



Nick Fish, Commissioner
Michael Stuhr, P.E., Administrator

1120 SW 5th Avenue, Room 600
Portland, Oregon 97204-1926
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www.portlandoregon.gov/water



CITY OF PORTLAND Agreement No.: 30004597
COLORADO STATE UNIVERSITY Agreement No. _____

Pursuant to CITY Ordinance Number _____

INTERGOVERNMENTAL AGREEMENT

This Intergovernmental Agreement ("IGA" or "Agreement") is entered into by and between THE CITY OF PORTLAND, OREGON, acting by and through its WATER BUREAU, hereafter called "CITY" or "PWB" and THE BOARD OF GOVERNORS OF THE COLORADO STATE UNIVERSITY SYSTEM, ACTING BY AND THROUGH COLORADO STATE UNIVERSITY, FOR THE BENEFIT OF THE DEPARTMENT OF CLINICAL SCIENCES ("CSU"). The CITY and CSU are referred to herein individually as a "Party" and collectively as the "Parties."

Pursuant to ORS 190.010, the CITY is authorized enter into a written agreement with any other unit or units of local government for the performance of any or all functions and activities that a party to the agreement, its officers or agencies, have authority to perform. Upon approval by CITY Council through the CITY's Ordinance process and upon final signature of both Parties approving authorities this Agreement shall be effective.

RECITALS

- A. The purpose of this Agreement is for CSU to conduct laboratory services for *Cryptosporidium* analysis in wildlife fecal samples and other technical services in support of the Bull Run Treatment Variance.
- B. CSU is a comprehensive, land-grant university with experience and resources in a field of mutual interest between CSU and the CITY.
- C. CSU shall perform the services desired by the CITY in accordance to the Scope of Work described in Exhibit A and per the terms outlined under this Agreement.
- D. Performance of such services is consistent, compatible and beneficial to the academic role and mission of CSU as an institution of higher education.
- E. This Agreement (including any exhibits and attachments hereto) constitutes the entire Agreement among the parties hereto.

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. INDEPENDENT CONTRACTORS

It is understood and agreed by the Parties that CSU is an independent contractor with respect to the CITY and that this Agreement is not intended and shall not be construed to create an employer/employee relationship or a joint venture relationship between CSU and the CITY. CSU shall be free from the direction and control of the CITY in the performance of CSU's obligations under this Agreement, except that the CITY may indicate specifications, standards requirements and deliverables for satisfaction of CSU's obligations under this Agreement.

2. SUMMARY OF WORK AND BUDGET

- A. CSU agrees to provide routine testing of wildlife fecal samples to determine the presence or absence of *Cryptosporidium*. CSU agrees to attempt genotyping of any samples found to be positive for the presence of *Cryptosporidium*. The CITY anticipates collecting between five (5) and twenty-five (25) fecal samples per month, but not more than 300 samples per year. In the course of the work, the CITY may require additional technical services from CSU. Additional technical services may include, but are not limited to method modifications and optimization, interpretation of sample results, or expert opinion. These types of services shall be pre-approved and must be authorized via Work Order (a sample is attached to this Agreement as **Attachment 1, Sample Work Order**) document prior to work being completed. Work Orders shall be issued through the PWB's Contract Administration Branch (CAB).
- B. Professional Standard of Care: CSU shall perform all services under this Agreement with care, skill and diligence, in accordance with the applicable professional standards currently recognized by similar professionals in this community in similar circumstances, and shall be responsible for the professional quality, technical accuracy, completeness, coordination and timeliness of all services furnished under this Agreement.
- C. **The following is a summary of the budget:** CSU shall be reimbursed for sample analysis on a unit cost basis, as described in the Exhibit B, Budget Detail, to this Agreement. The unit cost for the Sample Analysis shall represent the total cost of performing the specified analysis and reporting the results including labor and benefits, supplies, consumables, equipment and CSU's overhead costs of 22.5% for building operating costs, CSU equipment, administrative services and management and support service costs associated with this Agreement. The overhead rate of 22.5% shall be for the life of this Agreement.

Technical services beyond individual sample analysis shall be reimbursed on an hourly basis as described in Exhibit B, Budget Detail and must be pre-approved and agreed upon via Word Order document signed by both parties. Additional analyses and/or technical services requested via Work Order shall include a budget and be included as an attachment to the Work Order.

- D. The CITY has authorized a total not to exceed amount of **\$200,000** to fund the services required under this Agreement. Funding in the amount of \$100,000 is currently budgeted in the Fiscal Year (FY) 2015-16. Funding in the amount of \$100,000 will be requested by the PWB in FY 2016-17 Budget. The CITY's Fiscal Year is defined as July 1 through June 30 of each year.
- E. A detailed scope of work, deliverables and budget are set forth and attached to this Agreement as **Exhibit A, Statement of Work** and **Exhibit B, Budget Detail**. A Work Order form is attached as **Attachment 1, Sample Work Order**.

3. TERM

Work shall commence upon CITY's approval, via CITY Ordinance and upon the Agreement being signed by both parties approving authorities. The Agreement shall expire on **September 30, 2017**. This Agreement is subject to renewal only by a written amendment to the agreement mutually agreed upon by parties and per the requirements of CITY Council, which are subject to change.

4. BILLING PROCEDURES AND COMPENSATION

- A. The CITY shall compensate CSU in accordance with the rates specified in the attached **Exhibit B, Budget Detail**.
- B. Nothing in this Agreement requires the CITY to pay for work that does not meet the Standard of Care or other requirements of this Agreement.

CSU shall promptly perform such additional services as may be necessary to correct errors in the services required by this Agreement without undue delays and without additional cost. CSU shall bear all costs associated with requested corrections. Typographical and/or clerical errors shall be corrected and returned to the CITY Project Manager within 2 working days. CSU shall present written corrective actions taken within 15 calendar days of any other non-clerical error violation.

- C. The CITY's policy is to pay its invoices via electronic funds transfers through the automated clearing house (ACH) network. To initiate payment of invoices, CSU is required and shall execute the CITY's standard ACH Vendor Payment Authorization Agreement. This is available on the CITY's website at <https://www.portlandoregon.gov/bfrs/index.cfm?&a=409834&.=>

Upon verification of the data provided, the Payment Authorization Agreement shall authorize the CITY to deposit payment for services rendered directly into CSU accounts with financial institutions. All payments shall be in United States currency. Payment of any invoice, however, does not preclude the Collaborator from later determining that an error in payment was made and from withholding the disputed sum from the next monthly payment until the dispute is resolved.

- D. By the 15th of the month following the end of the previous month after the effective date, CSU shall submit via email to the CITY an invoice for work performed during the previous month. Each invoice shall include the following:
- (1) Identify the CITY's Agreement Number.
 - (2) Period of performance when work was completed.
 - (3) CITY's Project Manager's Name.
 - (4) Identify the tasks that was completed and briefly describe the work completed, the outcome, include any follow-up action or work still to be completed, timeframe for completion and percent of task currently complete.
 - (5) When work applies to a Work Order, include the Work Order Number and briefly describe the work completed, address any follow-up action or work still to be completed, timeframe for completion and include a percentage of work that has been completed.
 - (6) Itemized costs, including hourly rates, include subconsultant names and rates.
- E. Invoices shall only be submitted to the Portland Water Bureau Finance Office electronically. Email address is as follows: wbaps@portlandoregon.gov
- F. The CITY shall pay CSU based on these invoices for acceptable work performed and approved by the CITY's Project Manager. Any estimate of the hours necessary to perform the work is not binding on the CITY. CSU remains responsible if the estimate proves to be incorrect. Exceeding the number of estimated hours of work does not impose any liability on the CITY for additional payment.
- G. CSU shall attach photocopies of claimed reimbursable expenses. CSU shall stamp and approve all subconsultant invoices and note on the subconsultant invoice what they are approving as "billable" under the Agreement. The billing from CSU must clearly roll up labor and reimbursable costs for CSU and subconsultants— matching the subconsultant invoices.
- H. The CITY shall pay all amounts to which no dispute exists within 30 days of receipt of the invoice. Payment of any bill, however, does not preclude the CITY from later determining that an error in payment was made and from withholding the disputed sum from the next progress payment until the dispute is resolved.
- I. CSU shall make full payment to its subcontractors within 10 business days following receipt of any payment made by the CITY to CSU.

- J. CSU shall fully cooperate with a CITY Audit of the records at any time. CSU shall also fully cooperate with an audit to account for all expenses if necessary.

5. REPORTING REQUIREMENTS

- A. CSU shall provide reports on the progress of the services as required in the **Scope of Work, Exhibit A**.
- B. Both parties Project Managers, identified further in this Agreement, shall confer quarterly to review project management, staffing needs and performance to identify desired changes if necessary. Meeting minutes will be maintained for record by both parties.
- C. The assignment as Project Manager is for the full term of the Agreement. Should either party require to replace their assigned Project Manager during the term of the Agreement the requesting party shall notify the other party's Project Manager in writing, and if required, they shall meet to discuss and agree on any necessary adjustment to provide adequate time to make such change. Any changes to the assigned Project Manager requires a written amendment to the Agreement and must be signed by both parties' delegated authorities.

6. DELEGATION OF AUTHORITY

- A. CSU has delegated the Vice President for University Operations as CSU's approving authority for the Board of Governors of the Colorado State CSU System, further sub-delegated to the Director of Budgets. This delegation and sub-delegation includes signature authority for this Agreement, amendments and Work Orders for the Agreement and authority to give notices and to carry out other actions referred to herein, including termination of the Agreement as provided in under Section 7, Termination.
- B. The CITY Ordinance authorizing this Agreement, delegates the CITY's Water Bureau Administrator as the approving authority for the CITY. This delegation includes authority to sign the Agreement once CITY Council has approved the legislation authorizing this Agreement. Amendments increasing the total compensation of the Agreement may be agreed to and executed by the CITY's Water Bureau Administrator up to twenty-five percent of the total agreement amount. Any increase exceeding twenty-five percent of the total compensation would need City Council approval. The CITY's Water Bureau Administrator has the authority to give notices and to carry out other actions referred to herein, including termination of the Agreement as provided in this Agreement under Section 8, Termination and per CITY procurement rules and code.
- C. The CITY's Water Bureau Administrator has delegated signature authority to the Water Bureau Operations Group Director for Work Orders approved under this Agreement.

