Exhibit A



United States Department of the Interior

U.S. GEOLOGICAL SURVEY Oregon Water Science Center 2130 SW 5th Avenue Portland, OR 97201 http://or.water.usgs.gov/

March 1, 2019

Michael Jordan, Director Bureau of Environmental Services City of Portland 1220 SW 5th Avenue, Room 1000 Portland, OR 97204

Dear Mr. Jordan:

The U.S. Geological Survey (USGS), Oregon Water Science Center, and City of Portland, Bureau of Environmental Services (BES), collaboratively developed a workplan to further refine previous model results for Crystal Springs in Portland, Oregon. These refined model results will help determine future management strategies under different scenarios.

As a request from the City of Portland, the enclosed Joint Funding Agreement (JFA) is submitted for FY2019-FY2023 (March 1, 2019 to September 30, 2023). The total cost for this period is \$115,000. The USGS will provide \$40,000 in Cooperative Matching Funds and the City of Portland will provide \$75,000 for this work.

If these terms are agreeable to the City of Portland, we ask that you sign the enclosed JFA indicating your acceptance and availability of funds. Please return one signed copy to kerslake@usgs.gov. It is understood that if budgetary or financial circumstances require a change in the stated funding for either the City or USGS, this may be accomplished by a mutual exchange of letters.

No work may begin, or expenses incurred, prior to an agreement being signed by authorized officials of the cooperating customer agency and the USGS. The signed agreement is our legal authority that permits the work to be performed and which authorizes USGS to accept funds.

Funds are not required at this time; a signed agreement is not a bill, only an agreement to pay for the work that will be done. The Water Resources Cooperative Program operates under the authority of statute 43 USC 50 which allows us to perform this work. The Oregon Water Science Center DUNS number is 137883463. Billing to your agency will be fixed-price done quarterly by DI-1040.

Work performed with funds from this agreement will be conducted on a fixed-price basis. The results of all work under this agreement will be available for publication by the U.S. Geological Survey. During the course of this jointly planned activity and partnership, USGS may provide unpublished USGS data or information to your office for scientific peer and (or) courtesy review. Guidance concerning USGS's non-disclosure policy will be provided with any review material and is further explained in USGS Fundamental Science Practices.

We look forward to a successful relationship during the upcoming year. If you have any questions concerning this letter, please contact Adam Stonewall of this office at (503) 251-3276.

Sincerely,

James D. Crammond Center Director

Cc: To file, available upon request

U.S. Department of the Interior U.S. Geological Survey Joint Funding Agreement FOR Water Resource Investigations

Customer #: 600000238 Agreement #: 19YFJFA00000032 Project #: TIN #: 93-6002236

Fixed Cost Agreement YES[X]NO[]

THIS AGREEMENT is entered into as of March 1, 2019, by the U.S. GEOLOGICAL SURVEY, Oregon Water Science Center, UNITED STATES DEPARTMENT OF THE INTERIOR, party of the first part, and CITY OF PORTLAND, BES, party of the second part.

1. The parties hereto agree that subject to the availability of appropriations and in accordance with their respective authorities there shall be maintained in cooperation the Crystal Springs water quality modeling and evaluation in Portland, Oregon, herein called the program. The USGS legal authority is 43 USC 36C; 43 USC 50, and 43 USC 50b.

2. The following amounts shall be contributed to cover all of the cost of the necessary field and analytical work directly related to this program. 2(b) include In-Kind-Services in the amount of \$0.00

- (a) \$40,000 by the party of the first part during the period March 1, 2019 to September 30, 2023
- (b) \$75,000 by the party of the second part during the period March 1, 2019 to September 30, 2023
- (c) Contributions are provided by the party of the first part through other USGS regional or national programs, in the amount of: \$0

Description of the USGS regional/national program:

- (d) Additional or reduced amounts by each party during the above period or succeeding periods as may be determined by mutual agreement and set forth in an exchange of letters between the parties.
- (e) The performance period may be changed by mutual agreement and set forth in an exchange of letters between the parties.

3. The costs of this program may be paid by either party in conformity with the laws and regulations respectively governing each party.

4. The field and analytical work pertaining to this program shall be under the direction of or subject to periodic review by an authorized representative of the party of the first part.

5. The areas to be included in the program shall be determined by mutual agreement between the parties hereto or their authorized representatives. The methods employed in the field and office shall be those adopted by the party of the first part to insure the required standards of accuracy subject to modification by mutual agreement.

6. During the course of this program, all field and analytical work of either party pertaining to this program shall be open to the inspection of the other party, and if the work is not being carried on in a mutually satisfactory manner, either party may terminate this agreement upon 60 days written notice to the other party.

7. The original records resulting from this program will be deposited in the office of origin of those records. Upon request, copies of the original records will be provided to the office of the other party.

8. The maps, records or reports resulting from this program shall be made available to the public as promptly as possible. The maps, records or reports normally will be published by the party of the first part. However, the party of the second part reserves the right to publish the results of this program, and if already published by the party of the first part shall, upon request, be furnished by the party of the first part, at cost, impressions suitable for purposes of reproduction similar to that for which the original copy was prepared. The maps, records or reports published by either party shall contain a statement of the cooperative relations between the parties. The Parties acknowledge that scientific information and data developed as a result of the Scope of Work (SOW) are subject to applicable USGS review, approval, and release requirements, which are available on the USGS Fundamental Science Practices website (https://www2.usgs.gov/fsp/).

U.S. Department of the Interior U.S. Geological Survey Joint Funding Agreement FOR Water Resource Investigations

Customer #: 600000238 Agreement #: 19YFJFA00000032 Project #: TIN #: 93-6002236

Customer Technical Point of Contact

Customer Billing Point of Contact

9. Billing for this agreement will be rendered quarterly. Invoices not paid within 60 days from the billing date will bear Interest, Penalties, and Administrative cost at the annual rate pursuant the Debt Collection Act of 1982, (codified at 31 U.S.C. § 3717) established by the U.S. Treasury.

USGS Technical Point of Contact

Name:	Adam Stonewall	Name:	Kaitlin Lovell
	Hydrologist		Science Integration Division Manager
Address:	2130 SW 5th Avenue	Address:	1120 SW 5 TH Avenue, Room 1000
	Portland, OR 97201		Portland, Oregon 97204
Telephone:	(503) 251-3276	Telephone:	
Fax:	(503) 251-3470	Fax:	
Email:	stonewal@usgs.gov	Email:	kaitlin.lovell@portlandoregon.gov

USGS Billing Point of Contact

Name:	Andrew Kerslake	Name:	Kaitlin Lovell
	Administrative Officer		Science Integration Division Manager
Address:	2130 SW 5th Avenue	Address:	1120 SW 5 TH Avenue, Room 1000
	Portland, OR 97201		Portland, Oregon 97204
Telephone:	(503) 251-3253	Telephone:	
Fax:		Fax:	
Email:	kerslake@usgs.gov	Email:	kaitlin.lovell@portlandoregon.gov

U.S. Geological Survey United States Department of Interior

Signature

_____ Date:

Name: James D. Crammond Title: Center Director

By_

<u>Signatures</u>

City of Portland, BES

Ву	Date:
Name: Michael Jordan	
Title: Director, BES	

By_____ Date: _____ Name:

Title:

By_____ Date: _____ Name:

Title: