

**TASK ORDER No. 2014-01**

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

CITY Project No.: \_\_\_\_\_

**FORT LAUDERDALE PUBLIC WORKS DEPARTMENT**

**WATER SUPPLY PLAN UPDATE**

**PROFESSIONAL SERVICES**

This Task Order is being issued under a specific agreement between the City of Fort Lauderdale (**CITY**) and Hazen and Sawyer, P.C. (**CONSULTANT**) in accordance with the terms of the agreement "General Water Consultant Professional Architectural - Engineering Services" for professional services dated May 17, 2011 between **CITY** and **CONSULTANT** ("Master Agreement #606-10466") and amended as approved by City Commission on June 5, 2012.

**PROJECT BACKGROUND**

**CITY** adopted a 10-Year Water Supply Facilities Work Plan (Work Plan) into its comprehensive plan amendments in January 2009. The purpose of the Work Plan is to identify and plan for the water supply sources and facilities needed to serve existing and new development within the local government's jurisdiction. Chapter 163, Part II, Florida Statutes (F.S.), requires local governments to prepare and adopt updated Work Plans into their comprehensive plans within 18 months after the South Florida Water Management District (District) approves an update to the regional water supply plan.

2013 Lower East Coast Water Supply Plan Update (LEC Update) was approved by the District's Governing Board on Sept. 12, 2013. Therefore, **CITY** must update its Work Plan and comprehensive plan. The deadline for incorporation of the updated Work Plan into the comprehensive plan is March 13, 2015.

**PROJECT DESCRIPTION**

**CITY** has requested **CONSULTANT** to provide engineering services under this task order for updating its Work Plan and update of the comprehensive plan sections related to the updated the Work Plan.

The engineering services to be provided by **CONSULTANT** to **CITY** are described in the following scope of services.

**SCOPE OF SERVICES AND DELIVERABLES**

**CONSULTANT** shall provide all engineering services described on the tasks herein below:

## **Task No. 1 Update Water Supply Work Plan**

**Update Work Plan:** Since the development of the 2009 Work Plan, the District has issued a “2013 template” to assist utilities in preparing updated work plans such that the updates would follow a common section numbering scheme and include the content required by statute. **CONSULTANT** shall utilize the “2013 template” in updating the 2009 Work Plan.

### **Population Projections:**

- Update the planning period of the Work Plan to the current year including: a minimum 10-year period consistent with the applicable Regional Water Supply Plan and your Comprehensive Plan (e.g. a 2008 - 2018 planning period may be updated to 2013 – 2023; 2013 – 2033, etc.).
- **CITY** has determined that the 10 year planning horizon will be 2016 through 2026.
- Revise population projections with consideration given to the most current data found in the applicable published by the Office of Economic and Demographic Research, or other approved method [See Florida Statutes, Chapter 163.3177(1)(f)3]. The Comprehensive Plan, Work Plan, and applicable Regional Water Supply Plan should be based upon coordinated and consistent population projections and methodologies.

### **Water Suppliers:**

- Update current information concerning water suppliers within **CITY** jurisdiction limits. (e.g. include any existing and new water suppliers for your local jurisdictional limits). Show the water supplier for each portion of the jurisdiction and list the population covered by each water supplier.
- Provide updated consumptive use permit information for each water supplier.
- Show the water supplier’s service area(s) for the jurisdiction using a map. The service area(s) shall be consistent across the Work Plan, applicable Regional Water Supply Plan, and the Consumptive Use Permits.
- Update existing and projected level of service standards/per capita use rates for each service area and/or water supplier.
- Update the current and future population, demands, sources, and infrastructure needs of each water supplier.
- Revise the status of alternative water supply capital improvements for each water supplier to be consistent with the revised planning period.

- If there are contracts for bulk purchases or sales of water, attach the contract(s) or describe the details of the contract(s) in the Work Plan. **CITY** will provide copies of the contracts.

#### **Water Demand Projections:**

- Using the populations, planning period, and level of service/per capita use rate developed above, revise existing water demand projections. The results should be consistent with the applicable Regional Water Supply Plan. The projections should address current and projected needs and sources based on the demands for industrial, agricultural, and potable water use.
- **CONSULTANT** shall process the above data and develop spreadsheets and graphics forecasting the finished water demand and raw water demand in 5-year increments through the planning period.
- The raw water demand forecast shall be compared to the available water supply allocation in **CITY** water use permit to determine if a water supply shortfall (a.k.a., “demand-not-met”) is predicted over the next 20 years.
- Update the Work Plan’s water demands for self-served areas (e.g. private wells) and non-potable water (e.g. agriculture, industrial, irrigation).