7. PROJECT MANAGEMENT AND ADMINISTRATION

- A. CSU.
 - i. CSU has assigned Michael Lappin as responsible for the day-to-day management of this Agreement as provided herein and serves as first level of conflict resolution.
 - ii. Valeria Scorza has been assigned by CSU as the Project Manager who shall carry out the responsibilities designated in this Agreement. The assignment as Project Manager is for the full term of the Agreement.

B. CITY.

- i. The CITY has assigned Sarah Silkie as the Project Manager responsible for the day-to-day management of this Agreement as provided herein, who will carry out the responsibilities designated in this Agreement and serves as the first level of conflict resolution.
- ii. The CITY'S Water Bureau (WB) Contract Administration Branch (CAB) is assigned as the CITY's contact for contract administration and all revisions to the Agreement, amendments or Work Orders.
- iii. Any conflicts between the parties requires immediate notification by the CITY's Project Manager to the CITY's Water Bureau CAB.

C. CONTACTS:

Unless otherwise stated in this Agreement, the designees named below shall be the primary contact for all activities relating to the Work/Services to be performed under this Agreement.

CSU Project Manager:

Name: Valeria Scorza
 Address: 1678 Campus Delivery
 Fort Collins, CO 80523-1678
 Phone: 970-297-4247
 Email: Andrea.Scorza@ColoState.edu

CITY Project Manager:

Name: Sarah Silkie
 Address: 1900 N. Interstate Ave, B320-M
 Portland, OR 97227
 Phone: 503-823-7168
 Email: Sadie.Silkie@PortlandOregon.gov

CSU Administrative:

Name: Michael Lappin
 Address: 1678 Campus Delivery
 Fort Collins, CO 80523-1678
 Phone: 970-481-8586
 Email: Michael.Lappin@ColoState.edu

CITY WB CAB Representative:

Name: Andrew Urdahl
 Address: 1120 SW 5th Avenue, Room 600
 Portland, OR 97204
 Phone: 503-823-7490
 Email: Andrew.Urdahl@PortlandOregon.gov

8. TERMINATION

This Agreement may be terminated by either party. The CITY on thirty (30) days written notice may terminate this Agreement. CSU on ninety (90) days written notice may terminate this Agreement. In the event of an early termination, CSU shall be reimbursed for any completed work or work in progress at the time of termination of the Agreement and that the CITY agrees has been completed per the requirements of the Agreement. This provision shall survive the termination of the Agreement.

9. NON-DISCRIMINATION

In carrying out activities under this Agreement, neither party shall discriminate against any employee or applicant for employment because of race, color, religion, sex, age, handicap, familial status or national origin. Either party shall take affirmative actions to insure that applicants for employment are employed and that employees are treated during employment, without regard to their race, color religion, sex, age, handicap, familial status or national origin. Such action shall include but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff of termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

10. ACCESS TO RECORDS

Both parties and their duly authorized representatives shall have access to the books, documents, and records which are directly pertinent to the specific Agreement for the purpose of making audit, examination, excerpts and transcript.

11. PUBLICATION

Services conducted under this Agreement are intended to be of a collaborative nature between the CITY and CSU. As such, the CITY and CSU Project Manager shall jointly prepare and submit any initial publications resulting from work completed under this Agreement. Both CITY and CSU personnel shall be identified as authors when appropriate. The CITY and CSU shall jointly hold right to any final publication.

12. INDEMNIFICATION

CSU shall be responsible to the fullest extent allowed under the law for its own negligence, and the negligence of its employees and authorized volunteers acting within the scope of their actual authority. It is expressly understood and agreed that nothing contained in this Agreement shall be construed as an express or implied waiver by CSU of its governmental and sovereign immunities, as an express or implied acceptance by CSU of liabilities arising as a result of actions which lie in tort or could lie in tort in excess of the liabilities allowable under the Colorado Governmental Immunity Act, C.R.S. 24-10-101 et seq., as a pledge of the full faith and credit of the State of Colorado, or as the assumption of any of the parties of a debt, Agreement or liability of each other in violation of Article XI, Section 1 of the Constitution of Colorado. CSU is liable for breach of Agreement in the same manner as any private party would be under the same or similar circumstances.

Subject to the conditions and limitations of the Oregon Constitution, Article XI, Section 9, and the Oregon Tort Claims Act (ORS 30.260 to 30.300) CITY shall indemnify, defend and hold harmless CSU from and against all liability, loss and costs arising out of or resulting from the negligent or intentionally wrongful acts of CITY, its officers, employees and agents in the performance of this Agreement.

13. INSURANCE

CSU shall maintain workers' compensation insurance through the duration of this Agreement. During the term hereof CSU represents that it maintains general liability insurance covering itself and its employees in the performance of this Agreement, in an aggregate amount of not less than one million dollars (\$1,000,000), all or part of which may be self-insured. CSU shall furnish the CITY a certificate evidencing such insurance upon written request.

14. SUBCONTRACTING AND ASSIGNMENT

CSU shall not subcontract its work under this Agreement, with the exception of work identified in this Agreement or attached Statement of Work, without the written consent of the other party. Only an amendment to the Agreement will authorize the addition of additional subcontractors. An amendment, to add a subcontractor to the Agreement, is required prior any work being performed by a CSU or their preliminary subcontractor. CSU shall assure that all subcontractors used to perform the services under this Agreement, meet the CITY'S Codes pertaining to permits, workmen's compensation, licensing, and all other requirements.

15. DISPUTES

The party's designated representatives, identified in this Agreement, shall expend their best efforts to amicably resolve any dispute that may arise under this Agreement. Any dispute that the parties are unable to resolve shall be submitted to the Director of CSU or his/her designee and the CITY of Portland Water Bureau Administrator or his/her designee for resolution.

16. OREGON LAWS AND FORUM

[Reserved]

17. FUNDS AVAILABLE AND AUTHORIZED

The CITY certifies that sufficient funds in Fiscal Year (FY) 2015-16 are available and authorized for expenditure to finance costs of this Agreement within current appropriation and limitation. Funding for FY 2016-17 associated with this Agreement will be requested. In the event of any extension or non-appropriation, the CITY shall notify CSU its intent to terminate this Agreement. The CITY's contribution for the two year term of the Agreement is contingent upon receipt of approval by CITY Council and upon continuation of funding.

18. SEVERABILITY

If any term or provision of this Agreement is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Agreement did not contain the particular term or provision held to be invalid.

19. COMPLIANCE WITH APPLICABLE LAW

Both parties shall comply with all federal, state and local laws, regulations, executive orders and ordinances applicable to the Work under this IGA. Without limiting the generality of the foregoing, parties expressly agrees to comply with (i) Title VI of Civil Rights Act of 1964; (ii) Section V of the Rehabilitation Act of 1973; (iii) the Americans with Disabilities Act of 1990 and ORS 659.425; (iv) all regulations and administrative rules established pursuant to the foregoing laws; (v) Any applicable sections of ORS Chapter 279, and (vi) all other applicable requirements of Federal and State civil rights and rehabilitation statutes, rules and regulations.

20. FORCE MAJEURE

Neither Party shall be held responsible for delay or default caused by fire, riot, acts of God and war which are beyond its reasonable control. The affected party shall, however, make all reasonable efforts to remove or eliminate such a cause of delay or default and shall, upon cessation of the cause, diligently pursue performance of its obligation under the Agreement.

21. NO THIRD PARTY BENEFICIARY

The CITY and CSU are the only parties to this Agreement and such are the only parties entitled to enforce its terms. Nothing contained in this Agreement gives or shall be construed to give or provide any benefit, direct, indirect, or otherwise to third parties unless third persons are expressly described as intended to be beneficiaries of its terms.

22. MERGER CLAUSE

This Agreement constitutes the entire agreement between the parties. No waiver, consent, modification or change of terms of this Agreement shall bind either party unless in writing and signed by both parties. Such waiver, consent modification or change, if made, shall be effective only in the specific instance and for the specific purpose given. There are no understandings, agreements, or representations, oral or written not specified herein regarding this Agreement.

23. AMENDMENTS

The CITY and CSU may amend this Agreement at any time only by written amendment executed by both parties. The CITY of Portland Water Bureau Administrator, upon approval by City Council, is authorized to approve amendments for CITY to this Agreement that do not increase the total agreement amount above 25% of the original Agreement amount. CSU shall submit a written request to the CITY's Project Manager prior to any amendments to the Agreement. Any amendment to the Agreement shall require the signature of both parties' approving authorities. Amendments increasing the total contract amount above 25% of the original Agreement amount shall require approval of City Council for every increase.

The CITY of Portland Water Bureau Administrator has delegated signature authority to the CITY of Portland Water Bureau Operations Group Director for Work Orders supported by this Agreement and do not increase the total Work Order amount above 25% of the original Work Order amount. Amendments increasing the total Work Order amount above 25% of the original Work Order amount shall require approval of CITY of Portland Water Bureau Administrator for every increase. An amendment to the original Agreement may be necessary if applicable.

24. HEADINGS

Paragraph headings are for reference and convenience only and shall not be determinative of the meaning or the interpretation of the language of this Agreement.

25. OWNERSHIP OF DOCUMENTS

- A. The CITY and CSU shall jointly own any and all data, documents, plans copyrights, specifications, working papers, and any other materials produced in connection with this Agreement.
- B. CSU upon request by the CITY shall provide the CITY copies of the materials referred to above, including any electronic files containing the materials.

26. SEVERABILITY/SURVIVAL

If any of the provisions contained in this IGA are held unconstitutional or unenforceable, the enforceability of the remaining provisions shall not be impaired. All provisions concerning the limitation of liability, indemnity, publication and conflicts of interest shall survive the termination of this IGA for any cause.

27. CONFLICTS OF INTEREST

No CITY Officer or employee, during his or her tenure or for one year thereafter, shall have any interest, direct, or indirect, in this Agreement or the proceeds thereof. No board of director member or employee of CSU, during his or her tenure or for one year thereafter, shall have any direct financial interest in the Agreement or the proceeds thereof. No CITY Officer or employees who participated in the award of this agreement shall be employed by CSU during this Agreement.

28. CONTRIBUTION

If any third party makes any claim or brings any action, suit or proceeding alleging a tort as now or hereafter defined in ORS 30.260 ("Third Party Claim") against a party (the "Notified Party") with respect to which the other party ("Other Party") may have liability, the Notified Party must promptly notify the Other Party in writing of the Third Party Claim and deliver to the Other Party a copy of the claim, process, and all legal pleadings with respect to the Third Party Claim. Either party is entitled to participate in the defense of a Third Party Claim, and to defend a Third Party Claim with counsel

of its own choosing. Receipt by the Other Party of the notice and copies required in this paragraph and meaningful opportunity for the Other Party to participate in the investigation, defense and settlement of the Third Party Claim with counsel of its own choosing are conditions precedent to the Other Party's liability with respect to the Third Party Claim.

With respect to a Third Party Claim for which CSU is jointly liable with the CITY, CSU shall contribute to the amount of expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred and paid or payable by the CITY in such proportion as is appropriate to reflect the relative fault of CSU in connection with the events which resulted in such expenses, judgments, fines or settlement amounts, as well as other possible relevant equitable considerations. The relative fault of CSU on the one hand and of the CITY on the other hand shall be determined by reference to, among other things, the parties' relative intent, knowledge, access to information and opportunity to correct or prevent the circumstances resulting in such expenses, judgments, fines or settlement amounts. CSU's contribution amount in any instance is capped to the same extent it would have been capped under Oregon law if the State had sole liability in the proceeding. Nothing in this Agreement shall serve as a waiver of any governmental immunities of either party.

29. COUNTERPARTS

This Agreement may be signed in two (2) or more counterparts, each of which shall be deemed an original, and which, when taken together, shall constitute one and the same Agreement.

30. EFFECTIVE DATE AND DURATION

This Agreement shall be effective upon final date of execution and terminate on September 30, 2017, unless otherwise agreed to by both parties under the provisions of this Agreement.

Dated this _____ day of _____, 2015.

AGREED:**STATE OF COLORADO****John W. Hickenlooper, GOVERNOR**Board of Governors of the Colorado State CSU System,
acting by and through Colorado State CSU

Dr. Anthony Frank, President

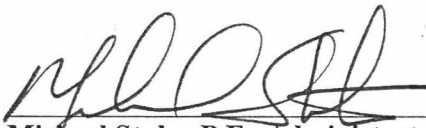
Signature: 
Angela Nielsen (Aug 25, 2015)**Angela Nielsen, Director of Budgets**Date: Aug 25, 2015**REQUIRED APPROVALS:**Signature: 
Michael Lappin (Aug 25, 2015)**Michael Lappin, Director, Veterinary Diagnostic Lab**Date: Aug 25, 2015***FUND ACCT NO.:****APPROVED AS TO FORM:**Signature: 
Grant N. Calhoun (Aug 18, 2015)**Grant N. Calhoun, JD, Assistant Legal Counsel/Director of Contracts**Date: Aug 18, 2015

CITY Agreement Number: 30004597

CITY Ordinance No. _____

CITY OF PORTLAND SIGNATURES

Signature: _____

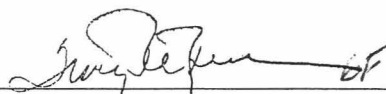

Michael Stuhr, P.E., Administrator
Portland Water Bureau

Date: _____

10/8/15

APPROVED AS TO FORM:
APPROVED AS TO FORM

By: _____


Office of City Attorney
CITY ATTORNEY

Date: _____

10/2/15

Exhibit A, Statement of Work

1. BACKGROUND

On March 14, 2012, the Oregon Health Authority (OHA) issued its Final Order granting CITY¹ of Portland Water Bureau's (PWB) request for a treatment variance under 42 USC § 300g-4(a)(1)(B). Variance Final Order condition 1(a)D requires that PWB sample Bull Run wildlife scat for *Cryptosporidium* at least semi-annually. The primary purpose of this Agreement is to provide analysis of wildlife scat samples collected from the Bull Run watershed in compliance with the Variance Final Order.

CSU² shall perform the following services or any combination of the following services at the request of the CITY's Project Manager (PM). CSU's PM and their designees shall work closely with the PWB PM and their designees to provide the services described in this Statement of Work and shall be required to complete the requested work within the identified turn-around times and due dates provided by the CITY's PM. Unless noted otherwise, the PWB PM shall coordinate sample collection and shipment to CSU along with a description of the analyses that shall be performed by CSU. For the duration of the Agreement, CSU shall maintain the necessary capability and capacity to satisfy the scope of work of this Agreement.

