger points for the nitrification action plan.

Relevance to CUSMP

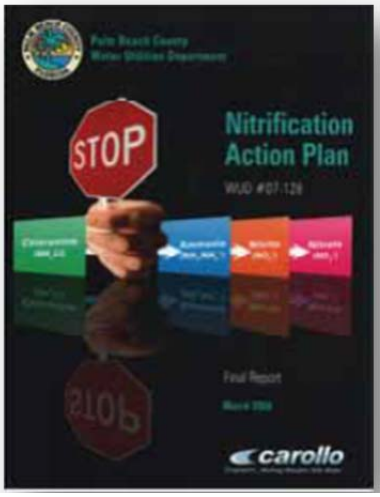
- ✓ Systemwide Water
- ✓ Quality Improvements.
- ✓ Storage Tank

Results suggested that nitrification was widespread and severe in two distribution system service areas, and nitrification episodes may have historically occurred in other service areas. A strong correlation was found between water quality measured at points of entry to the distribution system and the occurrence of nitrification. Factors found to contribute to nitrification included:

- High TOC, a food source for nitrifying bacteria.
- High free ammonia, a food source for ammonia oxidizing bacteria.
- Low alkalinity, which allows pH to decrease during distribution, favoring nitrification.
- High water temperature, which supports the growth of bacteria.

The study found that given these water quality conditions, modifications in the water treatment process were essential to control nitrification in the distribution system. Recommended actions to control nitrification included:

- Adjust water quality at the treatment plant to limit free ammonia and TOC, meet the taret Cl2:NH3-N ratio, and maintain adequate total chlorine residual.
- Conduct unidirectional flushing of the affected area(s) of the distribution system if nitrification is observed.
- Cycle the affected storage reservoir(s) if nitrification is observed in one of them.
- For persistent problems, consider supplementing unidirectional flushing or reservoir cycling with breakpoint chlorination.



The Nitrification Action Plan for Palm Beach County outlined recommendations that markedly improved distribution system water quality.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	Carollo Engineers	Sarasota, Florida	Prime

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
		13
21. TITLE AND LOCATION	22. YEAR COMPLETED	
	Professional Services	Construction (If applicable)
Port Everglades - Various GIS Projects **Fort Lauderdale, Florida**	1993-2014	1993-2014

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Port Everglades - Seaport Engineering and Construction Division, Public Works & Transportation Department, Florida	John Fogleson, Division Director	954-523-3404

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

Relevance to CUSMP

- ✓ Distribution System Hydraulic Model
- ✓ Hydraulic Analysis of Wastewater System

Port-Wide Sanitary Sewer System Analysis (July 2008 - March 2009)

CTA prepared a Port-wide sanitary sewer system analysis for Port Everglades in 2009. The study area included the entire Port Everglades properties and focused on the capacity and performance of Port's overall wastewater collection system; sewage lift stations; and force main network for meeting both present and future demands. The engineering study included the following services: an update to the Port's overall wastewater system atlas; site inspections of all existing sewage lift stations; review of existing documents provided by the Port; meetings with Port staff to discuss flow requirements, system performance, and to solicit additional information on the existing sewer system; performance of lift station startups; obtaining pressure readings from the Port's existing sewage pump stations and force main system; hydraulic analyses of the existing system; evaluation of the future sewer demands for the Port, based on the 2008 Update to the Port Everglades Master Plan; analysis of the required upgrades to the existing system to meet future demands; and computation of a probable cost estimate. Flow capacities and system analyses were performed using the Bentley Sewer CAD hydraulic computer model (version 5.6). CTA presented the results of the study to the Port in GIS format.

Port-Wide Water System Analysis (July 2008 - December 2008)

CTA prepared a Port-wide water system analysis for Port Everglades. The study area included the entire Port Everglades properties and focused on the capacity and Port's overall water distribution network for meeting fire flows and peak water demands. The engineering study included the following services: an update to the Port's overall water system atlas; performance of flow tests at various fire hydrants to record pressure readings and flows; preparation of a Haestad Methods WaterCAD model to evaluate existing and future water distribution flows and operations; evaluation and WaterCAD modeling of existing water distribution system; evaluation and WaterCAD modeling of water distribution system based on future build-out of the Port; recommendations for current and future water distribution upgrades, based on the results of the WaterCAD model and water system analysis. CTA presented the results of the study to the Port in GIS format.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	Craven Thompson & Associates, Inc.	Fort Lauderdale, Florida	Prime – Civil Engineering, GIS, and Surveying

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
		14
21. TITLE AND LOCATION	22. YEAR COMPLETED	
	Professional Services	Construction (If applicable)
Utility Analysis Zone Improvement Program (UAZ) 124 Broward County, Florida	2006	2012

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Broward County Water and Wastewater Services, Florida	Alan Garcia, PE, Director, Water & Wastewater Services	954-831-0747

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

The UAZ 124 project is located between Florida Turnpike, State Road 7, Commercial Boulevard and NW 39th Street. The infrastructure improvements to the existing neighborhood included new water, sanitary sewer systems. This area is primarily residential, built in the 1950's and early 1960's. The area was developed with sanitary sewer system, and an inadequate water distribution system. As a result of the aging sanitary system and inadequate water distribution infrastructure, Broward County selected Craven Thompson and Associates, Inc. to design infrastructure improvements needed in the area. The modeling was performed using Haestad Methods SewerCad and WaterCad Software. Craven Thompson & Associates, Inc. designed, permitted, and provided construction services for the construction of roadways, a sanitary sewer collection system consisting of 25,446 L.F. - 8" gravity main, 302 L.F. - 10" gravity main, 2,003 L.F. - 12" gravity main, and 46 L.F. - 16" gravity main. The sanitary force main system consisted of 2,350 L.F. - 8" main, and 3,790 L.F. 12" main. The water distribution system additions included 28,810 L.F. - 6" main, 4,440 L.F. - 8" main and 5,380 L.F. - 10" main. This project required coordination with the City of Lauderdale Lakes.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	Craven Thompson & Associates, Inc.	Fort Lauderdale, Florida	Prime – Civil Engineering, Computer Modeling, and Construction Management

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
		15
21. TITLE AND LOCATION	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Professional Services Contract, City of Sunrise, Florida	2008 to Present	N/A

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Sunrise Utilities Department, Florida	Allan Miller, Project Manager	954-888-6050 Telephone 954-572-2278 Fax AMiller@sunrisefl.gov

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

Revere works with the City of Sunrise in planning for the future of their SCADA System. The different sections of the plan look towards future needs for the City's service areas, looks towards current and future available technology, and government regulations. Following the planning stage, Revere then works to implement the most critical and relevant portions of those plans. Each plan is reviewed prior to beginning implementation, and then following implementation to ensure the goals were met. Following implementation, the plans are then reviewed with the City to determine the possible next step for that portion of the System, or if no further action needed at that time, when the plan should be revisited and reviewed for the current needs, technology and regulatory environment. Implementation services performed by Revere include configuration, maintenance, repair and replacements, diagnostics, administration, programming, upgrades, documentation and training for the City's SCADA Control System.

Relevance to CUSMP

✓ SCADA and Control System

Technical support services are provided for the following components/systems:

- SCADA Servers, SCADA Client Workstations and associated appurtenances
- Microsoft Access and SQL Server databases
- GE Cimplicity HMI SCADA Applications and GE 90-70 PLC, 90-30 PLC, Versamax PLC and related software
- Allen Bradley PLC and related software
- Modicon PLC and related software
- Routers, hubs, and switches linked through fiber and UTP cables
- Radio Spread Spectrum and Diagnostics Software
- Field Instrumentation
- Local Control Panel Hardwired Controls

Work is performed based on work orders issued by the City. A scope of work is prepared along with a time and expense estimate for approval by the City prior to proceeding with the work. We are required to provide a timely and comprehensive emergency response to failures for the included systems. A response and acknowledgement of an Emergency is to be provided within four (4) hours of being contacted by the City. Work to actively resolve an Emergency must begin within twenty-four (24) hours of the Declaration of Emergency. Support is provided via the following methods:

- Telephone assistance services via the technical support hotline 24 hours a day, 7 days per week.
- Communication via email.
- Professional emergency support available onsite within twenty-four (24) hours of notice.
- Control Systems Technician available onsite within five (5) hours of notice for troubleshooting and calibration equipment.

Revere has provided network support services to the Utilities Department for the SCADA Control System as well as the City's Management Information Systems (MIS) Department as it interfaces with the SCADA Control System and for monitoring tools of the City's overall network. As part of this support effort, we have implemented the use of CPWE and ICS-CERT best practices based on the procedures and guidelines provided by the City.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	Revere Control Systems, Inc.	Lakeland, FL / Birmingham, AL	Consultant Systems Integrator Instrumentation & Control

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
		16
21. TITLE AND LOCATION	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Broward County Regional Reuse Master Plan, Broward County, Florida	2012-2013	N/A

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Broward County Natural Resources Planning and Management, Florida	Dr. Jennifer Jurado	954-519-1270

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

Assistance with the preparation of the Broward County Regional Reuse Master Plan.

The scope of work for preparation of this report included

- Coordination with stakeholders to deliver a current and comprehensive review of existing reuse infrastructure, operations and current permitting within and adjacent to Broward County.
- Collection of relevant data for use in the evaluation of a county-wide strategy for the most cost effective development and phased approach of beneficial reuse projects across Broward County as part of a regional reuse master plan.
- Evaluation of potential regional and sub-regional reuse projects within and across jurisdictional and service area boundaries acknowledging any timing, infrastructure or legislative constraints.
- Present a county-wide strategy for the most cost-effective and sustainable development of beneficial reuse projects across Broward County as part of a regional reuse master plan that includes infrastructure cost estimates and potential funding opportunities to offset costs.

Relevance to CUSMP

- ✓ Reuse Planning
- ✓ Sustainable Planning

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	Cordova Rodriguez & Associates, Inc.	Pembroke Pines, Florida	Civil and GIS Subconsultant

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
		17
21. TITLE AND LOCATION	22. YEAR COMPLETED	
Lohmeyer Wastewater Treatment Plant Effluent Disposal Pump Station Rehabilitation, Fort Lauderdale, Florida	PROFESSIONAL SERVICES	CONSTRUCTION

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Fort Lauderdale, Florida	Maurice Tobon, PE (former Project Manager)	

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

Relevance to CUSMP

✓ Electrical System

Hillers Electrical Engineering provided electrical, instrumentation and control system design, construction inspection services, and programming services for construction of a 105 MGD capacity Effluent pumping station at Lohmeyer Wastewater Treatment Plant. Process improvements included adding five (5) vertical non-clog medium voltage pumps ranging in size from 1250 HP to 1750 HP.

Project Highlights:

- Modification of the existing medium voltage switchgear and addition of new medium voltage switchgear.
- Modifications to existing medium voltage starters and low voltage MCC'S.
- Design and implementation of medium voltage variable frequency drives and soft starts with contactor arrangement to allow two VFD'S to share one softstart as a back-up.
- New effluent pump PLC based control system with separate relay system back-up control panel.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	Hillers Electrical Engineering, Inc.	Boca Raton, Florida	Electrical Engineers

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		20. EXAMPLE PROJECT KEY NUMBER
		18
21. TITLE AND LOCATION	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION
Water Conservation Technical Evaluation **Palm Beach County, Florida**	2010	N/A

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Palm Beach County Utilities, Florida	Bevin A. Beaudet, PE	561-493-6000

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT

Maddaus Water Management, working with another firm, prepared a Water Conservation Technical Evaluation for Palm Beach County Utilities (PBC). PBC serves a growing population of about 500,000 people and is facing expensive water treatment options to meet demand from deeper groundwater aquifers.

Relevance to CUSMP

✓ Water Conservation

Project Highlights:

- Assessed the current water use patterns and prepared a Technical memorandum documenting the existing conservation potential and the planned future water needs.
- Held a measure screening workshop to review over 80 potential conservation measures and narrow the list to 26 measures for detailed evaluation.
- Calibrated a water use cost-benefit model (DSS Model) to existing and planned future service area conditions.
- Applied the model to evaluate water savings costs, and benefits for 26 measures.
- Packaged the 26 measures into three increasingly aggressive conservation programs.
- Prepared a final Technical Memorandum showing that water demands could be reduced 8-14 percent over 20-30 years and that water conservation could provide up to 35 percent of new water needs by 2035.
- Presented the results of the study in a water conservation workshop.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	Maddaus Water Management, Inc.	Alamo, California	Conservation Technical Analysis Lead – Subcontractor

G. KEY PERSONNEL PARTICIPATION IN EXAMPLE PROJECTS

26. NAMES OF KEY PERSONNEL	27. ROLE IN THIS CONTRACT	28. EXAMPLE PROJECTS LISTED IN SECTION F									
		1	2	3	4	5	6	7	8	9	10
Harold Aiken, PE	Principal-In-Charge	✓	✓								
Mohammad Badruzzaman, PhD, PE	Energy/Operational Efficiency	✓									
Thaddeus Buckley, GC	Optioneering		✓				✓				
Lynette Cardoch, PhD	Climate Change/Sustainable Planning						✓				
Rosana D. Cordova, P.E., LEED AP, AICP	Reuse Implementation										
Sangeeta Dhulashia, PE, PMP	Project Managers/Wastewater Treatment/Infrasturcture	✓	✓	✓			✓	✓			✓
Glenn Fawcett	Asset Management									✓	
Patrick Gibney, PE	Pumping and System Model										
Becky Hachenburg, PE, PMP	Project Managers/Water Treatment/Infrasturcture	✓	✓					✓	✓		
Paul Hillers, PE	Electrical Engineering		✓						✓		
Kristin Hink, EI	Demand Forecast	✓	✓				✓		✓		
Nan Johnson	SCADA and Control Systems										
Neil Johnson, PG	Water Supply/CUP		✓	✓							
William Maddaus	Water Conservation										
Jane McLamarah, PhD, PE	Infiltration/Inflow						✓				✓
Jason Mumm	Financing									✓	
Lyle Munce, PE	Treatment Process		✓								
Maria Ramirez, PE	Project Managers/Utilitywide	✓		✓			✓	✓	✓		
Chris Reinbold, PE	Water Quality / Infiltration/Inflow		✓								
Gerardus Schers, PMP	Project Managers/Water Treatment/Infrasturcture	✓	✓	✓			✓		✓		
Harold Schmidt, PE	Project Managers/Wastewater Treatment/Infrasturcture	✓	✓			✓	✓		✓		✓
John Visconti, PMP	Project Managers/Utilitywide	✓	✓				✓				

29. EXAMPLE PROJECTS KEY

NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)	NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)
1	Sunrise Master Plan and Related Engineering Services, Sunrise, Florida	6	Central District Wastewater Treatment Plant – Renewal and Replacement Program, Miami, Florida
2	Sunrise Program Management, Sunrise, Florida	7	Reclaimed Water Filtration Plant and Wastewater Reuse Study, Pompano Beach, Florida
3	Water and Wastewater Master Plan, City of Cape Coral, Florida	8	Water Treatment Plant Upgrades West Palm Beach, Florida
4	Utility Master Plan, Marco Island, Florida	9	Enterprise Asset Management (EAM) Program, Richmond Department of Public Utilities, Virginia
5	Optimization of Wastewater Lift Stations for Reduction of Energy Usage and Greenhouse Gas Emissions Jacksonville, Florida	10	Clean Water Atlanta Program, Atlanta, Georgia

G. KEY PERSONNEL PARTICIPATION IN EXAMPLE PROJECTS

26. NAMES OF KEY PERSONNEL	27. ROLE IN THIS CONTRACT	28. EXAMPLE PROJECTS LISTED IN SECTION F									
		11	12	13	14	15	16	17	18	19	20
Harold Aiken, PE	Principal-In-Charge										
Mohammad Badruzzaman, PhD, PE	Energy/Operational Efficiency										
Thaddeus Buckley, GC	Optioneering										
Lynette Cardoch, PhD	Climate Change/Sustainable Planning										
Rosana D. Cordova, P.E., LEED AP, AICP	Reuse Implementation						✓				
Sangeeta Dhulashia, PE, PMP	Project Managers/Wastewater Treatment/Infrastructure										
Glenn Fawcett	Asset Management										
Patrick Gibney, PE	Pumping and System Model			✓	✓						
Becky Hachenburg, PE, PMP	Project Managers/Water Treatment/Infrastructure										
Paul Hillers, PE	Electrical Engineering							✓			
Kristin Hink, EI	Demand Forecast										
Nan Johnson	SCADA and Control Systems					✓					
Neil Johnson, PG	Water Supply/CUP										
William Maddaus	Water Conservation								✓		
Jane McLamarah, PhD, PE	Infiltration/Inflow										
Jason Mumm	Financing										
Lyle Munce, PE	Treatment Process	✓	✓								
Maria Ramirez, PE	Project Managers/Utility-Wide										
Chris Reinbold, PE	Water Quality / Infiltration/Inflow	✓	✓								
Gerardus Schers, PMP	Project Managers/Water Treatment/Infrastructure										
Harold Schmidt, PE	Project Managers/Wastewater Treatment/Infrastructure										
John Visconti, PMP	Project Managers/Utility-Wide										

29. EXAMPLE PROJECTS KEY

NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)	NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)
11	Pinewoods Reverse Osmosis Water Treatment Plant Expansion Design Build, Lee County, FL	16	Broward County Regional Reuse Master Plan, Broward County, Florida
12	Palm Beach County Water Utilities Department, Palm Beach, Florida	17	Lohmeyer Wastewater Treatment Plant Effluent Disposal Pump Station Rehabilitation, Fort Lauderdale, Florida
13	Port Everglades - Various GIS Projects, Fort Lauderdale, Florida	18	Water Conservation Technical Evaluation Palm Beach County, Florida
14	Utility Analysis Zone Improvement Program (UAZ) 124 Broward County, Florida	19	
15	Professional Services Contract, City of Sunrise, Florida	20	

ARCHITECT-ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(if any)*: RFQ #246-11426

PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME: **MWH Americas Inc. (Sunrise Branch Office)**	3. YEAR ESTABLISHED: 1997 / 4. DUNS NUMBER: 06-568-7170
2b. STREET: 490 Sawgrass Corporate Parkway, Suite 300	5. OWNERSHIP
2c. CITY: Sunrise / 2d. STATE: FL / 2e. ZIP CODE: 33325	a. TYPE: Privately Held Corporation
	b. SMALL BUSINESS STATUS: N/A
6a. POINT OF CONTACT NAME AND TITLE: Harold Aiken, PE, Vice President	7. NAME OF FIRM *(If block 2a is a branch office)*: MWH Americas, Inc.
6b. TELEPHONE NUMBER: 954-846-0401 / 6c. E-MAIL ADDRESS: harold.aiken@mwhglobal.com	

8a. FORMER FIRM NAME(S) *(if any)*	8b. YR. ESTABLISHED	8c. DUNS NUMBER
MWH Americas, Inc.	2001	04-523-2204
Montgomery Watson, Inc.	1993	04-523-2204

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) FIRM	c. No. of Employees (2) BRANCH
02	Administrative	271	2
06	Architect	8	
07	Biologist	5	
08	CADD Technician	69	1
10	Chemical Engineer	7	
11	Chemist	3	
12	Civil Engineer	402	5
18	Cost Engineer/Estimator	34	
21	Electrical Engineer	48	1
23	Environmental Engineer	74	1
24	Environmental Scientist	65	
27	Foundation/Geotechnical Engineer	44	
30	Geologist	50	
34	Hydrologist	37	
42	Mechanical Engineer	40	1
48	Project Manager	280	2
51	Safety/Occupational Health Engineer	6	
57	Structural Engineer	43	
58	Technician/Analyst	256	
	Other	114	1
	Total	1856	14

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number (see below)*
D01	Dams (Concrete ; Arch)	1
E07	Energy Conservation; New Energy Sources	1
E09	Environmental Impact Studies, Assess or Stmts	2
P12	Power Generation, Transmission, Distribution	1
S04	Sewage Collection, Treatment & Disposal	4
W03	Water Supply; Treatment & Distribution	4
	Biosolids & Residuals	1
	Infrastructure & Industry	5
	Other	3
	Sanitary Wastewater/Stormwater	1
	Wastewater Planning & Management	2
	Water – Other	3
	Water Resource Planning & Management	3
	Water Reuse	4

*Revenue Index Number Based on Firm's Average Revenue

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

(Insert revenue index number shown at right)

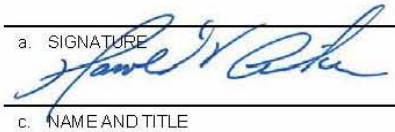
a. Federal Work	10
b. Non-Federal Work	10
c. Total Work	10

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. **Less than $100,000**
2. **$100,000 to less than $250.000**
3. **$250,000 to less than $500,000**
4. **$500,000 to less than $1 million**
5. **$1 million to less than $2 million**
6. **$2 million to less than $5 million**
7. **$5 million to less than 10 million**
8. **$10 million to less than $25 million**
9. **$25 million to less than $50 million**
10. **$50 million or greater**

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE: 

b. DATE: June 16, 2014

c. NAME AND TITLE: Harold Aiken, PE, Vice President

AUTHORIZED FOR LOCAL REPRODUCTION

STANDARD FORM 330 (6/2004)

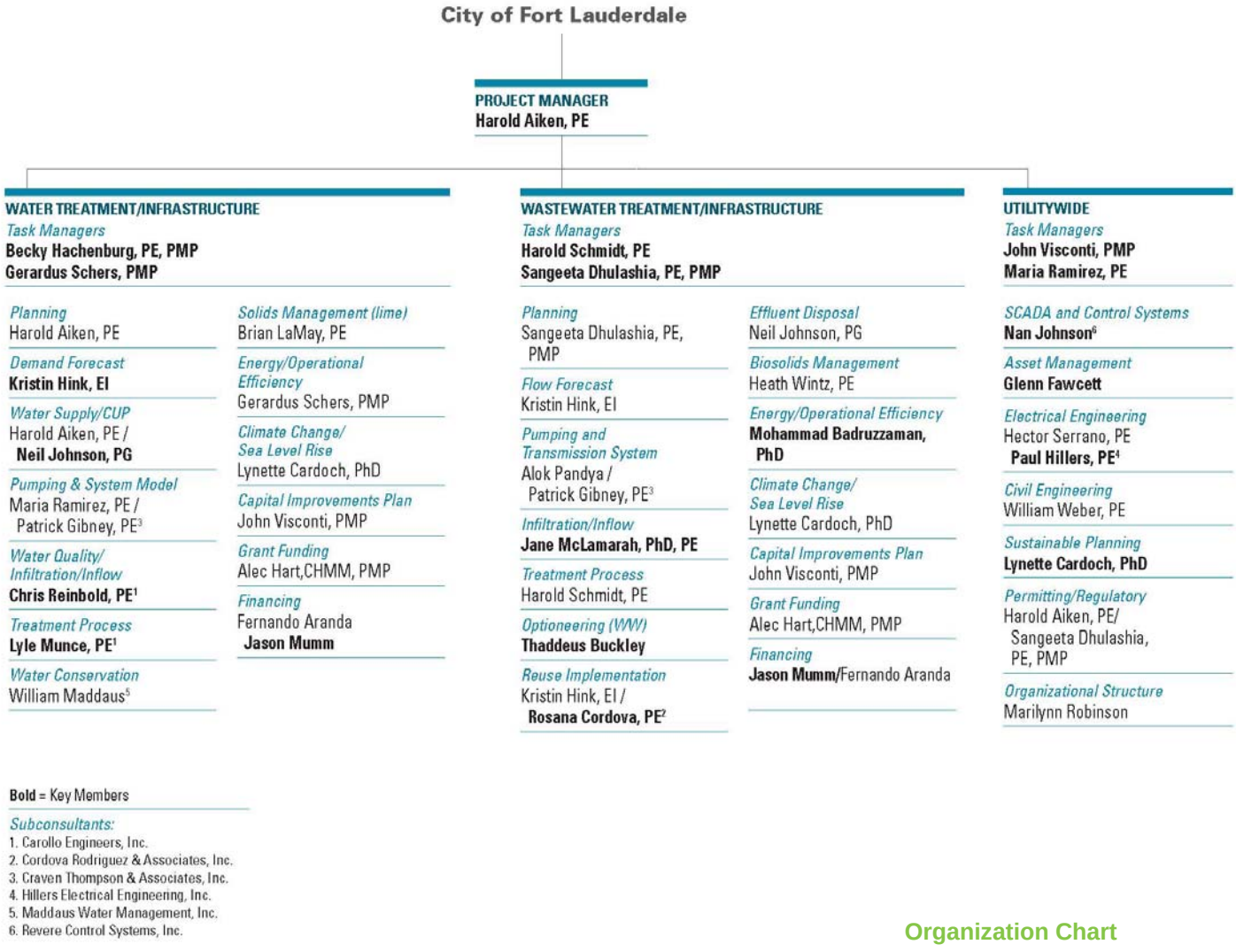
SECTION 4

Qualifications of the Project Team

MWH has brought together an exceptional team to provide the City of Fort Lauderdale with the specific skills and expertise required to meet the special needs of this project.

WE OFFER A PROVEN PROJECT TEAM with extensive master planning experience. MWH believes the most important aspect of any project is creating a team that involves the right people. People who are familiar with the project and client, experienced in their proposed role, and willing and readily available to perform the work requested. This MWH team was handpicked to provide the City of Fort Lauderdale with a blend of individuals who have substantial experience on similar projects and direct experience with the anticipated scope of services. Each team member is committed to this project and will spend the time and effort required to successfully complete the City's Comprehensive Utility Strategic Master Plan.

The organization chart below identifies our project team and associated responsibilities of the project staff. Key Project Team Members are identified in bold text.



Organization Chart

MEET OUR TEAM

The key to the successful planning and implementation of the City's Comprehensive Utility Strategic Master Plan is the strength of the team assigned to the project. MWH has assembled a team of consultants that is able to bring the full spectrum service to address the needs for the City of Fort Lauderdale's CUSMP. Successful completion of your projects requires a committed team experienced in all aspects of master planning. MWH provides a well-rounded team led by our ***Project Manager, Mr. Harold Aiken, PE.*** Mr. Aiken will provide the City with one point of accountability, ensuring coordination across all area of work and amongst the different Task Managers.

For the benefit of your project, we have supplemented our team with subconsultants who have been our known partners and are well known locally in their area of expertise. and many who we have worked with on various projects in Florida.

Together, our team possesses the knowledge, skills, and abilities specific to this project – as well as a solid track record on similar projects. An organization chart can be found on the previous page and firm profiles for each subconsultant can be found in Section 11 of this SOQ. Team member qualifications can be found on the SF 330 forms.

- ***Carollo Engineers, Inc.*** - Carollo has a history of teaming with MWH for Water Treatment projects. This partnership has successfully completed the many projects including Lee County's Pinewoods Reverse Osmosis Water Treatment Plant Expansion Design Build (2008), Sarasota County: Dona Bay Water Storage Analysis (2007), and Venice Minerals Closure plans (2010). Our firms have also worked together on the City of Oklahoma City Draper Water Treatment Plant Infrastructure Assessment and Capacity Expansion (2004).
- ***Cordova Rodriguez & Associates, Inc.***[(1)(2)] – Cordova staff has worked with MWH in the past on the Miami-Dade Water and Sewer Department's Pump Station Improvement Program, Program Management Team (2000) and have enjoyed a working relationship over 13 years.
- ***Craven Thompson & Associates, Inc***[(1)] – MWH has teamed with Craven Thompson over the past 10 years to complete the City of Oakland Park's Water Distribution System Evaluation and Master Plan (2004) and Water Supply Facility Work Plan (2008).
- ***Hillers Electrical Engineering, Inc***[(2)] – Hillers has teamed with MWH on various electrical projects including the ongoing upgrades to the West Palm Beach Water Treatment Plant.
- ***Maddaus Water Management, Inc.*** - Maddaus has completed 22 water conservation and demand management projects with MWH since 1995, across the United States and overseas.
- ***Revere Control Systems, Inc.*** - Revere has teamed with MWH for over 7 years, partnering on multiple Instrumentation and Control projects and with multiple clients. Two notable projects completed in Florida are the City of Sunrise Professional/Continuing Services Maintenance Contract (2012) and the City of West Palm Beach, Water Treatment Plant Automation Improvements / SCADA Upgrades (2012).

(1) Firm(s) with offices in the City of Fort Lauderdale
(2) M/WBE

Personnel Experience Matrix

It's important that your consulting engineer has the right team to complete the multitude of projects identified under the City's Comprehensive Utility Strategic Master Plan. The following table matches our proposed project team with the list of experience. As you can see, our team is well rounded to meet your needs.

Personnel Experience Matrix

PERSONNEL				WATER											WASTEWATER									WATER/ WASTEWATER				UTILITY-WIDE							
Team Member	Role	SF 330 Resume Page No.	Availability (%)	Integrated Utility Planning	Demand Forecast	Water Supply Planning	Wellfield Evaluation and Planning	Consumptive Use Permitting	Hydraulic Distribution Modeling	System-wide Water Quality Improvements	Treatment Process	Storage Tank and High Service Pumping	Solids Management	Water Conservation	Integrated Utility Planning	Flow Forecast	Pumping and Transmission System Modeling	Infiltration and Inflow Evaluation and Reduction	Treatment Process	Effluent Disposal	Reuse Planning, Design and Implementation	Optioneering	Biosolids Management Planning	Energy/Operational Optimization	Capital Improvement Plan	Grant Funding	Financing	SCADA and Control Systems	Asset Management	Electrical Engineering	Civil Engineering	Environmental Engineering	Sustainable Plan./ Climate Change/ Sea Level Rise	Regulatory Review	Organization Structure
Harold Aiken, PE*	Project Manager/Planning/ Water Supply/CUP/Permitting / Regulatory	22	75	✓	✓	✓	✓	✓	✓						✓		✓	✓			✓			✓	✓		✓		✓		✓	✓	✓	✓	✓
Fernando Aranda	Financing	N/A	60																								✓							
Mohammad Badruzzaman, PhD, PE*	Energy/Operational Efficiency	24	40								✓			✓			✓		✓				✓	✓				✓							
Thaddeus Buckley, GC*	Optioneering	25	40						✓		✓						✓		✓		✓	✓						✓		✓					
Lynette Cardoch, PhD*	Climate Change/Sea Level Rise/Sustainable Planning	26	50											✓					✓									✓				✓	✓	
Rosana Cordova, PE*	Reuse Implementation	27	50	✓		✓									✓						✓														
Sangeeta Dhulashia, PE, PMP*	Task Manager/Wastewater Treatment/Infrastructure/ Planning/ Permitting /Regulatory	28	85	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓		✓		✓		✓	✓					✓	✓	✓	✓	
Glenn Fawcett*	Asset Management	29	35																						✓				✓						✓
Patrick Gibney, PE	Pumping and System Model/ Pumping and Transmission System	N/A	80						✓								✓																		
Becky Hachenburg, PE, PMP*	Task Manager/Water Treatment/Infrastructure	30	80	✓		✓	✓	✓	✓		✓	✓												✓	✓			✓	✓	✓	✓		✓	✓
Alec Hart, CHMM, PMP	Grant Funding	N/A	30																							✓					✓		✓	
Paul Hillers, PE*	Electrical Engineering	31	60				✓		✓		✓						✓		✓	✓								✓		✓					
Kristin Hink, EI*	Demand Forecast/ Flow Forecast/ Reuse Implementation	32	100		✓	✓		✓	✓		✓					✓	✓				✓			✓						✓	✓		✓	
Nan Johnson*	SCADA and Control Systems	33	65																									✓	✓					
Neil Johnson, PG*	Water Supply/CUP/ Effluent Disposal	34	40				✓	✓												✓														
Brian LaMay, PE	Solids Management (Lime)	N/A	40				✓				✓	✓	✓						✓	✓	✓	✓								✓	✓		✓	
William Maddaus	Water Conservation	N/A	60		✓	✓								✓																				
Jane McLamarrah, PhD, PE*	Infiltration/Inflow	35	85												✓	✓	✓	✓															✓	
Jason Mumm*	Financing	36	30						✓													✓					✓							
Lyle Munce, PE*	Treatment Process	37	65			✓	✓		✓		✓	✓		✓										✓	✓						✓	✓		✓	
Alok Pandya	Pumping and Transmission System	N/A	70	✓	✓	✓			✓	✓		✓			✓	✓	✓	✓				✓													
Maria Ramirez, PE*	Task Manager/Utility-wide Pumping and System Model	38	90	✓	✓	✓			✓			✓				✓	✓			✓	✓				✓				✓	✓	✓	✓	✓	✓
Chris Reinbold, PE*	Water Treatment/Quality	39	80							✓	✓	✓	✓											✓	✓						✓	✓		✓	
Marilynn Robinson	Organizational Structure	N/A	30																																✓
Gerardus Schers, PMP*	Task Manager/Water Treatment/Infrastructure/ Energy/Operational Efficiency	40	75	✓						✓	✓	✓	✓		✓		✓		✓	✓	✓	✓		✓	✓						✓	✓		✓	
Harold Schmidt, PE*	Task Manager/Wastewater Treatment/Infrastructure/ Treatment Process	41	80												✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						✓	✓	✓	✓	
Hector Serrano, PE	Electrical Engineering	N/A	60				✓		✓		✓						✓		✓	✓								✓		✓					
John Visconti, PMP*	Task Managers/Utility-wide/ Capital Improvements Plan	43	75	✓											✓		✓		✓				✓		✓		✓		✓		✓	✓		✓	
William Weber, PE	Civil Engineering	N/A	50				✓										✓														✓				
Heath Wintz, PE	Biosolids Management	N/A	40				✓				✓								✓				✓								✓		✓		

* Only resumes of Key Personnel included in the Standard Form 330.

