Local Agency Standard Consultant Agreement

☒ Architectural/Engineering Agreement
☐ Personal Services Agreement

Agreement Number

Federal Aid Number

Agreement Type (Choose one)

☐ **Lump Sum**
Lump Sum Amount $ _____

☐ **Cost Plus Fixed Fee**
Overhead Progress Payment Rate _____ %
Overhead Cost Method
☐ Actual Cost
☐ Actual Cost Not To Exceed _____ %
☐ Fixed Overhead Rate _____ %
Fixed Fee $ _____

☒ **Specific Rates Of Pay**
☒ Negotiated Hourly Rate
☐ Provisional Hourly Rate

☐ **Cost Per Unit of Work**

Consultant/Address/Telephone
Jacobs Engineering Group Inc.
600 - 108th Ave NE
Suite 700
Bellevue, WA 98004

Project Title And Work Description
Kittitas County Naneum, Wilson, Cherry Creek Watershed Assessment

DBE Participation
☐ Yes ☐ No _____ %

Federal ID Number or Social Security Number
95-4081636

Do you require a 1099 for IRS?
☐ Yes ☒ No

Completion Date
December 31, 2016

Total Amount Authorized $ 652,378.00

Management Reserve Fund $ _____

Maximum Amount Payable $ 652,378.00

Index of Exhibits (Check all that apply):

☒ Exhibit A-1 Scope of Work
☐ Exhibit A-2 Task Order Agreement
☐ Exhibit B-1 DBE Utilization Certification
☒ Exhibit C Electronic Exchange of Data
☐ Exhibit D-1 Payment - Lump Sum
☐ Exhibit D-2 Payment - Cost Plus
☒ Exhibit D-3 Payment - Hourly Rate
☐ Exhibit D-4 Payment - Provisional
☐ Exhibit E-1 Fee - Lump/Fixed/Unit
☒ Exhibit E-2 Fee - Specific Rates
☒ Exhibit F Overhead Cost
☐ Exhibit G Subcontracted Work
☐ Exhibit G-1 Subconsultant Fee
☒ Exhibit G-2 Fee-Sub Specific Rates
☒ Exhibit G-3 Sub Overhead Cost
☒ Exhibit H Title VI Assurances
☒ Exhibit I Payment Upon Termination of Agreement
☐ Exhibit J Alleged Consultant Design Error Procedures
☒ Exhibit K Consultant Claim Procedures
☐ Exhibit L Liability Insurance Increase
☒ Exhibit M-1a Consultant Certification
☒ Exhibit M-1b Agency Official Certification
☒ Exhibit M-2 Certification - Primary
☒ Exhibit M-3 Lobbying Certification
☐ Exhibit M-4 Pricing Data Certification
☐ App. 31.910 Supplemental Signature Page

THIS AGREEMENT, made and entered into this _____ day of January, 2015, between the Local Agency of Kittitas County Public Works, Washington, hereinafter called the "AGENCY", and the above organization hereinafter called the "CONSULTANT".

WITNESSETH THAT:

WHEREAS, the AGENCY desires to accomplish the above referenced project, and

WHEREAS, the AGENCY does not have sufficient staff to meet the required commitment and therefore deems it advisable and desirable to engage the assistance of a CONSULTANT to provide the necessary services for the PROJECT; and

WHEREAS, the CONSULTANT represents that he/she is in compliance with the Washington State Statutes relating to professional registration, if applicable, and has signified a willingness to furnish Consulting services to the AGENCY,

NOW THEREFORE, in consideration of the terms, conditions, covenants and performance contained herein, or attached and incorporated and made a part hereof, the parties hereto agree as follows:

I General Description of Work

The work under this AGREEMENT shall consist of the above described work and services as herein defined and necessary to accomplish the completed work for this PROJECT. The CONSULTANT shall furnish all services, labor, and related equipment necessary to conduct and complete the work as designated elsewhere in this AGREEMENT.

II Scope of Work

The Scope of Work and projected level of effort required for this PROJECT is detailed in Exhibit "A" attached hereto and by this reference made a part of this AGREEMENT.

III General Requirements

All aspects of coordination of the work of this AGREEMENT with outside agencies, groups, or individuals shall receive advance approval by the AGENCY. Necessary contacts and meetings with agencies, groups, and/or individuals shall be coordinated through the AGENCY. The CONSULTANT shall attend coordination, progress and presentation meetings with the AGENCY and/or such Federal, State, Community, City or County officials, groups or individuals as may be requested by the AGENCY. The AGENCY will provide the CONSULTANT sufficient notice prior to meetings requiring CONSULTANT participation. The minimum required hours or days notice shall be agreed to between the AGENCY and the CONSULTANT and shown in Exhibit "A."

The CONSULTANT shall prepare a monthly progress report, in a form approved by the AGENCY, which will outline in written and graphical form the various phases and the order of performance of the work in sufficient detail so that the progress of the work can easily be evaluated.

The CONSULTANT, and each SUBCONSULTANT, shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The CONSULTANT, and each SUBCONSULTANT, shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of USDOT-assisted contracts. Failure by the CONSULTANT to carry out these requirements is a material breach of this AGREEMENT that may result in the termination of this AGREEMENT.

Participation for Disadvantaged Business Enterprises (DBE), if required, per 49 CFR Part 26, or participation of Minority Business Enterprises (MBE), and Women Business Enterprises (WBE), shall be shown on the heading of this AGREEMENT. If D/M/WBE firms are utilized, the amounts authorized to each firm and their certification number will be shown on Exhibit "B" attached hereto and by this reference made a part of this AGREEMENT. If the Prime CONSULTANT is a DBE firm they must comply with the Commercial Useful Function (CUF) regulation outlined in the AGENCY'S "DBE Program Participation Plan". The mandatory DBE participation goals of the AGREEMENT are those established by the WSDOT'S Highway and Local Programs Project Development Engineer in consultation with the AGENCY.

All Reports, PS&E materials, and other data furnished to the CONSULTANT by the AGENCY shall be returned. All electronic files, prepared by the CONSULTANT, must meet the requirements as outlined in Exhibit "C."

All designs, drawings, specifications, documents, and other work products, including all electronic files, prepared by the CONSULTANT prior to completion or termination of this AGREEMENT are instruments of service for this PROJECT, and are the property of the AGENCY. Reuse by the AGENCY or by others, acting through or on behalf of the AGENCY of any such instruments of service, not occurring as a part of this PROJECT, shall be without liability or legal exposure to the CONSULTANT.

IV Time for Beginning and Completion

The CONSULTANT shall not begin any work under the terms of this AGREEMENT until authorized in writing by the AGENCY.

All work under this AGREEMENT shall be completed by the date shown in the heading of this AGREEMENT under completion date.

The established completion time shall not be extended because of any delays attributable to the CONSULTANT, but may be extended by the AGENCY in the event of a delay attributable to the AGENCY, or because of unavoidable delays caused by an act of GOD or governmental actions or other conditions beyond the control of the CONSULTANT. A prior supplemental agreement issued by the AGENCY is required to extend the established completion time.

V Payment Provisions

The CONSULTANT shall be paid by the AGENCY for completed work and services rendered under this AGREEMENT as provided in Exhibit "D" attached hereto, and by reference made part of this AGREEMENT. Such payment shall be full compensation for work performed or services rendered and for all labor, materials, supplies, equipment, and incidentals necessary to complete the work. The CONSULTANT shall conform to all applicable portions of 48 CFR Part 31.

A post audit may be performed on this AGREEMENT. The need for a post audit will be determined by the State Auditor, WSDOT External Audit Office and/or at the request of the AGENCY'S PROJECT Manager.

VI Sub-Contracting

The AGENCY permits sub-contracts for those items of work as shown in Exhibit "G" attached hereto and by this reference made part of this AGREEMENT.

Compensation for this sub-consultant work shall be based on the cost factors shown on Exhibit "G."

The work of the sub-consultant shall not exceed its maximum amount payable unless a prior written approval has been issued by the AGENCY.

