

6354-12
Amd 14

**AMENDMENT NUMBER FOURTEEN TO AGREEMENT
BETWEEN
THE CITY OF JACKSONVILLE
AND
CDM SMITH INC.
FOR
MASTER STORMWATER MANAGEMENT PLAN:
UPDATE/UPGRADE MAP MODERNIZATION AND TMDL SUPPORT**

THIS AMENDMENT NUMBER FOURTEEN to Agreement for development of a Master Stormwater Management Plan: Update/Upgrade Map Modernization and TMDL Support (hereinafter the "Project") is made and entered into in duplicate this 15 day of July, 2015, by and between the CITY OF JACKSONVILLE, a municipal corporation in Duval County, Florida (hereinafter the "CITY"), and CDM SMITH INC., a foreign profit corporation authorized to do business in the State of Florida at 8381 Dix Trail, Suite 400, Jacksonville, Florida 32256 (hereinafter the "CONSULTANT").

RECITALS:

WHEREAS, on February 6, 2007, CITY and CONSULTANT made and entered into City of Jacksonville Contract # 6354-12 (hereinafter the "Agreement") for the Project; and

WHEREAS, said Agreement has been amended thirteen (13) times previously; and

WHEREAS, said Agreement should be amended further by: revising the Scope of Services by adding, attaching, and incorporating **Exhibit "Y"**, attached hereto and, by this reference, made a part hereof; revising the Contract Fee Summary by adding, attaching, and incorporating **Exhibit "Z"**, attached hereto and, by this reference, made a part hereof; increasing the lump sum amount for Flood Plain Mapping Services by

\$1,500.00 to a new limit of \$6,164,693.00; increasing the not-to-exceed limit for TMDL Support Services, as described in **Exhibit “Y”**, by \$23,729.87, as detailed in **Exhibit “Z”**, to a new not-to-exceed limit of \$454,993.53; increasing the not-to-exceed limit for Maintenance and Updates, as described in **Exhibit “Y”**, by \$8,029.43, as detailed in **Exhibit “Z”**, to a new limit of \$167,162.43; increasing the not-to-exceed limit for Septic Tank Model Technical Review, as described in **Exhibit “Y”**, by \$96,953.65, as detailed in **Exhibit “Z”**, to a new limit of \$229,411.65; increasing the not-to-exceed limit for Septic Tank Phase Out Credit Calculations, as described in **Exhibit “Y”**, by \$68,444.72, as detailed in **Exhibit “Z”**, to a new limit of \$156,918.60; making conforming revisions; and, increasing the CITY’s maximum indebtedness by an amount not-to-exceed \$198,657.67 to a new total maximum indebtedness of \$8,634,491.14, with all other provisions, terms, and conditions of said Agreement, as previously amended, remaining unchanged; now therefore

IN CONSIDERATION of the Agreement and of the mutual covenants and agreements contained herein, and for other good and valuable consideration admitted by the parties to be legally sufficient, the parties agree to amend said Agreement as follows:

1. The above stated recitals are accurate, true, and correct and, by this reference, are incorporated herein and made a part hereof.

2. Section 1.01 in said Agreement, entitled “STATEMENT OF CONSULTANT SERVICES”, is amended to revise the Scope of Services by adding and incorporating **Exhibit “Y”**, and as amended shall read as follows:

“1.01 STATEMENT OF CONSULTANT SERVICES

“The CONSULTANT shall furnish all services, documents, drawings and other matters called for in this Agreement, as well as those contained in the

“Scope of Services” attached hereto as **Exhibits ‘A’, ‘C’, ‘E’, ‘G’, ‘I’, ‘K’, ‘M’, ‘O’, ‘Q’, ‘S’, ‘U’, ‘W’, and ‘Y’,** and, by this reference, made a part hereof. The CONSULTANT accepts the special relationship established between itself and the CITY by this Agreement. The CONSULTANT covenants with the CITY that it is an expert in the design of the Project, and will cooperate with Program Managers, Construction Managers, CITY representatives and others in fostering the interests of the CITY. The CONSULTANT shall employ sound business administration and superintendence to complete the Project in a manner consistent with the best interests of the CITY.”

3. Section 3.01.01 in said Agreement is amended by increasing the lump sum amount for Flood Plain Mapping Services, as described in **Exhibit “Y”**, by \$1,500.00, as detailed in **Exhibit “Z”**, to a new limit of \$6,164,693.00, and as amended shall read as follows:

“3.01.01. For Flood Plain Mapping Services, as specified in Section 1 of this Agreement and as further described in **Exhibits ‘A’, ‘C’, ‘G’, ‘I’, ‘K’, ‘O’, and ‘Y’** a lump sum amount of SIX MILLION ONE HUNDRED SIXTY-FOUR THOUSAND SIX HUNDRED NINETY-THREE AND 00/100 DOLLARS (\$6,164,693.00); as detailed in **Exhibits ‘B’, ‘D’, ‘H’, ‘J’, ‘L’, ‘P’, and ‘Z’,** attached hereto and by this reference made a part hereof.”