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SECTION 5

Project Manager's Experience

We offer a Proven Project Team – Our project manager, task managers and project team are comprised of individuals with local, state, and national experience related to integrated utility planning comprising of water, wastewater, reuse, asset management, SCADA and controls, financing, and sustainable planning to address emerging issues such as sea level rise and climate change. This team understands the City's vision, strategic plan and sustainability action plan and is able to offer solutions based on actual experience. Our team is structured to offer the best individuals to successfully deliver the 'City of Fort Lauderdale's Comprehensive Utility Strategic Master Plan (CUSMP)' from start to finish – on time and within budget.

Our Project Manager

Harold Aiken, PE

Project Manager

Mr. Aiken's utility related career began in 1975 as a Project Engineer with the North Carolina Public Utilities Commission with a focus on utility service audits and rate setting.

In 1977, Mr. Aiken was recruited by the Southwest Florida Water Management District in Brooksville where he led the planning of the groundwater regulation program.

In 1979, he was recruited to be the Director of Engineering, Planning & Operations for the largest regional utility in Florida, the West Coast Regional Water Supply Authority. During his 10 years as the Director, he managed two Master Plans and oversaw the planning, permitting, funding, design and construction of 9 major expansions for the Tampa Bay three County areas.

In 1989, Mr. Aiken was appointed General Manager. During the next 5 years he consolidated the agency's 13 water agreements into a single document and rate. He also oversaw an investigation into failures of prestressed concrete cylinder pipe, the results which led to changes in the American Water Works Association C-300 standards.

In 1994, Mr. Aiken joined MWH (Formerly Montgomery Watson) to help manage the largest wet weather program in the Country, the Greater Houston Wastewater Program. In five years, the team of consultants and City staff design and constructed over 200 wet weather projects at a cost of $1.3B. Mr. Aiken managed the 3 largest service areas with more than 150 projects and a team of 36 consultants and staff of 12.

In 2000, Mr. Aiken assisted the City of Sunrise with completion of its 12 MGD nano-membrane softening plant and expanded it to 18 MGD. In addition to the membrane plant work, Mr. Aiken completed the City of Sunrise's Partial System Master Plan for the newly acquired Southwest Ranches service area.

In 2004, Mr. Aiken became Program Manager for the Acceler8 Everglades Restoration Program. Mr. Aiken oversaw an integrated team of project managers and a stable of consultants. A number of concepts introduced, such as, project life cycle and financial management are still used by the South Florida Water Management District today.

In 2007, Mr. Aiken began working the City of Sunrise Utility Master Plan which looked at a 20-year horizon for future water demands, new infrastructure and renewal and replacement. At the same time, he helped the City obtain a 20-Year Consumptive Use Permit. Immediately following the Master Plan completion, the City undertook a major utilities expansion. Mr. Aiken served as Program Manager working closely with the Utilities and Engineering Manager.

Recently, Mr. Aiken led the C-51 Independent Cost Estimate and Financial Analysis Team on behalf of utilities in Palm Beach and Broward Counties.

Meet Our Task Managers

The key to successful planning of CUSMP is the strength of the team assigned to this project. Successful completion of your project(s) requires a committed team experienced in all aspects of planning elements such as water supply, pumping systems and hydraulic modeling, water quality enhancements, treatment process, water conservation, solids management, operational efficiency, infiltration and inflow, optioneering, reuse implementation, effluent disposal, biosolids management, climate change, sea level rise, SCADA and control systems, asset management, permitting, organizational structure, capital improvement plan development, grant fund and financing. MWH provides a well-rounded team led by our Project Manager, Mr. Harold Aiken, PE. Harold will provide the City with one point of accountability, ensuring coordination across the team. He will work closely with each of the task managers required for the CUSMP. For the benefit of CUSMP, we have supplemented our team with local subconsultants who have worked on many similar projects in the local area and with the City's infrastructure.

Becky Hachenburg, PE, PMP
Water Treatment/ Infrastructure

- Over 18 years of experience in water supply and treatment process design, water management, environmental engineering, and water quality analysis.
- Managed several membrane plant projects, including the Sawgrass WTP Expansion project—which included nanofiltration (NF) membrane technology—and managed the North Lee County WTP design
- Technical Manager for the Everglades Acceler8 Program for South Florida Water Management District

Gerardus Schers, PM
Water Treatment/ Infrastructure

- Over 23 years of broad experience working on over $250M worth of completed and $150M under contract water construction projects with a total of $30M in engineering fees; expertise includes hydraulic, civil, and process engineering
- Led the design teams for the 24-mgd RO Water Treatment Plant and the 3-mgd expansion of the Southwest RO Water Treatment Plant in Cape Coral, FL
- Development of a long term rehabilitation solution of a 100-year old surface water treatment facility and the addition of MIEX, PAC, Ultrafiltration and Granular GAC treatment processes to treat alternative water supply source water for the City of West Palm Beach, FL

Harold Schmidt, PE
Wastewater Treatment/ Infrastructure

- 31 years of extensive experience in the planning, design, and construction of wastewater treatment plants, biosolids and odor control
- Technical Advisory Leader for the City of Sunrise Water and Wastewater Master Plan, responsible for the oversight of the evaluation of wastewater treatment system requirements
- Technical advisory lead for the Miami-Dade 143-mgd Central District WWT Water Reuse Project for Miami, FL
- MWH's East Division Wastewater Practice Leader
- Program Manager for $80M of Wastewater Capital Projects for the City of North Port, FL

Sangeeta Dhulashia, PE, PMP
Wastewater Treatment/ Infrastructure

- 19 years of broad experience in comprehensive utility planning, capital planning, and optimization of water and wastewater facilities
- Extensive experience with regional water supply issues and the evolving federal, state, and local regulations
- Technical Services Manager for over 60 design projects under the $300M Capital Improvement Program for the City of Sunrise
- Provides the City with expertise in water, wastewater and reuse facilities planning and the development/coordination of financial plans that support capital and R&R utility projects

John Visconti, PMP
Utility-Wide/ Capital Improvement Plan

- Over 24 years of experience in water and wastewater engineering, including project and construction management, engineering services during construction, and facilities planning, design, and construction
- Project Manager of the $300M Capital Improvement Program for the City of Sunrise
- Managed the Biosolids Processing Upgrades Program at the 80-mgd Hartford, CT Water Pollution Control Facility and the Greater Lawrence Sanitary District's Riverside Pump Station Odor Control System Project
- Project Manager for a sewer system odor and corrosion control project in Central Massachusetts
- Project Manager for the Everglades Acceler8 Program working on ACME Basin B and other projects

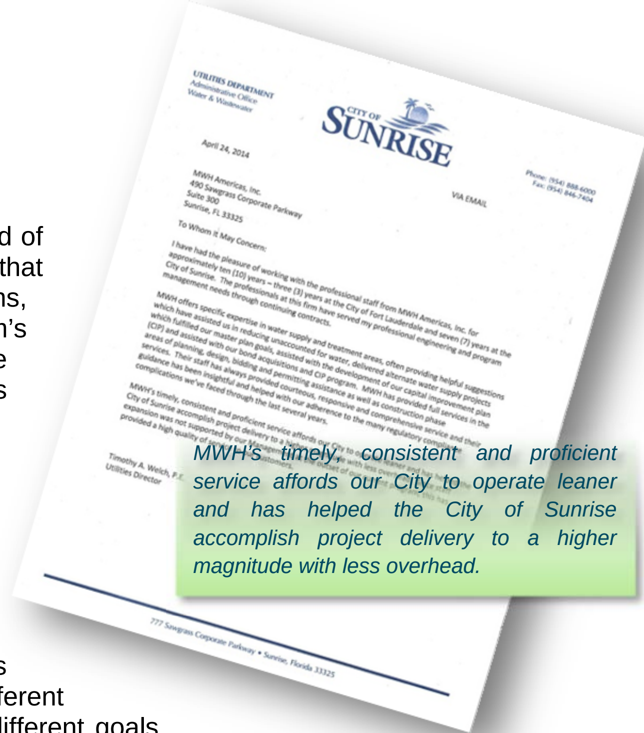
Maria Ramirez, PE
Utility-Wide/ Capital Improvement Plan

- 10 years of hydraulic modeling and water, wastewater, reuse planning experience to include electrical improvements, asset management and CIP.
- Performed network analysis including water and wastewater hydraulic modeling for the cities of North Miami Beach, Sunrise, Miramar, Cape Coral, and Margate
- Supported City of Sunrise Utilities Department for network modeling, capital planning and reuse planning.
- Developed supporting information for rate and bond reports for the City of West Palm Beach.

SECTION 6

Approach to Scope of Work

Comprehensive Strategic Planning


UTILITIES DEPARTMENT
Administrative Office
Water & Wastewater

CITY OF SUNRISE

Phone: (954) 888-6000
Fax: (954) 846-7404

April 24, 2014

MWH Americas, Inc.
490 Sawgrass Corporate Parkway
Suite 300
Sunrise, FL 33325

VIA EMAIL

To Whom it May Concern:

I have had the pleasure of working with the professional staff from MWH Americas, Inc. for approximately ten (10) years – three (3) years at the City of Fort Lauderdale and seven (7) years at the City of Sunrise. The professionals at this firm have served my professional engineering and program management needs through continuing contracts.

MWH offers specific expertise in water supply and treatment areas, often providing helpful suggestions which have assisted us in reducing unaccounted for water, delivered alternate water supply projects which fulfilled our master plan goals, assisted with the development of our capital improvement plan (CIP) and assisted with our bond acquisitions and CIP program. MWH has provided full services in the areas of planning, design, bidding and permitting assistance as well as construction phase services. Their staff has always provided courteous, responsive and comprehensive service and their guidance has been insightful and helped with our adherence to the many regulatory compliance complications we've faced through the last several years.

MWH's timely, consistent and proficient service affords our City to ... City of Sunrise accomplish project delivery to a higher ... expansion was not supported by our Management ... provided a high quality of service to our customers.

Timothy A. Welch, P.E.
Utilities Director

777 Sawgrass Corporate Parkway • Sunrise, Florida 33325

MWH's timely, consistent and proficient service affords our City to operate leaner and has helped the City of Sunrise accomplish project delivery to a higher magnitude with less overhead.

The City of Fort Lauderdale's Public Works department is in need of a Comprehensive Utility-Wide Strategic Master Plan (CUSMP) that evaluates the entire utility system and recommends actions, policies, code changes to maintain and improve the system's condition, capacity, performance, efficiency and quality of service as planning for future repair and replacement occurs. MWH has been performing utility planning for decades and has observed a rising degree of complexity for Comprehensive Utility Wide Master Planning. We understand that our utility managers are left with a challenge where dynamics of regulations, customer demand fluctuations, and economic changes drive adaptive planning process to make sound decisions for their customer base. Our approach to strategic planning is to align these different drivers with several different goals and balance it with financial elements such as cost of service, customer affordability index, future reinvestment requirements, reserve requirements and determining rates and fees, establishing future rating goals and thus developing a dynamic model of a wholistic wet infrastructure planning.

MWH has supported the City of Sunrise over several years through this adaptive planning approach. Our local team is extremely well versed in this area where we seek innovative solutions for you.

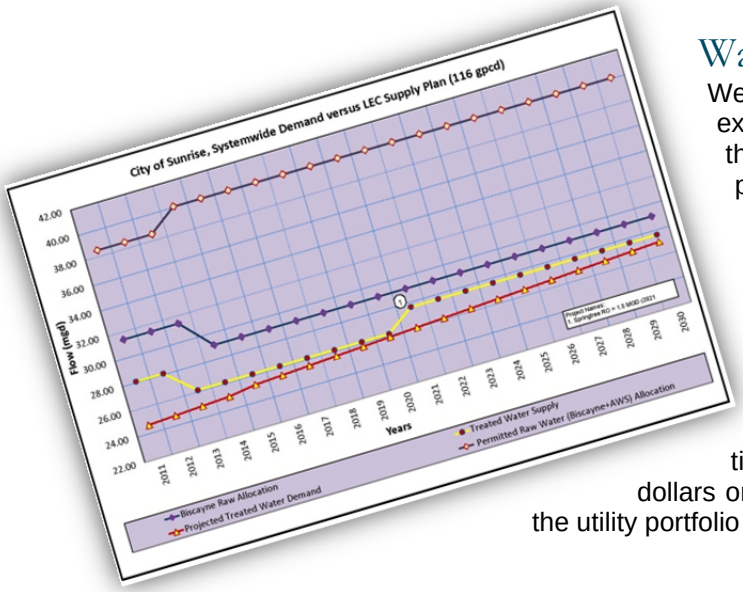
The City of Fort Lauderdale's 2007 Updated Water and Wastewater Master Plan's were prepared in a strong economic environment, which was growth driven, and as a result the population and demand projections were aggressive. Due to the recent economic downturn, regions of southeast Florida have seen decline in population projections. In fact, the Bureau of Economic and Business Research's (BEBR, 2009) 2025 projections for the County are approximately 20 percent less compared to the 2025 projections that were prepared in 2005. The reductions in population projections coupled with irrigation restrictions drive the reduced water and wastewater demands. More communities are using Building Codes or incentives to incorporate water conservation devices in new or renewed construction. Thus, it is prudent that the City re-evaluate its plans for expansion of its major treatment facilities to reflect current conditions which in turn provides the City more time to evaluate options benefiting the City. However, the potential impacts of sea level rise were also not included in the City's 2007 Master Plan and evaluation of the resiliency of the City's infrastructure is also prudent.

Demand Forecast

The City is looking to review historical demands as it relates to rain/drought conditions and perform projections for average, wet and dry conditions, update population projections by TAZ, develop diurnal by land use type for future horizons, and compare and identify demand forecast to previous planning documents.

MWH's Water Supply Facilities Plans for Utilities address these elements of demand forecast.

Demand forecasts have historically been function of population forecast. Over the last decade through adaptive planning processes, we have experienced that besides changes in population in South Florida, conservation, economic slowdown, foreclosures/vacancies, and consecutive wet or dry years, all of which affect the demands in future. Our approach to demand projections is such that a demand range should be developed for future planning horizon to cover the envelope of uncertainties and enable utilities to be adaptive. Our local team has recently completed a similar approach on demand projections for City of Sunrise.



Water Supply Planning

We maximize the City's use of existing infrastructure to achieve the highest return on investment possible as part of our Water Supply Planning process. We understand the value of coordination between other local governments and utility managers and encourage rigorous communication through our planning process. We offer a just in time planning approach when it comes to expending public dollars on infrastructure. This approach is coupled with diversifying the utility portfolio for alternative water supply for flexibility purposes.

MWH is currently coordinating with fourteen municipalities locally for Water Supply Facilities Plan Update 2014.

Water Use Permitting and Ensuring a Reliable Water Supply for Fort Lauderdale's Future

Our team understands the complexities of consumptive use permits (CUP) and its importance in securing a reliable long-term source water supply.

One of the challenges facing the City of Fort Lauderdale is developing a water supply that addresses future potable water demand projections within the constrained resources and the current regulatory environment. Historically, the City of Fort Lauderdale has relied on the Biscayne Aquifer as its sole water supply source. The City has over 30 production wells in two active wellfields (Prospect and Dixie Wellfields) with a targeted capacity of about 100 mgd, and two water treatment plants with a total (reliable) treatment capacity of approximately 70 mgd.

With the enactment of the 2007 Water Supply Availability Rule Biscayne use was capped based on April 2006 and preceding 12 months pumpage. Water usage from the Biscayne Aquifer above the 2006 limits could not impact the regional system. The City will likely be limited to its historic average withdrawal of raw water from the Biscayne Aquifer, which is well below the CUP value of 50.6 mgd. As a result, the City may not be able to use the full capacity of its constructed facilities to meet the future demands, and alternative water sources may be needed to meet future demand projections. To meet projected water demand, the City may likely need to develop approximately 10-mgd of non-traditional water supplies.