A. Task 1 – Detection of *Cryptosporidium* Oocysts and/or DNA

CSU shall provide routine testing of wildlife fecal samples to determine the presence or absence of *Cryptosporidium* oocysts.

- 1) Sampling frequency and amount – The CITY anticipates sampling up to five (5) times per month during the dry season (June-September), up to four (4) times per month in October before there is snow on the ground, and up to two (2) times per month during the wet season (October-May). The CITY anticipates collecting between five (5) and twenty-five (25) wildlife scat samples per month, but not more than a total of 300 samples per year. The actual number of samples that are collected may be less than the anticipated number based on the ability of CITY field personnel to locate scat samples in the Bull Run Watershed. The CITY may schedule additional sampling in response to a *Cryptosporidium*-positive water or scat sample, to investigate contamination vulnerabilities, or for special studies.
- 2) Analysis Method – Any of the following methods may be requested from the CSU for the detection and/or enumeration of *Cryptosporidium* in wildlife fecal deposits:
 - Immunofluorescence assay (IFA), i.e. Merifluor;
 - Sucrose-gradient separation;
 - Screening 18S ribosomal deoxyribonucleic acid (rDNA) Polymerase Chain Reaction (PCR); and,
 - HSP-70 PCR.

¹ THE CITY OF PORTLAND, OREGON, acting by and through its WATER BUREAU, hereafter called "CITY" or "PWB"

² THE BOARD OF GOVERNORS OF THE COLORADO STATE UNIVERSITY SYSTEM, ACTING BY AND THROUGH COLORADO STATE UNIVERSITY ("CSU" or "UNIVERSITY").

As new analytical methods are developed and validated, new methods may be added to this list through a written Work Order issued by CITY's PWB Contract Administration Branch (CAB). The scope of work, schedule, deliverables and compensation for each Work Order shall be established in writing prior to commencement of the work and must be approved and signed by both parties' delegated authorities. A sample Work Order form is attached as **Attachment 1, Sample Work Order** to this Exhibit A.

- 3) Quality Control – CSU shall implement standard quality control protocols, including the use of internal controls for ongoing quantification of method performance. For each wildlife species that is targeted by this project, CSU shall spike scat samples with an internal control at a standard frequency of at least one scat sample out of every ten (10) scat samples that are analyzed, unless otherwise requested by the PWB PM.
 - 4) Sample Storage – CSU shall store any remaining unprocessed portion of each scat sample under suitable refrigeration for a minimum of three (3) months. Any remaining fraction of the processed portion of the sample shall also be stored for a minimum of three (3) months. If the total mass of a scat sample is five (5) grams or less, the whole sample shall be processed and a portion stored. Stored samples shall be treated with antibiotics to prevent sample degradation. For small rodents and snowshoe hare, a sample may consist of a composite of multiple small droppings pooled by species. For these species, at minimum 2/3 of each composite sample shall be stored as specified above. Any *Cryptosporidium*-positive scat sample shall be stored for a period of twelve (12) months.
- B. Task 2 – Genotyping of *Cryptosporidium*-positive samples – Any of the following methods may be requested from CSU for the identification of *Cryptosporidium* species and genotypes found in Bull Run wildlife fecal samples:
- Genotyping 18S rRNA PCR;
 - HSP-70 PCR;
 - GP60 PCR;
 - DNA Sequencing; and,
 - BLAST analysis.

As new analytical methods are developed and validated, new methods may be added to this list through a work order issued by PWB's CAB.

- C. Task 3 – Consulting Services – In the course of this project, the CITY may require additional technical services from CSU. Additional technical services may include, but are not limited to method modifications and optimization, interpretation of sample results, expert opinion, or other technical assistance relevant to communicating the significance of sample results.

These types of services shall be authorized via work orders issued by PWB's CAB. Work Orders shall be issued as project needs are identified. The Work Order will establish the scope of work, schedule, deliverables, and compensation for each project. Work Orders require each party's approval in writing to proceed. Work Orders shall include an Exhibit A that identifies the work background, scope of work, and the deliverables required by the UNIVERSITY via the Work Order. In addition, an Exhibit A1, Budget Detail shall be included as an attachment to the Work Order and provide a clear and not to exceed budget for the work to be performed by the University per the Work Order.

PWB's delegated authority is the Operations Group Director. This authority may be delegated and assigned to another member but may only be designated in writing. A copy of the delegation will be provided by the CITY's PM to the CSU PM and the PWB CAB.

Work shall not commence until the Work Order is signed by both parties and submitted to the CITY PWB CAB. The CITY PM will follow by issuing a Work Order Notice to Proceed to the CSU PM. The notice may be sent via email to the CSU PM along with a PDF of the signed Work Order. Any changes to a signed Work Order must be completed as an amendment to the Work Order.

