

CITY OF PORTLAND  
PORTLAND STATE UNIVERSITY

INTERGOVERNMENTAL AGREEMENT

Low-Cost Urban Air Quality Sensor Testing

PSU Contract # 444896

This Agreement is entered into between City of Portland, hereinafter referred to as SPONSOR and Portland State University, hereinafter referred to as UNIVERSITY.

RECITALS

WHEREAS SPONSOR desires UNIVERSITY'S services on the project named above, in accordance with the SCOPE OF WORK hereunder;

WHEREAS the performance of such services is consistent, compatible and beneficial to the academic role and mission of UNIVERSITY;

Therefore, in consideration of the mutual promises and covenants contained herein, the parties hereto agree as follows:

ARTICLE I - SCOPE OF WORK

UNIVERSITY agrees to perform for SPONSOR the services described in ATTACHMENT A (scope of work) hereto, incorporated herein by reference.

ARTICLE II - AGREEMENT PERIOD

The project period is June 15, 2017 to June 30, 2018. Reimbursable costs under this Agreement may be incurred beginning as of June 15, 2017.

ARTICLE III - SCIENTIFIC PERSONNEL

The UNIVERSITY's Project Manager shall be Linda A. George, or other such person as shall be designated by the UNIVERSITY.

ARTICLE IV – CONSIDERATION

SPONSOR shall reimburse UNIVERSITY for the estimated cost of the Project in an amount not to exceed ("NTE") \$8,000 US DOLLARS, including direct and indirect costs in accordance with ATTACHMENT A ("Budget"). SPONSOR certifies that sufficient funds are available and authorized to finance the costs of this Agreement. SPONSOR recognizes that the Budget is the UNIVERSITY's best estimate of the total cost to support the Project, and UNIVERSITY may submit to SPONSOR a revised budget for additional funds if the cost of the Project is reasonably expected to exceed the NTE amount. SPONSOR may then determine whether to terminate the Agreement or to seek Council authorization for additional funding. SPONSOR is not liable for any payment in excess of the NTE amount unless agreed to by SPONSOR in writing. UNIVERSITY may adjust the Budget at its discretion, provided that such rebudgeting is within the NTE amount and consistent with the Project.

UNIVERSITY shall invoice SPONSOR no more often than quarterly for all costs of the Project incurred to date but not previously invoiced. SPONSOR shall pay UNIVERSITY within thirty (30) days of receipt of any invoice.

The final invoice shall be marked "Final" and submitted no later than 90 days after the termination of this agreement.

Invoices for work accomplished under this Agreement shall be submitted, no more frequently than quarterly, to

Christine Kendrick  
City of Portland  
Bureau of Planning and Sustainability  
1900 SW 4<sup>th</sup> Ave., Ste. 7100  
Portland, OR 97201

or such other person as may be identified in writing by the Director of the Bureau of Planning and Sustainability.

Payment shall be sent to  
Portland State University  
Attn: Kathleen Martin  
PO Box 751- ESM  
Portland, OR 97207

#### ARTICLE V - NOTICE

Any notice provided for under this Agreement shall be sufficient if in writing and delivered to the following addressee, or to such other address as the receiving party specifies in writing:

If to SPONSOR:

Christine Kendrick  
City of Portland  
Bureau of Planning and Sustainability  
1900 SW 4<sup>th</sup> Ave., Ste. 7100  
Portland, OR 97201

If to UNIVERSITY:

Linda A. George  
PO Box 751- ESM  
Portland, OR 97207-0751

and

Portland State University  
Ahrea Summers, Contract Officer  
PO BOX 751 (CAPS)  
Portland, OR 97207-0751  
[ahrea@pdx.edu](mailto:ahrea@pdx.edu)  
503-725-5422

#### ARTICLE VI - PERFORMANCE / REPORTING REQUIREMENT

UNIVERSITY is responsible for the performance of work and will provide progress reports of findings, if any, as stated in ATTACHMENT A, SCOPE OF WORK. UNIVERSITY shall maintain fiscal records pertinent to this Agreement for at least three (3) years following completion of work under this Agreement. UNIVERSITY shall maintain all fiscal records relating to this Agreement in accordance with generally accepted accounting principles. In addition, UNIVERSITY shall maintain all other records pertinent to this Agreement in such a manner as to clearly document UNIVERSITY'S performance hereunder.

#### ARTICLE VII - PUBLICATION BY UNIVERSITY

UNIVERSITY retains the right to publish or present at meetings the results of research conducted by UNIVERSITY. In addition, UNIVERSITY may use, reuse, and analyze the data that were developed by the UNIVERSITY during the course of research performed under this agreement for teaching or research purposes.

UNIVERSITY agrees to provide any proposed publication to SPONSOR thirty (30) days prior to submission, to review for the inclusion of SPONSOR-owned confidential information, and to determine whether patentable inventions or discoveries are disclosed therein.

#### ARTICLE VIII - CONFIDENTIALITY

Subject to the limitations and conditions of the Oregon Public Records law, UNIVERSITY agrees to keep confidential any SPONSOR proprietary information that SPONSOR designates as such in writing and supplies to UNIVERSITY during the course research performed under this Agreement. Such information will not be included in any published material without prior approval by SPONSOR.

