

FS Agreement No. 19-CO-11221634-044Cooperator Agreement No. 30006781**ORDINANCE - EXHIBIT A****COLLECTION AGREEMENT****Between The****CITY OF PORTLAND WATER BUREAU****And The****UNITED STATES DEPARTMENT OF AGRICULTURE,****U.S. FOREST SERVICE****ROCKY MOUNTAIN RESEARCH STATION**

This COLLECTION AGREEMENT is hereby entered into by and between the City of Portland Water Bureau, hereinafter referred to as "the Bureau", and the United States Department of Agriculture (USDA), Forest Service, Rocky Mountain Research Station, hereinafter referred to as the "U.S. Forest Service," under the provisions of the Forest and Rangeland Renewable Resources Research Act of 1978, as amended.

Background: The U.S. Forest Service and the Bureau have mutual interests in understanding impacts of wildfire risk and associated post-fire erosion on water quality. There is interest in understanding impacts of potential future climate, wildfire and post-fire mitigation scenarios and their associated potential impacts to water quality. The Bull Run Watershed is primary drinking water source for the City of Portland, Oregon and is the focus of this project. Collaboratively, both entities will benefit from an enhanced understanding of potential future climate and wildfire scenarios.

Title: Using Ecohydrological Models to Better Understand Wildfire Risk Scenarios in a Climate-limited Forested Watershed

I. PURPOSE: The purpose of this agreement, and incorporated Financial Plan, is to document the voluntary contribution of funds from the Bureau to the U.S. Forest Service to develop and use site-specific tools and models to enhance understanding of future fire risk and potential post-fire impacts resulting from differing fire scenarios and post-fire mitigation strategies. This information is expected to improve resiliency to wildfire by informing source water protection and water utility post-fire response planning efforts.

II. THE Bureau SHALL:

A. LEGAL AUTHORITY. The Bureau shall have the legal authority to enter into this agreement, and the institutional, managerial, and financial capability to ensure proper



planning, management, and completion of the project, which includes funds sufficient to pay the nonfederal share of project costs, when applicable.

- B. Perform in accordance with the Financial Plan.
- C. Upon presentation of a Bill for Collection, deposit with the U.S. Forest Service the amount agreed to in the Financial Plan.
- D. The Bureau will work collaboratively with the U.S. Forest Service to develop mutually acceptable objectives. The objectives will address tasks outlined in Exhibit A related to:
 - 1) Hosting a stakeholder “kick-off” meeting;
 - 2) Developing scenarios on wildfire’s impact on erosion and sedimentation;
 - 3) Develop scenarios on future climates and its impact on wildfires, erosion and sedimentation. See Exhibit A.

III. THE U.S. FOREST SERVICE SHALL:

- A. **ADVANCE BILLING.** The maximum total cost liability to the Bureau for this agreement is **\$159,948** The U.S. Forest Service shall bill the Bureau prior to commencement of work for deposits sufficient to cover the estimated costs (including overhead) for the specific payment period. Overhead is assessed at the rate of 20 percent.

Billing Method: Scheduled Billing

First billing of \$50,000 for fiscal year 2019 will be on final signature of the document.

Second billing of \$55,000 for fiscal year 2020 will be on August 1, 2019.

Third billing of \$54,948 for fiscal year 2021 will be on August 1, 2020.

Billing must be sent to VIA EMAIL TO:

wbaps@portlandoregeon.gov
City of Portland Water Bureau

If payment is not received to the satisfaction of the U.S. Forest Service by the date specified on the Bill for Collection (Form FS-6500-89), the U.S. Forest Service shall exercise its rights regarding the collection of debts owed to the United States. Conditions specified in an associated payment bond guaranteeing payment must also be met.

- B. **SPECIAL BILLING REQUIREMENTS – PROGRAM DOCUMENTATION.** The U.S. Forest Service Program Manager shall provide the Bureau with a written report that meets the Bureau’s specific documentation requirements.
- C. Perform in accordance with the attached Exhibit A1 - Financial Plan.
- D. The U.S. Forest Service will work collaboratively with the Bureau to complete task outlined in Exhibit A. These tasks are related to: 1) Hosting a stakeholder “kick-off”



meeting; 2) Developing tools and models to assess scenarios on wildfire's impact on erosion and sedimentation; 3) Develop tools and models to assess future climates and its impact on wildfires, erosion and sedimentation. See Exhibit A.