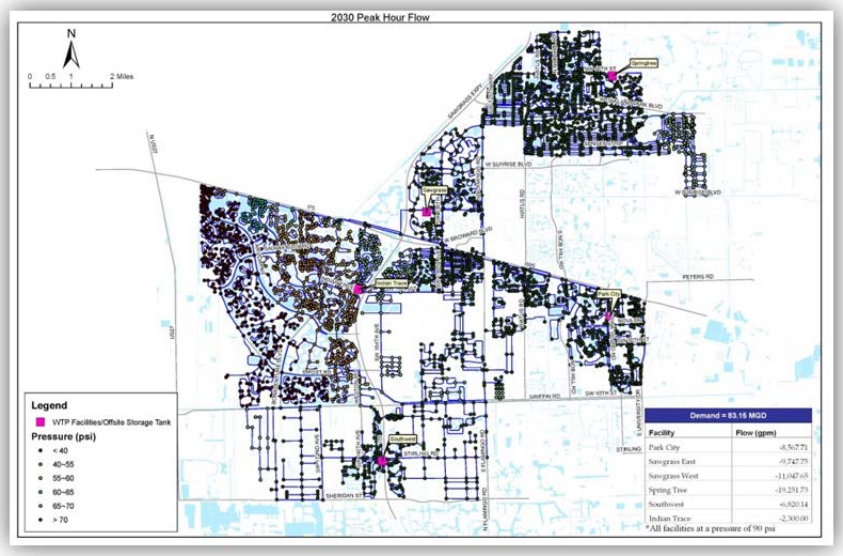
Because your future supplies must come largely from the Floridan Aquifer and/or (more likely) other alternative sources, more advanced and more expensive treatment technologies will be required to process this water. We will work closely with you to evaluate options such as RO, improved concentrate recovery, blending, aquifer storage and recovery (ASR) of all water sources, wastewater reclamation, and overall source water management, including water conservation, to enable you to meet these demands in the most practical, economical, and reliable fashion.

MWH is contracted through Palm Beach County by participating utilities to provide an independent cost estimate and financial analysis for the C-51 Reservoir Project. C-51 Reservoir project is contemplated by utilities as an Alternative Water Supply project. The work will serve as a guide to utilities who may choose to participate in the project which will be the first regional surface water supply within the tri-County area.

Hydraulic Modeling and GIS Management

We understand that the City has a need to update the hydraulic model to include newly constructed and ongoing projects in addition to existing 6 inch and 8 inch mains. The City also desires to convert the model to Bentley software, and post conversion, the City is looking to run the model for future planning horizons with specific scenarios and conditions to obtain recommended improvements.

Our proposed approach: Our team will export the current City model from Innovyze to Bentley's software. This will entail fixing mis-alignment, re-building where necessary and including facility controls. We will then perform the model update to include improvements that were constructed as part of the Waterworks 2011 program.



Our team as part of City of Sunrise's CIP Program recently assisted with similar tasks and have the ability to meet the City's needs.

Our team will update the model to include six and eight inch water mains from updated atlas maps, followed by which we will add improvements that were constructed as part of the Waterworks 2011 program and other new developments including projects underway using construction and record drawings. Post network update, we will convert/export the model from H2OMap to Bentley WaterCAD. This will entail fixing mis-alignment, re-building where necessary and including facility controls.

Model run simulations will be performed post conversion of software to include City preferred planning horizons and scenarios for different conditions including average day, maximum day with fire flow, and peak hour flow. Current condition and future condition simulations will be performed. Recommendations for fire flow by land use type, efficiency in operations, infrastructure improvements will be provided. Projects will be prioritized by timeline so they can be included in the City's Capital Improvements Plan where planning level estimates will be provided by each project.

Our local engineers have performed comprehensive hydraulic and dynamic water quality modeling, energy management, real-time simulation and control, seasonal variation evaluations, fire flow analysis, extended period simulations, unidirectional flushing and operation optimization. Needs addressed in our studies range from comprehensive capital planning to solutions of localized pressure/ fire flow problems and analysis of overall flow distribution and system operations.

Hydraulic distribution system modeling provides a basis for evaluating transmission and distribution pipeline, pump station, and storage tank infrastructure that is needed in the City's CIP. As with all planning efforts, the results of modeling are only as good as the information input into a model and how it is used. The master plan will ultimately present the City with recommended projects for future years, so it is imperative that the recommendations are based on sound data, a well-developed GIS and a reliable hydraulic model.

Carollo's Nitrification Action Plan for Palm Beach County outlined recommendations that markedly improved distribution system water quality.

System-wide Water Quality Improvements

Oftentimes overlooked, water quality in the distribution system can deteriorate rapidly from demands placed on the residual disinfectant from organic and inorganic constituents in the water, and from nitrification, which is common to utilities throughout Florida. In fact, Palm Beach County faced this problem and sought out Carollo (our team member) to complete a comprehensive study of their treatment and distribution systems in order to abate this problem. Carollo prepared a Nitrification Action Plan for Palm Beach County that quickly became the benchmark in the state on how such studies should be undertaken and implemented. This project involved hydraulic modeling (discussed above under master planning), water quality sampling, analysis, and evaluations at the plant and throughout the distribution system, and development of short-term and long-term strategies to deter nitrification throughout the system. Most importantly, our team understands not only the planning and design elements of a distribution system relative to conveying water, but we also have specialists trained in understanding and managing distribution water quality. This includes several staff with PhDs in water distribution system water quality, one of which is based in Carollo's Broward County office.

Develop Conceptual Treatment Technologies for Each Source Water Supply

We will work with the City to identify and evaluate treatment options suitable for each source water, whether it is high TDS Floridan Aquifer water, surface water, reuse water, or other potential supplies. These candidate treatment technologies will include reverse osmosis, nanofiltration, ultrafiltration, ion exchange, capacitive deionization, conventional lime softening, advanced wastewater treatment, or combinations thereof. Our expertise in all of these technologies will make sure that the City has the best information for making good decisions.

Floridan Aquifer Utilization

Development of the Upper Floridan aquifer as a supplemental water supply source for Southeast Florida is accelerating. A study performed in 2010 where evaluation of plans by several water utilities were undertaken indicated that at least 57 Upper Floridan aquifer wells are planned in Miami-Dade, Broward, and Palm Beach counties, each producing brackish water requiring desalination treatment. Planned withdrawals from this aquifer are expected to total about 225 mgd, of which 80 mgd is within Broward County.

Based upon USGS investigations, it is apparent that the aquifer hydraulic response to these increased withdrawals will be widespread, with significant water level declines and interference between adjacent wellfields. Water level declines will be offset by natural recharge. The closest point of recharge is from the Straits of Florida, which is less than one mile offshore and contains seawater.

Consequently, it is reasonable to expect that in the absence of a major program to locally recharge the Upper Floridan aquifer with fresh water, salt water intrusion will most likely occur fairly quickly due to lateral and vertical saltwater intrusion. This repeats a pattern that has occurred for many years in southwest Florida where production wells typically experience steadily increasing concentrations of total dissolved solids, necessitating reduction in production rates or replacement. Once saltwater encroachment occurs, the resource is permanently impacted as the intrusion process is usually irreversible.

Broward County modeling shows that saltwater intrusion will accelerate as more wells are placed into this aquifer. Given the number of wells planned in the Floridan Aquifer, the TDS rise rate may in fact be more rapid than assumed in current aquifer studies. All treatment facilities designed to utilize the Floridan aquifer must take into account the anticipated increase in total dissolved solids (primarily salt water). ***Our team's knowledge of the Floridan aquifer, coupled with our knowledge of highly saline water treatment, serves to ensure that all City facilities will be designed with the necessary flexibility to treat future water quality conditions without significant system modifications.***

Aquifer Storage and Recovery (ASR) Recharge Options

The City of Fort Lauderdale is looking to evaluate the option of placing the ASR well into service. Recharge of the Upper Floridan aquifer through wells will be essential to ensure the long term reliability and sustainability of this source. The cumulative volume of recharge will need to match or preferably exceed the cumulative volume of water produced from this aquifer.

The ability to successfully achieve aquifer recharge goals is governed primarily by FDEP's willingness to issue Underground Injection Control (UIC) construction and operating permits for ASR wells in the Upper Floridan aquifer, plus the approval of the Broward County.

Health Department – Despite a great need for storing water underground through wells, no such permits were issued by FDEP from 2001 to 2009, reflecting concerns regarding potential mobilization of arsenic and an unwillingness to allow credit for natural processes that occur underground that are known to attenuate bacteria, viruses, and other microbiota.

This difficult situation has begun to change during the past year. One UIC operating permit for a reclaimed water ASR well in Englewood has been issued, with another operating permit pending in St. Petersburg. One stormwater ASR wellfield has already been permitted and has been operational for many years at Marco Island, and a permit application for a stormwater ASR well is under review in southeast Florida, providing filtration pretreatment. In addition, two treated stormwater ASR wells are undergoing operational testing as part of the CERP at the Hillsboro Canal and Kissimmee River sites. The primary pre-treatment for these two test sites is filtration followed by UV for coliform reduction.

MWH designed the City of Fort Lauderdale's ASR well, and MWH and Carollo recently re-purposed the ASR well as dual purpose well for the Springtree WTP, City of Sunrise such that the withdrawn water can be treated with low pressure membrane process. This well is permitted as Floridan production well by SFWMD and as ASR well by FDEP. Our team brings full service experience of planning, permitting, design and construction of this concept!

The opportunity for the City of Fort Lauderdale is to develop an integrated plan that fully utilizes reclaimed water and stormwater sources to ensure that planned withdrawals from the Upper Floridan aquifer are at least balanced and preferably exceeded by planned recharge, and that the location of the ASR wells, injection wells, and production wells is carefully planned to achieve water quality and quantity goals at an acceptable cost. If desired, implementation of such a plan could steadily reduce the salinity of the Upper Floridan aquifer over a period of many years, eventually creating a huge freshwater reserve stored deep underground. In conjunction with Biscayne aquifer withdrawals, this would achieve water supply reliability and sustainability for the City.

Water Treatment

Our team has been an industry leader in helping our clients implement practical, reliable, and affordable membrane treatment. We have been involved in the design, construction, and operation of membrane treatment systems for more than three decades.

Membrane System Optimization – With diminishing funding resources, optimizing existing and future membrane facilities provides an opportunity to meet potable water system demands in the future at the lowest possible expense. Our teams past projects have focused on these objectives.

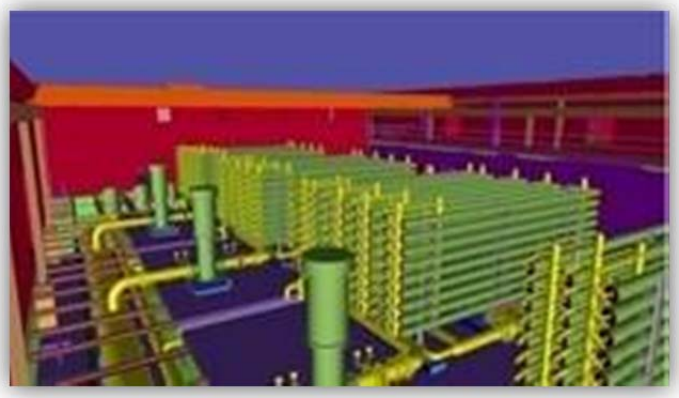
Water production can be increased in many ways including through the maximization of available membrane treatment area (use membranes with larger surface areas which fit in existing equipment), through the use of membranes with greater treatment capability per unit area (flux), reduced energy requirements (discussed further in following Reducing Energy subparagraph), and feed water treatment capabilities (i.e., use different elements in stages to maximize production and recovery).

Sawgrass Nano Filtration WTP, City of Sunrise – MWH designed the system and vessels such that the low pressure nanofiltration process could be upgraded to a high pressure Reverse Osmosis and vice versa with minimum process changes.

Membrane System Recovery - Conventional membrane treatment approaches typically allow up to approximately 75 to 85 percent of the feed stream to be recovered as potable water, with the remaining amount (concentrate or reject water) being disposed of. Carollo has recently completed multiple concentrate treatment pilot studies for utilities in Florida, California, and Arizona. Carollo published the Water Research Foundation report "Desalination Product Water Recovery and Concentrate Volume Minimization." This document reported on over twenty promising Reverse Osmosis (RO) concentrate treatment technologies. Highlighted in the report was an innovative approach combining RO, Energy Recovery Device (ERD), and chemical precipitation processes, to allow recoveries up to about 95%.

By repurposing existing decommissioned water treatment infrastructure, Fort Lauderdale might augment its potable water supply at less cost than tapping into the Floridan aquifer. Fort Lauderdale's Peele Dixie membrane process converts just 82% of the groundwater into drinking water. The remaining 18% of ground water is wasted through deep injection wells. The SFWMD commissioned Carollo to study the potential for RO concentrate minimization at South Florida utilities. The project reviewed water quality at twelve plants within the District to identify a solution to cost-effectively handle RO concentrate while meeting technical and permitting requirements. A modified lime softening process was evaluated. Using the information gained from this assessment, a pilot study was performed at the City of North Miami Beach, showing an increase in overall RO recovery of 13%; from 75% to 88%.

Reducing Energy Consumption in Membrane Treatment



North Reverse Osmosis WTP, City of Cape Coral, FL – MWH designed two-stage RO system and allowed for interstage boosting when it becomes economically advantageous for energy recovery.

Energy has become a key concern for the water industry, as there has been increased focus on costs, sustainability, greenhouse gas emissions, and reliability. Recent breakthroughs in state-of-the- art energy recovery devices and membrane element manufacturing now provide utilities with significant opportunities to lower the energy use of membrane treatment systems. Energy recovery devices save money by capturing pressure that would be lost in the waste stream and returning it to the high pressure pumps at the beginning of the system. Collier County is an example of this, which was designed by Carollo. By installing an energy recovery device, they captured the pressure that was being lost in its waste stream and used it to boost its high pressure feed pumps, saving an estimated $550,000/year. Installation of similar energy recovery devices on the City of Fort Lauderdale's future RO plants could result in potential cost savings comparable to those realized at Collier County.

Reducing Chemical Consumption in Membrane Treatment

Chemicals are an important and costly part of operating membrane systems. Sulfuric acid, as a pretreatment chemical, has been an industry standard chemical used in membrane systems across the industry to reduce the scaling potential of calcium carbonate and help keep iron in the dissolved, ferrous form. The result of this acid addition is enhanced system recovery and prevention of membrane fouling. Despite these benefits, sulfuric acid is a hazardous and costly chemical to use.

MWH assisted the City of Sunrise with the Optimization of their nano-filtration process saving the City approximately $800,000 annually in chemical costs.

Carollo developed the first design in the country that eliminated acid from an RO treatment plant. In 1999, Mount Pleasant Waterworks (South Carolina) saved $250,000/yr when it stopped adding acid to its membrane system. Special consideration for acid elimination must be given to facilities that have iron in their raw water. The presence of iron may necessitate the use of sulfuric acid as a pretreatment chemical. Additionally, for waters containing hydrogen sulfide, if acid is eliminated as a pretreatment chemical, pH adjustment may be required before subsequent treatment using degasification.

One of the challenges that nanofiltration facilities face is production of stable, well-buffered water without breaking the bank on chemical treatment costs. The use of a bypass treatment train around the membranes would provide additional water quality benefits as well as chemical savings.

The bypass treatment train would utilize an ion exchange process to remove the majority of organics. This could be applicable for the Peele Dixie WTP Membrane System. The bypass treatment train would provide the following benefits:

- ✓ Improved finished water alkalinity
- ✓ Reduction of acid feed
- ✓ Improved overall plant recovery
- ✓ Increased finished water hardness
- ✓ Reduction caustic feed (for the equivalent alkalinity)

Including the capital costs for the ion exchange system, this option has offered savings to similar utilities by as much as $900,000/year (assuming an average plant flow rate of 12 mgd) with the bypass treatment train when comparing the same finished water alkalinity.

Nanofiltration to Reverse Osmosis (RO) Treatment System Conversion – The conversion of one type of membrane treatment to another type of membrane treatment has been considered in several South Florida utilities due to the changing of available raw water sources. Our Team recently completed a study for a neighboring utility, the City of Sunrise at their existing 24 mgd nanofiltration WTP. Due to circumstances associated with raw water availability and consumptive use permitting constraints, the City of Sunrise considered transforming a portion of their existing nanofiltration WTP to low pressure RO.

Utilizing an anticipated Floridan Aquifer water quality the various nanofiltration components were evaluated at projected higher operating pressures. These included sand strainers, feed water pumps, chemical systems, cartridge filtration, membrane skids, and post treatment facilities. It was determined that at the projected Floridan Aquifer water quality the existing membrane treatment system could be converted to a RO treatment system by replacing limited equipment, piping, and associated appurtenances.

