

**REQUEST FOR QUOTES FOR
DEVELOPMENT OF A FLOODPLAIN STORAGE QUANTIFICATION METHOD
FOR THE NRCS FLOODPLAINS PROJECT
WILLAMETTE PARTNERSHIP**

INTRODUCTION

Willamette Partnership (Partnership) intends to hire a consultant to develop a quantification method that measures floodplain storage and attenuation for the NRCS Floodplain Managers Toolkit Project (Project). Interested consultants must submit quotes by email before 5:00 p.m. on December 15, 2016. The consultant selected by the Partnership shall enter into a Contract for Professional Services with the Partnership.

Willamette Partnership is the recipient of a 2014 Conservation Innovation Grant (“CIG”) awarded by the Natural Resources Conservation Service (“NRCS”) to integrate the science, policy, and tools for floodplain markets and incentives. As described in the CIG, The Nature Conservancy has built Floodplains by Design, a tool for urban floodplain planning that the City of Portland has effectively implemented in several areas, and that could be adapted to prioritize floodplain restoration opportunities on working lands. The Freshwater Trust is building tools to quantify nutrient and temperature reductions from floodplain restoration on farms, which could be adapted and supplemented with habitat and other metrics to inform local comprehensive planning. Willamette Partnership has built tools to assess stream functions with U.S. EPA and U.S. Army Corps of Engineers, which could be adapted to streamline permitting for floodplain conservation practices with farmers and cities.

The Partnership’s CIG Project is developing similar quantification and planning tools to support an integrated, proactive approach to the management, restoration and conservation of floodplains in Oregon. Outcomes will help NRCS better leverage investments through the Wetland Reserve Program, Floodplain Easement Program, Environmental Quality Incentives Program and other initiatives by coordinating with local, city, and county planning agencies and state natural resource agencies to target investments, quantify outcomes and create additional incentives for landowners to participate in these programs and contribute to floodplain health.

To support this effort, the existing science-based information on the functions and dynamics of floodplains needs to be connected to actionable methods of on-the-ground restoration. Specifically, the science A) needs to be packaged in a way that can be easily accessed by landowners, NRCS, or community planners making financial and compliance decisions about development, and B) needs to be integrated in a way that lets communities target multiple policy and environmental goals with their management actions.

The suite of tools developed under the Floodplains Managers Toolkit will help communities quantify and communicate the benefits and impacts of conservation and development decisions across the range of ecosystem services provided by floodplains. It will also help with coordination of regulatory requirements and management issues across regulating agencies and land ownerships. As a result, these materials could be used to develop ecosystem markets for floodplains and to improve targeting of incentive programs to encourage a more integrated approach to floodplain management.

PROJECT DESCRIPTION

Among the range of ecosystem services provided by floodplains, flood storage and attenuation is one of the most important. Floodplains take on and store excess water in times of flood, releasing it slowly overland and into groundwater. The flood storage and attenuation capacity of floodplains can help to mitigate peak flows reducing the risk of property damage and improving protection to downstream communities at risk from flooding. The opposite is also true - the loss of storage has been shown to alter the natural hydrograph of rivers, modifying the frequency, timing, and magnitude of floods. A healthy floodplain with storage and attenuation capacity gives flood water the space to spread out and slow down. This improves water quality both for local drinking water supplies and for aquatic species habitat. Developing incentives for creating or improving flood storage is important – especially in urban communities where options to offset development impacts are limited.

In addition, the recently released 2016 Biological Opinion (BiOp) on the Implementation of the National Flood Insurance Program in Oregon has identified flood storage as a key element of healthy floodplain conditions and sets out clear standards for how actions and activities associated with floodplain development must be addressed in order to protect and sustain habitat conditions for 17 listed native fish species. Options to meet the requirements of the BiOp include compensatory mitigation of adverse impacts associated with floodplain development to ensure “no net loss or beneficial gain” of natural floodplain functions.

The mitigation standards in the BiOp identify specific development activities that are permissible in the floodplain but that require mitigation for flood storage and attenuation. They include: *“the addition of fill, structures, levees, and dikes, which reduces flood storage and fish refugia, impedes habitat forming processes, increases flow volume and velocity thereby eroding stream banks and beds, and alters peak flow timing thereby increasing risk of injury to redds, fry, and alevin”*.¹

In order to adequately offset development impacts, mitigation for displaced flood volume must meet the following criteria:

- Located on site, except when precluded by geomorphic or spatial constraints or when off-site mitigation will clearly provide a greater benefit to listed species;
- Hydrologically connected to the waterbody which is the flooding source;
- Designed so that there is no increase in velocity;
- Designed to fill and drain in a manner that does not trap fish;
- Within the same hydraulic reach as the proposed development to minimize impact to affected fish populations;
- Measured in one foot elevation increments relative to the amount and location of fill placed; and
- Provided at a 1.5 to 1 ratio laterally, or greater, in order to guarantee no loss of beneficial floodplain functions, including conveyance.

¹ NOAA Fisheries. 2016. Biological Opinion for the Federal. Emergency Management Agency's National Flood Insurance Program in the State of Oregon. West Coast Region. Seattle, WA. 400p.
http://www.westcoast.fisheries.noaa.gov/publications/habitat/2016_04-14_fema_nfip_nwr-2011-3197.pdf

Tools are thus needed to support communities developing strategies for managing impacts to flood storage. This project shall develop a Flood Storage Quantification Tool (FSQT) that will help communities demonstrate that they meet the above specifications through their floodplain management activities. As such, application of the FSQT will support floodplain management planning and the use of mitigation in order to:

- Protect and restore active floodplains;
- Protect and restore floodplain habitat;
- Enhance flood storage;
- Enhance sediment deposition during high flows;
- Enhance native vegetation; and
- Enhance flow attenuation (reduce peak flows).

The criteria/requirements set out in the BiOp can be found online here:

http://www.westcoast.fisheries.noaa.gov/publications/habitat/2016_04-14_fema_nfip_nwr-2011-3197.pdf

The budgeted maximum amount for this Project is **\$65,000**.

SCOPE OF WORK

The scope of work is described in Exhibit A, attached hereto and incorporated herein.

QUALIFICATIONS

Partnership is seeking the services of a consultant or team of consultants with substantial experience in performing the particular service to be provided. The successful consultant must have the local capability, including staff and equipment, to perform the services and will have demonstrated experience performing this level of work as a regular part of their business.

QUOTE INSTRUCTIONS

1. Submission of Quotes

Consultants shall submit their quote by email to Willamette Partnership as follows:

Nicole Maness: maness@willamettepartnership.org
Willamette Partnership Project Manager

The email should have in its subject line: Quote for Floodplain Storage Quantification Method Services

2. Deadline

Quotes are due on or before Thursday, December 15, 2016 at 5:00 p.m., local time.

3. **Questions**

Any questions or areas of clarification must be submitted, by email, as soon as possible to Nicole Maness. Statements made by staff are not binding unless confirmed in a written addendum.

4. **Quote Form and Contents**

Submissions will be limited to 10 pages of material, (excluding front and back covers, the Certification Form, and the Appendix to the quote). Use 12-point, Times New Roman type, 8.5" X 11" paper, single-spacing and one-inch margins. Each side of the paper constitutes one page (blank pages do not count). To maintain the fairness and integrity of the selection process, it is important that quotes conform to the requirements of this section. Do not include any information that is not specifically requested. Elaborate artwork and expensive visual or other presentations are neither necessary nor desired. The quote should provide all information in the order requested. Failure to submit any of the required items may be grounds for rejection of the quote.

The quote will consist of the following elements:

Section 1 Letter of Introduction (1 page maximum) that contains:

- a. Name, telephone number, fax number and e-mail address of a contact person and project manager for your quote.
- b. Primary business experience, length of time in business, ownership, location of offices, and other introductory information.
- c. A statement that your quote will be valid for a period of 90 days.
- d. Have the letter signed by an authorized representative of your firm that is legally authorized to bind the firm to its quote and cost schedule and can participate in contract negotiations.

Section 2 Team (1 page maximum)

- a. Identify the team you are proposing to work on the Project. Your team may consist of internal staff, subconsultants, subconsultant personnel or other partners. List the direct qualifications and similar experience of each proposed team member including any subconsultants and their staff. Provide the locations of all team members and their role on the Project.
- b. Include a brief description of each team member's education, certificates or licenses, professional background, experience, skills, expertise and training for the type of services required.

Section 3 Experience of Team or Firm (1 page maximum)

- a. Consultants shall provide a narrative description of the consultant's relevant, direct experience on projects of similar size, scope and complexity for two local clients in the past 3 years. Provide client references for those projects including the contact names and phone numbers for each client. Include only projects where the key staff identified in the Team Section had a significant role. Consultants shall describe relevant experience working with federal, state, and/or local agencies. Consultants shall demonstrate a standard for timely responses to requests and have a record of past successful projects.

Section 4 Work Plan (3 pages maximum)

Provide the following information.

- a. A detailed explanation of consultant’s approach to the Scope of Work and the techniques the consultant expects to use. This should include an explanation of any modifications of work items in the Scope of Work presented in this RFQ.
- b. Describe how you would propose to use project partner personnel (e.g. Willamette Partnership staff, The Freshwater Trust, pilot community stakeholders, regulatory agencies) if at all, to assist you during the Project and indicate the approximate time requirement.
- c. Please provide any additional information about consultant’s Project approach that would be beneficial to the selection committee.
- d. Outline a work plan and related time schedule for each significant segment of the work.
- e. Include an estimate of the level of effort in the following format:

Tasks	Staff 1	Staff 2	Staff 3	Total Hours
Task 1	1			1
Task 2		1		1
Task 3			1	1
Task 4	1	1	1	3
Project Total	2	2	2	6

Section 5 Cost Schedule (2 pages maximum)

All costs are to be contained in this section. The cost schedule shall include: The hourly

billing rate for each person who would be assigned to the Project. Clearly tie cost and personnel to Project specific tasks.

- a. A list of the kinds of expenses for which reimbursement would be sought. State the rate for any expenses, such as photocopies or mileage that would be billed on a flat-rate basis.
- b. A description of your policy for billing for travel to work sites, including trip charges, mileage rates, labor rates during travel and any minimum charges for site visits.
- c. A description of how overhead, support and administrative charges are billed as part of the services.
- d. Provide a cost for each major Scope element and a total cost to perform the Scope of Work.
- e. The method used to charge for any special requests, reports, or broadening of the scope of the work beyond that described in this RFQ.

Section 6 Additional Information (2 pages maximum)

Any other information that the consultant feels applicable to the evaluation of the quote or of their qualification for accomplishing the Project should be included in this section. You may use this section to address those aspects of your services that distinguish your firm from other firms. You may also use this section to recommend alternative approaches to meeting the Scope. Additional information shall be considered when evaluating the consultant's Approach to the Project and Schedule.

If there is no additional information to present, state, "There is no additional information we wish to present."

EVALUATION OF QUOTES

Partnership will evaluate those quotes which conform to the quote instructions and meet the stated qualifications. The evaluation process will begin with an analysis of each Quote using the evaluation criteria identified below.

1. Evaluation Criteria

Partnership's selection committee will review all Quotes based on the following criteria. Each evaluation criteria has been weighted based on its relative value to the Contract as a whole. The criteria and the associated weights are listed in the table below.

<u>Criterion</u>	<u>Weight</u>
Team	20
Experience of Team or Firm	20
Work Plan	20
Approach to Work and Project	20
Cost Schedule	20

2. Interviews

Partnership may conduct interviews, ask consultants to submit references and contact those references or ask for additional information. If Partnership decides to hold interviews, it will notify all consultants of the following: a) consultants to be interviewed, b) criteria used to evaluate the interview and c) effect of the interview on the Quote score.

3. Negotiations

Partnership may enter into contract negotiations with the highest ranked consultant. In the event contract negotiations are unsuccessful, Partnership will terminate the negotiations and will begin negotiations with the second highest ranked consultant.

4. Clarification

Partnership reserves the right to seek clarification of each Quote submitted. Partnership also reserves the right to require other evidence of technical, managerial, financial, or other abilities prior to selection.

5. Notice of Intent to Award

Upon completion of the evaluation process, Partnership will advise the consultants of its number one selection.

6. Contract Award

Partnership will award the Contract to the consultant submitting the most advantageous and responsive quote. The Contract award may be subject to the approval of the Partnership's Executive Director and its Board of Directors.

GENERAL INFORMATION

1. Communication Procedures

The requirements of this section are intended to ensure the fair and equal treatment of all bidding consultants. Until the Partnership has decided who to award the Contract to, consultants are prohibited from contacting the Partnership, its Board or its employees, for marketing or solicitation purposes related to this quote. Disregard of the requirements of this section will result in the disqualification of the consultant.

2. Acceptance, Rejection or Cancellation of Award

- A. This RFQ does not constitute an offer to contract and does not commit the Partnership to the award of a Contract to anyone, or to pay any costs incurred in the preparation, submission or presentation of quotes. All costs of the quote process, interviews, contract negotiations, and related expenses are the responsibility of the consultant.
- B. The Partnership reserves the right to accept or reject any or all Quotes received as a result of this RFQ and to negotiate with any qualified consultant(s) for all or part of the requested services. Partnership reserves the right to waive any non-material informality or irregularity in any quote or quotes.
- C. Partnership also reserves the right to delay, suspend or cancel all or part of this RFQ at any time before execution of the Contract for any reason.
- D. Acceptance of a Quote is subject to budget approval, appropriation or budgetary constraints.

3. Contract

The consultant selected will be required to execute the Contract attached hereto as written. Except for terms that concern compensation and Scope of Work which will be placed in an exhibit to the Contract, the Contract is not negotiable. Submission of a quote constitutes acceptance of the terms of the Contract. You do not need to submit a signed copy of the Contract with your quote.

4. Interpretations and Addenda

If necessary, interpretations or clarifications that are deemed in Partnership's discretion to be pertinent to all parties in response to questions received will be posted on Willamette Partnership's website at <http://willamettepartnership.org/news/> or http://willamettepartnership.org/rfq_flood-storage-assessment-methodology_2016/

All questions should be addressed to **Nicole Maness (202-384-8992)** or by email at **maness@willamettepartnership.org**. Questions received less than two (2) business days before the Quote due date may not be answered. Oral and other interpretations or clarifications will be without legal effect.

Partnership may modify the RFQ at any time prior to the RFQ due date, by issuing a written Addendum to all consultants who are participating in the process at the time the Addendum is issued. Addenda will be numbered consecutively.

Partnership will post Addenda on Willamette Partnership website at <http://willamettepartnership.org/news/> or http://willamettepartnership.org/rfq_flood-storage-assessment-methodology_2016/

It is the consultant's responsibility to check for and obtain any Addenda that have been issued from Willamette Partnership's Website.

5. Anticipated Solicitation Schedule

Schedule of RFQ Events:

RFQ Distributed	December 02, 2016
Quotes Due	December 15, 2016, 5:00 p.m.
Telephone Interviews**	December 16 and 19, 2016
Notice of Intent to Award	December 20, 2016
Contract Finalized	December 22, 2016
Commencement of Services	December 23, 2016

** The need for interviews will be determined by Partnership.

These dates are approximate and Partnership reserves the right to change them.

6. Quote Withdrawal

Any quote may be withdrawn at any time before the "quote Due" date and time, by providing a written request for the withdrawal of the quote to Nicole Maness. A duly authorized representative of the consultant's firm shall execute the request. Withdrawal of a quote will not prejudice the right of the consultant to file a new quote.

7. Ownership of Documents/Inspection of Quotes/Proprietary Information

- A. Any material submitted by a consultant shall become the property of Partnership.
- B. If a consultant believes that any portion of its quote contains any information that is considered confidential or a trade secret, the consultant must identify each piece of that information on each page.

Identifying the Quote, in whole, as confidential is not acceptable. Consultant is cautioned that cost information submitted in response to a RFQ is generally not considered a trade secret. By signing the Certification Form as part of your quote, you are certifying that you have designated any data that is considered a trade secret or confidential information.

CERTIFICATION FORM

The undersigned acknowledges, attests and certifies individually and on behalf of Consultant that:

1. He/she is a duly authorized representative of Consultant, has been authorized by Consultant to make all representations, attestations, and certifications contained in this quote and all Addendum or Addenda, if any are issued, and has the power and authority to enter into and perform the Contract and that the Contract, when executed and delivered, shall be a valid and binding obligation of Consultant and enforceable in accordance with its terms.
2. Consultant, acting through its authorized representatives, has read and understands all Request for Quote (RFQ) instructions; Scope of Work and Special Terms and Conditions contained in this RFQ document, and has received, read and understood Addenda Nos. _____, _____, _____. If no Addenda were received, write "None Received" in the first blank provided.
3. The quote submitted is in response to the specific language of the RFQ and Consultant has made no assumptions based upon either (a) verbal or written statements not contained in the RFQ or any Addenda.
4. Partnership shall not be liable to Consultant for any expenses incurred by Consultant in preparing and submitting its quote or in participating in the quote evaluation/selection process.
5. Consultant will furnish the designated item(s) and/or service(s) in accordance with the quote Scope of Work and Special Terms and Conditions and requirements, and will comply in all respects with the terms of the resulting Contract upon award.
6. Consultant certifies that Consultant has not discriminated and will not discriminate, in violation of ORS 279A.110(1) against any minority, women or emerging small business enterprises certified under ORS 200.055, or against a business enterprise that is owned or controlled by or that employs a disabled veteran, as defined in ORS 408.225, in obtaining any required subcontracts.
7. Neither he/she nor any principals of Consultant are presently debarred, suspended, proposed for debarment, or declared ineligible from submitting quotes or quotes by any federal, state or local entity, department or agency.
8. Consultant has not been convicted or had a civil judgment rendered against them within a three-year period preceding the date of this Certification Form for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performance of a public (federal, state or local) contract or subcontract; violation of federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making a false statement, tax evasion, or receiving stolen property.

9. Consultant is not presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph 8 of this Certification Form.
10. Consultant has not had one or more contracts terminated for default by any federal, state or local public agency within a three-year period preceding the date of this Certification Form.
11. This quote has been arrived at independently and has been submitted without any collusion designed to limit independent bidding or competition. Consultant and its affiliates, subsidiaries, officers, directors, and employees are not currently under investigation by any governmental agency and have not in the last four years been convicted of or found liable for any act prohibited by state or federal law in any jurisdiction, involving conspiracy or collusion with respect to submitting a quote on any public contract.
12. Consultant certifies that it has designated any trade secret or confidential information in its quote as required by the RFQ. If the quote contains no designations, then Consultant is stating its quote does not contain any trade secret or confidential information.

I state that _____ (Name of Firm) understands and acknowledges that the above representations are material and important, and will be relied on by Willamette Partnership in awarding the contract(s) for which this quote is submitted. I understand and this firm understands that any misstatement in this Certification Form is and shall be treated as fraudulent concealment from Willamette Partnership of the true facts relating to the submission of quotes for this Contract.

 Consultant Firm Name, if applicable

 Signature of Consultant's Duly Authorized Representative

Printed Name: _____

Title, if applicable: _____

Date of Certification Form: _____

Phone: _____ Fax: _____

PROFESSIONAL SERVICES AGREEMENT

This Professional Services Agreement (the "Agreement"), dated _____ ("Effective Date"), is between Willamette Partnership ("Partnership") and _____ ("Consultant").

RECITALS

13. Partnership is in need of professional services.
14. Partnership and Consultant wish to enter into an Agreement for Consultant to provide these services.

TERMS AND CONDITIONS

1. Services to be Provided

Consultant shall provide the services (the "Services") described in each Scope of Work attached hereto as Exhibit A and incorporated herein (a "Scope of Work"). Consultant shall perform the Services with the same degree of care, skill, diligence, competency, and knowledge that is ordinarily exhibited and possessed by other professionals in good standing in the same or similar field and community as Consultant.

In performing the Services, Consultant shall be an independent contractor and not an employee of Partnership. Partnership shall have the right to verify that Consultant's performance meets the requirements of this Agreement, but shall not have the right to control the manner of Consultant's or Consultant's sub-contractors' performance. Consultant may perform services for persons other than Partnership, provided that Consultant shall not undertake to perform services for persons other than Partnership if those services would impair timely performance of Consultant's obligations to Partnership.

No provision of this Agreement shall be construed to create a partnership, joint venture, employer-employee, landlord-tenant or principal-agent relationship. Consultant acknowledges that Consultant has no authority to take any action on behalf of Partnership, and Consultant agrees that Consultant shall take no action on behalf of Partnership.

Consultant shall, at Consultant's expense, obtain and maintain all permits, licenses and government approvals needed to perform its obligations under this Agreement.

2. Payment

Partnership shall pay Consultant for the Services as specified in each Scope of Work.

In the event of a dispute concerning the amount due under any invoice, Partnership may withhold the disputed amount without incurring interest or other charges pending the outcome of the dispute.

Partnership shall have the right to examine Consultant's business records to verify the accuracy of Consultant's invoices. The right of inspection shall extend to all documents necessary to permit adequate evaluation of the billing data submitted.

Consultant shall be solely responsible for the compensation of its employees and sub-contractors. Consultant shall pay all federal, state and local taxes, social security taxes (FICA), Medicare taxes, unemployment insurance, and worker's compensation insurance arising from Consultant's employment of Consultant's employees or payment of compensation to Consultant's employees and sub-contractors.

3. Interference with Performance

Partnership will review the information, materials, documentation, reports or Work Product (as defined below) developed or produced by Consultant in performing the Services in a timely manner. Partnership will provide prompt notice to Consultant if Partnership becomes aware of any development that affects the scope or timing of the Services, or of any defect in the information, materials, documentation, reports or Work Product developed or produced by Consultant in performing the Services.

Consultant will notify Partnership immediately of any factor, occurrence or event that would be reasonably expected to affect Consultant's ability to perform the Services on the schedule set forth in the Statement of Work.

Time is of the essence in the performance of this Agreement.

4. Additional Services; Changes in Services; Force Majeure

Consultant and Partnership may agree to additional Services or new terms of payment by entering into a new Scope of Work.

Partnership may at any time notify Consultant in writing that it wishes to modify the description of Services or the timetable for performance, in which case the parties may amend the applicable Scope of Work as described in Section 12, which amendment shall include an increase in the applicable compensation payable to Consultant if a change in Services or work schedule increases the cost of performance.

Neither Partnership nor Consultant shall be responsible for or liable for damages resulting from delays due to causes beyond their reasonable control, including acts of God, acts or omissions of governmental authorities, strikes, lockouts, acts of the public enemy, wars, blockades or civil disturbances. In the event of such a delay, the completion date for Consultant's services shall be extended for a period equal to the length of the delay. Consultant shall notify Partnership in writing not more than 10 days after the occurrence of any event that Consultant believes will result in such a delay. The failure of Consultant to provide such notice shall result in a waiver of Consultant's right to claim that the delay is excusable.

5. Intellectual Property; Confidential Information

5.1 Ownership. Partnership will continue to own all right, title and interest in and to all Partnership Property. Subject to Section 5.2 below, Consultant will continue to own all right, title and interest in and to all Consultant Property. Partnership will own all right, title and interest in and to all Developments.

5.2 License. Unless provided otherwise in a Scope of Work, Consultant hereby grants to Partnership a nonexclusive, non-transferrable, royalty free, perpetual, limited license to use the Consultant Property to the extent necessary for Partnership to use the Work Product and Services provided by Consultant, solely for Partnership's business purposes, as contemplated by the Scope of Work.

5.3 Nondisclosure. The parties acknowledge that, in connection with this Agreement, each party (the "Receiving Party") may obtain Confidential Information of the other party (the "Disclosing Party"). Such Confidential Information will not be used or disclosed by the Receiving Party except as specifically authorized, or as necessary to perform the Services. The Receiving Party agrees to accord to such Confidential Information the same standards and procedures it uses to protect its own confidential business information (but not less than reasonable care), including limiting access to employees on a need-to-know basis and only after such persons have been informed of and bound to maintain confidentiality.

5.4 Definitions. The following terms have the following specified meanings:

"Confidential Information" means any information related to the business, products, services or affairs of the Disclosing Party or its affiliates or clients that is not generally available to the public. Confidential Information will not include information which: (i) is now, or becomes part of the public domain through lawful means; (ii) was already known by the Receiving Party at the time of disclosure; (iii) is independently developed by the Receiving Party without use of Confidential Information; and (iv) was obtained from a third party not under any confidentiality obligation with respect to the information.

"Consultant Property" means all Inventions and related Intellectual Property Rights that (A) were in existence and owned by Consultant before the Effective Date, or (B) were made or discovered by Consultant after the Effective Date other than in connection with performing the Services for Partnership under this Agreement.

"Developments" means (i) all Work Product; (ii) all Inventions that are included in the Work Product, or are otherwise prepared by Consultant in connection with performing the Services for Partnership under this Agreement; and (iii) all related Intellectual Property Rights that are made, created, discovered or reduced to practice in connection with performing the Services for Partnership under this Agreement.

"Intellectual Property Right" means any invention rights, patent rights, copyrights, mask work rights, trade secret rights, trademark rights, rights in trade names, rights in service marks and other intellectual property rights.

"Inventions" means any technique, know-how, method, process, procedure,

improvement, discovery or invention, whether or not patentable or copyrightable, whether or not reduced to practice, and whether or not conceived or reduced to practice solely or jointly with others.

"Partnership Property" means all Inventions and related Intellectual Property Rights that were in existence and owned by Partnership before the Effective Date.

"Work Product" means any composition, work of authorship, computer program, algorithm, prototype, sample, model, document, photograph, picture, drawing, design, sketch, notes, writing or other work product, and any product, prototype, sample, model, document, diskette, storage media, photograph, picture, drawing, design, recording, report, proposal, writing or other tangible item, created by Consultant in connection with or as a result of the performance of Services by Consultant for Partnership pursuant to this Agreement.

6. Indemnification

To the fullest extent permitted by law, Consultant shall indemnify, hold harmless, reimburse and defend Partnership and the officers, directors, partners, members, employees, agents, contractors, and sub-contractors of Partnership, and the successors in interest of the foregoing, from, for and against all suits, actions, claims, damages, penalties, liabilities, losses and expenses (including reasonable attorneys' fees) (collectively, "Losses") asserted by a third party and arising out of or resulting from (a) Consultant's material breach of this Agreement, (b) a material defect in any Work Product delivered to Partnership by Consultant, (c) infringement of any Intellectual Property Right of that third party by Consultant or any Work Product delivered to Partnership by Consultant, (d) Consultant's intentional misconduct, or (e) Consultant's violation of any applicable law. The foregoing indemnification obligations will not apply to a Loss to the extent that Loss was caused by (i) Partnership's material breach of this Agreement, (ii) Consultant's compliance with specifications or detailed instructions provided by Partnership, (iii) Partnership's modification of the Work Product, (iv) Partnership's intentional misconduct, or (v) Partnership's violation of any applicable law.

To the fullest extent permitted by law, Partnership shall indemnify, hold harmless, reimburse and defend Consultant and the officers, directors, partners, members, employees, agents, contractors, and sub-contractors of Consultant, and the successors in interest of the foregoing, from, for and against all Losses asserted by a third party and arising out of or resulting from (a) Partnership's material breach of this Agreement, (b) Partnership's intentional misconduct, or (c) Partnership's violation of any applicable law. The foregoing indemnification obligations will not apply to a Loss to the extent that Loss was caused by (i) Consultant's material breach of this Agreement, (ii) Consultant's intentional misconduct, or (iii) Consultant's violation of any applicable law.

7. Disclaimer of Warranties

CONSULTANT MAKES NO WARRANTIES, WRITTEN OR ORAL, EXPRESS OR IMPLIED, REGARDING THE SUBJECT MATTER OF THIS AGREEMENT, INCLUDING WITH RESPECT TO THE SERVICES AND WORK PRODUCT, AND ALL WARRANTIES ARE SPECIFICALLY EXCLUDED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT, AND ANY WARRANTY ARISING BY STATUTE, OPERATION OF LAW, COURSE OF DEALING OR PERFORMANCE, OR USAGE OF TRADE.

8. Limitation of Liability

EACH PARTY'S LIABILITY TO THE OTHER PARTY ARISING OUT OF OR RELATING TO THIS AGREEMENT UNDER ANY LEGAL THEORY WILL BE LIMITED TO DIRECT DAMAGES AND WILL NOT EXCEED THE AMOUNT OF THE FEES PAID OR PAYABLE BY PARTNERSHIP TO CONSULTANT UNDER THE SCOPE OF WORK TO WHICH THE CLAIM RELATES AS OF THE DATE THE PARTY'S LIABILITY TO THE OTHER IS AGREED OR FINALLY DETERMINED. IN NO EVENT WILL EITHER PARTY BE LIABLE TO THE OTHER PARTY FOR SPECIAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES, OR LOST PROFITS, EVEN IF SUCH PARTY HAS PREVIOUSLY BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE LIABILITY LIMITATIONS DESCRIBED IN THIS SECTION 8 WILL NOT LIMIT EITHER PARTY'S OBLIGATION TO INDEMNIFY THE OTHER PARTY UNDER SECTION 6 OF THIS AGREEMENT.

9. Insurance

Neither Consultant nor any sub consultant shall commence work under this Contract until Consultant has obtained all the insurance required herein and submitted a certificate of insurance to the Partnership. Consultant shall maintain the insurance for the duration of this Contract. Review of the insurance by the Partnership shall not relieve or decrease the liability of Consultant. The insurance certificate shall provide for thirty days advance written notice to the Partnership's Project Manager prior to cancellation. The Partnership must be listed as an additional insured on any policy satisfying the requirements of items B and C below. The following minimum insurance is required:

A. Workers compensation in the amount required by Oregon law, and employers liability insurance in the amount of \$500,000.

B. Business automobile liability insurance in the amount of \$500,000 per occurrence.

C. Commercial general liability in the amount of \$500,000 combined single limit per occurrence and a \$1,000,000 Annual Aggregate limit. If Consultant's primary Commercial General Liability and Automobile coverages do not meet the minimum limits required above, Consultant shall maintain during the life of this Contract, Excess or Umbrella Liability over the primary policies sufficient to meet the total aggregate limits required by this Contract.

D. Professional liability insurance in the amount of \$1,000,000.

10. Termination

This Agreement will take effect on the Effective Date and will remain in effect until terminated as described in this Section 10.

This Agreement may be terminated by either party without cause at any time upon 15 days prior written notice. Either party may terminate this Agreement and/or any Scope of Work upon written notice, effective immediately, if the other party is in material breach of this Agreement or such Scope of Work, and such breach remains uncured for 15 days after written notice of the breach. Termination of this Agreement alone will not result in the termination of any Scope of Work which are then in effect, each of which will stay in effect until completed.

In the event of termination of any Scope of Work, Partnership shall pay Consultant for all Services performed prior to the date of termination, and Consultant shall promptly deliver all Work Product in progress to Partnership.

11. Notices

Notices under this Agreement shall be in writing. Notices may be served by certified or registered mail, postage paid with return receipt requested; by private courier, prepaid; by facsimile or email; or personally. Mailed notices shall be deemed delivered three (3) days after mailing, properly addressed. Couriered notices shall be deemed delivered on the date that the courier represents that delivery will occur. Electronic notices shall be deemed delivered when receipt is either confirmed by confirming transmission equipment or acknowledged by the addressee or its office. Personal delivery shall be effective when accomplished. Unless a party changes its address by giving notice to the other party as provided herein, notices shall be delivered to the parties at the addresses set forth on the signature page of this Agreement.

12. Amendments; Waivers

Any modification, amendment or waiver of any portion of this Agreement or any Scope of Work shall not be effective unless in writing and approved by both parties.

13. Third Party Beneficiaries

No provision of this Agreement shall in any way inure to the benefit of any third person so as to constitute any such person a third party beneficiary of this Agreement or of any one or more of the terms of this Agreement, or otherwise give rise to any cause of action in any person not a party to this Agreement.

14. Interpretation of Agreement

This Agreement shall not be construed for or against any party by reason of the authorship or alleged authorship of any provision. The paragraph headings contained in this Agreement are for ease of reference only and shall not be used in construing or interpreting this

Agreement. The words "includes" and "including" are not limited in any way and mean "includes or including without limitation"

15. Severability/Survival

If any of the provisions contained in this Agreement are held illegal, invalid or unenforceable, the enforceability of the remaining provisions shall not be impaired. The provisions of Sections 5, 6, 7, 8, and any other terms of this Agreement that by their nature operate beyond termination or expiration, will survive and continue in full force and effect after any termination or expiration of this Agreement.

16. Choice of Law/Venue

This Agreement and all rights, obligations and disputes arising out of the Agreement shall be governed by Oregon law. All disputes and litigation arising out of this Agreement shall be decided by the state courts in Oregon. Venue for all disputes and litigation shall be in Multnomah County, Oregon.

17. Integration

This document constitutes the entire agreement between the parties on the subject matter hereof and supersedes all prior or contemporaneous written or oral understandings, representations or communications of every kind on the subject. No course of dealing between the parties and no usage of trade shall be relevant to supplement any term used in this Agreement. Acceptance or acquiescence in a course of performance rendered under this Agreement shall not be relevant to determine the meaning of this Agreement and no waiver by a party of any right under this Agreement shall prejudice the waiving party's exercise of the right in the future.

The parties have executed this Professional Services Agreement on the Effective Date.

PARTNERSHIP:

Willamette Partnership

By:

Name: Bobby Cochran

Title: Executive Director

Address: 4640 SW Macadam Ave,
Suite 50

Portland, OR 97239

Email Address:
cochran@willamettepartnership.org

CONSULTANT:

“Consultant”

By:

Name:

Title:

Address:

Email Address:

EXHIBIT A SCOPE OF WORK

DEVELOPMENT OF A FLOODPLAIN STORAGE QUANTIFICATION METHOD FOR NRCS FLOODPLAIN MANAGERS TOOLKIT PROJECT

I. PROJECT DESCRIPTION

Among the range of ecosystem services provided by floodplains, flood storage and attenuation is one of the most important. Floodplains take on and store excess water in times of flood, releasing it slowly overland and into groundwater. The flood storage and attenuation capacity of floodplains can help to mitigate peak flows reducing the risk of property damage and improving protection to downstream communities at risk from flooding. The opposite is also true - the loss of storage has been shown to alter the natural hydrograph of rivers, modifying the frequency, timing, and magnitude of floods. A healthy floodplain with storage and attenuation capacity gives flood water the space to spread out and slow down. This improves water quality both for local drinking water supplies and for aquatic species habitat. Developing incentives for creating or improving flood storage is important – especially in urban communities where options to offset development impacts are limited.

In addition, the recently released 2016 Biological Opinion (BiOp) on the Implementation of the National Flood Insurance Program in Oregon has identified flood storage as a key element of healthy floodplain conditions and sets out clear standards for how actions and activities associated with floodplain development must be addressed in order to protect and sustain habitat conditions for 17 listed native fish species. Options to meet the requirements of the BiOp include compensatory mitigation of adverse impacts associated with floodplain development to ensure “no net loss or beneficial gain” of natural floodplain functions.

The mitigation standards in the BiOp identify specific development activities that are permissible in the floodplain but that require mitigation for flood storage and attenuation. They include: *“the addition of fill, structures, levees, and dikes, which reduces flood storage and fish refugia, impedes habitat forming processes, increases flow volume and velocity thereby eroding stream banks and beds, and alters peak flow timing thereby increasing risk of injury to redds, fry, and alevin”*.²

In order to adequately offset development impacts, mitigation for displaced flood volume must meet the following criteria:

- Located on site, except when precluded by geomorphic or spatial constraints or when off-site mitigation will clearly provide a greater benefit to listed species;
- Hydrologically connected to the waterbody which is the flooding source;

² NOAA Fisheries. 2016. Biological Opinion for the Federal. Emergency Management Agency's National Flood Insurance Program in the State of Oregon. West Coast Region. Seattle, WA. 400p.
http://www.westcoast.fisheries.noaa.gov/publications/habitat/2016_04-14_fema_nfip_nwr-2011-3197.pdf

- Designed so that there is no increase in velocity;
- Designed to fill and drain in a manner that does not trap fish;
- Within the same hydraulic reach as the proposed development to minimize impact to affected fish populations;
- Measured in one foot elevation increments relative to the amount and location of fill placed; and
- Provided at a 1.5 to 1 ratio laterally, or greater, in order to guarantee no loss of beneficial floodplain functions, including conveyance.

Tools are thus needed to support communities developing strategies for managing impacts to flood storage. This project shall develop a Flood Storage Quantification Tool (FSQT) that will help communities demonstrate that they meet the above specifications through their floodplain management activities. As such, application of the FSQT will support floodplain management planning and the use of mitigation in order to:

- Protect and restore active floodplains;
- Protect and restore floodplain habitat;
- Enhance flood storage;
- Enhance sediment deposition during high flows;
- Enhance native vegetation; and
- Enhance flow attenuation (reduce peak flows).

The criteria/requirements set out in the BiOp can be found online here:

http://www.westcoast.fisheries.noaa.gov/publications/habitat/2016_04-14_fema_nfip_nwr-2011-3197.pdf

II. QUANTIFICATION METHOD OR TOOL SPECIFICATIONS

Consultant shall develop a flood storage quantification method or tool to measure the effects of development and restoration activities on flood storage and attenuation capacity of floodplains in Oregon. The method or tool shall be applicable to range conditions across Oregon and shall be sensitive enough to identify and measure the effects of development or restoration actions on the hydrological and hydraulic systems in the floodplain. Specifically, the method or tool shall support communities in their need to meet the requirements for quantifying flood storage and attenuation set out in Element 4. Floodplain Management Criteria for Special Hazard Areas that Avoid, Minimize, and Mitigate Program Level Impacts of the 2016 Oregon Biological Opinion on the National Flood Insurance Program. Ideally, the method or tool shall identify where restoration or activities specific to flood storage and attenuation may impact or benefit habitat and water quality functions in the floodplain.

To the extent possible, the tool shall make use of available data and existing models and shall be capable of being run by qualified conservation professionals using standard software generally employed for these kinds of analyses.

Finally, the tool shall be pilot tested in such a way as to provide rapid feedback on the usability and accuracy of the tool.

III. SPECIFIC TASKS FOR FLOODPLAIN STORAGE QUANTIFICATION METHOD DEVELOPMENT

Consultant(s) shall be responsible for the following project tasks:

Task 1. Attend Project Kick-off Meeting

Within 10 business days of the Project start date, Consultant shall attend, in person, a Project kick-off meeting held in Portland, OR with Willamette Partnership to review and discuss the project objectives, review existing material and receive any information that is relevant to the Project.

Consultant shall allocate up to 3 hours of time to participate in this meeting.

Task 2. Develop Conceptual Model

By January 15, 2017, Consultant shall develop a conceptual model of floodplain functions as they relate to flood water storage and attenuation in Oregon. The conceptual model shall describe the basis of a Floodplain Storage Quantification Tool (FSQT or Tool). The model shall be used to help identify and measure the effects of development or restoration actions on the hydrological and hydraulic systems in the floodplain. In addition, the model may identify where restoration or activities specific to flood storage and attenuation may impact or benefit habitat and water quality functions in the floodplain.

The conceptual model shall be presented in a short technical memo that includes:

1. Statement of objectives and intended application of the Floodplain Storage Quantification Tool in Oregon.
2. Identification of floodplain functions that will be quantified by the tool including definitions and rationale for selection.
3. A strategy for how floodplain functions will be quantified and how those measurements will support assessment of development and restoration activities at scales relevant to floodplain management and planning.
4. If applicable, an 8.5 by 11 inch or 11 by 17 inch diagram or schematic that helps to visualize the conceptual model.

Task Deliverables:

- A written Technical Memo documenting all elements of the Conceptual Model.

Consultant shall submit the Technical Memo to Nicole Maness, Partnership's Project Manager by email to maness@willamettepartnership.org.

Task 3. Quantify Storage and Attenuation Functions of Floodplains

By February 15, 2017, Consultant shall use hydrologic & hydraulic modeling to quantify relationships between various floodplain actions/impacts to flood storage and flow attenuation as listed in Element 4. Floodplain Management Criteria for Special Hazard Areas that Avoid, Minimize, and Mitigate Program Level Impacts of the BiOp's Reasonable and Prudent Alternative³. The outputs from the models shall be used to create indices to quantify floodplain storage and attenuation. This will be accomplished by running model scenarios to identify relationships between site conditions and effects on hydrological and hydraulic outcomes and thresholds. Examples of the types of questions to be able to answer with the modeling include:

- Is there an ecological floodplain recurrence interval (i.e. the 10 or 25 year floodplain) that if protected, would provide significant habitat and water quality benefits?
- What are the site characteristics that most improve flood storage and attenuation (e.g. vegetation condition, degree of floodplain connection, microtopography)?
- Are the modeling results consistent for similar stream reaches (i.e. % storage/attenuation benefit for a specific width of active floodplain)? Are the modeling results significantly different for dissimilar stream reaches (i.e. %storage/attenuation benefit for a braided vs channelized system)?
- Are the metrics consistent across different types of floodplains (confined, steep or shallow gradients)?
- How should storage/attenuation mitigation be applied within a watershed? (i.e. distance upstream of development, % development area vs contributing watershed area, within stream reach).

Scenarios will be run in three to four different pilot communities in Oregon with various levels of existing information/data:

- City of Portland-Johnson Creek 1D models available.
- City of Enterprise – no existing models, assess storage opportunistically.
- City of Albany – 2D models available.

One Dimensional Modeling Scenarios: Use existing RAS models to compare the following scenarios for up to three representative reaches.

- Model Incision: Compare a connected reach to an incised reach by dropping channel elevations by 2 ft.
- Model vegetation effects: Compare a bare grass floodplain with forested by increasing Manning's roughness.
- Model effects of development: Fill in floodplain to 1 ft above the base flood elevation with impervious area leaving floodway undeveloped.

Compare the following model outputs for each scenario: channel shear stress, velocities, and floodplain connectivity for various flow rates (Q2, Q5, Q10, Q100). Use unsteady flow to run

³ http://www.westcoast.fisheries.noaa.gov/publications/habitat/2016_04-14_fema_nfip_rpaonly_nwr-2011-3197.pdf

typical storm hydrographs for each scenario and quantify the change in peak flow through the reach.

Two Dimensional Modeling Scenarios: Flood storage cannot be easily quantified using one dimensional models. A 2D model requires more data but more accurately defines flows across floodplains. The 2D analysis will use existing LiDAR data to build a floodplain surface. Consultant shall compare developed and natural floodplain surfaces for similar or adjacent channel reaches to assess differences in storage and attenuation.

Task Deliverables:

- Results of modeling scenarios with documentation of relationships and thresholds for three stream systems.
- Technical Memo summarizing recommendations for developing the Flood Storage Quantification Tool.

Consultant shall submit the Technical Memo to Nicole Maness, Partnership's Project Manager by email to maness@willamettepartnership.org.

Task 4. Develop a Draft Floodplain Quantification Tool

By April 30, 2017 Consultant shall develop a draft Floodplain Storage Quantification Tool. The draft tool shall be used to quantify the flood storage and attenuation benefits or impacts from specific management actions.

As part of Tool development, Consultant shall:

- Work with floodplain jurisdictions to ensure the Floodplain Storage Quantification Tool (Tool) is relevant to their floodplain management planning processes
- Ensure the Floodplain Storage Quantification Tool relates to relevant regulatory requirements and to the RPA outlined in the Biological Opinion of the NFIP in Oregon where appropriate. Specifically the tool should provide strategies to quantify impacts and mitigation options for compensatory mitigation as described in RPA Element 4F.
- Identify data availability for a representative number of communities in Oregon and design the Tool within these limitations.
- Anticipate and manage foreseeable misuse of the modeling data and Floodplain Storage Quantification Tool.

Deliverables:

- Draft version of quantification tool (MS Excel tool, GIS model, or similar)
- Written document describing how to use the Tool.

Consultant shall submit the deliverables to Nicole Maness, Partnership's Project Manager by email to maness@willamettepartnership.org.

Task 5. Finalizing the Floodplain Storage Quantification Tool

By July 15, 2017, Consultant shall work with the project team to apply the lessons learned through scenario testing using the Floodplain Storage Quantification Tool and stakeholder feedback to refine and update the Tool. Consultant shall provide written instruction for users to apply the Tool as part of their floodplain management planning process.

Deliverables:

- Finalized Flood Storage Quantification Tool
- Finalized User Guide for the Flood Storage Quantification Tool.

Consultant shall submit deliverables to Nicole Maness, Partnership's Project Manager by email to maness@willamettepartnership.org.

IV. SCHEDULE

Consultant shall complete all work by August 31, 2017

EXHIBIT B(1)

RATES

Rates to be provided by consultant.