All reimbursable direct labor, overhead, direct non-salary costs and fixed fee costs for the sub-consultant shall be substantiated in the same manner as outlined in Section V. All sub-contracts shall contain all applicable provisions of this AGREEMENT.

With respect to sub-consultant payment, the CONSULTANT shall comply with all applicable sections of the Prompt Payment laws as set forth in RCW 39.04.250 and RCW 39.76.011.

The CONSULTANT shall not sub-contract for the performance of any work under this AGREEMENT without prior written permission of the AGENCY. No permission for sub-contracting shall create, between the AGENCY and sub-contractor, any contract or any other relationship. A DBE certified sub-consultant is required to perform a minimum amount of their sub-contracted agreement that is established by the WSDOT Local Programs Project Development Engineer in consultation with the AGENCY.

VII Employment

The CONSULTANT warrants that they have not employed or retained any company or person, other than a bona fide employee working solely for the CONSULTANT, to solicit or secure this contract, and that it has not paid or agreed to pay any company or person, other than a bona fide employee working solely for the CONSULTANT, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or making of this contract. For breach or violation of this warrant, the AGENCY shall have the right to annul this AGREEMENT without liability or, in its discretion, to deduct from the AGREEMENT price or consideration or otherwise recover the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

Any and all employees of the CONSULTANT or other persons while engaged in the performance of any work or services required of the CONSULTANT under this AGREEMENT, shall be considered employees of the CONSULTANT only and not of the AGENCY, and any and all claims that may arise under any Workmen's Compensation Act on behalf of said employees or other persons while so engaged, and any and all claims made by a

third party as a consequence of any act or omission on the part of the CONSULTANT'S employees or other persons while so engaged on any of the work or services provided to be rendered herein, shall be the sole obligation and responsibility of the CONSULTANT.

The CONSULTANT shall not engage, on a full- or part-time basis, or other basis, during the period of the contract, any professional or technical personnel who are, or have been, at any time during the period of the contract, in the employ of the United States Department of Transportation, or the STATE, or the AGENCY, except regularly retired employees, without written consent of the public employer of such person.

VIII Nondiscrimination

During the performance of this contract, the CONSULTANT, for itself, its assignees, and successors in interest agrees to comply with the following laws and regulations:

Title VI of the Civil Rights Act of 1964
(42 USC Chapter 21 Subchapter V Section 2000d through 2000d-4a)

Federal-aid Highway Act of 1973
(23 USC Chapter 3 Section 324)

Rehabilitation Act of 1973
(29 USC Chapter 16 Subchapter V Section 794)

Age Discrimination Act of 1975
(42 USC Chapter 76 Section 6101 et seq.)

Civil Rights Restoration Act of 1987
(Public Law 100-259)

American with Disabilities Act of 1990
(42 USC Chapter 126 Section 12101 et. seq.)

49 CFR Part 21

23 CFR Part 200

RCW 49.60.180

In relation to Title VI of the Civil Rights Act of 1964, the CONSULTANT is bound by the provisions of Exhibit "H" attached hereto and by this reference made part of this AGREEMENT, and shall include the attached Exhibit "H" in every sub-contract, including procurement of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto.

IX Termination of Agreement

The right is reserved by the AGENCY to terminate this AGREEMENT at any time upon ten (10) days written notice to the CONSULTANT.

In the event this AGREEMENT is terminated by the AGENCY other than for default on the part of the CONSULTANT, a final payment shall be made to the CONSULTANT as shown in Exhibit "I" for the type of AGREEMENT used.

No payment shall be made for any work completed after ten (10) days following receipt by the CONSULTANT of the Notice to Terminate. If the accumulated payment made to the CONSULTANT prior to Notice of Termination exceeds the total amount that would be due when computed as set forth herein above, then no final payment shall be due and the CONSULTANT shall immediately reimburse the AGENCY for any excess paid.

If the services of the CONSULTANT are terminated by the AGENCY for default on the part of the CONSULTANT, the above formula for payment shall not apply.

In such an event, the amount to be paid shall be determined by the AGENCY with consideration given to the actual costs incurred by the CONSULTANT in performing the work to the date of termination, the amount of work originally required which was satisfactorily completed to date of termination, whether that work is in a form or a type which is usable to the AGENCY at the time of termination, the cost to the AGENCY of employing another firm to complete the work required and the time which may be required to do so, and other factors which affect the value to the AGENCY of the work performed at the time of termination.

Under no circumstances shall payment made under this subsection exceed the amount, which would have been made using the formula set forth above.

If it is determined for any reason that the CONSULTANT was not in default or that the CONSULTANT'S failure to perform is without the CONSULTANT'S or it's employee's default or negligence, the termination shall be deemed to be a termination for the convenience of the AGENCY. In such an event, the CONSULTANT would be reimbursed for actual costs in accordance with the termination for other than default clauses listed previously.

In the event of the death of any member, partner or officer of the CONSULTANT or any of its supervisory personnel assigned to the PROJECT, or dissolution of the partnership, termination of the corporation, or disaffiliation of the principally involved employee, the surviving members of the CONSULTANT hereby agree to complete the work under the terms of this AGREEMENT, if requested to do so by the AGENCY. This subsection shall not be a bar to renegotiation of the AGREEMENT between the surviving members of the CONSULTANT and the AGENCY, if the AGENCY so chooses.

In the event of the death of any of the parties listed in the previous paragraph, should the surviving members of the CONSULTANT, with the AGENCY'S concurrence, desire to terminate this AGREEMENT, payment shall be made as set forth in the second paragraph of this section.

Payment for any part of the work by the AGENCY shall not constitute a waiver by the AGENCY of any remedies of any type it may have against the CONSULTANT for any breach of this AGREEMENT by the CONSULTANT, or for failure of the CONSULTANT to perform work required of it by the AGENCY. Forbearance of any rights under the AGREEMENT will not constitute waiver of entitlement to exercise those rights with respect to any future act or omission by the CONSULTANT.

X Changes of Work

The CONSULTANT shall make such changes and revisions in the complete work of this AGREEMENT as necessary to correct errors appearing therein, when required to do so by the AGENCY, without additional compensation thereof. Should the AGENCY find it desirable for its own purposes to have previously satisfactorily completed work or parts thereof changed or revised, the CONSULTANT shall make such revisions as directed by the AGENCY. This work shall be considered as Extra Work and will be paid for as herein provided under Section XIV.

XI Disputes

Any dispute concerning questions of fact in connection with the work not disposed of by AGREEMENT between the CONSULTANT and the AGENCY shall be referred for determination to the Director of Public Works or AGENCY Engineer, whose decision in the matter shall be final and binding on the parties of this AGREEMENT; provided, however, that if an action is brought challenging the Director of Public Works or AGENCY Engineer's decision, that decision shall be subject to de novo judicial review. If the parties to this AGREEMENT mutually agree, disputes concerning alleged design errors will be conducted under the procedures found in Exhibit "J", and disputes concerning claims will be conducted under the procedures found in Exhibit "K".

XII Venue, Applicable Law, and Personal Jurisdiction

In the event that either party deems it necessary to institute legal action or proceedings to enforce any right or obligation under this AGREEMENT, the parties hereto agree that any such action shall be initiated in the Superior court of the State of Washington, situated in the county in which the AGENCY is located. The parties hereto agree that all questions shall be resolved by application of Washington law and that the parties to such action shall have the right of appeal from such decisions of the Superior court in accordance with the laws of the State of Washington. The CONSULTANT hereby consents to the personal jurisdiction of the Superior court of the State of Washington, situated in the county in which the AGENCY is located.

XIII Legal Relations

The CONSULTANT shall comply with all Federal, State, and local laws and ordinances applicable to the work to be done under this AGREEMENT. This contract shall be interpreted and construed in accordance with the laws of the State of Washington.