Lime Softening Plant Modifications

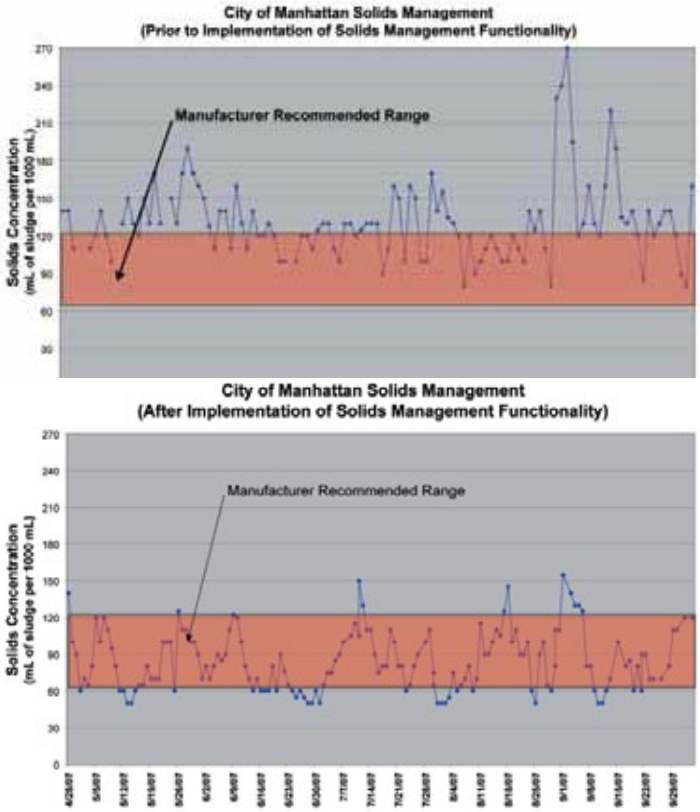
Solids Contact Clarifiers (SCCs), utilized in the City's Fiveash lime softening treatment facility, are one of the oldest technologies in the water treatment industry. Although widely used, SCCs are also one of the most misunderstood and neglected unit processes. The SCC process is the first step in the lime softening solids management and its impact on the final water quality and dewatered solids should not be underestimated.

Conversion of a series operation of basins to parallel operation increased basin capacity from 17 to 37 mgd without building any new structures. The new mode of operation significantly reduced lime and carbon dioxide usage, resulting in major cost savings.

Maintaining a high solids concentration in the center cone of the SCC is critical for producing excellent settled water quality and producing a concentrated residuals stream. The softening process is optimized by allowing the solids to remain in the center cone and for successive layers of calcium carbonate to precipitate where the benefit is decrease in volume of the lime softening solids stream that needs to be processed through the thickener and pumped to the lagoons.

The generation of solids in the center cone is dependent upon the following factors:

- Flow rate
- Influent hardness
- Effluent hardness
- Lime dose



Our team member, Carollo has developed a proven, simple algorithm that captures these factors and uses them to control the solids concentration in the center cone of SCCs. Prior to implementing this algorithm, the City of Manhattan, KS could not stay within the recommended percent solids range for more than 4 days.

Once the algorithm was implemented, the City was able the stay within the recommended percent solids for more than 100 days straight. Maintaining the proper solids concentration results in excellent settled water quality (less solids carryover) and improves dewaterability, resulting in less hauling and disposal costs.

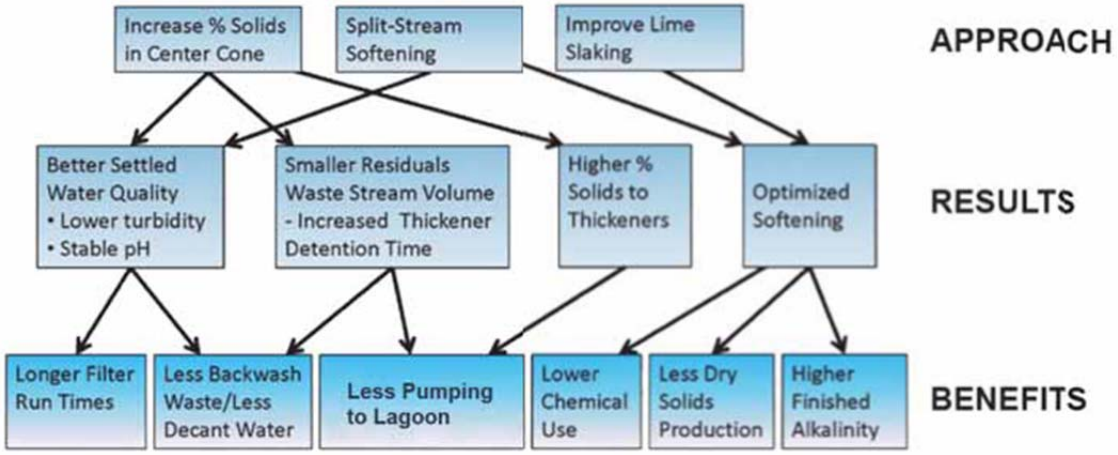
Lime Sludge Dewatering Facility Feasibility Study (2012)

MWH conducted a study to determine the feasibility of constructing a lime sludge dewatering facility at the existing Water Treatment Plant. The objectives of the study were to provide an overall water savings to the WTP to offset the need for alternative water supplies and provide improved dewatering to lower maintenance and disposal costs. Existing technologies were evaluated including belt filter presses, mechanical presses, and vacuum presses. MWH provided a recommendation for the most suitable technology, preliminarily sized the facility, provided conceptual general arrangement drawings, and developed a site plan for the proposed facility. A technical memorandum was developed to present the evaluation and provide recommendations.

Split Softening Treatment

The softening process occurs when the pH is high enough that all of the bicarbonate alkalinity is converted to carbonate which causes mineral precipitation. The challenge with this precipitation reaction is that it "over-softens" the water (i.e. takes out more of the mineral content than desired) resulting in lower hardness than the desired hardness goal. In the US, most utilities bypass a portion of this flow around the softening process, but most southeast Florida utilities are prevented from doing this due to very high total organic carbon content of the raw water and its associated color.

Split softening treatment can be successfully utilized in Southeast Florida if a portion of the carbon content in the bypass water is removed to prevent water color problems. Our team member, Carollo has recently completed a project for Palm Beach County Water Utilities Department (PBCWUD) where the use of a recently constructed ion exchange system will permit bypass flow around the softening units. This process will allow PBCWUD to "dial-in" the finished water hardness and increase the finished water alkalinity all while producing a more stabilized finished water which is low in organic carbon, taste, odor, and color. In addition, the chemical usage was decreased, solids production was reduced, and the resulting bypass flow will allow PBCWUD to increase the plant capacity by 15% without building any new treatment facilities.



Carollo's proven system approach to the softening process provides synergistic benefits resulting in improved performance and reduced operations costs.

Fiveash WTP Hydraulic Improvements

The existing Fiveash Water Treatment Plant has hydraulic bottlenecks that limit its production capacity to 60 mgd rather than the 70 mgd that the facility was designed to process. Unleashing this unused capacity bycost-effectively eliminating hydraulic bottlenecks will be examined and may likely have complementary benefits of enhanced reliability, and improvements in the quality of finished water even at lower flow rates through the facility. An example of where Carollo discovered, and cost- effectively remedied hydraulic bottlenecks plaguing Oklahoma City for more than 50 years, came with expansion of their Draper WTP from 90 to 150 mgd. Rather than adopt the recommendations of another national consulting firm to expand their existing 90 mgd low lift pump station, which had been continually operated for 51 years, Carollo discovered a means to eliminate the bottleneck between the pump station and plant. This plant now receives not only 90, but more than 150 mgd of flows by gravity from the supply reservoir. This solution saved tens of millions of dollars in capital and operating costs. Oklahoma City is listed as one of our references and their project was managed by staff now working in Broward County and assigned to your project.

Water Storage

The principle function of storage is to provide reserve supply of water for: 1) operational storage for daily demand fluctuations, 2) fire flow reserve, and 3) emergency needs. Operational management and water quality are also key factors when assessing water storage. Operational and water quality analyses would be completed using the City's hydraulic water distribution system model. Our approach for evaluating the sufficiency of total water storage in the City's water system is briefly described below.

Peak Demands	Fire Flow (FF) Demands	Emergency/Reserves
The intent of operational storage is to provide the difference in quantity between the peak day demands and the system's reliable available supply.	Fire storage is the amount of water required when the capacity of the production facilities is insufficient to meet the necessary maximum day demand plus fire flow demands for a particular duration of time. The required fire flow rate is usually based on the type of customers served, for example, a lower fire flow rate is required for single-family home developments than for major industrial areas.	Emergency storage is the volume recommended to meet demand during emergency situations such as pipeline failures, major trunk main failures, pump failures, electrical power outages, or natural disasters. The amount of emergency storage included within a particular water distribution system is an owner option, based on the assessment of risk, the desired degree of system reliability, economic considerations, and water quality concerns. Emergency storage is also used to provide reliability and redundancy to adjacent utilities.
25% - 50% of Max Day Demand	FF based on land use type	Approx. 10% of Max Day Demand
Minimum 25% of Max Day Demand	Max Day + FF Demand	

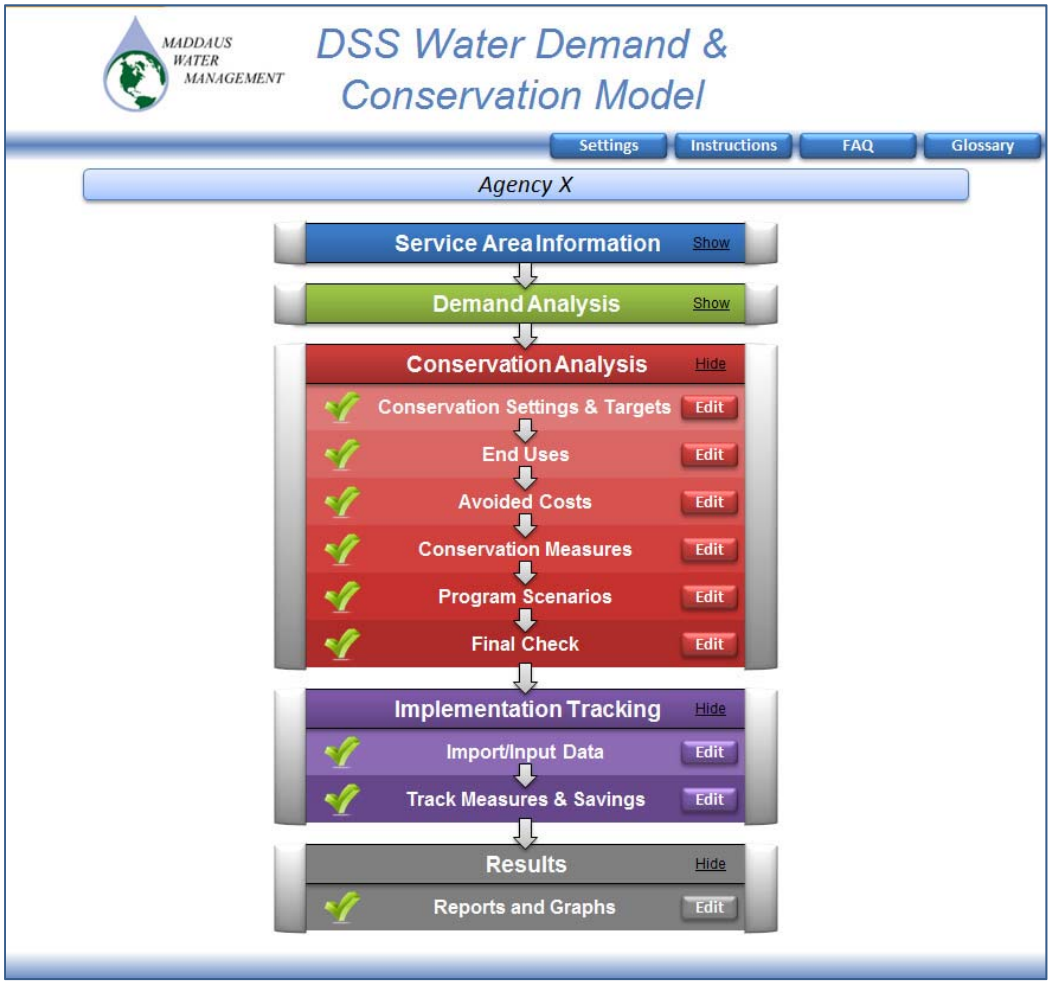
Other factors we will consider in assessing your storage systems, both existing tanks and possible future replacement or complementary storage includes:

- Storage tank and site security
- Water turnover inside storage tank
- On-site pumping standby power systems

Water Conservation and Demand Management

We understand that the top goal of the water element of the City's Sustainability Action Plan 2011 is to reduce year 2020 potable water demands by 20%.

Our team member, Maddaus Water, specializes in water conservation across the Country. They offer the Demand Side Management Least Cost Planning Decision Support System (DSS) Model. This model prepares long-range, detailed water demand projections at a very detailed level.



Schematic of DSS Model as applied to an urban water system or regional area for water use efficiency

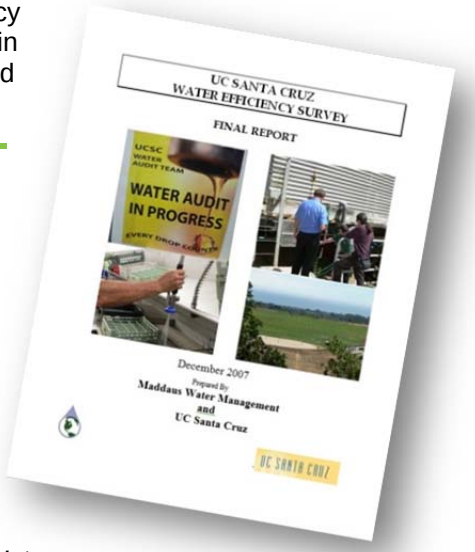
The DSS Model evaluates water use efficiency measures using benefit cost analysis with the present value of the cost of water saved ($/Million Gallons) and benefit-to-cost ratio as economic indicators. The analysis is performed from various perspectives including the utility and community (utility plus customer). Benefits are based on savings in water and wastewater facility operations and maintenance (O&M) and savings from deferring or downsizing future capital facilities, such as water treatment plant expansions or new source development or water purchases from wholesalers. The above figure presents the steps, which illustrate the process for forecasting water use efficiency savings, including the impacts of fixture replacement due to plumbing codes and standards already in place.

In the past five years Maddaus Water Management has worked on multiple regional studies including:

- ✓ Palm Beach County in Florida
- ✓ 16 counties in the Atlanta, Georgia Metropolitan area
- ✓ 7 utilities in Southern Oregon
- ✓ 27 utilities in the San Francisco Bay Area, California
- ✓ 9 utilities in Sonoma County, California
- ✓ 6 utilities in the Sacramento area, California
- ✓ 4 utilities in Southern California

The DSS Model has been used for practical applications of water use efficiency planning in over 215 service areas including extensive efforts nationally in California, Oregon, Colorado, Utah, Georgia, Florida, North Carolina, Ohio and internationally in Australia, New Zealand and Canada.

UC Santa Cruz currently spends approximately $1.8 to $2.0 million annually on its water, irrigation and sewer bills and an additional $4.0 million annually on it's in energy bills. Implementation of the combined high priority water conservation projects is estimated to result in a 15.0 percent savings in total annual water use (approximately 29.8 million gallons per year) and save approximately $500,000 per year after all the high priority projects are completed as a result of lower water, sewer, and energy bills (using 2009 price rates). The payback from implementation of the recommended water conservation projects will occur in approximately one year.



MWH has enjoyed a successful working relationship with Maddaus Water Management of nearly 20 years, where we have worked together globally and extensively in United States.

Wastewater Flow and Loads Forecast

Wastewater flows and pollutant loadings must be evaluated and projected over the planning period in order to determine the capacity of existing wastewater conveyance, treatment and disposal facilities to determine system expansion needs and localized system limitations. Our approach for flow forecast would be to evaluate past 10 year period for average day, maximum day and rolling three month average day flow. Based on historic trends we would develop factors to perform a forecast for each of those data sets. Historic per capita flow data will be developed and used as a secondary marker as projections are performed. Pollutant loading for BOD, TSS and TKN will be reviewed for past five years. TKN is not anticipated to contribute significantly to oxygen requirements for the GTL WWTP since a high rate pure oxygen system is used which does not facilitate significant nitrification for TKN to be significant. Loadings for future flows will be used based on peaking factors developed from historic data.

As a leader in hydraulic and hydrologic modeling services, MWH emphasizes the importance of a strong understanding of real-world water and sewer system operations and focuses on identifying solutions to address clients' specific needs.

