



Hazen and Sawyer
4000 Hollywood Blvd., Suite 750N, North Tower • Hollywood, FL 33021

April 24, 2019

Clece Aurelus, P.E.
City OF HOLLYWOOD
Department of Public Utilities
Engineering and Construction Services Division
Post Office Box 229045
Hollywood, Florida 33022

Hollywood Department of Public Utilities
2020 Water Supply Plan Update
City Project No. 19-3070

As requested, Hazen and Sawyer, P.C. (CONSULTANT) is pleased to offer engineering services for the City of Hollywood's (City) Water Supply Facilities Work Plan Update (Work Plan).

BACKGROUND

City adopted a 10-Year Water Supply Facilities Work Plan (Work Plan) into its comprehensive plan amendments in January 2015. The purpose of the Work Plan update was 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 (FS), 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 Lower East Coast (LEC) regional water supply plan.

The 2018 LEC's Water Supply Plan Update (LEC Update) was approved by the District's Governing Board on November 9, 2018. Therefore, the City must update its Work Plan and Comprehensive Plan. The deadline for incorporation of the updated Work Plan into the Comprehensive Plan is May 9, 2020.

SCOPE OF SERVICES

CONSULTANT shall utilize the format of the previously prepared 2015 Work Plan as the basis for 2019 Work Plan updates. As outlined in the Water Supply Facilities Work Plan Update Checklist, the updates shall address the following items:

Task 1.1 – Service Area Description

CONSULTANT shall obtain data and GIS mapping information from the City as needed to identify specific updates required to the existing Work Plan. Such information shall include existing water supply facilities (raw water wells, treatment and storage facilities, transmission and distribution network), facility capacity, service agreements with neighboring utilities, and conservation efforts.

Task 1.2 – Population Projections and Water Suppliers

CONSULTANT shall incorporate population projections consistent with those prepared by the District including:

- 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 the City's Comprehensive Plan. The planning horizon will be 2015 through 2040.
- Revise population projections with consideration given to the most current data.
- Provide updated consumptive use permit information for the City's water treatment plant.
- Show the City's service area(s) for the jurisdiction using a map.
- Update existing and projected level of service standards/per capita use City's rates.
- Update the current and future infrastructure needs of the City.
- Revise the status of alternative water supply capital improvements for the City 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.

Task 1.3 – Water Demand Projections

CONSULTANT shall update the water demand forecast based upon the updated population and planned or anticipated developments as determined by the City as follows:

- 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 planning horizon.
- Update the Work Plan's water demands for self-served areas (e.g. private wells) and non-potable water (e.g. agriculture, industrial, irrigation).

Task 1.4 – Water Supply, Treatment Capacities and Future Projects

CONSULTANT shall utilize the updated information as determined in the previous subtasks to identify their impacts to existing facilities and the improvements necessary to accommodate them including:

- Describe existing and future water sources for the City to meet the demand over the planning period. It is noted that 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.
- 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).
- Revise the 5-Year Schedule of Capital Improvements to include the water supply projects deemed necessary within the five-year planning period.
- Sector Plans are not applicable to City's Work Plan. The Work Plan shall be updated to indicate that Sector Plans are not applicable.

Task 1.5 – Summary Table

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

Task 1.6 – Work Plan

CONSULTANT shall provide the following to 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. Up to six hard copies of the Work Plan will be submitted upon request.

Task 1.7 – Comprehensive Plan Recommendations

CONSULTANT shall perform the following duties regarding recommendations for adoption to the Comprehensive Plan:

- 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.
- CONSULTANT, with assistance from City staff, shall develop a presentation for the City Commission.
- 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 will provide information on the option to be utilized. CONSULTANT shall indicate in the Work Plan the option selected by City.

CONSULTANT shall provide the following for City:

- Comprehensive Plan Suggested Revisions - Draft: 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
- Meeting: CONSULTANT shall participate in one review meeting with City to receive and discuss City's review comments for the draft submittal.
- Comprehensive Plan Suggested Revisions - Final: Comments received from City will be incorporated into the final version of the Comprehensive Plan Goals, Objectives and Policies memorandum. CONSULTANT shall prepare and electronically issue a PDF version and Microsoft Word version of the memorandum. Up to six hard copies of the memorandum will be submitted upon request.