4. Section 3.02.01 in said Agreement is amended by increasing the not-to-exceed limit for TMDL Support Services, as described in **Exhibit “Y”**, by \$23,729.87, as detailed in **Exhibit “Z”**, to a new not-to-exceed limit of \$454,993.53, and as amended shall read as follows:

“3.02.01. For TMDL Support Services, as described in **Exhibits ‘A’, ‘G’, ‘I’, ‘U’, and ‘Y’,** an amount not-to-exceed FOUR HUNDRED FIFTY-FOUR THOUSAND NINE HUNDRED NINETY-THREE AND 53/100 (\$454,993.53), as detailed in **Exhibits ‘B’, ‘H’, ‘J’, ‘V’, and ‘Z’.**”

5. Section 3.02.09 in said Agreement is amended by increasing the not-to-exceed limit for Maintenance and Updates, as described in **Exhibit “Y”**, by \$8,029.43, as detailed in **Exhibit “Z”** to a new limit of \$167,162.43, and as amended shall read as follows:

“3.02.09. For Maintenance and Updates, as described in **Exhibits ‘A’, ‘I’, ‘O’, and ‘Y’,** an amount not-to-exceed ONE HUNDRED SIXTY-SEVEN THOUSAND ONE HUNDRED SIXTY-TWO AND 43/100 DOLLARS (\$167,162.43), as detailed in **Exhibits ‘B’, ‘J’, ‘P’, and ‘Z’.**

6. Section 3.02.18 in said Agreement is amended by increasing the not-to-exceed limit for Septic Tank Model Technical Review, as described in **Exhibit “Y”,** by \$96,953.65, as detailed in **Exhibit “Z”,** to a new limit of \$229,411.65, and as amended shall read as follows:

“3.02.18. For Septic Tank Model Technical Review, as described in **Exhibits ‘M’, ‘O’, and ‘Y’,** an amount not-to-exceed TWO HUNDRED TWENTY-NINE THOUSAND FOUR HUNDRED ELEVEN AND 65/100 DOLLARS (\$229,411.65), as detailed in **Exhibits ‘N’, ‘P’, AND ‘Z’.**”

7. Section 3.02.22 in said Agreement is amended by increasing the not-to-exceed limit for Septic Tank Phase Out Credit, as described in **Exhibit “Y”,** by \$68,444.72, as detailed in **Exhibit “Z”,** to a new not-to-exceed limit of \$156,918.60, and as amended shall read as follows:

“3.02.22. For Septic Tank Phase Out Credit Calculations, as described in **Exhibits ‘U’ and ‘Y’,** a lump-sum amount of ONE HUNDRED FIFTY-SIX THOUSAND NINE HUNDRED EIGHTEEN AND 60/100 DOLLARS (\$156,918.60), as detailed in **Exhibits ‘V’, and “Z”,** attached hereto and made a part hereof by this reference.”

8. Section 3.03 in said Agreement is amended by making conforming revisions in order to cite and reference new **Exhibit “Z”** and as amended shall read as follows:

“3.03. The CONSULTANT shall submit invoices for payment or reimbursement under this subsection on an “as incurred” basis for Services performed under Sub-Section 3.02 and on a per-cent completion basis for Services performed under Sub-Section 3.01. Such invoices shall be combined with the CONSULTANT’s regular invoices as set forth in Subsection 3.04 hereof. The cost of services provided by the CONSULTANT for Services performed under Sub-Section 3.02 and on a per-cent completion basis for Services performed under Sub-Section 3.01 shall be paid at the rates (including direct labor, indirect costs and profit) shown in the “Contract Fee Summary Format” attached hereto as **Exhibits ‘B’, ‘D’, ‘F’, ‘H’, ‘J’, ‘L’, ‘N’, ‘P’, ‘R’, ‘T’, ‘V’, ‘X’**

and 'Z'. The cost of services provided to the CONSULTANT by others shall be reimbursed at the invoiced amount without markup by CONSULTANT. Travel expenses, if provided for as a reimbursable expense in Exhibits 'B', 'D', 'F', 'H', 'J', 'L', 'N', 'P', 'R', 'T', 'V', 'X', and 'Z' shall be reimbursed only to the extent provided by Chapter 106, Part 7 of the Ordinance Code of the CITY. Travel expenses not specifically covered by said chapter shall be reimbursed only to the extent provided by the uniform policies and practices of the CITY."

9. Section 3.06 in said Agreement is amended by increasing the CITY's maximum indebtedness by an amount not-to-exceed \$198,657.67 to a new maximum not-to-exceed \$8,634,491.14, and as amended shall read as follows:

"3.06. The maximum indebtedness of the CITY for all Services to be performed pursuant to this Agreement shall not exceed the sum of EIGHT MILLION SIX HUNDRED THIRTY-FOUR THOUSAND FOUR HUNDRED NINETY-ONE AND 14/100 DOLLARS (\$8,634,491.14)."

10. Attach Exhibits "Y" and "Z".

SAVE AND EXCEPT as expressly amended in and by this instrument, the provisions, terms, and conditions of said Agreement of February 6, 2007, as previously amended, shall remain unchanged and shall continue in full force and effect.

[Remainder of page is left blank intentionally. Signature page follows immediately.]

IN WITNESS WHEREOF, the parties hereto have duly executed this Amendment Number 14 the day and year first above written.

ATTEST:

CITY OF JACKSONVILLE

By: James R. McCain, Jr.
James R. McCain, Jr.
Corporation Secretary



By: Sam E. Mousa
Lenny Curry, Mayor
Sam E. Mousa
Chief Administrative Officer
For: Mayor Lenny Curry
Under Authority of:
Executive Order No. 2015-05

CDM SMITH INC.

WITNESS:

By: Cheryl Gullotto
Signature
Cheryl Gullotto
Type/Print Name
OSC
Title

By: Patrick R. Victor
Signature
Patrick R. Victor
Type/Print Name
Vice President
Title

In compliance with Section 24.103(e), *Ordinance Code*, I do certify that there is an unexpended, unencumbered, and unimpounded balance in the appropriation sufficient to cover the foregoing and that provision has been made for the payment of the monies provided therein to be paid.

[Signature]
Director of Finance

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AB

Form Approved

James R. McCain, Jr.
Office of General Counsel

EXHIBIT "Y"

AMENDMENT No. 14

FOR

Master Stormwater Management Plan (MSMP) Continuing Support

This Authorization, when executed, shall be incorporated in and become part of the Agreement for Professional Services between the City of Jacksonville (OWNER), and CDM Smith Inc. (CONSULTANT), dated February 7, 2007 hereafter referred to as the Agreement.

PROJECT BACKGROUND

Amendment 14 to the Master Stormwater Management Plan (MSMP) authorizes work to continue support for the OWNER for two years (FY 2015 and 2016). Tasks in this amendment are extensions of Task 2.3 and Task 9 from the original authorization dated February 6, 2007.

Total Maximum Daily Load (TMDL) Support and Meetings related to Task 2.3:

To meet TMDL and Basin Management Action Plan (BMAP) commitments, the OWNER is implementing a Septic Tank Phase Out (STPO) Program to address nutrient contributions from failing septic tanks. The objectives of ongoing STPO activities are to:

- Assist the OWNER in establishing scientifically defensible and TMDL credit estimates associated with STPO activities.
- Provide technical support to evaluate and prioritize septic tank phase out projects.

Currently, confidence in the standing TMDL credit estimates is low, and the estimates are expected to change significantly with ongoing work and the resulting improved science. The OWNER previously established a Technical Advisory Committee (TAC) comprised of leading agency experts and CONSULTANT to conduct a technical peer review of the model developed by FDEP to evaluate delivery of septic tank nitrogen loads to receiving waters and corresponding TMDL load reduction credit for STOP used by FDEP (ArcNLET) to establish TMDL credit, and to peer review the application of the model in Duval County. Initial reviews conducted by the TAC and summarized in the TAC Consensus Findings Memorandum of July 31, 2012, did discover significant issues in the software, which was updated accordingly by the FSU modeling team. Two of 38 STPO priority areas were re-run with the updated model and results changed by up to a factor of 8 in favor of the interests of the OWNER (more TMDL credit). The TAC work has proceeded and has recently encountered a new issue with the software, of similar magnitude, that has been brought to the attention of the FDEP.

Concurrently with previous TAC technical peer review activities, the TAC reviewed existing monitoring well network data. The existing monitoring well network provides useful data for upland areas but does not provide adequate information critical to the question of applicability in surface waters. Calibrating to upland wells does not confirm whether the nitrate transport calculations in the vicinity of surface water bodies is appropriate. The TAC began field data collection to support peer review of the ArcNLET model application and calibration in Duval County. The initial field data collection demonstrated the value and feasibility of establishing a pilot monitoring program to verify model accuracy. The TAC has developed a

preliminary pilot monitoring program outline and recommendations and is now ready to begin implementation of the pilot monitoring program in Eggleston Heights. The program consists of a groundwater/ subsurface component, and a receiving surface water component. The pilot monitoring program will collect the necessary surface water information to compare to determine if ArcNLET is accurately predicting denitrification and nitrate transport to surface water bodies. This information may be used by FDEP to calibrate the ArcNLET model or to justify modifications to some of the models assumed coefficients.

In addition to the STPO Program, the OWNER identified credit trading as a major component of its strategy to meet 2015 and 2023 BMAP nutrient reduction obligations. While a mechanism was created to allow credit trading, the details of each credit trade are left to be negotiated between the involved parties.

MSMP Maintenance and Updates related to Task 9:

The OWNER's hydrologic and hydraulic models, as well as land use, and other agency projects should be updated on a periodic basis to keep technical information up to date for planning decisions. Based on the recent pace of development that has occurred in the City of Jacksonville, CONSULTANT updated the 2010 MSMP models, and issued the 2013 model results based on the analysis conducted, and the data retrieved from the OWNER and the Department of Transportation (FDOT). CONSULTANT does not anticipate that an update to the models will be necessary for years 2015 and 2016. However, land availability, construction costs estimates, and land acquisition cost estimates should be updated as part of the MSMP maintenance task.

SCOPE OF WORK

The following is a description of the services to be provided under this Amendment. These tasks include support for TMDL project implementation, support related to the STPO Program, and Capital Improvement Project (CIP) implementation support.

TASK 2 - WATER QUALITY EVALUATIONS AND TMDL SUPPORT

Subtask 2.3 - TMDL Support and Meetings

Subtask 2.3.9 - TMDL/BMAP/LSJR TAC Support

CONSULTANT will coordinate the OWNER's ongoing activities related to TMDL including the Lower St Johns River Basin Management Action Plan, LSJR TAC, and fulfillment of nutrient reduction obligations.

Subtask 2.3.9.1 - BMAP Updates

CONSULTANT will prepare annual BMAP reports to summarize OWNER's nutrient reduction activities during 2015 and 2016 calendar years. CONSULTANT will interface with FDEP for project reporting, calculation methodologies, credit trading opportunities, and the development of software to support calculation of TMDL credit associated with the OWNER'S STPO Program.

Subtask 2.3.9.2 - Credit Negotiations

CONSULTANT will provide technical support to the OWNER during the negotiation process including but not limited to review of memorandums of understanding (MOU), calculation and comparison of credit trading costs, and communication with potential trading partners regarding trading terms as directed by

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the OWNER. CONSULTANT will also participate in up to 10 progress meetings with the OWNER to discuss ongoing and potential credit trading negotiations.

Subtask 2.3.10 - Support for septic tank phase out program

This task continues support of the OWNER's STPO Program through peer reviews, pilot program development and testing, potential model refinement or alternate model development, and through model application and alternatives evaluations in Duval County

Subtask 2.3.10.1 - Review of ArcNLET Updates

The FDEP will release a new version of the ArcNLET model in spring 2015 including the functionality to estimate ammonia contributions from septic tanks in close proximity to surface water bodies. CONSULTANT will review the ArcNLET update documentation and use the updated model to simulate several previously modeled areas. CONSULTANT will provide comments to both the TAC and FDEP for consideration in future model updates and/or revisions to the current model update.

Subtask 2.3.10.2 - Technical Advisory Committee (TAC) Support

The CONSULTANT and the TAC are ready to work further with FDEP toward resolution of the technical issues previously identified by the TAC as well as any potential new item(s), and to work further toward defensible and sound TMDL credit estimates. Activities under this task include:

- TAC coordination through the activities of the TAC secretary and TAC chairperson (CONSULTANT staff)
- Bi-Monthly 2-hour TAC meetings and associated documentation over an anticipated 8 month period.
- TAC work products: review memos, white papers, data and model review summaries, correspondence with FDEP and model developers, correspondence with other researchers in support of pilot monitoring as requested by OWNER.
- TAC research and data analysis assignments (activities assigned to CONSULTANT staff by the TAC): Research, data acquisition, review, reduction and summary reporting back to TAC, field work.
- Up to three formal intermediary model assessments and TAC recommendations for ArcNLET application, submitted to FDEP.

Subtask 2.3.10.3 - Pilot Monitoring Program Development and Testing (Not budgeted at this time)

The objective of this task is to test the applicability of the ArcNLET model in Duval County through a data collection program that targets the receiving water bodies as opposed to existing groundwater monitoring wells. The TAC previously developed a preliminary pilot monitoring program outline and recommendations and is now ready to begin implementation of the pilot monitoring program in Eggleston Heights. The program consists of a groundwater/ subsurface component, and a receiving surface water component. Continuing activities related to the pilot monitoring program include:

- Establish and coordinate field data collection program with the OWNER, FDEP, other agencies, university researchers, and subcontractors.

EXHIBIT "Y"

- Coordinate acquisition and installation of field equipment in coordination with the OWNER and FDEP.
- Review data on a bi-weekly basis as it is being collected to determine if the data collected is of sufficient quality and utility for the intended purpose.
- Data products may include the following types of data:
 - Monitoring well level and quality (N-species, pH, temperature, redox/eH, DO, and specific conductivity) for four existing SJRWMD wells.
 - Individual plume water quality (field conductivity and N-species) for approximately 20 proposed plume monitoring probes.
 - Groundwater flow and velocity data (proposed wells)
 - Temporary in-situ groundwater probes
 - Ground penetrating radar
 - Electromagnetic induction
 - Surface water continuous nitrate probe data
 - Surface water continuous conductivity data
 - Surface water continuous streamflow data
 - Surface water quality data (grab sampling)
- Explore federal cooperative funding possibilities

Subtask 2.3.10.4 - Model Refinement and/or Alternate Model Development (Not budgeted at this time)

Through application of the ArcNLET model CONSULTANT has documented technical questions regarding the model's methodology for maintaining water balance. CONSULTANT will develop an alternative methodology to address these concerns and present it to the TAC for consideration. The goal of the proposed work is to develop a new modeling tool that will run in desktop spreadsheet format, based on industry-standard groundwater flow and contaminant transport modeling principles and taking advantage of GIS-generated mapping and other publicly-available data/information sources. The specific steps for developing, testing, and documenting the proposed new modeling tool are described below. Pending TAC acceptance, this alternative model may be proposed to FDEP for incorporation into the ArcNLET model or as an "add-on" tool used on ArcNLET output data. CONSULTANT will provide technical support for discussions with FDEP on the application of the alternative model.