Pumping and Transmission System Modeling

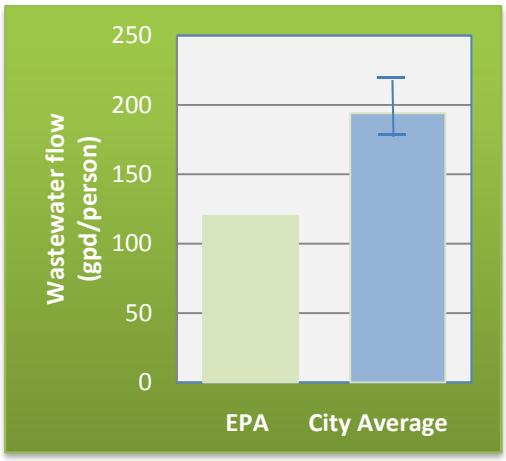
We understand that the City of Fort Lauderdale currently uses Innovyze's modeling platform H2OMap and InfoSWMM, and wants to convert to Bentley's WaterCAD. MWH staff is well experienced with other modeling software, including EPA SWMM, XP-SWMM, MOUSE, HYDROWORKS, MIKESWMM, HydraGraphics, FEQ, EPA Net, WaterCADD, WaterGEMS, and others. In addition, MWH benefits from a global network of modelers with the ability to tap into the collective knowledge base through the MWH KNet, or Knowledge Network. Access to the MWH modeling community offers the City access to some of the best and brightest minds in water and sewer modeling, along with local knowledge and expertise to apply the latest modeling technology to the District's specific hydraulic challenges. As a leader in hydraulic and hydrologic modeling services, MWH emphasizes the importance of a strong understanding of real-world water and sewer system operations and focuses on identifying solutions to address clients' specific needs. This balance of theoretical and practical experience enables staff to make appropriate decisions during model development and application, leading to executable and cost-effective solutions. Our team members understand that a hydraulic model is a tool to be used to facilitate the analysis of systems, not a substitute for good engineering judgment and a clear understanding of the factors that affect real world system performance.

Our team will export the current City model from Innovyze to Bentley's software. This will entail fixing mis-alignment, re-building where necessary and including facility controls. We will then perform the model update to include improvements that were constructed as part of the Waterworks 2011 program to include in house pump station improvements, force mains with sizes, pumps, wetwells and diurnal curves. The updated model will be used to evaluate current and future performance of the existing transmission system. List of projects will be developed based on improvements needed from the model runs and will be classified in different categories, prioritization will occur based on these categories for future projects including all forcemains and pump stations.

Infiltration and Inflow Evaluation

Wet Weather infiltration and inflow (I/I) makes up 50% Of the City's peak event influent. Communities across the United States are working to find cost-effective, long-term approaches to managing their aging wastewater infrastructure and preventing the problems that lead to sanitary sewer overflows, and treatment of groundwater through the wastewater system. The City is no different than most utilities in struggling to stretch their funds to garner the maximum benefit for their use.

In the United States Environmental Protection Agency's (USEPA) Guide for Conducting Evaluations of Municipal Wastewater Collection System Operations and Maintenance Management Programs (1996), EPA determined that I/I can be considered non-excessive when the total daily flow during periods of high groundwater does not exceed 120 gallons per day per person (gpd/person).



Over the past 18-years, the average wastewater flows in gpd/person entering City's wastewater collection system has ranged from 178 gpd/person to 220 gpd/ person, or an average of 194 gpd/person which is nearly 62% higher than the recommended average.

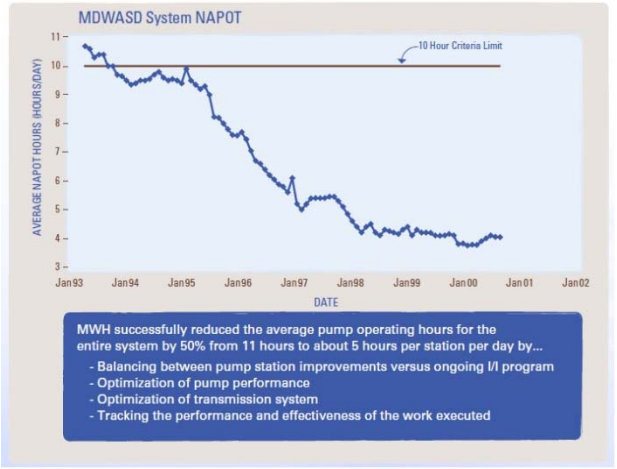
Based on the projected flows through 2025, calculations show the average flow in gpd/person will be only slightly reduced (5 mgd) by the efforts of the Waterworks 2011 program. The City performed a sanitary sewer Evaluation survey (SSES) in 2002 and since that time the City has undergone several land use and zoning changes. Wastewater flow patterns within basins are affected by changes in land use, which then influences the pump station and wetwell performance.

The City of Fort Lauderdale's current I/I reduction results are measured as reductions in plant influent flow instead of within the system on a sewershed basis. We recommend that the city undertake a comprehensive area wide re-prioritization, evaluate wastewater pump stations, evaluate the current SCADA system, and perform an updated SSES Study to identify prioritization areas for your continued I/I reduction program. By mapping system flows against known rain events and amounts, high leakage areas can be generally isolated on sewershed basis. Post identification of problematic areas prioritization can occur and less expensive techniques such as smoke, dye, camera and manhole inspections can further pin point specific high problem areas. This type of targeted top priority repair process can provide maximum savings with minimum costs while providing an attractive investment.

While 100% elimination of I/I is impossible, it is important that this work continue to minimize the extraneous flows from entering your WWTP. A large part of the big picture for wastewater collection and treatment systems is energy. Frequently, this amounts to as much as 35% of a municipality's budget, and treatment facilities are often the largest energy users in their municipalities. One item that increases energy costs is I/I and the unnecessary pumping and treatment of rainwater and groundwater that enter the wastewater collection system and is pumped to WWTP for treatment.

Our team will review City's previous and ongoing I/I reduction effort, and summarize the information to include in the master plan. Based on the data available from the City, we can assist in identifying the benefits through past and present efforts. We would then be able to compare historic energy and O&M costs and compute cost to benefit ratio for each energy and O&M cost category.

We suggest a performance based I/I reduction approach, which is benchmarked at a sewer-shed level (estimate I/I rates) with progress to be monitored (I/I reductions) at the same level. We firmly believe that a measureable reduction in I/I is truly achievable. This will ensure that an expansion to the GTL WWTP will not be required throughout your planning period. More importantly, it will enable the City's WWTP to operate more efficiently reducing O&M costs to align with City's Sustainability Action Plan 2011.

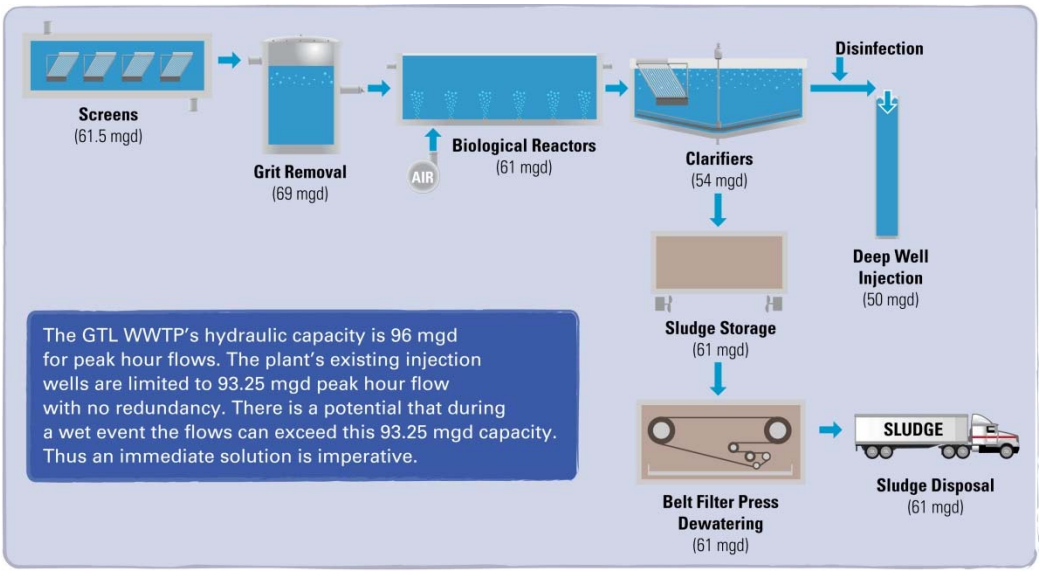


Reductions in flow will pay dividends in lowering energy costs, making the City more sustainable, freeing up conveyance and treatment capacity, and delaying the need for another deep injection well along with the associated cost of high level disinfection.

MWH has been performing extensive work locally and nationwide to address infiltration and inflow issues. As part of Miami-Dade's Wastewater System Improvement Program, MWH provided a savings of $100M by applying innovations, engineering solutions and modifications to their operations and maintenance procedures that allowed for wet weather control to occur without spending capital dollars and construction of improvements.

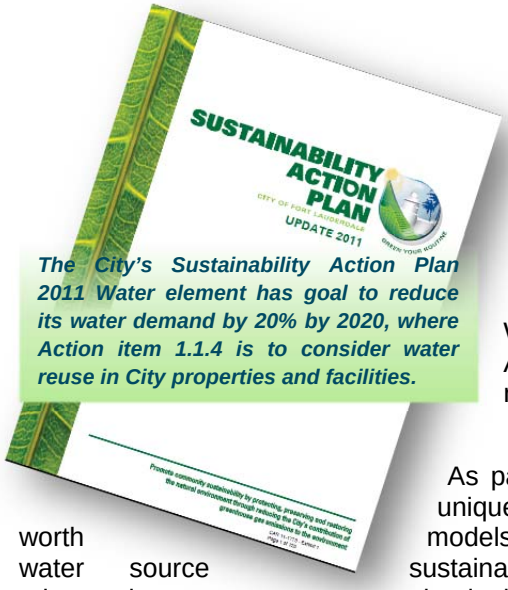
Wastewater Treatment

The City has one WWTP the GTL WWTP which is currently rated at 56.6 mgd Three Month Average Daily Flow. The plant's hydraulic capacity is 96 mgd for peak hour flows. The majority of the process components have a capacity of 61 mgd, with the exception of the secondary clarifiers (54 mgd) and the five deep injection wells (50 mgd) which are limiting the plant's process capacity. The plant has five existing injection wells which are permitted to operate at up to 10 fps of maximum injection velocity which yields 93.5 mgd. The 2008 Reuse Feasibility study indicated that the peak hour flow was expected to reach the maximum permitted capacity of deep injection wells of 93.5 mgd, with all five wells operating and no standby well. Thus, an imminent expansion of the effluent disposal system or an alternate method to decrease the peak influent flows should be considered.



Historically, adding injection wells was the cost-effective solution to increase disposal capacity. However, under new FDEP regulations, construction of a new deep injection well will also trigger the plant to implement high level disinfection (HLD) which is a tertiary process currently not provided for within the existing process scheme.

At MWH, we have been at the forefront with the experience of designing and managing construction of high level disinfection/reuse facilities in southeast Florida with over 40 mgd in operation. Our design for the City of Pompano Beach was at one time the largest HLD facility in Broward County. MWH is currently working with City of Hallandale Beach to use reclaim water as salt water intrusion barrier.



The City's Sustainability Action Plan 2011 Water element has goal to reduce its water demand by 20% by 2020, where Action item 1.1.4 is to consider water reuse in City properties and facilities.

Reuse Evaluation and Alternative Supply

The City's Strategic Plan has an objective O6: To work with partners to identify and implement Wastewater reuse opportunities.

MWH is at forefront of Reuse Planning and Alternative Evaluation. Within Broward County we have performed extensive evaluation for Alternative Water Supply coupled with several different types of reuse options.

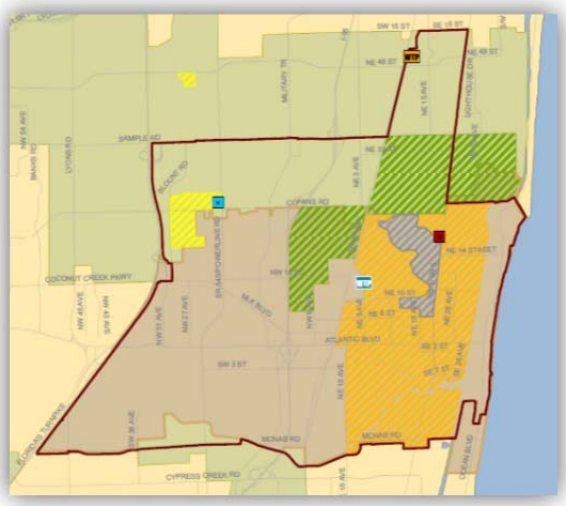
As part MWH's 2008 Master Plan for the City of Sunrise, we presented a unique approach to water utility planning by looking beyond typical present worth models to include in the alternatives analysis regulatory drivers, long term water source sustainability, and risk. The City's plan incorporated use of a wide variety of advanced treatment technologies including Membrane Bioreactor (MBR), RO, and UV for groundwater recharge, technologies for surface water recharge, irrigation quality (IQ) water, and RO for brackish water treatment and concentrate recovery. The use of such varied technologies was tailored to the application with a goal of managing both cost and risk.

Our team has completed state of the art pilot studies for Miami Dade Water and Sewer Authority, City of Sunrise and City of West Palm Beach to evaluate newer technologies and we have the ability to evaluate satellite treatment systems to provide irrigation quality water at the City's regional lift stations.

ENR BEST 2013 PROJECTS
Engineering News-Record Recognizing Excellence

MWH was appointed by the City of Anaheim to design a water sustainable satellite facility to demonstrate how urban developers can utilize low impact development features in any location. The newly constructed demonstration facility, which was completed in March, illustrates how five separate water sustainable features are used to reuse water within a small footprint. The main feature of the demonstration facility is a 100,000 gallon per day recycled water treatment plant. Anaheim Water Sustainability Campus has been selected for an 'Award of Merit' in the water/environment category by ENR California following the publication's 'Best Projects 2013' competition.

Our team has been part of an extensive reuse planning process for the City of Sunrise under the Capital Improvements Program where concept of harvesting substitution credits from entities on private allocations from SFWMD by providing them IQ water is being implemented. As part of this program our team has also evaluated different technologies for IQ water along with phasing to implement reuse.



Our team is currently working with the City of Pompano Beach to evaluate substitution credit possibilities due to their ongoing reuse initiatives.

MWH has been actively engaged with the SFWMD, FDEP, and Broward County for a ground water recharge project considered by the City of Sunrise. The City conducted a pilot study, led by MWH, to evaluate emerging AWTs to meet high level nutrient removal in 2007. While the Florida Department of Environmental Protection (FDEP) regulates discharges from WWTFs in the State, local agencies can impose more stringent standards. An example of this is contained in Chapter 27 of Broward County Ordinances for total phosphates regulated at concentration of 10 parts per billion. This pilot study evaluated innovative wastewater treatment processes for ground water recharge reuse applications: Multiple treatment trains combining BNR-MBR technology, reverse osmosis, and chemical phosphorous removal at pilot scale, and Cost analysis for commercial "scale-up" application of treatment alternatives to full-scale wastewater reuse application. Following the pilot study, MWH performed a preliminary design for a demonstration project where practicality of permitting rapid infiltration trenches versus injection/recharge wells were determined at the site based on the site specific geologic data for the design of the aquifer recharge system, aquifer performance test, and hydraulic modeling analysis. This project also determined the system reuse capacity by conducting an aquifer performance test and simulating operational performance through analytical modeling. A preliminary engineering report was developed considering a phase I and a phase II plant upgrade which has considered various advance treatment technologies including biological nutrient removal, membrane bioreactor, reverse osmosis and ultraviolet disinfection processes.

Operations Optimization

With limited funds, it's now more important than ever to invest capital for the maximum benefit. The framework to evaluate and prioritize your capital investments, combining the expected life of the asset and identifying the criticality of the highest priority repair and investments, is important.

In addition to the renewal and replacement (R&R) component of the City's WWTP and wastewater collection system described above, improving systems operations will also play a key role in this program. For example, when replacing equipment, it is important to look at ways to improve the annual operating costs, by reducing day to day resources, such as energy, chemical, and labor requirements.

For the GTL WWTP, two areas for energy reduction consideration are the cryogenic facility and mixing equipment for your biological process.

MWH has assisted many utilities with operations optimization and development of R&R programs.