IV. IT IS MUTUALLY AGREED AND UNDERSTOOD BY AND BETWEEN THE PARTIES THAT:

A. PRINCIPAL CONTACTS. Individuals listed below are authorized to act in their respective areas for matters related to this agreement.

Principal Bureau Contacts:

Bureau Program Contact	Bureau Administrative Contact
Liane Davis City of Portland Water Bureau 1120 SW 5 th Ave, Room 600 Portland OR 97204-1927 Phone: 503-823-7487 Fax: 503-823-7024 Liane.Davis@portlandoregon.gov	Corrina Rodriguez City of Portland Water Bureau Corrina.Rodriguez@portlandoregon.gov

Principal U.S. Forest Service Contacts:

U.S. Forest Service Program Manager Contact	U.S. Forest Service Administrative Contact
Peter Robichaud Rocky Mountain Research Station 1221 S. Main St. Moscow, ID 83843 Phone: 208 883 2349 Fax: 208 883 2318 probichaud@fs.fed.us	Cindy Gordon Rocky Mountain Research Station 240 West Prospect Road Fort Collins, CO 80526-2098 Phone: 970 498 1172 Fax: 970 498 1212 cdgordon@fs.fed.us

B. FOREST SERVICE LIABILITY TO THE COOPERATOR. The United States shall not be liable to The Bureau for any costs, damages, claims, liabilities, and judgments that arise in connection with the performance of work by the U.S. Forest Service or its contractors under this agreement, including but not limited to damage to any property owned by The Bureau or any third party.

C. REFUNDS. Funds collected in advance by the U.S. Forest Service, which are not spent or obligated for the project(s) approved under this agreement, may be refunded to the Bureau, authorized for use for a new agreement by the Bureau, or waived by the Bureau. A Data Universal Numbering System (DUNS) number and registration in the System for Award Management (SAM) by the Bureau may be necessary to process a refund. Due to processing costs, any balance less than \$25 shall not be refunded to the Bureau.



- D. **PUBLIC NOTICES.** It is the U.S. Forest Service's policy to inform the public as fully as possible of its programs and activities. The Bureau is/are encouraged to give public notice of the receipt of this agreement and, from time to time, to announce progress and accomplishments. Press releases or other public notices should include a statement substantially as follows:

"Rocky Mountain Research Station of the U.S. Forest Service, Department of Agriculture, is working collaboratively with the City of Portland on developing tools and models to better understand wildfire risk and potential post-fire impacts."

The Bureau may call on the U.S. Forest Service's Office of Communication for advice regarding public notices. The Bureau is/are requested to provide copies of notices or announcements to the U.S. Forest Service Program Manager and to the U.S. Forest Service's Office of Communications as far in advance of release as possible.

- E. **FREEDOM OF INFORMATION ACT (FOIA).** Public access to agreement records must not be limited, except when such records must be kept confidential and would have been exempted from disclosure pursuant to Freedom of Information regulations (5 U.S.C. 552). Requests for research data are subject to 2 CFR 215.36.

Public access to culturally sensitive data and information of Federally-recognized Tribes may also be explicitly limited by P.L. 110-234, Title VIII Subtitle B §8106 (2009 Farm Bill).

- F. **PARTICIPATION IN SIMILAR ACTIVITIES.** This agreement in no way restricts the U.S. Forest Service or the Bureau from participating in similar activities with other public or private agencies, organizations, and individuals.
- G. **ENDORSEMENT.** Any of the Bureau's contributions made under this agreement do not by direct reference or implication convey U.S. Forest Service endorsement of the Bureau's products or activities.
- H. **NOTICES.** Any communication affecting the operations covered by this agreement by the U.S. Forest Service or the Bureau will be sufficient only if in writing and delivered in person, mailed, or transmitted electronically by e-mail or fax, as follows:

To the U.S. Forest Service Program Manager, at the address specified in the agreement.

To the Bureau, at the Bureau's address shown in the agreement or such other address designated within the agreement.



Notices are effective when delivered in accordance with this provision, or on the effective date of the notice, whichever is later.

- I. COLLABORATION. The U.S. Forest Service and the Bureau may mutually agree to collaborate in the review of draft publications, interpretive signs, manuscripts, and other printed material and audiovisuals prior to completion. This agreement, in and of itself, does not authorize the Bureau's participation in the project.
- J. USE OF U.S. FOREST SERVICE INSIGNIA. In order for the Bureau to use the U.S. Forest Service insignia on any published media, such as a Web page, printed publication, or audiovisual production, permission must be granted from the U.S. Forest Service's Office of Communications (Washington Office). A written request will be submitted by Forest Service **ROCKY MOUNTAIN RESEARCH STATION** to the Office of Communications Assistant Director, Visual Information and Publishing Services prior to use of the insignia. The U.S. Forest Service **ROCKY MOUNTAIN RESEARCH STATION** will notify The Bureau when permission is granted.
- K. U.S. FOREST SERVICE ACKNOWLEDGED IN PUBLICATIONS, AUDIOVISUALS, AND ELECTRONIC MEDIA. The Bureau shall acknowledge U.S. Forest Service support in any publications, audiovisuals, and electronic media developed as a result of this agreement.
- L. NONDISCRIMINATION STATEMENT – PRINTED, ELECTRONIC, OR AUDIOVISUAL MATERIAL. The Bureau shall include the following statement, in full, in any printed, audiovisual material, or electronic media for public distribution developed or printed with any Federal funding.

In accordance with Federal law and U.S. Department of Agriculture policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age, or disability. (Not all prohibited bases apply to all programs.)

To file a complaint alleging discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW, Washington DC 20250-9410 or call toll free voice (866) 632-9992, TDD (800)877-8339, or voice relay (866) 377-8642. USDA is an equal opportunity provider and employer.

If the material is too small to permit the full statement to be included, the material must, at minimum, include the following statement, in print size no smaller than the text:

"This institution is an equal opportunity provider."

- P. TERMINATION FOR COLLECTION AGREEMENTS. Either party, in writing, may terminate this agreement in whole, or in part, at any time before the date of expiration.



The U.S. Forest Service shall not incur any new obligations for the terminated portion of this agreement after the effective date of termination and shall cancel as many obligations as possible. Full credit must be allowed for U.S. Forest Service expenses and all noncancelable obligations properly incurred up to the effective date of termination.

Q. DEBARMENT AND SUSPENSION. The Bureau shall immediately inform the U.S. Forest Service if they or any of their principals are presently excluded, debarred, or suspended from entering into covered transactions with the Federal Government according to the terms of 2 CFR Part 180. Additionally, should the Bureau or any of their principals receive a transmittal letter or other official Federal notice of debarment or suspension, then they shall notify the U.S. Forest Service without undue delay. This applies whether the exclusion, debarment, or suspension is voluntary or involuntary.

R. MODIFICATIONS. Modifications within the scope of this agreement must be made by mutual consent of the parties, by the issuance of a written modification signed and dated by all properly authorized, signatory officials, prior to any changes being performed. Requests for modification should be made, in writing, at least 30 days prior to implementation of the requested change. The U.S. Forest Service is not obligated to fund any changes not properly approved in advance.

S. COMMENCEMENT/EXPIRATION DATE. This agreement is executed as of the date of the last signature, and is effective through **December 31, 2022** at which time it will expire. The expiration date is the final date for completion of all work activities under this agreement.

T. AUTHORIZED REPRESENTATIVES. By signature below, each party certifies that the individuals listed in this document as representatives of the individual parties are authorized to act in their respective areas for matters related to this agreement. In witness whereof, the parties hereto have executed this agreement as of the last date written below.

MICHAEL STUHR, P.E., Administrator
City of Portland Water Bureau

Date

APPROVED AS TO FORM

Kenneth Brychan 3/1/18

CHIEF DEPUTY CITY ATTORNEY

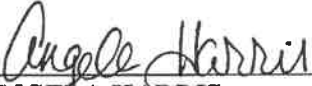
John Thigpen
FRANK H. MCCORMICK, Program Manager
U.S. Forest Service, Rocky Mountain Res. Station

2/26/19

Date



The authority and format of this agreement have been reviewed and approved for signature.


ANGELA HARRIS

U.S. Forest Service Grants Management Specialist

2/26/19
Date

Burden Statement

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0596-0217. The time required to complete this information collection is estimated to average 4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW, Washington, DC 20250-9410 or call toll free (866) 632-9992 (voice). TDD users can contact USDA through local relay or the Federal relay at (800) 877-8339 (TDD) or (866) 377-8642 (relay voice). USDA is an equal opportunity provider and employer.