1. Finalize the concepts for developing a new modeling tool for desktop estimation of nitrogen-discharge reductions from septic system removal programs, to achieve technically-defensible credit under the TMDL program;

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2. Base the new modeling tool on industry-accepted analytical solutions applicable to surficial, water table aquifer conditions, as well as incorporating water balance and nitrate mass conservation principles, and identification and simulation of nitrate migration and fate from each individual septic tank in a simulated sub-basin;
3. Build on ArcNLET work that has included initial estimation of load-reductions, and that has also included useful GIS-based generation of groundwater-shed extents and other information/data needed for the proposed new modeling tool, as well as providing the basis for identifying and selecting test cases;
4. Build on prior numerical 3D groundwater flow and plume modeling, for helping guide the development and fine-tuning of the proposed new modeling tool, and for providing the basis for identification and selection of test cases;
5. Preserve a reasonable water balance in characterizing the hydraulics of the GW flow field: by defining groundwater contributing zones to each surface water segment being evaluated and applying standard groundwater flow and mass balance equations, a reasonable mass balance may be achieved. For each groundwater contributing zone, groundwater divides will be defined based on surface elevation and prevailing slope (the "water table as subdued replica of topography" option) or based on better information/data that may be available (from geophysical surveying and/or monitoring well data). Groundwater flow equations will then be applied along with estimated ranges of net-recharge and horizontal conductivity to develop a reasonable, adequately conservative combination of parameter values.
6. The groundwater flow field characterization will be used to calculate the time-of-travel from each septic system location along the groundwater flowpath to the point where the flowpath meets the surface water segment. The computed time-of-travel and the globally-assumed denitrification rate can then be used to compute the attenuation of the globally-assumed septic system nitrate loading rate for the individual septic system being considered. Loading rates will be summed for all of the septic systems within the ground watershed contributing to the surface water segment being considered.
7. Apply the proposed new modeling tool to test case sub-basins in the Eggleston Heights area.
8. Document the development and test-case application of the proposed new modeling tool; and,
9. Anticipate and prepare for eventual full linkage/combination of the spreadsheet based form of the proposed new modeling tool with the ArcNLET GIS-based software that generates groundwater-shed boundaries, surface water network to groundwater flow system connections, locations of individual septic systems, and topographic and other features' control and alignment/length of groundwater flow path lines from each septic system to the appropriate surface water discharge point.

Subtask 2.3.10.5 - Application of Modeling Tool to Additional Areas (Not budgeted at this time)

CONSULTANT will perform ArcNLET and alternative spreadsheet based tool (developed in task 2.3.10.4) model runs as described below to refine nutrient reduction estimates for previously completed projects and support TAC evaluation of the models.

EXHIBIT "Y"

1. ArcNLET Model runs and sensitivity analyses will be performed at the discretion and direction of the TAC to further vet the ArcNLET model and the application of the model in Duval County. For example: recent sampling of 50 septic tank locations on residential parcels in Eggleston Heights (out of 3,518 total) found that all septic tank drainfields are in the backyards and therefore many septic tanks are considerably close to receiving water bodies than previously assumed. Previously, the location of the septic system in the model was the parcel centroid. Moving the location of all the point sources to the centroid of the backyard is expected to impact the model results significantly and possibly require a third calibration of the Eggleston Heights ArcNLET model. Up to six ArcNLET model runs will be performed including up to 5,000 individual septic tanks. For each run, a level of effort will be prepared for OWNER approval.
2. Additional model runs and re-runs of previous placeholder results (STPO priority areas, BJP areas, etc.) will be performed at the discretion of the OWNER as datasets are improved and/or the alternative modeling tool developed under Task 2.3.10.3 is approved. Up to six ArcNLET model runs will be performed including up to 5,000 individual septic tanks. For each run, a level of effort will be prepared for OWNER approval.

Subtask 2.3.10.6 - STPO Program Technical Support

While ArcNLET evaluations are being completed by the TAC, the OWNER will continue activities to phase out septic tanks to meet 2015 and 2023 nutrient reduction goals. CONSULTANT will coordinate with relevant consultants and agencies engaged in the STPO capital improvement program to provide the following services:

- Conduct technical evaluation of septic tank phase out candidates
- Develop and discuss methodologies to address credits for multi-family or commercial properties
- Develop and discuss methodologies to address credits for failing septic tanks
- Conduct ArcNLET model runs to evaluate nutrient reductions for completed phase outs
- Participate in bi-weekly meetings with STPO Program Coordinator

TASK 9 - MSMP MAINTENANCE AND UPDATES

Subtask 9.1.2 - Evaluate Potential Projects for Prioritization

This task will include CONSULTANT technical assistance to review and adjust the current Capital Improvement Plan (CIP) as-needed, to incorporate changes that have occurred and will likely continue to occur with regards to the Basin Management Action Plan (BMAP), land availability, and completion of projects that were already identified in the CIP. Updated unit costs and project cost opinions will accompany new potential CIP projects as requested by the OWNER, based on market conditions in the geographic project area. Additionally, CONSULTANT will coordinate with the OWNER's new Stormwater Assessment Team (SWAT) to develop updated O&M costs based on FY 2013 and FY 2014 maintenance activities to updated cost-benefit analyses associated with select projects on an as needed basis for new CIP projects proposed by the OWNER.