#### **Water Supply Sources and Treatment Capacities:**

- Describe existing and future water sources for each water supplier to meet the demand over the planning period. Note: In areas having limited fresh water availability, alternative sources may be necessary.
- Describe existing and future water treatment facilities and capacities to meet the demand over the planning period.
- Describe new commitments for water conservation and reclaimed water programs, if applicable.
- Identify geographical areas and projected withdrawal amounts for existing and future domestic self-supply systems. Provide details of future plans to provide regional water service to these areas in the planning period, if any.
- Identify potential impacts to existing Minimum Flow and Levels (MFLs), water reservations, and/or restricted allocation areas in the updated planning period, if applicable.
- Provide updated water service area descriptions.

### **Water Supply Projects:**

- Update water supply projects (alternative and traditional) to be consistent with the Work Plan's planning period (e.g. delete completed projects and add projects planned for the updated planning period).
- Prior planning efforts by **CITY** identified a water supply shortfall and a series of alternative (i.e., Floridan Aquifer, etc.) water supply infrastructure improvements to augment water supply to prevent a shortfall. The timing of these projects was presented in Exhibits 7D, 9A and 9B of the Water Use Permit staff report. **CONSULTANT** shall assess the timeframe of these projects and update the timeframes for the projects in Exhibits 7D, 9A and 9B.
- Revise the 5-Year Schedule of Capital Improvements to include the water supply projects deemed necessary within the five-year planning period. For example, if you are planning to construct a new Floridan well in year two of the planning period, the financial plans for the well would be included the 5-Year Schedule of Capital Improvements.

### **Sector Plans (if required):**

- Sector Plans are not applicable to **CITY's** Work Plan. The Work Plan shall be updated to indicate that Sector Plans are not applicable.

### **Summary Table:**

As required by the District, a summary table shall be developed in the Work Plan identifying where various items of the Work Plan are located within the local government's comprehensive plan.

### **Task No. 1 Deliverables**

**CONSULTANT** shall provide the following for **CITY**:

1. Updated Work Plan - Draft: **CONSULTANT** shall prepare and electronically issue a PDF version of the draft updated work plan.
2. Meeting: **CONSULTANT** shall participate in one review meeting with **CITY** to receive and discuss **CITY's** review comments for the draft submittal.
3. Updated Work Plan - Final: Comments received from **CITY** will be incorporated into the final version of the updated Work Plan. **CONSULTANT** shall prepare and electronically issue a PDF version and Microsoft Word version of the Final Updated Work Plan.

### **Task 2 - Comprehensive Plan Update:**

- **CONSULTANT** shall review the Comprehensive Plan Goals, Objectives and Policies related to water supply and provide suggested revisions to the Comprehensive Plan based upon the Updated Work Plan for the following elements:

- Implementation of the Work Plan
  - Concurrency for water supply availability
  - Water conservation programs
  - Alternative water supply projects
  - Reclaimed water programs
  - Level of service standards
  - Population projections
  - Water supply/source needs and demands
  - Capital improvement element
  - Intergovernmental coordination with the District, water suppliers, and other local governments. Identify any joint planning areas and joint infrastructure service areas related to water supply
- **CONSULTANT** shall recommend revisions to the Comprehensive Plan related to the data and analysis for availability of water supply sources, water treatment facilities, and water services for the revised planning periods.
  - **CITY** will be responsible for incorporating the suggested revisions into the Comprehensive Plan document.
  - There are three potential options available to local governments for adopting an original Work Plan into **CITY**'s Comprehensive Plan:
    1. Option 1: Incorporate the Work Plan as a sub-element (option recommended by the Department of Economic Opportunity (DEO) and SFWMD);
    2. Option 2: Incorporate by reference in a policy; or
    3. Option 3: Include as goals, objectives and policies throughout the comprehensive plan.
  - **CITY** has selected Option 3. **CONSULTANT** shall indicate in the Work Plan that **CITY** has selected Option 3.

## **Task No. 2 Deliverables**

**CONSULTANT** shall provide the following for **CITY**:

1. Comprehensive Plan Suggested Revisions: Review the Comprehensive Plan Goals, Objectives and Policies related to water supply and provide a memorandum with suggested revisions based upon the Updated Work Plan.

## **PROJECT ASSUMPTIONS**

1. **CONSULTANT** shall not initiate work until **CITY** provides the historical population, forecasted population, historical billing meter data, historical water treatment plant production data and the historical raw water flow data in the format indicated below in "City's Responsibilities".

2. Modification of the scope of the alternative water supply projects presented in the Water Use Permit staff report Exhibits 7D, 9A and 9B and 2009 Work Plan is not included; only the timeframe for implementation of these projects will be adjusted in the Updated Work Plan.
3. **CONSULTANT** shall update the construction cost opinion for the Dixie Florida Water Supply / Treatment Facility. Cost opinion shall be Class 4 estimate as defined by the Association of the Advancement of Cost Engineering International. The expected accuracy range would be +50 percent to -30 percent.

**CITY'S RESPONSIBILITIES**

1. Prior to issuing the notice to proceed, **CITY** will provide **CONSULTANT** with the following data in the format below:
  - Historical population for 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, and 2013 for **CITY** water service area broken down as follows:
    - City of Fort Lauderdale
    - City of Oakland Park
    - City of Wilton Manors
    - Oakland Forest Subdivision with the City of Oakland Park
    - City of Tamarac
    - Town of Davie – Hacienda Village
  - Forecasted population over **CITY** planning period in 5 year increments for **CITY** water service area broken down as follows:
    - City of Fort Lauderdale
    - City of Oakland Park
    - City of Wilton Manors
    - Oakland Forest Subdivision with the City of Oakland Park
    - City of Tamarac
    - Town of Davie – Hacienda Village
  - Forecasted population provided by **CITY** will be based upon the University of Florida Bureau Of Economic and Business Research (BEBR) forecast.
  - Historical billing meter data (all account types – i.e., irrigation, master meters, Fort Lauderdale customers, etc.) for all water billed in annual average millions of gallons per day, broken down as follows:

| <b>Billing Meters</b>   | <b>2005</b> | <b>2006</b> | <b>2007</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>2011</b> | <b>2012</b> | <b>2013</b> |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Fort Lauderdale (sum of all meters not including the large user meters below) |             |             |             |             |             |             |             |             |             |
| Oakland Park  |             |             |             |             |             |             |             |             |             |

| <b>Billing Meters</b>                            | <b>2005</b> | <b>2006</b> | <b>2007</b> | <b>2008</b> | <b>2009</b> | <b>2010</b> | <b>2011</b> | <b>2012</b> | <b>2013</b> |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Wilton Manors                                    |             |             |             |             |             |             |             |             |             |
| Oakland Forest                                   |             |             |             |             |             |             |             |             |             |
| Tamarac  |             |             |             |             |             |             |             |             |             |
| Davie Hacienda Village                           |             |             |             |             |             |             |             |             |             |
| Port Everglades Meter 1<br>(Serial No. 13817212) |             |             |             |             |             |             |             |             |             |
| Port Everglades Meter 2<br>(Serial No. 6906501)  |             |             |             |             |             |             |             |             |             |
| Port Everglades Meter 3<br>(Serial No. 7135595)  |             |             |             |             |             |             |             |             |             |
| Port Everglades Meter 4<br>(Serial No. 9100694)  |             |             |             |             |             |             |             |             |             |
| Port Everglades Meter 5<br>(Serial No. 31930975) |             |             |             |             |             |             |             |             |             |
| BCOES  |             |             |             |             |             |             |             |             |             |
| FLDOT Toll Booth                                 |             |             |             |             |             |             |             |             |             |
| <b>Total Water Billed</b>                        |             |             |             |             |             |             |             |             |             |

- Historical water treatment plant production data in millions of gallons per day, broken down as follows:

| <b>Year</b> | <b>Fiveash WTP</b> |                | <b>Dixie WTP</b> |                |
|-------------|--------------------|----------------|------------------|----------------|
|             | <b>AADF</b>        | <b>Max Day</b> | <b>AADF</b>      | <b>Max Day</b> |
| 2005        |                    |                |                  |                |
| 2006        |                    |                |                  |                |
| 2007        |                    |                |                  |                |
| 2008        |                    |                |                  |                |
| 2009        |                    |                |                  |                |
| 2010        |                    |                |                  |                |
| 2011        |                    |                |                  |                |
| 2012        |                    |                |                  |                |
| 2013        |                    |                |                  |                |

- Historical raw water flow data in millions of gallons per day, broken down as follows:

| Year | Annual Average Day Raw Water (mgd) |                    |
|------|------------------------------------|--------------------|
|      | Dixie Wellfield                    | Prospect Wellfield |
| 2005 |                                    |                    |
| 2006 |                                    |                    |
| 2007 |                                    |                    |
| 2008 |                                    |                    |
| 2009 |                                    |                    |
| 2010 |                                    |                    |
| 2011 |                                    |                    |
| 2012 |                                    |                    |
| 2013 |                                    |                    |

2. If construction costs are required to be supplied in the updated Work Plan for reclaimed water projects, the estimates shall be supplied by **CITY**.

### ADDITIONAL SERVICES

If authorized in writing by the City as an amendment to this Task Order, the Consultant shall furnish, or obtain from others, Additional Services of the types listed in Article 8 of the Master Agreement. The City, as indicated in the Master Agreement, will pay for these services.