- The cryogenic facility which is at the end of its useful life is probably the largest energy user at GTL WWTP. One alternative to potentially expensive repairs to the existing facilities is to replace the cryogenic system with the newer, more efficient vacuum-assisted pressure swing adsorption (VPSA) technology. Recent work by MWH for a facility that was a little more than half the size of your WWTP indicated a savings of nearly $175,000 annually.
- As noted in your 2008 Updated Wastewater Master plan, the lightning mixers for your High Purity Oxygen (HPO) basins are scheduled for replacement in the next 5 years. An alternative to for reduce electric energy usage of the mixers is to replace them with newer technology, more energy-efficient mixers, such as submerged mixers. Additionally, most of the newer technology mixers are designed to provide more uniform mixing, while requiring less power than the historical surface aerators that have been used at HPO facilities.

- Additionally, there are process changes that can be considered to improve the overall facility operations, such as adding an anaerobic "selector" compartment prior to the HPO reactors. This selector helps control the growth of filamentous organisms, which hinders the performance of the downstream process.

MWH is committed to helping clients develop sustainable solutions that meet their business and economic objectives. As such, we provide a suite of services designed to accomplish a fundamental purpose for our clients - reduce their on-site capital and operating expenses due to inefficient resource use. Our suite of services includes: Energy Management (e.g. energy economics, cogeneration), Renewable Energy (e.g. biomass/biogas, hydropower, solar photovoltaic, wind, incineration and waste to energy), Climate Change (e.g. carbon accounting, reduction, and management), and Sustainable Water Management (e.g. water conservation and reuse, sustainable design, integrated water and energy solutions, anaerobic digestion and biogas, and demand side management).

With a global team of knowledgeable energy management staff, MWH provides neutral advice and independent assessments to support the development and implementation of customized energy management programs, aimed at continual improvement for biogas to energy projects.

Biosolids

The City of Fort Lauderdale's has a lime stabilization system which is convenient and low profile but generates significant amount of greenhouse gas emissions in the production of lime and process energy. The current disposal system uses lime and then is land filled or field spread.

The City has Action 2.1.2 of the Sustainability Action plan to re-study digestion options and cost/GHG benefits.

Our team will work with the City staff to develop a classification goal of Class A or Class AA. MWH through its extensive engineering experience has the ability to present alternatives from end user goal perspective with market data and ability to high light advantages and disadvantages of each goal. End user goal range as follow:

- Distribution and Market
- Use as Fuel Source
- Land Application
- Alternate Uses, such as digestion enhancement, sludge reduction etc.

We will review the City's existing residuals management process and evaluate options for reducing biosolids generated at the treatment plant through process modifications and/or improvements. We will also evaluate the present disposal practices and recommend options to minimize quantity, maximize quality, and evaluate its marketability. When considering thickening and dewatering processes, it is necessary to consider more than just the initial cost, but to also consider the operation of the whole system and all the influences upon it. To this end, we work closely with the City of Fort Lauderdale to develop an approach that best serves their needs.

MWH has extensive engineering and construction experience that is relevant to the design, bidding, and construction of biogas utilization projects. With the recent implementation of new regulatory programs, green power initiatives, greenhouse gas reduction credits, and funding opportunities, we look forward to continuing to assist communities in meeting their energy goals.

For City of Tampa's Howard F. Current Advanced Wastewater Treatment Plant, 96 MGD high purity oxygen (HPO) facility like City of Fort Lauderdale's G T Lohmeyer facility, MWH developed a business case for continued utilization of biogas, provided operational enhancement recommendations and presented potential cost savings associated with the recommendations. An alternative that recommended three new generators for additional heat need from digester was selected out of five alternatives. This alternative was determined to nearly double the increase in gas production and reduce the increasing operational costs by roughly 25%.

Asset Management

An ongoing study by the Standish Group (more than 50,000 technology projects) indicates as high as 70% of all IT projects are challenged and fail to deliver to expectation. Eight out of the top ten reasons pertain to inadequate executive buy-in, poor communication and unclear scope. Furthermore, of system functionality implemented, around 50% is rarely or never used.

Our project Plan is specifically targeted to address these findings, manage risk and set a clear course for a successful project. It is underpinned by:

- Documentation of your current frustration, pain and inefficiencies (project drivers)
- A clear understanding of affordability and value form an EAM (return on investment)

Enterprise level Asset Management solutions can touch many parts of a Utility, and they are extremely configurable and scalable across an organization. However, this plethora of functionality often contributes to implementation failures. Organizations are overwhelmed attempting to roll out more functionality than the business can afford or absorb. Our role will be to keep the project grounded by focusing on areas of the operation that gain the greatest improvement benefits. We work from the top leadership down to ensure our recommendations are not "best of breed" but rather "best for you". As a rule of thumb we find that well-implemented EAM programs can easily show a demonstrable return at 1% of a Utility's annual O&M/R&R budget.

MWH has been assisting the City of Fort Collins Utilities (FCU) Department for several years with the development and implementation of enhanced asset management practices across their water, wastewater, storm water, and electrical distribution system assets. As part of the asset management effort, MWH assisted FCU with the selection of a new EAM technology and implementation vendor.

Sustainability

The City's Strategic Plan has a Goal 2: Be a sustainable and resilient community. This entails proactive maintenance of water and wastewater infrastructure, adaptation to sea level rise, improve climate change resiliency, improve water quality and secure community's water supply.

We understand that the City has the following Strategic Initiatives;

O1. 5., Integrate the Water and Sewer Master Plan with infrastructure improvements that include modern and efficient energy standards

O1. 6., Develop a Water Capacity Model and approval process for future development

O1. 7., Address excessive Infiltration and Inflow (I&I) and develop performance indicators
O4. 4., Examine the possibility of using sludge from water and wastewater operations more effectively
O6. 1., Work with partners to identify and implement wastewater reuse opportunities.

We have formed a team to deliver these goals and our team will work with your staff to achieve the above goals as discussed previously in our approach as it pertains to development of efficient energy standards, performing demand management and helping develop a water capacity model, addressing infiltration and inflow, solids management and identifying and assisting in implementation of wastewater reuse.

MWH prepared a climate adaptation and resiliency plan for Miami Dade Water and Sewer Department (MDWASD). This task involved generating acceptable levels of risk and risk tolerance and associated levels of service during regular operations as well as extreme events. For the City of Hallandale Beach, MWH is working on a salt water intrusion barrier by injecting reuse quality water to recharge the highly saline shallow aquifer.

MWH has recently completed the development of the Charles River model (including reservoir routing and dam operations) for the city of Cambridge, MA. An Infoworks ICM model was used to determine the impacts on storm and sanitary sewer flooding with forecasted storms in the 2030 and 2070 climate change time horizons. In the near future, these precipitation-only impacts will be evaluated in conjunction with sea level rise and storm surge impacts once results from coastal modeling using ADCIRC are fed into Infoworks ICM. The results of the study showed that the East Cambridge and Cambridgeport areas would be severely impacted and require infrastructure projects to address the identified risks. Future studies are in progress and the analysis has now been expanded to the Alewife Brook watershed, which is thought to be even more prone to flooding due to lack of storage in the basin and limited drainage capacity of the Amelia Earhart Dam.

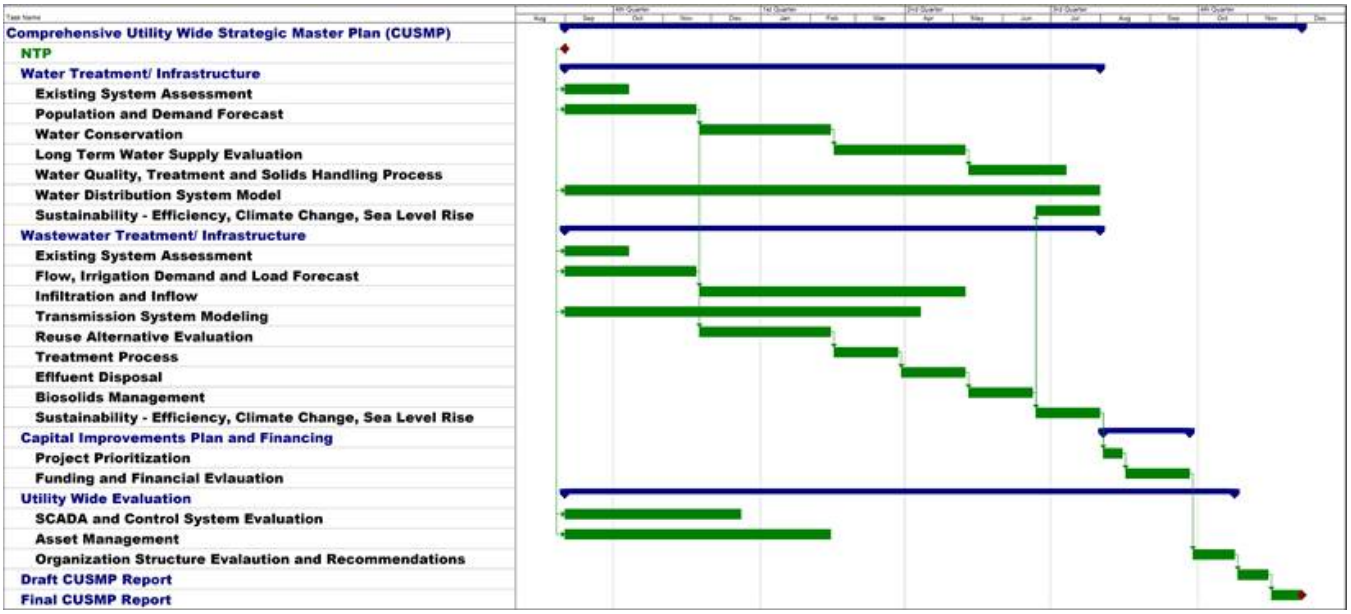
MWH has Proven Experience in Reducing Costs through Resource Efficiency Management Guided by its purpose - Building a Better World – the MWH organization is committed to helping clients develop sustainable solutions that meet their business and economic objectives. MWH experts assist clients in developing new and innovative methods to identify major sources of energy consumption, manage energy by reducing inefficiencies, and take advantage of renewable energy alternatives.

MWH employee Kristin Hink served as a board member to the City of Fort Lauderdale Citizen's sustainability 'Green' Committee. This Committee identifies and recommends affordable strategies associated with conservation, renewable energy and energy efficiency, toward the ultimate goal of establishing the City of Fort Lauderdale as a leader in environmental sustainability.

As an industry leader in environmental technology, MWH has naturally extended its services to encompass sustainable design in every aspect of our work. MWH is a member of the United States Green Building Council (USGBC) and supports the LEED approach to project delivery. MWH has over 75 LEED Accredited Professionals (AP) throughout company offices who provide sustainable design services for our clients who demand cutting edge technology solutions in today's energy-conscious world.

Demonstrated Ability to Meet Time/Budget Constraints

MWH will efficiently manage the schedule from our Sunrise office. MWH can use either Primavera P6 or Microsoft Projects as schedule tools to integrate the power of Critical Path Method (CPM) scheduling to provide detail tracking of each task. The scheduling software will be used to properly monitor and evaluate the project progress. We use proven Earned Value Management (EVM) systems within our internal procedures and systems to calculate the physical percent complete based on the project of major groups of deliverables versus the planned project baseline. This provides the platform for MWH and the City to ensure that monthly progress is reported, validated, and maintained according to plan; which also aids in the continued communication between the City and MWH. We propose a concept level schedule shown below and will be happy to work with the City to refine this.



Workload and Availability

The main office designated to service the City of Fort Lauderdale is our Broward County office, located in Sunrise less than 10 miles from the City of Fort Lauderdale. This office has the ability and capacity to handle the CUSMP and our team of consultants. This office is staffed by engineers, designers, and support staff who live throughout South Florida. The licensed professionals in this office include multidiscipline staff of planners, process (water and wastewater), discipline engineers (including electrical), and CADD designers. The Broward County office is currently under contract with the City of Sunrise for Water and Wastewater Capital Improvements Program, City of North Miami Beach, City of Hallandale Beach, City of Hollywood, Broward County, and City of Pompano Beach. MWH with its staff of over 60 people across the state is well positioned to supply resources right away to meet the City's needs. MWH is also able to tap into the resources of its 6,000 experts around the world to supplement the team if need arises. Availability of our personnel is listed on the Personnel Experience Matrix shown in Section 3, page 67.

SECTION 7

References

Client Name, address, contact person telephone and FAX numbers and E-mail addresses	Project Name / Description of work and Year the project was completed and total cost of the construction, estimated and actual
Mr. Timothy Welch, PE, Utilities Director City of Sunrise 777 Sawgrass Corporate Parkway Sunrise, FL 33325 Telephone: (954) 888-6037 Fax Number: (954) 846-7404 Email: twelch@sunrisefl.gov	***Sunrise Program Management and Master Plan -*** MWH prepared the 'Sunrise Utilities 2030 Water and Wastewater Draft Master Plan' which provided the City with a comprehensive and detailed evaluation of the its water and wastewater treatment plant facilities and identified improvements needed through the year 2030. **Year Completed**: 2009 (Master Plan; Ongoing (Program) **Estimated Cost**: N/A; **Actual Cost** (MWH Fee): $1.47M (Master Plan); $9.5M (Program)
Mr. Manuel E. Moncholí, Process Engineer/Wastewater Operations Miami-Dade Water and Sewer Department 3071 SW 38th Avenue, Suite 320-10 Miami, FL 33146 Telephone: (786) 552-8352 Fax Number: N/A Email: memonc@miamidade.gov	***Central District Wastewater Treatment Plant (CDWWTP) – Renewal and Replacement Program -*** MWH provide engineering, design, and construction management services to evaluate, rehabilitate, and upgrade the infrastructure and operations at the 143-mgd CDWWTP. **Year Completed**: Ongoing **Estimated Cost**: N/A; **Actual Cost** (MWH Fee): $7.8M
Mr. Randy Brown, Director City of Pompano Beach 1201 NE 5 Avenue Pompano Beach, FL 33060 Telephone: (954) 545-7044 Fax Number: (954) 545-7046 Email: randolph.brown@copbfl.com	***Reclaimed Water Filtration Plant and Wastewater Reuse Study -*** MWH provided general engineering services to support the implementation of an overall reclaimed water implementation study, plan, and capital improvement program. **Year Completed**: 2002 **Estimated Cost**: N/A; **Actual Cost** (MWH Fee): $800K; $280K change orders (90% owner directed changes)
Mr. Reginald Wells, Deputy Commissioner City of Atlanta, Dept. of Watershed Mgmt., Office of Linear Infrastructure Operations 651 14th Street, NW Atlanta, GA 30318 Ph.: (404) 546-3733; Cell: (770) 294-3053 Fax: N/A Email: rwells@atlantaga.gov	***Clean Water Atlanta Program -*** An MWH joint venture was selected as program manager for the $3.9B Clean Water Atlanta Program. MWH focused on developing a strategic financial plan, gaining active support of political leaders to help secure funding and re-engineering a "water resources utility." **Year Completed**: Ongoing **Estimated Cost**: $3.9B; **Actual Cost**: $3.2B
Mr. Doulgas Chambers, Water Plant Manager City of West Palm Beach 1009 Banyan Boulevard West Palm Beach, FL 33401 Ph.: (561) 822-2275; Cell (561) 267 8384 Fax: N/A Email: dchambers@wpb.org	***Water Treatment Plant Upgrades -*** MWH provide design, permit, and construction management services for the upgrades to increase the reliability of the City's water supply system and to meet Palm Beach County Consent Order requirements. **Year Completed**: Ongoing **Estimated Cost**: $17.5M; **Actual Cost** (MWH Fee): $9.5M

SECTION 8

Minority/Women (M/WMBE) Participation

MWH understands and enthusiastically supports the City of Fort Lauderdale's M/WBE program. As demonstrated on previous projects, MWH has an excellent record of meeting local M/WBE goals on projects – a few of which are highlighted in this section. Even when not required, MWH has demonstrated a commitment to the principles of non-discrimination and equal opportunity – within our company and in selection of subconsultants. Our company philosophy, shared by the City, is to support the development of local, small and minority-owned businesses in the communities in which we live and work.

A project's subcontracting plan is an essential tool that not only assists in the achievement of project objectives, but also offers a direct insight into a firm's character, core values and business ideals. At MWH, we consider ourselves one of the few "single source providers" that has the in-house capabilities to furnish all aspects of a project from preliminary planning and engineering, detailed design, procurement, construction, start-up and phase over services. With that said, it is crucial to note that MWH considers "subcontracting" as an opportunity, not a burden.

MWH's approach for assigning project tasks to M/WBE firms for this project was based on a functional need rather than a target percentage, ensuring that the goals will be met or exceeded through value-added roles that enhance project delivery. With that in mind, the following table shows the M/WBE firms on our team and their project role. Additional information about these firms can be found in Section 11. MWH will utilize a minimum M/WBE participation of 12% for this project and we will work with our M/WBE team partners to increase this utilization when additional opportunities are presented by the City's requested tasks.

