

FIRST AMENDMENT

to

INTERLOCAL AGREEMENT

Between

BROWARD COUNTY

and

CITY OF FORT LAUDERDALE

for

COST SHARING FOR THE
DEVELOPMENT OF A SALTWATER INTRUSION MODEL FOR THE CENTRAL
PORTION OF COASTAL BROWARD COUNTY, FLORIDA

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PORTION OF COASTAL BROWARD COUNTY, FLORIDA

This is a First Amendment to that certain Agreement between: BROWARD COUNTY, a political subdivision of the state of Florida, hereinafter referred to as "COUNTY",

AND

CITY OF FORT LAUDERDALE, an independent political subdivision of the State of Florida, hereinafter referred to as "CITY".

WHEREAS, COUNTY and CITY entered into an Interlocal Agreement which was approved by COUNTY on April 13th, 2010, providing for cost sharing for the development of a saltwater intrusion model for the central portion of coastal Broward County, Florida; and

WHEREAS, the parties are desirous of amending the terms of the agreement to provide for an extension of time with no changes in funding from COUNTY or CITY. The amendment is therefore deemed a no-cost amendment to the Agreement;

NOW, THEREFORE, in consideration of the mutual terms and conditions, promises, covenants and payments hereinafter set forth, COUNTY and CITY agree as follows:

1. The above recitals and representations are true and correct and are incorporated herein.

2. ARTICLE 2, SCOPE OF SERVICES, Section 2.1, is hereby amended as follows:

2.1 CITY shall provide cost sharing for the development of a saltwater intrusion model for the central portion of coastal Broward County including all work identified in this Interlocal Agreement, ~~and Exhibit "A" and Exhibit "A-1" Addendum to Scope of Services.~~ and Addendum to Scope of Services. The parties agree that the Scope of Services ~~is~~ and Addendum to Scope of Services are a description of all work to be performed under this Interlocal Agreement to include preliminary considerations and prerequisites, and all labor, materials, equipment, and tasks.

3. ARTICLE 3, COMPENSATION, Section 3.2.2 is hereby amended as follows:

3.2.2 Quarterly invoices are scheduled to amount to \$12,500.00 per quarter for the first 6 quarters, \$15,625.00 for the following 4 quarters, and \$12,500.00 per quarter for the ~~remaining 6 next 5~~ next 5 quarters. A final payment of \$12,500.00 will be made upon final completion of project.

4. ARTICLE 4, TERM AND TIME OF PERFORMANCE OF AGREEMENT, Section 4.1 is hereby amended as follows:

4.1 This Interlocal Agreement shall become effective upon execution by COUNTY and shall continue in full force and effect until midnight, ~~forty-eight (48)~~ sixty (60) months following final execution of the Agreement. In addition, the County Administrator is authorized to execute any amendments extending the term of this Interlocal Agreement with the appropriate amendment prepared with the same or similar formality.

5. ARTICLE 9, NOTICES, Section 9.1, is hereby amended as follows:

9.1 Whenever either party desires to give notice to the other, such notice must be in writing, sent by certified United States Mail, postage prepaid, return receipt requested, or by hand delivery with a request for a written receipt of acknowledgment of delivery, addressed to the party for whom it is intended at the place last specified. The place for giving notice shall remain the same as set forth herein until changed in writing in the manner provided in this section. For the present, the parties designate the following:

FOR BROWARD COUNTY:

Director, Natural Resource Planning and Management Division
1 N. University Drive, Suite 201
Plantation, FL 33324

115. S. Andrews Avenue, Room 329H
Fort Lauderdale, Florida 33301

With copy to:

County Administrator
115 South Andrews Avenue, Suite 409
Fort Lauderdale, Florida 33301

TO CITY:

Lawrence Teich, Environmental Resource Supervisor
City of Fort Lauderdale- Public Works Department
949 NW 38th streets
Fort Lauderdale, FL 33309

6. Except as amended herein, all other terms and conditions of the Agreement, as incorporated herein, shall remain in full force and effect.

- REMAINDER OF PAGE INTENTIONALLY LEFT BLANK -

IN WITNESS WHEREOF, the parties hereto have made and executed this First Amendment to Interlocal Agreement: BROWARD COUNTY through its COUNTY ADMINISTRATOR, authorized by Board action on the 13th day of April, 2010, and CITY OF FORT LAUDERDALE, signing by and through its Mayor, authorized to execute same.