### PERFORMANCE SCHEDULE

**CONSULTANT** shall perform the services identified in this amendment in accordance with the following schedule:

| Description                                  | Estimated Completion Time <sup>(note A)</sup> |          |
|--|---|----------|
|  | For Task                                      | From NTP |
| Task 1 – Update Water Supply Work Plan       |   |          |
| • Prepare Draft Updated Work Plan            | 20  | 20       |
| • City Review                                | 10  | 30       |
| • Prepare Final Updated Work Plan            | 10  | 40       |
| Task 2 – Comprehensive Plan Update           |   |          |
| • Submit memorandum with suggested revisions | 10  | 50       |

Note A: Estimated time in calendar days from the Task Order Notice-to-Proceed, unless otherwise noted.

Note that a number of factors affecting the project are beyond the control of **CONSULTANT** including work by others such as reviews by others and delivery of information to be supplied by others. Consequently, the schedule presented herein is dynamic and is presented as a best case scenario. The schedule will be updated when appropriate.

**METHOD OF COMPENSATION**

The services performed shall be accomplished using the Not to Exceed method of compensation. Reimbursable expenses associated with these services are not included in the fees and will be itemized separately, subject to an established Not to Exceed limit. A fee schedule and cost breakdown for reimbursable expenditures is included on Exhibit A.

**TERMS OF COMPENSATION**

Services shall be provided for the following Not to Exceed amounts:

| Task No                  | Task Title                    | Labor Fees    |                | Total           |
|--------------------------|-------------------------------|---------------|----------------|-----------------|
|                          |                               | Consultant    | Sub consultant |                 |
| 1                        | Update Water Supply Work Plan | \$20,572      | \$0            | \$20,572        |
| 2                        | Comprehensive Plan Update     | \$1,618       | \$0            | \$1,618         |
| <b>All tasks</b>         |                               |               |                | <b>\$22,190</b> |
| Task No                  | Description                   | Reimbursables |                | Total           |
|                          |                               | Consultant    | Sub consultant |                 |
| 1                        | Not Used                      | \$0           | \$0            | \$0             |
| 2                        | Not Used                      | \$0           | \$0            | \$0             |
| <b>All reimbursables</b> |                               |               |                | <b>\$0</b>      |
| <b>TOTAL</b>             |                               |               |                | <b>\$22,190</b> |

Exhibit A provides a more detailed cost breakdown for this Task Order.

**CITY CONTACTS**

Requests for payments should be directed to City of Fort Lauderdale Accounts Payable via e-mail to AcctsPayable@FortLauderdale.gov. All other correspondence and submittals should be directed to the attention of **Todd Hiteshew** at the address shown below. **Please be sure that all correspondence refers to the City project number and title as stated above.**

City of Fort Lauderdale  
 949 Northwest 38th Street  
 Fort Lauderdale, Florida 33309

**CONSULTANT CONTACTS**

Hazen and Sawyer, P.C.  
 4000 Hollywood Boulevard  
 Suite 750 North

George A. Brown, P.E.  
gbrown@hazenandsawyer.com  
Phone: (954) 987-0066  
Fax: (954) 987-2949

**CITY**

IN WITNESS OF THE FOREGOING, the parties have set their hands and seals the day and year first above written.

CITY OF FORT LAUDERDALE, a municipal  
corporation of the State of Florida:

By \_\_\_\_\_  
LEE R. FELDMAN, City Manager

(CORPORATE SEAL)

ATTEST:

\_\_\_\_\_  
JONDA K. JOSEPH, City Clerk

Approved as to form:

\_\_\_\_\_  
CARRIE L. SARVER  
Assistant City Attorney

**CONSULTANT**

WITNESSES:

**HAZEN AND SAWYER, P.C.**  
a New York corporation  
authorized to do business in Florida

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name

By: \_\_\_\_\_

Name: Patrick A. Davis, P.E.

Title: Vice President

ATTEST:

By: \_\_\_\_\_

Name: Gary W. Bors, P.E.

Title: Vice President

(CORPORATE SEAL)

STATE OF FLORIDA:  
COUNTY OF BROWARD:

Patrick A. Davis and Gary W. Bors as Vice President's of Hazen and Sawyer, P.C., a New York corporation, acknowledged the foregoing instrument before me this \_\_\_\_\_ day of \_\_\_\_\_, 2014, on behalf of the corporation. They are personally known to me and did not take an oath.

(SEAL )

\_\_\_\_\_  
Notary Public, State of Florida  
(Signature of Notary taking Acknowledgement)

Annie A. Brown  
Name of Notary Typed, Printed or Stamped

\_\_\_\_\_  
My Commission Expires

\_\_\_\_\_  
Commission No.