PROJECT MANAGEMENT

Project Management - CSU has designated Valeria Scorza as the CSU PM. The CSU PM shall be the main point of contact and shall be responsible for ensuring that all work is performed according to the Agreement and notifying the PWB PM if any agreement provisions cannot be met.

The CSU PM shall work with the PWB PM to establish and document work flow processes, including but not limited to sample shipment, sample receipt, analyses and reporting of all results to PWB. The CSU PM shall be responsible for ensuring that the agreed upon work flow processes are followed by CSU staff. If the CSU PM shall not be available for an extended time-period (more than three days) at any time, the PWB PM shall be notified and a CSU designee shall be assigned as the CSU contact during that time.

The CITY has designated Sarah Silkie as the CITY PM. The CITY PM or their designee, Ann Richter, shall be responsible for the following tasks:

- Coordinating with CSU to develop work flow processes;
- Providing sampling schedules and notifying CSU of changes to the schedules;
- Notification of sample shipment listing the sample(s) that have been shipped, sample information, requested analyses, and turn-around times;
- Notification of special requests such as unscheduled samples, or rush turn-around times;
- Reviewing laboratory results and other deliverables prepared by the UNIVERSITY; and,
- Providing CSU data or other information relevant to the project, as needed.

SPECIFIC WORK REQUIREMENTS

- A. Sample work flow – CSU shall work with the CITY PM to establish and document a sample work flow process, including but not limited to sample shipment, sample receipt, laboratory analyses, and reporting of all results to the CITY PM.
- B. Shipping Containers – CSU shall provide all necessary shipping containers suitable for shipping samples to the laboratory. Shipping containers shall include ice packs, packing material, and any other items necessary for adequate sample shipment.
- C. Container shipment – Containers shall be shipped at cost to the CITY. CSU shall provide for timely delivery of shipping containers to:

City of Portland Water Bureau
Attn: Sadie Silkie
Water Quality Compliance
1900 N. Interstate Avenue
Portland, OR 97227

- D. Chain of custody – CSU shall provide electronic copies of all chain of custody manifest forms. Electronic copies of chain of custody forms shall be delivered to the CITY PM in an editable file such as MS Word or Excel.
- E. Sample collection and shipment instructions – CSU shall provide via email sample collection, preservation, and shipping instructions.
- F. Laboratory operating procedures – Upon request, CSU shall provide via email the standard operating procedure (SOP) employed by the laboratory for each analysis to be performed under the Agreement for this work.
- G. Sample receipt and acceptance – CSU shall report, via email to the CITY PM, within one (1) business day of sample receipt, and report any samples received by the laboratory in unacceptable condition, or rendered unacceptable for analysis while in the possession of the laboratory.
- H. Laboratory services and analytical requirements – For the analysis of *Cryptosporidium* in fecal deposits, CSU shall use the method(s) requested by the CITY in the Chain of Custody (COC). CSU shall follow the laboratory standard operating procedures that have been provided to the CITY for the requested analysis. Any modifications or changes to the standard operating procedures shall be communicated to and approved by the CITY PM prior to implementing the change.

WORK PERFORMED BY THE CITY

The CITY will be responsible for the specific duties listed below and through the designated CITY PM shall be responsible for providing support for this project as needed.

- A. The CITY will designate a PM, Sarah Silkie, who shall be responsible for coordinating all CITY work under this Agreement. Sarah Silkie's designee is Ann Richter.
- B. The CITY PM will coordinate with CSU to develop a sample work flow process and a sampling schedule. The sampling schedule shall be divided into the dry (June-September) and wet (October-May) seasons.
- C. The CITY will review any documents prepared by CSU.
- D. The CITY will provide CSU with Bull Run wildlife fecal samples needed to optimize methods or modification or to run quality control procedures, as agreed upon with the CITY PM.

DELIVERABLES

All deliverables and resulting work products from this contract shall become the joint property of the CITY of Portland. As such, CSU grants the CITY the right to copy and distribute (in any and all media and formats) project deliverables for regulatory, project certification/recognition, program development, public education, and/or for any purposes at the sole discretion of the CITY of Portland.

CSU shall provide the CITY PM with reports and electronic data of sample results. All reports shall be complete, accurate, formatted as required, and submitted by e-mail directly to the CITY PM by the requested turn-around time.

CSU shall provide the following reports:

- 1) Individual Sample Result Reports - CSU shall provide results for each scat sample and matrix spike sample analyzed in a format to be agreed upon by the PWB PM and the UNIVERSITY. Individual sample reports are included in the per sample costs listed below. Reports shall be complete, accurate and formatted as required. Reports shall be received by the CITY PM and designated CITY personnel within a turn-around-time of ten (10) business days (Monday through Friday, not including public holidays and weekends) from CSU's receipt of each scat sample.

Each report shall consist of the following elements and shall be submitted as one (1) PDF document to the CITY PM and designated CITY personnel:

- Laboratory report;
- Scanned copy of the laboratory bench sheet(s) for each analysis completed;
- Scanned copy of the laboratory slide examination form (if microscopy conducted); and,
- Scanned copy of the completed chain of custody form.