#### ARTICLE IX - INDEMNIFICATION

Subject to the conditions and limitations of the Oregon Tort Claims Act (ORS 30.260 through 30.300) and the Oregon Constitution, Article XI, Section 7, UNIVERSITY shall indemnify SPONSOR against any liability for damage to life or property arising from UNIVERSITY'S actions under this Agreement provided, however, UNIVERSITY shall not be required to indemnify SPONSOR for any such liability arising out of the wrongful or negligent acts of employees or agents of SPONSOR.

Subject to the conditions and limitations of the Oregon Tort Claims Act (ORS 30.260 through 30.300) and the Oregon Constitution, Article XI, Section 9, SPONSOR agrees to be responsible, assume liability and indemnify UNIVERSITY for SPONSOR'S own wrongful or negligent acts or omissions, or those of its officers, agents, employees or representatives provided, however, SPONSOR shall not be required to indemnify UNIVERSITY for any such liability arising out of the wrongful or negligent acts of employees or agents of UNIVERSITY.

#### ARTICLE X – CONTROLLING LAW AND VENUE

This Agreement shall be governed and construed in accordance with the laws of the State of Oregon, even if Oregon's choice of law rules would otherwise require application of the law of a different state. Any suit for enforcement shall occur, if in the state courts, in the Multnomah County Court having jurisdiction thereof, and if in the federal courts, in the United States District Court for the District of Oregon.

#### ARTICLE XI – ASSIGNMENT

Neither party shall assign or transfer any interest in this Agreement, nor assign any claims for money due or to become due during this Agreement, without the prior written approval of the other party.

#### ARTICLE XII - COPYRIGHT

UNIVERSITY may assert copyright on materials that it produces in the performance of the work of this agreement. SPONSOR shall have irrevocable, worldwide, royalty-free, non-exclusive license to use, reproduce, publish or re-publish or otherwise disseminate such copyrighted materials. SPONSOR has unrestricted access to use data and information from the report for non-commercial purposes.

#### ARTICLE XIII - TERMINATION

This Agreement may be terminated by either of the parties hereto upon written notice delivered to the other party at least thirty (30) days prior to intended date of termination. By such termination, neither party may nullify obligations already incurred for performance or failure to perform prior to the date of termination. Payment to UNIVERSITY shall be prorated to and include the day of termination.

THIS AGREEMENT CONSTITUTES THE ENTIRE AGREEMENT BETWEEN THE PARTIES. THERE ARE NO UNDERSTANDINGS, AGREEMENTS, OR REPRESENTATIONS, ORAL OR WRITTEN, NOT SPECIFIED HEREIN REGARDING THIS AGREEMENT. NO AMENDMENT, CONSENT, OR WAIVER OF TERMS OF THIS AGREEMENT SHALL BIND EITHER PARTY UNLESS IN WRITING AND SIGNED BY ALL PARTIES. ANY SUCH AMENDMENT, CONSENT, OR WAIVER SHALL BE EFFECTIVE ONLY IN THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. SPONSOR, BY THE SIGNATURE BELOW OF ITS AUTHORIZED REPRESENTATIVE, ACKNOWLEDGES HAVING READ AND UNDERSTOOD THE AGREEMENT AND SPONSOR AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date set forth herein by their duly authorized representatives.

CITY OF PORTLAND

PORTLAND STATE UNIVERSITY

Signed: Ahrea

Name: Ahrea Summers

Title: Contract Officer

Date: June 27, 2017

Signed: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

APPROVED AS TO FORM

City \_\_\_\_\_ Attorney \_\_\_\_\_

Attachment A Scope of Work

Attachment B Budget

## ATTACHMENT A

**SCOPE OF WORK** for City of Portland and Portland State University Intergovernmental Agreement for project titled A Framework for Low-Cost Urban Air Quality Measurements

Portland State University will provide the following services and/or data sets to City of Portland:

- Testing of air quality sensor devices as provided by City of Portland Bureau of Planning and Sustainability:
  - Exposure of sensor devices to ambient concentration ranges of nitric oxide (NO), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), particulate matter with aerodynamic diameters < 2.5µm (PM<sub>2.5</sub>) while measuring with a reference instruments. Tests will also be performed for ozone (O<sub>3</sub>) concentrations if time and budget allows.
  - Exposure to known concentrations of the same gases listed above while varying relative humidity levels
  - Exposure to mixtures of nitrogen oxides, ozone and carbon monoxide to investigate cross-sensitives for individual gas sensors in each device
- Evaluation datasets will include sensor data, reference instrument, and exposure conditions timestamped together for each test
  - City of Portland BPS will facilitate access to the sensor data (as real-time as is possible) to help facilitate the tests and to be combined with reference instrument and exposure condition data for each test
- As requested by City of Portland staff, maintenance, diagnostic checks, and basic repair of City of Portland reference air quality instruments to the project manager's specifications.

## PROJECT BUDGET

Description	Amount
Approximately 20 day usage fee (\$3000 per analyte for 10 day usage including environmental chamber, sensing reference instruments and gases)	\$6000
Technician time (\$25/hour)	\$2000
Budget Total	\$8000