Firm	Proposed Role
Cordova Rodriguez & Associates, Inc.	Reuse Implementation
Hillers Electrical Engineering, Inc.	Electrical Engineering
Minimum M/WBE Participation = 12%	

MWH's philosophy has always been to work with local and community firms as part of an integrated team.

This philosophy has been proven time and time again. One of the strongest examples of this is our work as the program Manager for the Miami-Dade County pump station Improvement program. Under this program, MWH provided for over 25 percent participation inside the team and also worked with the County to prepare the projects so over 50 percent of the construction work was performed by local and minority firms. MWH's commitment to leveraging the expertise of a wide range of subconsultants to perform various services for our clients maximizes local resources while maintaining controls and quality in successful project delivery. Other examples include Palm Beach County where MWH has utilized 23 % SBE, or 8 % higher than the County's goal over the past three years. MWH as a JV member of the Program Management Team for the SFWMD's ACCELER8 Everglades Restoration Program, our contract had an SBE goal of 25%. At the end of this six year assignment, the final SBE utilization was 32.7% or $17.4M back to the local community.


State of Florida

Minority, Women & Florida Veteran Business Certification

Hillers Electrical Engineering, Inc.

Is certified under the provisions of 287 and 295.187, Florida Statutes for a period from:

12/13/2013 to 12/13/2015

SERVICES

OSD


State of Florida

Minority, Women & Florida Veteran Business Certification

Cordova Rodriguez & Associates, Inc.

Is certified under the provisions of 287 and 295.187, Florida Statutes for a period from:

12/04/2013 to 12/04/2015

SERVICES

OSD

SECTION 9

Sample Insurance Certificate

MWHGLOB-01 NEALDO

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 5/27/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:
Willis of Colorado, Inc. c/o 26 Century Blvd P.O. Box 305191 Nashville, TN 37230-5191	PHONE (A/C, No, Ext): (877) 945-7378 FAX (A/C, No): (888) 467-2378 E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Travelers Indemnity Company	25658
INSURER B : Travelers Property Casualty Company of America	25674
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
MWH Global Inc.
MWH Americas, Inc.
MWH Constructors, Inc.
380 Interlocken Crescent, Suite 200
Broomfield, CO 80021

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR	X		VTC2K-CO-5643B790-IND-13	8/31/2013	8/31/2014	EACH OCCURRENCE	$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 300,000
							MED EXP (Any one person)	$
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT X LOC						GENERAL AGGREGATE	$ 2,000,000
							PRODUCTS - COMP/OP AGG	$ 2,000,000
	OTHER:							$
B	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS HIRED AUTOS SCHEDULED AUTOS NON-OWNED AUTOS			VTC2JCAP5643B808TIL13	8/31/2013	8/31/2014	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
							BODILY INJURY (Per person)	$
							BODILY INJURY (Per accident)	$
							PROPERTY DAMAGE (Per accident)	$
								$
	UMBRELLA LIAB OCCUR EXCESS LIAB CLAIMS-MADE						EACH OCCURRENCE	$
							AGGREGATE	$
	DED RETENTION $							$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N N/A (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below			VTC2KUB5643B81A13	8/31/2013	8/31/2014	X PER STATUTE OTH-ER	
							E.L. EACH ACCIDENT	$ 1,000,000
							E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Regarding: RFQ # 246-11426
RFQ # 246-11426 Engineering Services for Comprehensive Utility Strategic Master Plan (CCNA – Consultants' Competitive Negotiation Act)

City of Fort Lauderdale c/o Procurement Service Division100 N. Andrews Avenue, #619 Fort Lauderdale, FL 33301RFQ # 246-11426 Engineering Services for Comprehensive Utility Strategic Master Plan (CCNA – Consultants' Competitive Negotiation Act) are included as an Additional Insured as respects to General Liability Coverage.

CERTIFICATE HOLDER

City of Fort Lauderdale
c/o Procurement Service Division
100 N. Andrews Avenue, #619
Fort Lauderdale, FL 33301

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

ACORD 25 (2014/01) The ACORD name and logo are registered marks of ACORD

General Liability Insurance

ACORD®

CERTIFICATE OF LIABILITY INSURANCE

10/1/2014

DATE (MM/DD/YYYY) 5/29/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Lockton Companies 444 W. 47th Street, Suite 900 Kansas City MO 64112-1906 (816) 960-9000	CONTACT NAME: PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS:
	INSURER(S) AFFORDING COVERAGE — NAIC #
	INSURER A : Lloyd's of London (AF Beazley)
INSURED 1347682 MWH AMERICAS, INC. 370 INTERLOCKEN BLVD. STE. 300 BROOMFIELD CO 80021	INSURER B : INSURER C : INSURER D : INSURER E : INSURER F :

COVERAGES MWHGL05 **CERTIFICATE NUMBER:** 12960973 **REVISION NUMBER:** XXXXXXX

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	COMMERCIAL GENERAL LIABILITY			NOT APPLICABLE			EACH OCCURRENCE	$ XXXXXXX
	☐ CLAIMS-MADE ☐ OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ XXXXXXX
							MED EXP (Any one person)	$ XXXXXXX
	GEN'L AGGREGATE LIMIT APPLIES PER:						PERSONAL & ADV INJURY	$ XXXXXXX
	☐ POLICY ☐ PRO-JECT ☐ LOC						GENERAL AGGREGATE	$ XXXXXXX
	OTHER:						PRODUCTS - COMP/OP AGG	$ XXXXXXX
								$
	AUTOMOBILE LIABILITY			NOT APPLICABLE			COMBINED SINGLE LIMIT (Ea accident)	$ XXXXXXX
	☐ ANY AUTO ☐ ALL OWNED AUTOS ☐ HIRED AUTOS ☐ SCHEDULED AUTOS ☐ NON-OWNED AUTOS						BODILY INJURY (Per person)	$ XXXXXXX
							BODILY INJURY (Per accident)	$ XXXXXXX
							PROPERTY DAMAGE (Per accident)	$ XXXXXXX
								$ XXXXXXX
	☐ UMBRELLA LIAB ☐ OCCUR			NOT APPLICABLE			EACH OCCURRENCE	$ XXXXXXX
	☐ EXCESS LIAB ☐ CLAIMS-MADE						AGGREGATE	$ XXXXXXX
	☐ DED ☐ RETENTION $							$ XXXXXXX
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N			NOT APPLICABLE			☐ PER STATUTE ☐ OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) N / A						E.L. EACH ACCIDENT	$ XXXXXXX
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ XXXXXXX
							E.L. DISEASE - POLICY LIMIT	$ XXXXXXX
A	PROFESSIONAL LIABILITY	N	N	GLOPR1301286	10/1/2013	10/1/2014	EACH CLAIM: $1,000,000 AGGREGATE: $2,000,000	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
RFQ # 246-11426 Engineering Services for Comprehensive Utility Strategic Master Plan (CCNA – Consultants' Competitive Negotiation Act)

CERTIFICATE HOLDER	CANCELLATION
12960973 CITY OF FORT LAUDERDALE C/O PROCUREMENT SERVICE DIVISION 100 N. ANDREWS AVENUE, #619 FORT LAUDERDALE FL 33301	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE

ACORD 25 (2014/01) The ACORD name and logo are registered marks of ACORD

Professional Liability Insurance

SECTION 10

Joint Ventures

MWH will not provide services under a Joint Venture contract for the City of Fort Lauderdale RFQ # 246-11426 Comprehensive Utility Strategic Master Plan (CCNA – Consultants' Competitive Negotiation Act).

SECTION 11

Subconsultants

Carollo Engineers, Inc.

Carollo Engineers, Inc. is a full-service firm that solely specializes in the planning, design, and construction of water and wastewater facilities. Carollo's reputation is based upon client service and a continual commitment to quality. During our 81-year history, Carollo has successfully completed tens of thousands of projects for public sector clients. Carollo's completed projects range in size from 1 to over 600 million gallons per day (mgd).

Carollo is currently ranked within Engineering News Record's top 100 design firms and provides exclusively water and related infrastructure engineering services. This allows Carollo to attract the best and brightest staff with a personal passion to focus on water and wastewater. For that reason, the quality and professional standing of our professionals have fostered a reputation for leadership and innovation that is second-to-none. Carollo's staff includes civil, environmental, electrical, mechanical, chemical, structural, control system, and corrosion control engineers, as well as architects, planners, and specialists in other areas.

Cordova Rodriguez & Associates, Inc.

Established in 2000, Cordova Rodriguez & Assoc., Inc. has earned local recognition as a dedicated and professional engineering and planning consulting firm. Cordova Rodriguez & Assoc., Inc. (CRA) is a consulting firm offering sustainable planning and civil engineering services to a variety of public and private sector clients. CRA provide services for the evaluation, planning, design and construction inspection of municipal infrastructure systems.

CRA has built its reputation on innovative engineering solutions that are on time, within budget, and client-focused. Services provided to government agencies include: Infrastructure design, permitting and construction services, Water and sewer distribution design and permitting, Surface water management design and permitting, Plans review for engineering and planning, Review, interpretation and amendments of codes, standards and ordinances, Planning and studies of infrastructure needs, Agency & Permitting Coordination, Land Use Plan Amendments, Comprehensive Plan Amendments, Amendments to Land Development Codes, Zoning, Plat Processing, Environmental Resource Permitting, Environmental Impact Studies, Assessments or Statements, Site Planning, Development Permitting Applications & Processing, Assistance in Planning & Engineering Reviews, G.I.S., and LEED principals

.

Craven Thompson & Associates, Inc.

Craven Thompson & Associates, Inc. (CTA) is a multi-disciplinary firm comprised of specialized teams each fully staffed with top caliber professional and support personnel, serving clients in both the public and private sectors. CTA offers a wide range of civil engineering, and GIS capabilities that is coordinated with its Planners, Surveyors and Landscape Architects, to provide a total capability, from site evaluation to a completed project.

CTA has modeled (with Haestad Methods WaterCAD and SewerCAD), designed and permitted hundreds of miles of water and sanitary sewer main in Broward County We have modeled, complete water and sewer systems for numerous large projects which have included water distribution and sanitary sewer systems for many

governmental entities. The modeling and design have included distribution, collection, and transmission systems, pump stations, and treatment plants.

CTA staff has over 20 years of GIS experience, currently run the latest version of ESRI's ArcGIS software version 10.1 and have been involved with multiple Municipalities in development of GIS databases and mapping projects.

Hillers Electrical Engineering, Inc.

Hillers Electrical Engineering, Inc. (HEE) brings over 200 years of combined, unsurpassed experience, expertise, and personalized service in electrical engineering design, and construction management. HEE electrical design services include power, telemetry, start-up assistance and construction management services for County and State municipal agencies.

HEE design staff brings vast electrical, instrumentation and telemetry design and project management experience in a variety of areas such as raw water wells, ASR and DIW wells, water treatment facilities, water distribution systems, wastewater collection systems, wastewater treatment facilities including reuse, storm water and treatment pumping stations.

MADDAUS WATER MANAGEMENT INC.
105 Zephyr Place, Danville, CA 94526 (925) 831-0194

Maddaus Water Management, Inc.

Maddaus Water Management (MWM) is a majority women-owned California S-Corporation. MWM is widely recognized for their expertise and capabilities in water resource management, and for innovative contributions in advancing demand management technology and integrated water resources planning. MWM have extensive experience working on regional demand and water use efficiency projection projects and has always taken a technically rigorous approach to water management planning using proven engineering estimates of water savings and benefit-cost analysis. MWM works in many states where water supply is a critical issue.

Within the field of water management, MWM offer a complete range of services, including master planning, drought mitigation, feasibility studies, benefit-cost analysis, detailed program design, budgeting and scheduling, program startup and operation, and evaluation. Types of services offered are: Long-Range Water Use Efficiency / Conservation Planning, Drought Preparedness Planning, Program Implementation and Evaluation, Water Demand Forecasts Incorporating Water use efficiency, Water Efficiency Surveys, Commercial/Industrial Water Efficiency Training Workshops, Water Use Efficiency / Conservation Research, Integrated Water Resources Planning.

REVERE

Revere Control Systems, Inc.

Revere Control Systems, Inc. (Revere) is a Control Systems Integrator specializing in the field of water and wastewater. Revere was established in 1980 and employs over 140 people with one goal in mind: to be recognized as the preferred automation, communication, and information integrator. Revere employs knowledgeable, experienced, and easy-to-work-with professionals at every level: delivering quality results with a focus on satisfaction.

As a servant-leader organization, Revere is founded on the highest standards of customer service, ethics, and care of the environment. Revere is "Engineered to Serve" the client, in every way, to help you achieve your goals, solve your problems, and meet your needs.

Revere provides full service control system integration including the following: electrical and power, automation and controls, wireless communications, information management and technology, training, documentation and service, and Design/Build electrical construction. Revere's Design/Build service eliminates the gaps between disciplines and shortens schedules with a single, common project responsibility. Revere's customers give this service high marks and praise. Revere is an independent integrator, offering a solution based on the equipment that provides the best combination of price and performance for your application from one source. Revere supply quality equipment from recognized industry suppliers with training and certification available. Revere provides our customer's with REX, a web-based customer access to all project data, documentation, and scheduling information: easy access to ship dates, drawings, software, O&M manuals, and more. Revere is certified by the Control System Integrators Association (CSIA) assuring adherence to best industry practices at all levels and operations of the business.

SECTION 12

NON-COLLUSION STATEMENT:

By signing this offer, the vendor/contractor certifies that this offer is made independently and *free* from collusion. Vendor shall disclose below any City of Fort Lauderdale, FL officer or employee, or any relative of any such officer or employee who is an officer or director of, or has a material interest in, the vendor's business, who is in a position to influence this procurement.

Any City of Fort Lauderdale, FL officer or employee who has any input into the writing of specifications or requirements, solicitation of offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement.

For purposes hereof, a person has a material interest if they directly or indirectly own more than 5 percent of the total assets or capital stock of any business entity, or if they otherwise stand to personally gain if the contract is awarded to this vendor.

In accordance with City of Fort Lauderdale, FL Policy and Standards Manual, 6.10.8.3,

3.3. City employees may not contract with the City through any corporation or business entity in which they or their immediate family members hold a controlling financial interest (e.g. ownership of five (5) percent or more).

3.4. Immediate family members (spouse, parents and children) are also prohibited from contracting with the City subject to the same general rules.

Failure of a vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the City Procurement Code.

NAME	RELATIONSHIPS
NOT APPLICABLE	

In the event the vendor does not indicate any names, the City shall interpret this to mean that the vendor has indicated that no such relationships exist.

Signature

LOCAL BUSINESS PREFERENCE CERTIFICATION STATEMENT

The Business identified below certifies that it qualifies for the local BUSINESS preference classification as indicated herein, and further certifies and agrees that it will re-affirm it's local preference classification annually no later than thirty (30) calendar days prior to the anniversary of the date of a contract awarded pursuant to this ITB. Violation of the foregoing provision may result in contract termination.

(1) Cordova Rodriguez & Associates, Inc.
Craven Thompson & Associates, Inc.
Business Name

is a **Class A** Business as defined in City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. A copy of the City of Fort Lauderdale current year Business Tax Receipt **and** a complete list of full-time employees and their addresses shall be provided within 10 calendar days of a formal request by the City.

(2) _____
Business Name

is a **Class B** Business as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. A copy of the Business Tax Receipt **or** a complete list of full-time employees and their addresses shall be provided within 10 calendar days of a formal request by the City.

(3) Carollo Engineers, Inc.
Hillers Electrical Engineering, Inc.
MWH Americas, Inc.
Business Name

is a **Class C** Business as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. A copy of the Broward County Business Tax Receipt shall be provided within 10 calendar days of a formal request by the City.

(4) _____
Business Name

requests a **Conditional Class A** classification as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. Written certification of intent shall be provided within 10 calendar days of a formal request by the City.

(5) _____
Business Name

requests a **Conditional Class B** classification as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. Written certification of intent shall be provided within 10 calendar days of a formal request by the City.

(6) Maddaus Water Management, Inc.
Revere Control Systems, Inc.
Business Name

is considered a **Class D** Business as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. and does not qualify for Local Preference consideration.

BIDDER'S COMPANY: MWH Americas, Inc.

AUTHORIZED COMPANY PERSON:

Harold V. Aiken		June 16, 2014
NAME	SIGNATURE	DATE

MWH®

BUILDING A BETTER WORLD

490 SAWGRASS CORPORATE PKWY
SUITE 300
SUNRISE, FL 33325
TEL: 954 846 0401
FAX: 954 846 0424