The CONSULTANT shall indemnify and hold the AGENCY and the STATE and its officers and employees harmless from and shall process and defend at its own expense all claims, demands, or suits at law or equity arising in whole or in part from the CONSULTANT'S negligence or breach of any of its obligations under this AGREEMENT; provided that nothing herein shall require a CONSULTANT to indemnify the AGENCY or the STATE against and hold harmless the AGENCY or the STATE from claims, demands or suits based solely upon the conduct of the AGENCY or the STATE, their agents, officers and employees; and provided further that if the claims or suits are caused by or result from the concurrent negligence of (a) the CONSULTANT'S agents or employees, and (b) the AGENCY or the STATE, their agents, officers and employees, this indemnity provision with respect to (1) claims or suits based upon such negligence (2) the costs to the AGENCY or the STATE of defending such claims and suits shall be valid and enforceable only to the extent of the CONSULTANT'S negligence or the negligence of the CONSULTANT'S agents or employees.

The CONSULTANT'S relation to the AGENCY shall be at all times as an independent contractor.

The CONSULTANT shall comply with all applicable sections of the applicable Ethics laws, including RCW 42.23, which is the Code of Ethics for regulating contract interest by municipal officers. The CONSULTANT specifically assumes potential liability for actions brought by the CONSULTANT'S own employees against the AGENCY and, solely for the purpose of this indemnification and defense, the CONSULTANT specifically waives any immunity under the state industrial insurance law, Title 51 RCW.

Unless otherwise specified in the AGREEMENT, the AGENCY shall be responsible for administration of construction contracts, if any, on the PROJECT. Subject to the processing of a new sole source, or an acceptable supplemental agreement, the CONSULTANT shall provide On-Call assistance to the AGENCY during contract administration. By providing such assistance, the CONSULTANT shall assume no responsibility for: proper construction techniques, job site safety, or any construction contractor's failure to perform its work in accordance with the contract documents.

The CONSULTANT shall obtain and keep in force during the terms of the AGREEMENT, or as otherwise required, the following insurance with companies or through sources approved by the State Insurance Commissioner pursuant to Title 48 RCW.

Insurance Coverage

A. Worker's compensation and employer's liability insurance as required by the STATE.
B. Commercial general liability written under ISO Form CG 00 01 12 04 or its equivalent with minimum limits of one million dollars ($1,000,000) per occurrences and two million dollars ($2,000,000) in the aggregate for each policy period.
C. Vehicle liability insurance for any automobile used in an amount not less than a one million dollar ($1,000,000) combined single limit.

Excepting the Worker's Compensation Insurance and any Professional Liability Insurance secured by the CONSULTANT, the AGENCY will be named on all policies as an additional insured. The CONSULTANT shall furnish the AGENCY with verification of insurance and endorsements required by the AGREEMENT. The AGENCY reserves the right to require complete, certified copies of all required insurance policies at any time.

All insurance shall be obtained from an insurance company authorized to do business in the State of Washington. The CONSULTANT shall submit a verification of insurance as outlined above within fourteen (14) days of the execution of this AGREEMENT to the AGENCY.

No cancellation of the foregoing policies shall be effective without thirty (30) days prior notice to the AGENCY.

The CONSULTANT'S professional liability to the AGENCY shall be limited to the amount payable under this AGREEMENT or one million ($1,000,000) dollars, whichever is the greater, unless modified by Exhibit "L". In no case shall the CONSULTANT'S professional liability to third parties be limited in any way.

The AGENCY will pay no progress payments under Section V until the CONSULTANT has fully complied with this section. This remedy is not exclusive; and the AGENCY and the STATE may take such other action as is available to it under other provisions of this AGREEMENT, or otherwise in law.

XIV Extra Work

A. The AGENCY may at any time, by written order, make changes within the general scope of the AGREEMENT in the services to be performed.

B. If any such change causes an increase or decrease in the estimated cost of, or the time required for, performance of any part of the work under this AGREEMENT, whether or not changed by the order, or otherwise affects any other terms and conditions of the AGREEMENT, the AGENCY shall make an equitable adjustment in the (1) maximum amount payable; (2) delivery or completion schedule, or both; and (3) other affected terms and shall modify the AGREEMENT accordingly.

C. The CONSULTANT must submit any "request for equitable adjustment", hereafter referred to as "CLAIM", under this clause within thirty (30) days from the date of receipt of the written order. However, if the AGENCY decides that the facts justify it, the AGENCY may receive and act upon a CLAIM submitted before final payment of the AGREEMENT.

D. Failure to agree to any adjustment shall be a dispute under the Disputes clause. However, nothing in this clause shall excuse the CONSULTANT from proceeding with the AGREEMENT as changed.

E. Notwithstanding the terms and conditions of paragraphs (A) and (B) above, the maximum amount payable for this AGREEMENT, shall not be increased or considered to be increased except by specific written supplement to this AGREEMENT.

XV Endorsement of Plans

If applicable, the CONSULTANT shall place their endorsement on all plans, estimates, or any other engineering data furnished by them.

XVI Federal and State Review

The Federal Highway Administration and the Washington State Department of Transportation shall have the right to participate in the review or examination of the work in progress.

XVII Certification of the Consultant and the Agency

Attached hereto as Exhibit "M-1(a and b)" are the Certifications of the CONSULTANT and the AGENCY, Exhibit "M -2" Certification Regarding Debarment, Suspension and Other Responsibility Matters - Primary Covered Transactions, Exhibit "M-3" Certification Regarding the Restrictions of the Use of Federal Funds for Lobbying and Exhibit "M-4" Certificate of Current Cost or Pricing Data. Exhibit "M-3" is required only in AGREEMENTS over $100,000 and Exhibit "M-4" is required only in AGREEMENTS over $500,000.

XVIII Complete Agreement

This document and referenced attachments contain all covenants, stipulations, and provisions agreed upon by the parties. No agent, or representative of either party has authority to make, and the parties shall not be bound by or be liable for, any statement, representation, promise or agreement not set forth herein. No changes, amendments, or modifications of the terms hereof shall be valid unless reduced to writing and signed by the parties as an amendment to this AGREEMENT.

XIX Execution and Acceptance

This AGREEMENT may be simultaneously executed in several counterparts, each of which shall be deemed to be an original having identical legal effect. The CONSULTANT does hereby ratify and adopt all statements, representations, warranties, covenants, and agreements contained in the proposal, and the supporting material submitted by the CONSULTANT, and does hereby accept the AGREEMENT and agrees to all of the terms and conditions thereof.

In witness whereof, the parties hereto have executed this AGREEMENT as of the day and year shown in the "Execution Date" box on page one (1) of this AGREEMENT.

By _____ By _____

Consultant _____ Agency _____

Supplemental Signature Page for Standard Consultant Agreement	Consultant/Address/Telephone Jacobs Engineering Group Inc. 600 - 108th Ave NE Suite 700 Bellevue, WA 98004
Agreement Number	Project Title And Work Description Kittitas County Naneum, Wilson, Cherry Creek Watershed Assessment
Federal Aid Number	
Local Agency Kittitas County Public Works	

THIS AGREEMENT, made and entered into this _____ day of January, 2015, between the Local Agency of Kittitas County Public Works, Washington, hereinafter called the "AGENCY", and the above organization hereinafter called the "CONSULTANT".

In witness whereof, the parties hereto have executed this AGREEMENT as of the day and year first above written.

CONSULTANT

By _____

Consultant _____

By _____

Consultant _____

LOCAL AGENCY

By _____

Agency _____

By _____

Agency _____

By _____

Agency _____

By _____

Agency _____

Exhibit A-1
Scope of Work

Project No. _____

See attached Scope of Work dated September 19, 2014; whereas the CONSULTANT shall not perform services exceeding the cumulative amount specified for the tasks in the Scope of Service and authorized by this contract. This Scope of Work prepared by the CLIENT is estimated to cost $652,378. This amount is authorized for expenditure; however, it is conditionally limited to $532,680 until additional funds are acquired and authorized by the CLIENT. Until that time, the following work totaling $119,698 will be delayed and authorized at a later date and/or eliminated by the CLIENT: Kramer Consulting Public Involvement/Floodplain by Design consistency (multiple sub-tasks) $17,951; Task 100 Management Reserve $28,997; Task 2.5 - Phase 1 Presentation (multiple sub-tasks/Three meetings) $12,424; Task 2.6 - Alternative Screening Criteria Meetings and Preparation $7,139; Task 6 - Complete Project GIS Database (Multiple sub-tasks) $27,296; Task 7 - Present Results to TAG/LAG/Public $11,021; Task 8 - Phase 2 Scope Development $14,870

Documents To Be Furnished By The Consultant

Jacobs Supplemental Assumptions by task number December 22, 2014

Level of Effort/Estimate December 24, 2014

Naneum, Wilson, and Cherry Creek Watershed Assessment

Project Draft Scope of Work

This scope of work describes the tasks required to complete an existing condition assessment of the Naneum, Wilson, and Cherry Creek watersheds within the Kittitas valley of eastern Washington. This is the first phase (Phase 1) in producing a watershed plan that will be used to guide future enhancements to improve fish passage, use and productivity, improve water quality, improve irrigation reliability, reduce the impact of irrigation facilities on streams, and reduce flood hazards within the three watersheds. The purpose of Phase 1 is to develop a baseline understanding of the existing condition of each stream as it relates to fish, irrigation, water quality, and flooding in order to plan and prioritize future projects with a goal addressing limiting factors to recovery and enhancement of steelhead, salmon, and other aquatic species within the study watersheds. Most streams within the three watersheds have been significantly altered to accommodate irrigation and transportation infrastructure, development, and to reduce flooding. Legacies of these fragmented actions are streams that have degraded habitat, contain barriers to fish passage, poor water quality, insufficient flow and create unintended flood hazards. Results of the Phase 1 existing condition assessment will be critical to development of a geospatial decision management framework and a plan for future improvements (to be completed in Phase 2). The estimated schedule for Phase 1 is approximately 2.5 years - with completion by November 2016.

Kittitas County Flood Control Zone District is the lead agency and will manage the project. Funding for the project is provided by the Washington State Salmon Recovery Funding Board (SRFB), the Kittitas County Flood Control Zone District (FCZD), and in-kind services and funding by the Kittitas County Conservation District (KCCD), the United States Bureau of Reclamation-Yakima River Basin Water Enhancement Project (USBR), and the Mid-Columbia Fisheries Enhancement Group (MCFEG). Additional project partners who will participate as members of the project's technical advisory group include: USDA Forest Service, US Fish and Wildlife Service, Washington Department of Fish and Wildlife, Washington Department of Natural Resources, City of Ellensburg, City of Kittitas, Central Washington University, the Yakama Nation, Trout Unlimited, Washington Department of Ecology, Washington Water Trust, and all key irrigation entities including the Kittitas Reclamation District (KRD), Cascade Irrigation District, and the Ellensburg Water Company.

Most land within the watersheds and bordering the streams is privately held and the landowners are typically protective of their property and the streams that pass through them. To achieve success, landowner and community input will be critical; therefore, an effective stakeholder engagement plan will be developed and will be led by the FCZD and KCCD.

The following provides a description of the tasks to be carried out to complete Phase 1. Multiple project partners have agreed to participate in the project. Therefore, the partner responsible for completing or leading each task along with key assumptions and anticipated deliverables are listed. A consultant will be retained to manage the project and to complete certain technical tasks. At this time it is not clear whether the funds available are sufficient to complete all of the tasks described below. If they are not,

the FCZD, consultant, and select members of the TAG will work together to prioritize tasks. It is possible that certain low priority tasks could be delayed until additional funds can be secured or they may be moved to Phase 2.

Scope of Work

Phase 1 – Existing Condition Assessment

The objective of Phase 1 is to develop a thorough understanding of fish, habitat, irrigation, water quality, flow conditions, and flood issues present within each watercourse within each sub-basin. This information will be required to identify and develop a plan/strategy for future improvement projects within the project area (Phase 2). Phase 1 will include the following tasks.

Task 1 – Project Goals and Objectives

A clear set of project goals and objectives are required to ensure that the Phase 1 assessment produces the information needed to implement Phase 2. These goals and objectives must be developed in collaboration between project proponents, landowners, and community representatives to ensure that they address the potential diverse interests of the affected community.

Project goals and objectives will be developed through a series of three meetings. Prior to the first meeting, phone calls will be held with key project proponents to seek their goals, concerns, and anticipated outcomes for the project. Input will be used to develop a draft set of project goals and objectives. The first meeting will include only the key proponents with the purpose to refine the draft project goals and objectives, and to identify a small number of key stakeholders that must be engaged in the project to achieve a successful outcome. A second phone meeting will be held with the key project proponents to finalize the project goals and objectives and to refine a plan to present project goals to the broader group of stakeholders. The third meeting will be with the key stakeholder group with the purpose to describe the project, present the draft project goals and objectives and to seek input. Following this meeting, the final set of project goals and objectives will be written.

Lead: Consultant

Assumptions:

- The two face-to-face meetings will take place in Ellensburg

Deliverables:

- Problem statement
- Draft project goals and objectives
- Final project goals and objectives
- Meeting minutes

Task 2 – Stakeholder Engagement

Active stakeholder participation will be essential throughout the duration of the project. It will focus on engagement of three stakeholder groups: 1) a technical advisory group (TAG), 2) landowner /

community member advisory group (LAG), and 3) the general public. FCZD and KCCD staff will partner to lead this task.

It is anticipated that the stakeholder engagement effort will include the following tasks. These are in-addition to the targeted meetings proposed above to define the project goals and objectives.

Task 2.1 Selection of Participants for the TAG and Key Landowner / Community Advisory Groups

The FCZD and KCCD will identify and invite key stakeholders to participate in the TAG and Landowner/Community Advisory Groups.

Task 2.2 Project Kick-Off and Overview Meetings

- TAG: A two hour meeting will be held to provide an overview of the goals and objectives of the project and seek input from members of the TAG.
- LAG: A two hour meeting will be held to provide an overview of the project and seek input from members of the LAG.
- General Public: A two hour meeting will be held to provide an overview of the project to the general public. The public will be encouraged to provide information and data they believe will be helpful to achieve the project goals and objectives.

Task 2.3 Project Website

A project website will be created to provide the general public with status updates. Anticipated schedules and locations for field data collection will be provided on the website.

Task 2.4 Progress Report Meetings and/or Conference Calls

Phase 1 will take 2.5 years to complete, therefore, general project updates will be provided to the TAG and LAG groups quarterly via meetings and/ or telephone conference calls. Updates will also be posted to the website. The TAG will also review of specific technical products throughout the course of the project. These reviews are identified within the task descriptions below.

Task 2.5 Presentation of Phase 1 Results

- TAG: A two hour meeting will be held to provide the TAG with an overview of the Phase 1 findings.
- LAG: A two hour meeting will be held to provide the TAG with an overview of the Phase 1 findings.
- General Public: A two hour meeting will be held to provide the TAG with an overview of the Phase 1 findings.

Task 2.6 Alternative Screening and Evaluation Criteria

- TAG/LAG: A two hour meeting will be held to present and seek input to the draft alternative screening and evaluation criteria developed in Task 4.

Lead: FCZD and KCCD with significant support by Consultant

Assumptions:

- Meeting materials will be provided to participants in advance in order to maximize meeting time.

- Each set of meetings will take place on the same day.
- FCZD and KCCD staff will organize each meeting and will invite participants
- FCZD and KCCD staff will prepare meeting minutes if required.
- Progress report meetings may occur more frequently if necessary.

Deliverables:

- Communication strategy
    - Brochure communicating problem statement, goals and objectives and how this project links to salmon recover and community benefits
- Power Point Presentations and other meeting materials
- Website content

Task 3 – Watershed Inventory and Condition Assessment

To develop a baseline understanding of the existing condition of each watercourse as it relates to fish, habitat, irrigation, and floods, the following will be identified/assessed.

- Stream channel locations and tributary connections
- Irrigation channels and ditch locations
- Stream flow rates -- Instantaneous peak floods, bank-full (channel-forming), and low flows as they relate to fish passage and habitat.
- Stream temperature and turbidity
- Irrigation control structures that affect stream hydraulics
- Fish passage barriers
- Water rights, including legal points of diversion, and overlapping water right holders
-
- Fish presence
- Riparian and Aquatic habitat conditions
- Flood, erosion, and sedimentation hazard locations

The tasks required to develop this information are described below:

Task 3.1 Data Collection

Task 3.1.1 Collect & Review Existing Data & Information

Existing data and information necessary for the Phase 1 assessment will be collected, reviewed, organized, and made accessible to team members. Data and information may include, but not be limited to:

- Topographic mapping and LiDAR data
- Historical aerial photographs
- Planning level spatial data including:

  - Stream channels
  - Irrigation canals, ditches, and structures
  - Mapped floodplains and channel migration zones
  - Parcel, easement, and right-of-way boundaries
  - Roads and trails
  - Major utility corridors
  - Sensitive areas
- Fish and habitat data
  - Stream assessment reports prepared between 2003 and 2005 by KCCD for 75 miles of channel within the three watersheds
  - Completed fish habitat improvement projects
  - Historical and existing fish presence data
- Flood history and photographs
- FEMA digital flood maps
- Stream flow data
  - USGS and DOE stream gage records
- Water quality data
- Water right data
- Ecology Water Rights Tracking System and water rights confirmed in the Conditional Final Order for the adjudication
- Groundwater reports and data
- USFS post forest fire sediment / runoff model results
- Surficial geology maps and reports
- TMDL Monitoring Reports
- Studies
  - 1975 Wilson Creek Study
  - Irrigation studies
  - City of Ellensburg study
  - Total maximum daily load (TMDL) studies

Lead: Consultant

Assumptions:

- FCZD, KCCD, and partners will provide a significant portion of the information and data

Deliverables:

- Geodatabase approved by the TAC for use with data from all tasks listed below.
- Decision management framework for addressing the problem statement with goals and objectives for each task.
- Project website where the data will be stored, organized, and will allow easy access by project partners.

Task 3.1.2 – LiDAR Data for Upper Watershed Areas

LiDAR data exists for portions of the watersheds that occupy the floor of the Kittitas Valley. LiDAR data does not exist for the upper portion of each watershed extending from the valley floor to the stream headwaters along Mission Ridge. LiDAR for the upper watersheds will be collected by a selected consultant, and will include LiDAR elevation data, aerial imagery, and feature data including creek centerlines, roads, bridges, and identifiable culverts.

Lead: LiDAR Consultant

Assumptions:

- Project funds will allow for complete coverage of the upper watersheds. If adequate funds are not available, LiDAR will be collected for the primary stream corridors only.

Deliverables:

- LiDAR data set in LAS format, 1' or 2' Contours, and as an ASCII point file
- Feature data including creeks, edge of road, bridges, identifiable culverts, etc.
- Aerial Imagery (if project funds allow)

Task 3.1.3 – Stream Flow Data Collection

There is a critical need for year-round stream flow data for most channels within the three watersheds. Currently, the Washington State Department of Ecology operates stream gages at several locations that provide either 15 minute or daily discharges and the USGS operates gages on Naneum Creek, Cherry Creek, and Wilson Creek. These data sets are useful, but significantly more data is needed. Data loggers and/or crest stage gages will be installed at strategic locations within the watersheds to help the project team determine how flow distributes through each channel network as it moves from the upper watershed to the outlet. The number and locations of the gages will be determined based upon review of channel network configurations, input from TAC members, and available budget.

It is not within the project budget to establish rating curves for each stream gage, for this would require multiple physical discharge measurements at each site. Instead, simple channel cross section and longitudinal profile surveys will be collected and normal depth calculations performed to create an approximate stage discharge rating curve for each gage site. This will allow discharges to be estimated up to bankfull events. It will be difficult to produce reliable discharge estimates for large floods that over top the channel banks, however, in siting the gages, to the extent possible, locations will be selected where overbank flows can be estimated.

Lead: Consultant with input from FCZD and TAG

Assumptions:

- Gage data will be download every two months
- Crest stage gages will be reset following relatively large floods.

Deliverables:

- Data logger data and flow estimates
- Gage normal depth rating curves

Task 3.2 -- GIS Mapping

The consultant will develop a GIS project for the study area. It will include a GIS geodatabase that will serve as the repository for all key spatial data obtained or generated in Phase 1, and a project area based map that will provide the primary platform from which Phase 1 project maps and other deliverables will be generated. To the extent the budget allows, the GIS project will include:

- *Project Area Base Map*

  A base map will be created onto which spatial data created or generated during Phase 1 can be overlaid. The base map will include aerial imagery, topography, planning level data such as roads, trails, parcels, and jurisdictional boundaries.
- *Watercourses*

  Existing GIS watercourse location data will be obtained from Kittitas County. Channel locations will be reviewed and refined by comparing the mapped locations to aerial imagery and LiDAR data. Some watercourse segments will be too small to map via this process and therefore, field verification of select sites will be required to the extent the budget allows. The field effort is covered in a later task.
- *Irrigation Infrastructure – canals and ditches, diversion structures*

  GIS irrigation infrastructure layers will be obtained from appropriate sources. Irrigation channel locations will be reviewed and refined by comparing the mapped location to aerial imagery and LiDAR data. Irrigation structures that influence stream hydraulics will be identified and mapped. Stream crossing types will be identified (siphon, undershot, etc). Limited field verification of structure location and impact to the stream will be required.
- *Water Crossings*

  GIS data for water crossings (bridges, culverts) will be obtained from Kittitas County and the City of Ellensburg.
- *Fish passage barriers*

  A map showing fish passage barriers will be created based upon examination of aerial imagery, LiDAR data and existing photographs. Field verification of select sites will be completed to the extent the budget and property access allow.
- *Water rights and points of diversion*

  Water rights within the streams will be identified and locations mapped. Overlapping water rights will be noted where stream rights and irrigation district rights share a place of use.
- *Riparian habitat type and condition*

  GIS polygons will be created to identify riparian areas along the banks of the streams. Mapping will be general and will not identify specific species. Polygons will also be created to identify areas along streams where there is no significant riparian buffer.
- *Existing and historic side channels, off-channel ponds, and other floodplain habitat features*
- *WDFW Habitat Assessment Protocol Site Data*

  Stream segments will be identified where WDFW Habitat Assessment protocols can be applied to collect representative habitat characteristic data. This will include identification of

sites that were evaluated by the KCCD between 2003 and 2005, as well as sites that will be evaluated as part of this project. Key data for each sample site will be entered into tables can be queried within the GIS project.

- *Water quality 303(d) (impaired waterbody) data*
  A GIS layer will be created to identify existing point source water quality pollutant sites. This will be done only if point source data is available.
- *Historical flood sites and inundation areas*
  A GIS layer will be created to identify points along streams where flooding originates, flow paths and inundated land. This task will only be completed if reliable flood information is available.
- *FEMA flood mapping*
  Digital versions of existing FEMA flood maps will be input into the GIS project geodatabase and included on the project map.
- *Flood and erosion control facilities*
  A GIS layer will be created that identifies known flood and erosion control facilities (e.g., levee, revetments). Facilities will be identified by examining aerial imagery, LiDAR data, and through discussions with FCZD and KCCD staff.

Figures will be created within the GIS project to allow project team members to print physical maps to be taken into the field for site verification and to provide a consistent format for figures generated for the project report. ArcGIS Online maps will be used to allow the public and partners to view the collected data.

Figures showing the data generated above will be provided to the TAG for review and comment.

Lead: Consultant with GIS data input provided by project partners

Assumptions:

- The level of effort for this task cannot be fully determined until the project team has a clear understanding of which data sets exist in a compatible GIS format and which do not. The consultant will work with the project team to determine the GIS layers/data to create and who will create them.
- Many of the TAG members have firsthand knowledge of the watercourses and therefore, it is assumed that they will provide additional detail to improve the accuracy of the maps.

Deliverables:

- Integrate data into geodatabase per task 3.1
- Metadata for each GIS data file
- Figures showing key project data

Task 3.3 - Channel Characterization

General Channel Type Classification

All watercourses mapped in Task 3.3 will be assigned a channel type classification based upon the general categories below.

Primary irrigation canals and laterals that are owned, operated and maintained by a defined owner. ,

- Secondary irrigation channels that do not have a clear owner responsible for maintenance or managing flow
- Channels that convey natural flow generated from the watershed runoff. These channels my also convey irrigation return flows.
- Channels that convey water generated from springs,
- Sseasonal ditches, etc.

Habitat Classification

All watercourses mapped in Task 3.3 will be assigned a habitat classification following the completion of the field data collection, hydrology, hydraulic, and sediment tasks described below. Classification catagories will be determine by the consultant and members of the TAG.

Lead: FCZD and TAG

Assumptions:

- A characterization committee made of FCZD staff and TAG members will be formed to work on this task.

Deliverables:

- GIS layers will be updated / created to display the characterization information.
- A companion report to the GIS data will be produced with additional information.

Task 3.4 - Field Work

Significant field work is required to complete the Phase 1 assessment. A strategic field inspection plan will be developed to target key sites. The watersheds cover 394 square miles and contain approximately 270 stream miles which is very large. In addition, some landowners will not grant access, therefore, a strategic plan will be required. The field program will be comprised of two main components, a habitat survey and verification of GIS data.

Habitat Surveys

Physical habitat surveys will be conducted using the WDFW Habitat Assessment protocol from the Fish Passage Barrier and Surface Water Diversion Screening Assessment and Prioritization Manual (2009). Similar surveys have already been conducted by KCCD on Coleman Creek, Cherry Creek, and several of their tributaries between 2003 and 2005, and new habitat surveys will focus on areas that have not previously been analyzed. The WDFW habitat assessment methodology involves walking each stream

up to the end of fish use, evaluating all man-made features and assigning fish passage Priority Index (PI) and Screening Priority Index (SPI) scores. Each stream will be divided into reaches at each man-made feature and at significant changes in gradient, bed form, channel size, streamflow, or riparian condition. Each reach will be assessed for:

- Overall habitat quality
- Magnitude of spring flow influence
- Water temperature and turbidity
- Percent of each reach shaded by riparian vegetation
- In-stream cover density, including large woody debris (LWD), undercut banks, close overhanging vegetation, etc.
- Floodplain connectivity and extent of disconnected off-channel/side channel habitat.

More detailed measurements of habitat characteristics will be taken at representative sample sections within each reach. Where feasible, the Full Survey (FS) methodology will be used, resulting in sample sections totaling approximately 20% of total stream length. However, due to the scale of the project, the Reduced Sampling Full Survey (RSFS) may be used, which specifies one 180-foot long sample section in each reach. Habitat characteristics to be measured include:

- Length of each pool, riffle, and rapid in the sample section
- Wetted and scour line widths at the first two pools, riffles, and rapids found in each sample section
- Average channel depth
- Substrate composition for each habitat type (riffle, pool, or rapid)
- Channel gradient
- Channel entrenchment (floodprone width/bankfull width)

The data collected will be input into the "Survey X4" spreadsheet from WDFW. This spreadsheet will be used to calculate and summarize the total survey length, rearing area, spawning area, and adjusted production areas for each reach. The stream reaches examined will be identified in a GIS layer and key data will be placed in a GIS data table linked to each reach.

Lead: KCCD

Assumptions:

- Habitat survey will focus on areas that were not previously surveyed as part of the habitat surveys on Coleman and Cherry Creek conducted by KCCD from 2003 to 2005.
- Field inspections will only be completed for stream reaches where access is granted by the landowner.

Deliverables:

- Survey X4 spreadsheet
- GIS Layer with data tables.
- Integrate data into geodatabase per task 3.1

Fish Surveys

In coordination with the habitat surveys, the USFWS will conduct fish surveys of the study streams to determine fish presence, species diversity, and relative abundance. Surveys will be conducted via appropriate methods that may include backpack electrofishing, seining, tagging, and/or video monitoring. The objectives of these surveys are to (1) increase landowner knowledge and participation by establishing fish survey reaches on private and public property in the agricultural and forested areas of the watersheds, (2) collect baseline fish data for a Before-After Control Impact study protocol for monitoring the effectiveness of fish passage barrier removal projects, and (3) to determine if certain sub-watersheds are currently more or less productive for target species such as rainbow trout, which are a good indicator species for determining habitat suitability and production potential for other anadromous salmonids.

Lead: USFWS via a funding agreement with USBR. USFWS has equipment, trained personnel, and permits for conducting fish surveys. WDFW will be consulted and included in study plans where there is a potential for PIT tagging of fish in areas of interest to the steelhead Viable Salmonid Population project.

Assumptions:

- Enough landowners with significant streamside property will grant access to establish long term monitoring sites; MCFEG and/or KCCD can provide assistance via student interns.

Deliverables:

- Fish survey data will be collected and maintained in a spreadsheet or database and made available;
- An annual progress report for year 1 and a final report for year 2 will be prepared and disseminated to the stakeholders.

Verification of GIS Mapping

As part of the Habitat Survey field work described above, the KCCD will take the GIS Project maps created in Task 3.2 into the field to verify the accuracy of the feature data. Specific data to verify will include:

- Watercourse location and classification (includes all natural and man-made watercourses (irrigation canals, ditches, etc.)
- Irrigation diversion or intake structures
- Fish passage barriers
- Riparian habitat type and condition
- Water crossing dimensions (culverts, bridges, etc.)
- Flood and Erosion control features or facilities

Lead: KCCD and/or other team members and/or consultant

Assumptions:

- Sites where access is denied will not be examined.
- The KCCD field program may not cover all reaches and therefore, additional team partners or the consultant may complete additional verification site inspections.

Deliverables:

- Marked up maps will be provided to the consultant, who will use them to update the GIS project information.
- Integrate data into geodatabase per task 3.1

Task 3.5 – Water Rights Research

Water rights will be researched to identify points of diversion, ditch use and overlapping water rights holders and how it impacts potential water available from irrigation districts and private sources. Opportunities for water saving and efficiencies will be identified in order to increase in-stream flows.

Lead: KCCD and/or other team members or consultant.

Assumptions:

Deliverables:

- Map showing points of diversion, water rights and low-flow reaches, spreadsheet of water rights and scanned documents.

Task 3.6 – Stream Flow -- Hydrology

Stream discharges will be estimated to evaluate both habitat conditions and flood risk. For habitat, the primary goal will be to estimate "critical" low flows that impact fish passage, rearing, and migration. For flood hazards, the goal will be to estimate annual instantaneous peak flood discharges for each channel segment.

Stream gage records (from both existing and proposed gages) should provide significant insight into how flow distributes within each channel network. This gage data will be the primary source of data for low flow habitat assessment and for estimating bankfull or channel forming discharges which are important for both habitat and channel capacity assessments. The gages may provide some data that can be used to help predict flood magnitude and frequency; however, because large floods can be relatively rare, there may not be a significant event during the study period. Therefore, an alternative approach to estimating peak flood discharges is to build a hydrologic model of the combined watershed and to use it to create synthetic annual instantaneous peak discharge records at key sites. These records would be used to create flood frequency curves which would be used to estimate flood frequency discharges at the key sites. Because most major floods within the watershed are generated by rain-on-snow events, a model capable of simulating rain-on-snow runoff should be used. A hydrologic model will only be constructed if the input data required for the model are available and if the project budget is sufficient. Selection of the model will be done in consultation with members of the TAG.

Climate change may impact the magnitude, duration, and timing stream discharges. Information on climate change is evolving and changing rapidly. The consultant will conduct a limited review of the latest climate change prediction data and literature relevant to the Kittitas Valley, and will offer an opinion as to how stream habitat and flood hydraulic conditions may be affected. If a hydrologic model is developed for the combined watershed, it may be possible to use it estimate how stream flows will change under certain climate change scenarios. The findings of the climate change review will be discussed with the TAG to determine how to apply the findings to the investigation.

Lead: Consultant with input and review by TAG members

Assumptions:

- Discharge estimates will have a high degree of uncertainty due to limited gage data, groundwater, and inter-channel exchange.
- Climate change impacts will be based upon readily available opinions offered by climate change experts and agencies such as the USBR, USACE, WSDOT, etc.

Deliverables:

- Stream discharge estimates to the extent feasible) – low flow values important for habitat, bankfull / channel forming discharges, and annual instantaneous peak flooddischarges.
- Description of methods and results, as well as identification of key physical features that influence stream flow.

Task 3.7 – Channel Hydraulics

Due to overwhelming number and length of streams within the study area, it will not be possible to develop detailed hydraulic models of all stream reaches; therefore, the following approaches will be utilized to estimate hydraulic characteristics to evaluate both ecological conditions and flood hazards.

For Habitat –

- Hydraulic characteristics (flow depth and velocity) will be estimated at key locations throughout each channel network to classify hydraulic conditions for fish habitat. The locations will be selected by the consultant with input from TAG members. The focus of the habitat hydraulic analysis will be to estimate hydraulic conditions (depth and velocity) for critical low or other flows that limit or impact fish passage, rearing, and migration, as well as bankfull channel forming discharges. Normal depth calculations will be used to estimate depth and velocity at most sites, however, HEC-RAS numerical modeling may be used within reaches if, for example, a model is also needed to assess flood risk. For reaches with impaired or inadequate hydraulic conditions, hydraulic analysis will be used to test opportunities to improve conditions.

For Flood --

- The scope for this task will be developed following the identification of known flood problem sites and areas. Flood risk assessments will focus on areas currently or planned for

development and have known flooding issues (eg. Wilson Creek as it passes through the City of Ellensburg). The Consultant will work with the FCZD, KCCD, the City of Ellensburg and others to identify which areas should be evaluated and to determine whether numerical modeling or simpler methods are appropriate. The results will be presented as spatial data in the GIS project.

- Once enough information is gathered to identify flow changing barriers, structures and facilities, flood water routing will be identified and the flow accommodation needs of the system will be reviewed to determine the needs of the system to carry the 2-year, 10-year and 100-year flows.

Lead: Consultant with input from the FCZD

Assumptions:

- Topographic data sufficient for hydraulic calculations can be obtained from the LiDAR data or from the stream measurements obtained as part of the field habitat surveys.
- No topographic surveys will be completed, unless approved by the FCZD

Deliverables:

- Hydraulic calculations
- Hydraulic models and results
- GIS layers showing habitat and flood hydraulic characteristics integrated into geodatabase per task 3.1
- Channel accommodation needs will be determined.
- Written description of methods, assumptions and uncertainties.

Task 3.8 – Sediment Transport and Deposition

Sediment transport and deposition and its influence on channel morphology, habitat quality, and flood and erosion risk will be examined. General sediment transport and deposition trends along with substrate quality will be documented during the habitat field inspection task. This data will be considered when habitat quality is defined for each watercourse and sub-reach. For reaches with impaired or inadequate sediment conditions to support fish, opportunities to improve sediment conditions will be sought. For example in reaches devoid of gravel bed material, wood could be added to the channel bed to capture and retain course bed material.

For flooding, areas of excessive sediment deposition will be identified and the processes that are responsible for the deposition identified. An assessment will be completed to determine the impact the sediment has on flooding and erosion to determine if sediment management of some form should be considered as part of the overall plan to reduce flood and erosion risk.

Lead: Consultant

Assumptions:

Deliverables:

- Written description of sediment deposition sites, characteristics, and the impact the deposition is having on channel geomorphology, habitat, and flood/erosion risk.
- GIS maps showing sediment deposition areas.

Task 3.9 - Fire Impact to Habitat and Flood Hazards

Fire impacts and its influence on habitat, flood and erosion risk will be examined. Recent forest fires in portions of the upper watershed may produce elevated sediment transport levels to watershed streams and have destroyed habitat and changed the environment within the watersheds. The USFS has completed an analysis of potential sediment production and transport levels caused by the Table Mountain Fire. A new assessment of the impacts of the Snag Canyon Fire will be completed. The reports and assessments will be used to draw conclusions as to how the fires have affected habitat and flood characteristics within the basin streams, and future implications to the watershed.

Lead: Consultant

Assumptions:

- USFS reports will be provided by the FCZD
- If ample time exists to assess the impacts of future fires that cause significant damage the study area, those fires will be assessed

Deliverables:

- Assessment, based upon a review of the USFS report and completion of study for new fire burned areas, of the likely impact the recent forest fires will have on sediment transport and deposition
- Assessment of the impacts to habitat within and downstream of the fire burned area
- Written description of the impacts of the fire upon habitat, flood and erosion risk.
- GIS maps showing fire burned areas.

Task 4 – Alternative Screening and Evaluation Criteria

Screening and evaluation criteria will be developed to guide the selection of proposed actions in Phase 2. The 2009 Yakima Steelhead Recovery Plan lists the return of steelhead into the Upper Naneum Creek through the removal of fish passage barriers and other constraints as a priority action. The path to the Upper Naneum Creek is complicated and alternatives will need to be reviewed, discussed and consensus found in the form of a common path forward for fish management strategies. Based on the outcome, criteria will be chosen to guide the implementation of projects within the watershed. The consultant will lead discussions with the TAG and LAG to develop alternatives for discussion and to choose the best path forward, and will work closely with the FCZD and KCCD to develop draft criteria which will then be provided to the TAG and LAG for review and input.

Screening criteria will likely include:

- Feasibility
- Unacceptable risk to damage to property, infrastructure, or habitat.
- Current conditions/use

Evaluation criteria will be weighted and likely include:

- Salmon and Salmon Habitat benefit
- Irrigation benefit
- Flood and/or erosion benefit
- Impact to fluvial processes
- Impact to salmon and salmon habitat
- Impact to irrigation systems
- Sustainability
- Implementation feasibility
    - Permitability
    - Design complexity and cost
    - Construction complexity and cost
    - Maintenance requirements and cost

Lead: Consultant

Assumptions:

- None

Deliverables:

- Agreed to screening and evaluation criteria for Phase 2

Task 5 – Identification of Initial List of Actions

Task 3 will provide the project team with sufficient information and knowledge to identify limiting factors to salmon recovery, the most significant sites where habitat should be preserved or improved, and where flood and erosion hazards should be reduced. Limiting factors to salmon recovery should take into account all data collected in Task 3, including opportunities to preserve and enhance water quality; in-stream flow; in-stream, riparian, and off-channel habitat quality and abundance; floodplain connectivity; fish passage; and fish screening. One of the highest priorities for fish is to determine if there is a preferred route that should be preserved and/or enhanced to provide a path for fish to access upper portions of the watershed. The FCZD, TAG and consultant will use the information developed in Task 3 to determine if there is a path. If there is, and if improvements are needed to allow unobstructed fish passage, the team will identify and prioritize the improvements. In addition there may be other sites where early actions should be taken to improve habitat or to reduce flood / erosion risk. Up to three habitat and two flood and erosion projects will be identified for early action. For these sites, concept drawings, and cost estimates for design, permitting and construction will be prepared so that grant funding can be pursued.

Lead: FCZD, TAG, consultant

Assumptions:

- None

Deliverables:

- GIS layer that shows preferred fish passage route
- Early action concept sketches and cost estimates

Task 6 – GIS Project Database and Summary Report

The final products for Phase 1 will be the GIS project database, a companion summary report, and as needed individual task specific technical reports prepared by project partners. The GIS project will provide a comprehensive database that will be used to identify potential project sites in Phase 2. The summary report will document Phase 1 methods, results, and will present information that cannot be presented in spatial form.