COLLECTION AGREEMENT - SCOPE OF WORK, EXHIBIT A

Using Ecohydrological Models to Better Understand Wildfire Risk Scenarios in a Climate-Limited Forested Watershed

Introduction

Fire disturbances are projected to increase with climate change and are a major cause of increased erosion, runoff, suspended sediment, and debris flows in forested watersheds. In the western Cascades, the estimated area burned is projected to increase 200-400% by 2100, and a severe fire could have major consequences for municipal water supplies and the millions of people in this region who depend on these forested watersheds for clean water.

In areas with a historically infrequent fire regime, such as the Bull Run Watershed and the Cedar River Watershed, the respective primary water supplies of Portland and Seattle, water utilities have few site-specific tools and little to no empirical data available to aid in predicting the current or future impact of fire activity on source watersheds, water quality, and supply or treatment infrastructure. Wildfire protection and post-fire response planning have, to date, necessarily relied upon data and literature from other, and often quite ecologically different, locations and forest types.

The goal of this project is to provide site-specific tools and modeled data and outputs to enhance understanding of future fire risk and potential post-fire impacts resulting from differing fire scenarios and mitigation strategies; this information is expected to improve resiliency to wildfire by informing source water protection and water utility post-fire response planning efforts.

Project Approach, Deliverables, and Timeline

“Stakeholders” refers to staff of the Portland Water Bureau (PWB) as well as other possible project partners including, but not limited to, Mt Hood National Forest, Seattle Public Utilities, collaborating research institutions, and other collaborators as mutually identified by PWB and the project research team throughout the project

The project will consist of three primary tasks:

Task A: Task A will convene a stakeholder “kick-off” meeting with PWB and other stakeholders mutually identified by PWB and research team, to provide overview of project and models, refine tasks and timelines, discuss questions, and gather and share data.

Task B: Task B will address the following questions: *(a) How might the worst-case scenario for fire impact erosion and sedimentation rates? (b) How might that differ from a moderate burn scenario? (c) How might these scenarios vary spatially across the*

watershed based on fuels, soils, litter depth, topography, or other factors? (d) How might post-fire mitigation actions influence impacts from erosion or sedimentation?

Task C: Task C will address the following questions: (a) *What are the relative roles of climate and fuels in driving wildfire fire spread into the future?* (b) *How might that vary spatially by the major sub-basins?*

Task A: (prior to July 1, 2019)

A “kick-off” meeting with PWB, affiliated research collaborators, and other stakeholders mutually identified by PWB and research team, will be convened to provide overview of project and models, refine tasks and timelines, discuss questions, and gather and share data.

Task B: (July 1, 2019 to June 30, 2020)

Description of Tools Used in Task 2:

The Water Erosion Prediction Project (WEPP) model is a complex process-based hydrology and erosion model. WEPP-based tools are widely-used among forestry and fire professionals. The Post-fire Erosion Prediction tool (WEPP-PEP) is an online tool that simulates post-fire streamflow and sediment transport on hillslopes or in watersheds and the impact of targeted post-fire mitigation efforts using observed or predicted soil burn severity maps. WEPP-PEP and other WEPP-based tools are hosted on the newly developed online platform, WEPPCloud. WEPPCloud serves as both a gateway to WEPP products and a tool itself for automating the acquisition and processing of climate, soil, management, and topographic inputs for WEPP. Additionally, this task will also employ the Erosion Risk Management Tool (ERMiT), which allows users to predict the probability of a given amount of post-fire sediment delivery from the base of a hillslope in each of five years following wildfire.

Approach and Deliverables:

- Stakeholder Meeting: A meeting will be held with PWB to discuss PWB’s hydrologic model and climate change projection experience and tools that have been developed and their relationship to the WEPP model.
- Parameterization of the WEPP-Cloud model: The WEPP-Cloud watershed interface for current unburned conditions will be run to assess the ability of watershed model to simulate streamflow from the current unburned watersheds using USGS stream gauging stations located above the reservoirs within the Bull Run watershed. Those results will be used to adjust model parameters to ensure the model is adequately representing the hydrology of the watershed. Input obtained from meeting with PWB staff regarding data and experience with Bull Run hydrologic modeling and climate change projections will be incorporated to the extent applicable.
- Stakeholder Meeting: A meeting with PWB and other mutually agreed upon stakeholders will be held. Meeting will include presentation of (a) the WEPP hydrologic model and its comparison to PWB’s PRMS hydrologic model; (b) the unburned model assessment

and; (c) identification of the wildfire scenarios of greatest concern; and (d) identification of desired spatial maps, output products and formats.

- Burn Severity Maps: Burn severity map(s), based on scenarios developed above, will be created using probabilistic burn severity map based on random forest modeling techniques or using projections from the WMFire spread model through the RHESys analysis (see Task 3). At a minimum, a worst-case scenario map and a moderate-case scenario, developed in collaboration with PWB, will be produced.
- Initial Analysis Products:
 - Identification of spatial variability in burn severity and potential “hot spots” of erosion across the watershed using the WEP-PEP tool.
 - A distribution of expected erosion rates, sediment delivery, and daily peak flows based on 100-year iterative runs based on historic and future projected climate scenarios from the worst-case soil burn severity map.
 - Depending upon the interests of the stakeholders, a frequency analysis which allows for probabilistic risk-based outputs by hillslope or watershed outlet to explore spatial variability in fire impacts may also be provided.
- Stakeholder Meeting: A meeting with PWB and other mutually agreed upon stakeholders will be held that includes (a) presentation of the wildfire worst-case scenario results, assessment of model predictions; (b) discussion and identification of desired output products; (c) an initial assessment of the effectiveness of mitigation strategy(ies) using the ERMiT model; (d) discussion of spatial variability and mitigation options. Feedback from stakeholders will inform subsequent mitigation analysis.
- Analysis:
 - Run ERMiT model with desired mitigation options.
- Stakeholder Meeting: Discuss outcomes of ERMiT model and assess pros and cons of various mitigation strategies based on effectiveness of erosion control.
- Training: A training session to train PWB staff and other mutually agreed upon stakeholders on using the WEPP-Cloud tools will be provided, dependent upon stakeholder interest. Scripts from models will also be provided.
- Stakeholder Meeting: A final meeting with PWB and other mutually agreed upon stakeholders will be held at the end of the project to present and discuss final products and final report.

Task 3 (July 1, 2020 to June 30, 2021)

Description of Models/Tools Used in Task 3:

The Regional Hydro-Ecologic Simulation System (RHESys) model couples a spatially distributed hydrologic model with a biogeochemical model to simulate vegetation dynamics and nutrient cycling in watersheds. It has been modified to use remote sensing products such as leaf area index (LAI) and forest structure metrics from Lidar to be more dynamic (Hanan et al. 2018). Linking the RHESys and WEPP models is a key advancement of FireEarth, as it facilitates predicting fire based on future conditions rather than historical observations, even in watersheds where fire has not historically occurred frequently. Another key advancement is application of the coupled RHESys-WMFire model. WMFire is an intermediate complexity fire spread model that was

designed to be directly coupled with RHESSys. It is a stochastic model that simulated the probability of fire spread based on four variables: litter load, relative moisture deficit, wind direction, and topographic slope; all variables are derived directly from RHESSys outputs.

Approach and Deliverables:

- Stakeholder Meeting: A meeting will be held with PWB to discuss PWB's hydrologic model and climate change projection experience and tools that have been developed and their relationship to the RHESSys model. (discussion may occur simultaneously with similar meeting described in Task B above)
- Parameterization and calibration of the RHESSys model: RHESSys will be parameterized, calibrated, and evaluated for the Bull Run watershed using remote sensing and streamflow data. Input obtained from meeting with PWB staff regarding data and experience with Bull Run hydrologic modeling and climate change projections will be incorporated to the extent applicable.
- Stakeholder Meeting: A meeting with PWB and other mutually agreed upon stakeholders will be held. Meeting will include: (a) review model calibration results; (b) identification of output products and formats that would be most useful for assisting in wildfire planning and decisions.
- Analysis:
 - Conduct a modeling experiment using the RHESSys coupled with the stochastic fire spread model WMFire as well as historical climate inputs from Global Climate Models (GCMs), combined with fire management scenarios (exclusion and no exclusion) to gauge the extent to which these drivers promote the spread of severe wildfires.
 - Outputs will include set of distribution probabilities of historic and future fire size under no and full fire suppression scenarios and under current and future project climate scenarios.
 - Repeat the modeling experiment to assess spatial variability across four major sub-basins.
- Stakeholder Meeting: A meeting with PWB and other mutually agreed upon stakeholders will be held. Meeting will include (a) discussion of results of modeling experiments; (b) review of model outputs; (c) assessment of the drivers influencing the size and frequency of wildfires across the watershed; (d) assessment of spatial variability; and (e) desired final products and final report.
- Stakeholder Meeting: A meeting will be held with PWB and other mutually agreed upon stakeholders to present and discuss final products and report.

Collaboration on Development and Distribution of Scientific Results

In the interest of partnership that is integral to this scope of work, it is assumed that the U.S. Forest Service and any of affiliated research collaborators funded through this project (hereafter "Researchers"), the PWB, and other mutually agreed upon stakeholders, will work together, actively sharing and receiving data, information, and expertise, throughout all tasks associated

with this project and on any reports, publications and presentations of results relating specifically to this project.

Researchers and the City agree to collaborate on publication or dissemination of project results, data or visualizations.

Specifically:

- Researchers and the City shall allow the other party to comment on use and publication of results before publication;
- Researchers and the City shall allow the other party to coauthor any publications or external presentations;
- Researchers and the City shall allow the other party to review any peer reviewed comments for publications, and shall discuss appropriate responses;
- Researchers acknowledge the City in published documents;
- The City properly attributes Researchers when citing or distributing products or data;
- Researchers will not share data acquired from the City for use in this project without written authorization from the City;
- Researchers shall provide the City with the output data and products, including model scripts, described in this agreement, in addition to other data, visualizations and reports generated through funding of this project.

Project Budget:

Budget shall be in accordance with the attached Exhibit A1 – Financial Plan

Forest Service Agreement #

Bureau Agreement #

Collection Agreement Financial Plan, Exhibit A1

Cooperator and FS Contributions

COST ELEMENTS and related data				Cooperator Contribution	FS Non-Cash Contribution	
Line Item Cost Subtotals				Subtotal	Subtotal	Combined Subtotals
PERSONNEL						
Resource Specialists (List all personnel):	# of Days	\$/Day				
PI Robichaud (project oversight, admin)	13.00	\$500.00	\$6,500.00			\$6,500.00
			\$0.00			\$0.00
			\$0.00			\$0.00
			\$0.00			\$0.00
			\$0.00			\$0.00
				\$0.00		\$0.00
				\$0.00		\$0.00
				\$0.00		\$0.00
				\$0.00		\$0.00
Subtotal, Personnel:	13.00		\$6,500.00	\$0.00		\$6,500.00
TRAVEL						
Explanation of trips: From Where/To Where/For Whom	Vehicle Mileage Cost or Airfare Cost	# of Trips	PerDiem and Lodging			
Moscow ID to Portland OR (annual)	440.00	3	\$470.00	\$1,790.00		\$1,790.00
				\$0.00		\$0.00
					\$0.00	\$0.00
Subtotal, Travel:	\$440.00	3	\$470.00	\$1,790.00	\$0.00	\$1,790.00
EQUIPMENT						
Name and Type of Equipment:	Unit Cost	Quantity				
				\$0.00		\$0.00
				\$0.00		\$0.00
					\$0.00	\$0.00
Subtotal, Equipment:	\$0.00	0	\$0.00	\$0.00	\$0.00	\$0.00
SUPPLIES						
Name and Type of Supplies:	Unit Cost	Quantity				
				\$0.00		\$0.00
				\$0.00		\$0.00
					\$0.00	\$0.00
Subtotal, Supplies:	\$0.00	0	\$0.00	\$0.00	\$0.00	\$0.00

CONTRACTUAL			
Describe Contracts that will most likely result from this project:			
			\$0.00
			\$0.00
			\$0.00
Subtotal, Contractual:		\$0.00	\$0.00
OTHER			
Describe Other Costs of the Project:			
Cooperative Agreement Washington State University		\$62,500.00	\$62,500.00
Cooperative Agreement University of Idaho		\$62,500.00	\$62,500.00
			\$0.00
Subtotal, Other:		\$125,000.00	\$0.00
TOTAL DIRECT CHARGES		\$133,290.00	\$0.00
OVERHEAD ASSESSMENT (if applicable, see FSH 1909.13)		Insert Rate Here:	
	20.0%	\$26,658.00	
Total Party Costs		\$159,948.00	\$0.00
COST ELEMENTS SUBJECT TO NATIONAL PASS-THROUGH RATES		Cooperator Contribution	
TOTAL CHARGES			\$0.00
OVERHEAD ASSESSMENT (if applicable, see FSH 1909.13)		Insert Rate Here:	
Total Pass-Through Costs			\$0.00
TOTAL PROJECT COSTS			\$159,948.00

Burden Statement

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The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

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