EXHIBIT "Y"

MEETINGS AND PROJECT QUALITY MANAGEMENT

Activities performed under this task consist of those general functions required to maintain the project on schedule, within budget, and that the quality of the work products defined within this scope is consistent with CONSULTANT's standards and OWNER's expectations. Specific activities included are identified below:

Project Kick-Off and Progress Meetings

CONSULTANT will prepare for and conduct a kick-off meeting for Task 2.3.10.4 Alternative Model Development. The CONSULTANT will provide monthly progress updates during the estimated 24-month project duration. Additionally, the CONSULTANT will attend special meetings at the request of the OWNER from time to time. An average of one (1) additional meeting per month with the OWNER staff is assumed in this Task Authorization. The CONSULTANT will prepare and distribute meeting minutes of each meeting as appropriate. This task also includes monthly project status review management meetings, and periodic progress internal team meetings.

Project Quality Management

CONSULTANT maintains a quality management system (QMS) on all of your projects. An internal project planning meeting will be conducted at the start of the project. This action is required by CONSULTANT's QMS procedures. Technical Specialist Reviews will be conducted on work products associated with Task 2.3.10 and one Technical Review Committee (TRC) meeting has been budgeted for the alternative model development. OWNER's representatives are invited to attend and participate at the TRC meetings.

Project Status Reports

CONSULTANT's project manager will prepare and submit monthly written status reports for an anticipated project life of 24 months.

DATA OR COORDINATION ASSISTANCE TO BE PROVIDED BY THE OWNER AND OTHER SUBCONTRACTORS

Task 2.3.9

1. OWNER and OWNER's Subcontractors will provide timely information on completed stormwater projects to enable CONSULTANT to calculate projected water quality benefits based on tributary area and pond characteristics.

Task 2.3.10

2. FDEP will provide a new/updated version of the ArcNLET including the ammonia module for evaluation by CONSULTANT.
3. England, Thims, and Miller (ETM) is the OWNER's program Manager for the STPO Program and will provide ArcGIS shapefiles of potential septic tanks to be evaluated using the ArcNLET model. ETM will also provide information resulting from field vetting of the STPO properties and construction/phase out of the identified tanks. Field vetting may include: location of the drainfield with respect to surface water bodies, whether the tank is failing (i.e. resulting in overland flow),

EXHIBIT "Y"

whether surface water bodies are connected to the NPDES system, and presence of multiple septic tanks on a single site.

4. ETM will coordinate and lead bi-weekly meetings with COJ and JEA on the STOP Program. CONSULTANT will provide technical support and attend meetings at the request of the Program Manager.

Task 9.0

5. OWNER will provide information on proposed CIP projects to be evaluated. Relevant information includes tributary area, available pond configuration, and information on potential contamination or other issues that may impact project benefits and costs. Information from other consultants or studies will be forwarded as appropriate to determine project benefits and costs according to the MSMP methodologies established in the 2010 MSMP Update.

ASSUMPTIONS

The above described engineering services have been based upon the following assumptions:

Task 2.3.9

1. CONSULTANT will use FDEP BMAP-approved methodology to calculate projected nitrogen reduction for completed stormwater projects. This methodology includes event mean concentrations established for the original TMDL modeling and dry year precipitation conditions. Stormwater project residence time and removal efficiencies will be based on curves developed by Walker for Florida ponds.
2. Annual BMAP update information for septic tank policies and non-structural BMPs will be provided by others (e.g. OWNER or ETM staff). CONSULTANT will provide input to septic tank project descriptions based on ArcNLET modeling to be assembled by the STPO Program Manager.
3. OWNER Office of General Council will be responsible for reviewing and executing the water quality credit trading affidavits established with basin stakeholders.

Task 2.3.10

4. FDEP, USGS, Department of Health, and OWNER staff will be made available to participate in the TAC and provide review of CONSULTANT work products.
5. OWNER will provide resources to conduct grab samples of surface waters and ground water monitoring wells as outlined in the preliminary monitoring plan.
6. OWNER will provide laboratory services for analysis of N-species, pH, temperature, redox/eH, DO, and specific conductivity.
7. Initial values for input parameters for the alternative model will be based on literature values or existing field data. Additional monitoring will not be conducted to develop site specific input parameters.