COUNTY

WITNESSES:

BROWARD COUNTY, through its COUNTY ADMINISTRATOR

Print Name:

By _____
BERTHA HENRY

Print Name:

____ day of _____, 2014

Insurance requirements
Approved by Broward County
Risk Management Division

Approved as to form by
Joni Armstrong Coffey
Broward County Attorney
Governmental Center, Suite 423
115 South Andrews Avenue
Fort Lauderdale, Florida 33301
Telephone: (954) 357-7600
Telecopier: (954) 357-6968

By _____

By _____
Michael C. Owens (Date)
Senior Assistant County Attorney

Date _____

MCO/tr
01/17/14
First Amend Ft Lauderdale Saltwater Modeling Cost Share.docx
#14-058.06

FIRST AMENDMENT TO INTERLOCAL AGREEMENT BETWEEN BROWARD COUNTY AND CITY OF FORT LAUDERDALE FOR DEVELOPMENT OF A SALTWATER INTRUSION MODEL FOR CENTRAL PORTION OF COASTAL BROWARD COUNTY, FLORIDA TO BE PERFORMED IN PARTNERSHIP WITH U.S. GEOLOGICAL SURVEY.

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 _____
JOHN P. "JACK" SEILER, Mayor

By _____
LEE R. FELDMAN, City Manager

(CORPORATE SEAL)

ATTEST:

JONDA K. JOSEPH, City Clerk

Approved as to form:

Assistant City Attorney

Exhibit "A-1" – Addendum to Scope of Services Saltwater Intrusion Model for Central Broward County

The deliverables for this project still include:

- Status reports describing project progress, future plans, and unresolved issues (provided upon request)
- All model datasets, including specialized codes developed for the project (provided upon completion of the project)
- Project findings in the form of a journal article or U.S. Geological Survey Scientific Investigations Report (draft copy will be provided for review; final paper or report will be provided upon publication)

To meet the objectives of the proposal, a primary task was to develop a saltwater intrusion model for central Broward County. The scale of this model has been increased to include southern Broward County. The model data sets and specialized programs named in the deliverables, required to run the model, will include the central and southern parts of the County, and a journal article or USGS report describing simulation results for the expanded area.

Variable-density groundwater flow and transport models generally require relatively small grid cells to calculate solutions with any degree of accuracy or precision. The larger the model area, the greater the number of grid cells are required. The greater the number of grid cells, the more numerous are the calculations made, and this can become computationally intractable. Yet models are more reliable with distance away from model boundaries, so to achieve reliable simulation results, it is generally more beneficial to include a larger area within the model, so that the results in areas of greatest interest are further removed from any boundaries.

When the project was proposed, there were concerns that a single model describing saltwater intrusion in the central and southern part of the county would be too large to be computationally tractable. So this project was designed to include a model and results from just the central part of the county. During model development, ways to make the solution of a single, larger model more tractable were identified. Thus the Central and Southern County models will be merged into a single model, and the results will be published in a single, common report. All of the analyses indicated from the originally proposed Central model will be included these deliverables.

Revised Timeline

The Timeline below has been adjusted to account for the merging of the models for central and southern Broward County into a single common model.

Task	Description	FY10				FY11				FY12				FY13				FY14				FY15	
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
1	Obtain historical pumping records at well fields																						
2	Obtain historical water-level and water-quality information (specific conductance, chloride and total dissolved solids) and develop an understanding of rates and patterns of saltwater intrusion																						
3	Develop a conceptual hydrogeologic model of the study area using existing data																						
4	Collect and analyze historical land use maps for quantifying temporal and spatial distributions of aquifer recharge																						
5	Develop a variable-density saltwater intrusion model and calibrate the model to water levels and salinities																						
6	Perform a detailed sensitivity analysis to identify the importance of aquifer parameters and hydrologic stresses on saltwater intrusion																						
7	Perform at least three predictive scenarios related to sea-level rise and/or drought conditions																						
8	Prepare a journal article or USGS Scientific Investigations Report to document and publish the results and conclusions of the study																						