KEY ASSUMPTIONS

1. Previous 2015 Water Supply Plan in its present format will be used to the extent possible.
2. The population and water demand forecasts presented in the Work Plan shall cover up to the year 2040 to be consistent with the SFWMD's LEC Plan.
3. Population projections for the City's retail water service area will be estimated based on the most recently published population projections by the University of Florida's Bureau of Economic and Business Research (BEBR).
4. Population projections for the Broward County 3A and 3B/C service areas will be obtained from the Broward County's updated Water Supply Facilities Plan.
5. CONSULTANT shall initiate work upon receipt of the historical water treatment plant production data and the historical raw water flow data in electronic format from the City.
6. The Seminole Tribe of Florida (STOF) maintains its own water supply system and is required to prepare its own Water Supply Plan updates. STOF facilities and service area will not be included in the Work Plan.
7. If construction costs are needed for reclaimed water projects in the updated Work Plan, estimates shall be order of magnitude level for budgeting purposes.
8. Incorporation of the recommendations into the Comprehensive Plan will be managed by City staff. Presentation assistance, if desired, to be provided under separate task.

City Responsibilities

1. Upon issuing the notice-to-proceed, City will provide CONSULTANT with a copy of the following in electronic format:
 - Historical monthly average and maximum day water treatment plant finished water production data in millions of gallons per day for the period 2014 through 2018. Data for previous years will be obtained from the 2015 Water Supply Plan.

- Historical monthly raw water flow data in millions of gallons per day for each water source. City will provide CONSULTANT with an electronic copy of the Broward County 2019 Water Supply Facilities Work Plan and the City of Fort Lauderdale 2019 Water Supply Facilities Work Plan.
 - Updated GIS shapefiles including information to be updated.
2. City will provide CONSULTANT with information on recent developments regarding its reuse system and water conservation.

COMPENSATION

The engineering services for this project will be performed for a lump sum amount of \$39,971. A fee breakdown is attached.

SCHEDULE

Engineering services will be completed within six (6) months from receipt of the Notice-to-Proceed and requested data.

Engineering services for the project will be performed as part of our Professional Services Agreement for General Engineering Consultant Services dated October 2017. Services provided by Hazen and Sawyer, D.P.C. shall be limited to those services specifically identified in this work order.

We look forward to your reply. In the meantime, should you have any questions, please contact us.

Very truly yours,

HAZEN AND SAWYER, D.P.C.



J. Philip Cooke, P.E.
Senior Associate

c: File No. 4321-016/1.0
M. Durand

Attachment

**CITY OF HOLLYWOOD
DEPARTMENT OF PUBLIC UTILITIES
Water Supply Facilities Work Plan Update
Fee Estimate Breakdown**

<u>Tasks</u>	Labor Hours								<u>Subtotal</u>	<u>Fee</u>
	<u>Vice President</u>	<u>Senior Associate</u>	<u>Associate</u>	<u>Senior Principal Engineer</u>	<u>Principal Engineer</u>	<u>Engineer</u>	<u>Senior Drafter</u>	<u>Admin Assistant</u>		
LABOR										
Task 1.1 - Service Area Description	0	3	0	0	15	15	0	0	33	\$ 5,128
Task 1.2 - Population Projections and Water Suppl	0	4	0	0	12	28	0	0	44	\$ 6,493
Task 1.3 - Water Demand Projections	0	3	0	0	15	15	0	0	33	\$ 5,128
Task 1.4 - Supply, Treatment and Future Projects	0	2	0	0	10	10	0	0	22	\$ 3,419
Task 1.5 - Summary Table	0	1	0	0	5	6	0	0	12	\$ 1,833
Task 1.6 - Work Plan	0	10	0	0	28	28	22	22	110	\$ 14,451
Task 1.7 - Comprehensive Plan Revisions	0	2	0	0	10	10	0	0	22	\$ 3,419
Subtotal	0	25	0	0	95	112	22	22	276	\$ 39,871
DIRECT EXPENSES										
Out-of-pocket										\$ 100
Subtotal										\$ 100
Total (Lump Sum)										\$ 39,971
Maximum Hourly Labor Rate	274.12	261.80	212.52	181.72	166.32	123.20	95.48	73.92		