The laboratory report shall at a minimum include the following information for each sample:

- Sample ID;
- Sample collection date
- Wildlife species;
- Analytical procedure(s);
- Number of replicates;
- Fecal mass analyzed;
- PCR confirmed presence or absence of *Cryptosporidium*;
- Species or genotype of *Cryptosporidium* (if applicable);
- Number of native *Cryptosporidium* oocysts by IFA (if applicable);
- Number of spiked *Cryptosporidium* oocysts (if applicable);
- Number of recovered *Cryptosporidium* oocysts (if applicable); and,
- Percent recovery of spiked oocysts (if applicable).

The bench sheet shall include, at a minimum, the CITY sample ID, the analysis start and end date and time, sample volume processed, number of replicates, counts or positive/negative status of native *Cryptosporidium* oocysts for microscopic analyses, and if applicable sample spiking dose and recovery for *Cryptosporidium* oocysts. For molecular analyses, the bench sheet shall also include the PCR assays employed, and number of wells positive and negative, as well as relevant negative and positive controls results.

- 2) *Cryptosporidium*-positive Follow-up Reports – for each *Cryptosporidium*-positive sample that undergoes genotyping and/or any other follow-up analysis, CSU shall provide a detailed report of all work that was completed within a turn-around-time of twenty (20) business days from the date of the initial positive identification. The follow-up report shall include the same elements as the Individual Sample Result Reports, in addition to any DNA sequences obtained, a BLAST analysis of the sequence(s) obtained and a short narrative stating whether the sample can be identified as a particular species or genotype. The CITY PM may request that additional information be included in the report and shall communicate the nature of this information to the CSU PM as soon as possible. The cost of *Cryptosporidium*-positive follow-up reports is included in the per-unit costs listed below, except for the narrative and any additional information requested by the CITY PM. The cost of the narrative section of the report and any additional information may be charged on an hourly basis according to the rates specified below.

FAILURE TO COMPLETE ON TIME

CSU shall notify the CITY PM immediately by telephone (503-823-7168) and by email (Sadie.Silkie@portlandoregon.gov) if any analyses cannot be reported within the required turn-around time. Data reports submitted more than five (5) business days past the required turn-around time or the chronic late submission of reports for any number of days past the required turn-around times may be considered grounds for termination of the Agreement. City designee Ann Richter shall also be notified by telephone (503-823-6135) and e-mail (Ann.Richter@portlandoregon.gov).

CSU PERSONNEL

CSU shall assign the following Key Personnel to do the work in the capacities designated. Key personnel shall not be replaced without prior authorization from the CITY PM and may only occur through an amendment to the Agreement.

NAME	ROLE ON PROJECT
Michael Lappin	Laboratory Director
Valeria Scorza	Project Manager

SUBCONSULTANTS

CSU shall assign the following subconsultants to perform work on an as-needed basis in the capacities designated:

NAME	ROLE ON PROJECT
George Di Giovanni – University of Texas School of Public Health	Genotyping of <i>Cryptosporidium</i> Expert opinion

Exhibit B, BUDGET DETAIL**COMPENSATION**

CSU shall be reimbursed in accordance with the rates below. The Sample Analysis unit costs represents the total cost of performing the specified analysis and reporting the results including all CSU overhead costs, which are set at a rate of 22.5%³. The CSU overhead (OH) rate under this Agreement and any amendments to this Agreement shall not exceed 22.5%.

The unit costs listed below may only be changed through a request by the CSU PM to the CITY PM in writing. If approved, an amendment to the Agreement shall be required and must be signed by both parties delegated authorities identified in Section 6 of this Agreement, before authorizing any payments under this Agreement.

DESCRIPTION	Unit Cost, including OH
SAMPLE ANALYSIS	
Cryptosporidium assay	\$185.00
Genotyping	
DNA Sequencing and Alignment	\$125.00
BLAST Analysis	\$125.00
Quality Assurance / Quality Control (QA/QC)	
PCR Internal Control	\$95
SUPPLIES AND SHIPPING	
Shipment of packing container to CITY (cost per shipment)	Cost plus 22.5%

Key CSU Personnel shall be billed at the following rates:

Name	Hourly Rate
Michael Lappin, DVM, Ph.D.	\$180.00
Valeria Scorza, Ph.D.	\$180.00

Subconsultant Personnel shall be billed at the following rates:

Name	Hourly Rate
George Di Giovanni	\$220.00

The maximum markup on subconsultant services shall not exceed 22.5% throughout the term of the Agreement. Limited use of CSU's subconsultant is required by the CITY and necessary in order to control costs. Prior to CSU utilizing the subconsultant for services the CSU PM shall obtain prior authorization in writing from the CITY PM before beginning any work. Using the subconsultant for work under any Work Order requires pre-authorization and must be approved through a signed Work Order per the terms of the Agreement.

³ For example, includes labor and benefits, supplies, consumables, equipment building operating costs, CSU equipment, administrative services and contract management and support.