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8. FDEP or TAC will endorse/approve use of the spreadsheet tool for use in evaluating nutrient reductions associated with septic tank phase outs prior to application of the model on previous model runs (Task 2.3.10.4)

DELIVERABLES

CONSULTANT will provide the following deliverables to the OWNER:

Task 2.3.9

1. 2014 BMAP Update section for stormwater BMPs.
2. 2015 BMAP Update section for stormwater BMPs and STPO Program estimates for nitrogen reduction using the most currently agreed to version of the ArcNLET model.
3. Draft WQ Credit documents and exhibits to support memoranda of understanding, affidavits, and other relevant legal documentation.

Task 2.3.10

4. TAC review memoranda, white papers, data and model review summaries, correspondence with FDEP and model developers, correspondence with other researchers.
5. Summary of WQ monitoring program methodology and results.
6. A spreadsheet model or add-in tool to supplement ArcNLET estimates for total nitrogen associated with septic tank drainfields in close proximity to surface water bodies. This tool will be presented to FDEP and the TAC for additional discussions and peer review as appropriate.
7. Completed documentation for application of the spreadsheet model to previous model runs (up to six).
8. Technical white papers outlining methodologies for nutrient calculations and/or application of the ArcNLET model to evaluate nutrient reductions associated with septic tank phase outs.

Task 9.0

9. CONSULTANT will provide updated project costs for each of the Jacksonville CIP projects (up to 40) listed in the MSMP Countywide Project Benefits list.

TIME OF COMPLETION/SCHEDULE

CONSULTANT shall commence work within 14 business days after issuance of a written notice-to-proceed from the OWNER. All tasks will be completed by September 30, 2016.

COMPENSATION AND PAYMENT

Total compensation for the services and related materials and supplies described in this scope of work will be \$198,657.67 in labor and other direct costs as shown in the attached Contract Fee Summary

Form. Labor costs shall be invoiced on a time and materials basis at the agreed billing rates and labor categories. In the event that incurred costs approach 80 percent of the upper limit, CONSULTANT will notify the OWNER. Additional service tasks outside the scope of services provided herein will be negotiated under an amendment or the issuance of a new amendment.

EXHIBIT "Z"

**CONTRACT FEE SUMMARY FOR ENGINEERING DIVISION
CITY OF JACKSONVILLE, FLORIDA**

PART I - GENERAL				
1. Project MSMP Update Amendment 14 - MSMP Support 2015-2016		2. Proposal Number RFP		
3. Name of Consultant CDM Smith Inc.		4. Date of Proposal 4/1/2015		
PART II - LABOR RELATED COSTS				
5. Direct Labor	Hourly Rate	Estimated Hours	Estimated Cost	TOTAL
Officer/Technical Expert	\$66.00	0	\$0.00	
Principal / Associate / Project Engineer	\$56.00	0	\$0.00	
Senior Professional	\$44.50	0	\$0.00	
Project Engineer II / GIS Specialist	\$36.50	0	\$0.00	
Project Engineer I / GIS Specialist	\$30.50	0	\$0.00	
GIS Specialist I / Technician	\$26.00	0	\$0.00	
Clerical	\$18.50	0	\$0.00	
TOTAL DIRECT LABOR		0 Hours		\$0.00
6. Overhead (Combined Fringe Benefit & Administrative) Overhead Rate 178.5% x Total Direct Labor				\$0.00
7. SUBTOTAL: Labor + Overhead (Items 5 & 6)				\$0.00
8. PROFIT: Labor Related Costs (Item 7) x 10%				\$0.00
PART III - OTHER COSTS				
9. Miscellaneous Direct Costs			\$ 1,500.00	
			\$	
			\$	
			\$	
MISCELLANEOUS DIRECT COSTS SUB-TOTAL				\$1,500.00
10. SUBCONTRACTS (Lump Sum)			\$	
			\$	
			\$	
			\$	
			\$	
SUB-CONTRACT SUB-TOTAL				\$0.00
TOTAL LUMP SUM AMOUNT (Items 5, 6, 8, 9 and 10)				\$1,500.00
11. REIMBURSABLE COSTS (Limiting Amount)				
Task 2.3.9.1 BMAP Updates			\$ 6,813.22	
Task 2.3.9.2 Credit Negotiations			\$ 16,916.65	
Task 2.3.10.1 Review of ArcNLET Updates			\$ 28,294.49	
Task 2.3.10.2 TAC Support			\$ 68,659.16	
Task 2.3.10.3 Pilot Monitoring Program Development and Testing			\$ -	
Task 2.3.10.4 Alternate Model Development			\$ -	
Task 2.3.10.5 Application of Alternate Modeling Tool			\$ -	
Task 2.3.10.6 STPO Program Technical Support			\$ 68,444.72	
Task 9.1.2 Evaluate Potential Projects for Prioritization			\$ 8,029.43	
SUB-TOTAL REIMBURSABLES				\$197,157.67
PART IV - SUMMARY				
TOTAL AMOUNT OF AMENDMENT #6 (Lump Sum Plus Reimbursables) (Items 5, 6, 8, 9, 10 and 11)				\$198,657.67
12. PRIOR CONTRACT AMOUNT (Through Amendment #11)				\$8,435,833.47
AMENDED AMOUNT OF CONTRACT				\$8,634,491.14



CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
05/22/2015

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 Aon Risk Services Northeast, Inc. Boston MA office One Federal Street Boston MA 02110 USA	CONTACT NAME: PHONE (A/C. No. Ext): (866) 283-7122 FAX (A/C. No.): 800-363-0105		
	E-MAIL ADDRESS:		
INSURED CDM Smith Inc. 75 State Street, Suite 701 Boston MA 02109 USA	INSURER(S) AFFORDING COVERAGE		NAIC #
	INSURER A: Zurich American Ins Co		16535
	INSURER B: Lloyd's Syndicate No. 2623		AA1128623
	INSURER C:		
	INSURER D:		
	INSURER E:		

Holder Identifier :

COVERAGES **CERTIFICATE NUMBER: 570057775273** **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. **Limits shown are as requested**

INSR LTR	TYPE OF INSURANCE	ADDITIONAL INSURED	SUBROGATION	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input checked="" type="checkbox"/> LOC OTHER:			GL0837663219	01/01/2015	01/01/2016	EACH OCCURRENCE	\$2,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$300,000
							MED EXP (Any one person)	\$10,000
							PERSONAL & ADV INJURY	\$2,000,000
							GENERAL AGGREGATE	\$4,000,000
							PRODUCTS - COMP/OP AGG	\$4,000,000
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS			BAP 8376631-19	01/01/2015	01/01/2016	COMBINED SINGLE LIMIT (Ea accident)	\$2,000,000
							BODILY INJURY (Per person)	
							BODILY INJURY (Per accident)	
							PROPERTY DAMAGE (Per accident)	
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION						EACH OCCURRENCE	
							AGGREGATE	
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	WC837663320	01/01/2015	01/01/2016	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER	
							E.L. EACH ACCIDENT	\$1,000,000
							E.L. DISEASE-EA EMPLOYEE	\$1,000,000
							E.L. DISEASE-POLICY LIMIT	\$1,000,000
B	Archit&Eng Prof			QC1501367	01/01/2015	01/01/2016	per claim aggregate	\$1,000,000

Certificate No : 570057775273

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Re: Contract 6354-12. Project No. P-78-06. Master Stormwater Management Plan, Program Upgrade/Update and Flood Map Modernization.
City of Jacksonville is included as Additional Insured in accordance with the policy provisions of the General Liability policy. A waiver of Subrogation is granted in favor of the City of Jacksonville in accordance with the policy provisions of the General Liability, Automobile Liability and Workers' Compensation policies.

CERTIFICATE HOLDER**CANCELLATION**

City of Jacksonville Attn: Ivy Dwyer-Frazee 117 W. Duval Street, Suite 480 Jacksonville FL 32202 USA	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
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PROCUREMENT DIVISION



June 11, 2015

The Honorable Alvin Brown, Mayor
City of Jacksonville
4th Floor, St. James Building
Jacksonville, FL 32202

Dear Mayor Brown:

Ref: P-78-06 Master Stormwater Management Plan: Update/Upgrade, Map Modernization and TMDL Support (Amendment No. 14) (corrected Copy)
Department of Public Works

The Professional Services Evaluation Committee met today in Board Room 851 on the eighth floor of the Ed Ball Building, for the purpose of amending the above-referenced contract.

The following motion and/or recommendation was adopted:

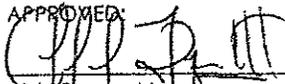
That Contract No. 6354-12, originally executed February 6, 2007, with CDM Smith, Inc. for Master Storm Water Management Plan: Update/Upgrade, Map Modernization and TMDL Support be amended to: (I) incorporate the attached Scope of Services, identified as Exhibit Y; (II) incorporate the attached Fee Summary identified as Exhibit Z; (III) increase the lump-sum amount for Flood Plain Mapping Services by \$1,500.00 to a new limit of \$6,164,693.00 and to increase the not to exceed limits for TMDL Support Services by \$23,729.87 to a new not to exceed limit of \$454,993.53, Maintenance and Updates by \$8,029.43 to a new not to exceed limit of \$167,162.43, Septic Tank Model Tech Review by \$96,953.65 to a new not to exceed limit of \$229,411.65 and Septic Tank Phase-out Credit Calculations by \$68,444.72 to a new not to exceed limit of \$156,918.60; thereby increasing the maximum indebtedness to the city by \$198,657.67 to a new maximum of \$8,634,491.14; All other terms and conditions, as previously amended, shall remain the same. Nothing contained herein shall be amended, modified, or otherwise revised, without prior approval from the PSEC and the Mayor.

If the foregoing meets your approval, please affix your signature and return to my office.

Respectfully submitted,


Gregory Pease, Chief
Procurement Division
Chairman, Professional Services
Evaluation Committee

Cleveland Ferguson III
Deputy Chief Administrative Officer
For: Mayor Alvin Brown
Under Authority of:
Executive Order No. 2015-01

APPROVED:

Alvin Brown, Mayor

This 11th day of JUNE, 2015

cc: Council Auditor
James McCann, OGC
Philip Boston, GAD
Subcommittee Member