Lead: Consultant

Assumptions:

- The FCZD will distribute the draft and final reports to the stakeholders.
- The FCZD will assemble all report comments and will provide them to the consultant

Deliverables:

- GIS Project as specified in Task 3.1
- Draft project report will be provided in PDF format to the FCZD.
- Final project report will be provided to the FCZD

Task 7 – Presentations of Results

Following the preparation of the project report, the findings will be presented to the TAG, LAG, and General public as specified in Task 2 above.

Lead: Consultant with assistance in and input from key partners.

Assumptions:

- Presentation will be in the form of Power Point

Deliverables:

- Power point presentations and other graphics

Task 8 – Phase 2 Scope Development

It is anticipated that Phase 2 will commence immediately following the completion of Phase 1, assuming required funding has been secured. The consultant will prepare a draft scope of work for Phase 2, and provide it to the FCZD and KCCD for review. An updated draft will then be presented to the TAG and LAG for review and comment.

Lead: Consultant

Assumptions:

- None

Deliverables:

- Draft Phase 2 scoping document for FCZD and KCCD review
- Updated Phase 2 scoping document for TAG and LAG review

Task 9 – Project Management

A consultant will be retained to manage Phase 1. This will include setting up the project schedule, coordinating all tasks including those to be carried out by the consultant and partner agencies. The consultant project manager will report directly to the FCZD project lead and will keep him/her informed on progress, issues, and budget. The consultant and FCZD project managers will determine the desired update method(s) and frequency.

Lead: Consultant

Assumptions:

- The consultant will strive to keep the project moving at a pace that will meet key project milestone dates. It is recognized, however, that due to the extensive collaborative work efforts that will be completed by partner agencies, it will be the responsibility of the partners to meet milestones for which they are responsible.

Deliverables:

- Project schedule with key milestone dates
- Progress reports
- Invoices

Kittitas County Naneum, Wilson, Cherry Creek Watershed Assessment -
Supplemental Assumptions

General Assumptions:

a. The Project Manager has the flexibility to shift effort between tasks to manage the tasks, deliverables, and overall project budget.
b. The project will be approximately 24 months in duration ending in November 2016.
c. Management Reserve hours will be released on a task by task basis only after written permission is received from the designated Kittitas County Public Works Representative.

Task 1.1-1.4 Project Goals and Objectives
Phone and Face to Face meetings

a. Jacobs Planner, and WSE, will participate in four meetings by conference call.
b. Jacobs Project Manager (PM) will participate in two meetings by conference call and two face to face meetings.
c. Kramer Consulting will participate in three meetings by conference call and one face to face meeting.
d. Preparation for four meetings with follow-up to prepare Agenda, Written Project Goals and Objectives, Meeting Minutes, and Problem Statement.

Task 2.1-2.2 – Stakeholder Engagement

a. Coordination for the stakeholder meeting and planning with key team members and Client will include the Jacobs Project Manager, Planning Lead, GIS lead, WSE and Kramer Consulting.
b. Produce and provide project brochure to client including information generated from task 1, maps, graphics, and editing, as well as input from Kramer Consulting on Floodplains by Design.
c. Brochures will be produced by KCFCZD or KCCD.
d. Project Kick-Off Meeting Attendance will include all three meetings on one day.

Task 2.3 – Project Website

a. Project website will be developed and maintained by Kittitas County with only minor support by the consultant including PDF Maps, agenda's, minutes, reports, and other materials which are largely generated under other tasks.
b. GIS staff will provide data updates quarterly to Kittitas County.

Task 2.4 Progress Reporting Updates

a. Due to a completion date of November 2016 for the SRF Board grant, eight quarterly Technical Advisory Group (TAG) and Landowner Advisory Group (LAG) meetings are planned instead of ten.
b. TAG and LAG updates are assumed to be on the same day.
c. Participation is expected in 8 updates of which 6 are conference calls and 2 are face to face meetings.
d. Jacobs Project Manager, WSE principle, and Jacobs Planner will participate in six meetings by conference call. Jacobs Project Manager and WSE principle will participate in two face to face meetings.
e. Progress report preparation and/or additional participation will include tasks for the Jacobs Project Manager, Planner, Biologist, and GIS staff time, with support and/or participation by WSE as needed

Task 2.5 Present Phase 1 Findings to TAG, LAG, and Public.

a. TAG, LAG and Public presentations are assumed to be on the same day.
b. Jacobs Project Manager, WSE principle, Jim Kramer will participate in three face to face presentations.

c. Preparation and/or additional participation will include Jacobs Project Manager, Planner, Biologist, graphics, and GIS staff time, with support and/or participation by WSE as needed

Task 2.6 – Alternatives Screening Criteria

a. Jacobs Project Manager, WSE principle, Jim Kramer will participate in one combined face to face TAG/LAG meeting.
b. Additional Technical Staff participation in the meeting and/or preparation may include Senior Biologist or GIS Lead Preparation, graphics, and GIS staff, with support and/or participation by WSE and Kramer Consulting as needed.

Task 3.1 – GIS Data Collection (Watershed Inventory)

a. 75% of all existing GIS data will be provided by client and project partners.
b. GIS Data from partners will be usable in the imported format, requiring little additional rectification.
c. All GIS and CAD data will be in a known coordinate system.
d. Jacobs is not responsible for the horizontal accuracy of existing GIS data.
e. If any existing data requires to be purchased, the cost will be absorbed by the client.
f. No hardcopy data sources will be digitized.
g. Project SharePoint site will be used for data warehousing and sharing and will be accessible by project team and partners.
h. SharePoint site will not include customized features.
i. Decision Making Framework will be developed using ArcGIS Model Builder.
j. Project geodatabase will be managed in ArcSDE/SQL Server.
k. All tabular data will be stored in project geodatabase.
l. Project geodatabase schema will be reviewed with the client and project partners to ensure inclusion of all pertinent information.

Task 3.1.1 Develop GeoDatabase and Decision Making Framework

a. ESRI's ArcSDE, an enterprise geodatagbase, will be setup on SQL Server for this project to allow versioning of data and multi-user editing.
b. The GIS Technical Lead will manage ArcSDE connections, versioning, and Citrix hosted ArcMap desktop.
c. Backups will be made weekly and there will be one server migration in the 24 month project lifespan.

Task 3.1.1 Develop GeoDatabase and Decision Making Framework

Jacobs is proposing a web map service to assist the project team with map access for development of a decision-making framework. The budget for this task is unknown, but is estimated based on past project experience at 60 hours.

Task 3.1.1 Data SharePoint site development/management

a. SharePoint will allow sharing of GIS and other project data.
b. Jacobs will establish, maintain, and manage a web-based "cloud" SharePoint site for access by the project team and partners. The budget for this task is unknown, but is estimated based on past project experience at $2,000 for the service and 40 hours management of 24 months.
c. There will be a maximum of 20 internal users and 10 external users.
d. There will be approximately 20 folders setup for sharing files.

Task 3.1.2 LiDAR Data

a. Four separate LiDAR data layers exist within the study area. Collection and rectifying of boundaries is limited to 80 hours.

b. Assumes that all LiDAR acquisition is complete.
c. All LiDAR data is classified as bare earth model.
d. No cost is assumed for acquisition of new aerial imagery.

Task 3.1.3 Stream Flow Data

a. WSE will lead, Jacobs assumes no role.
b. WSE will work with the client to Select Sites
c. Purchase and Install Gages. This includes:
   i. Gage purchase and prep
   ii. Gage Installation (10 units)
   iii. Assume one day for likely gage repairs over two years.
d. Establish Rating curves at various sites. Assume WSE will only establish a rating curve through discharge measurements at 4 sites and the other 8 we will establish some type of simple method.
   i. For 4 sites, assume six flow measurements each by team of two
   ii. For 8 sites perform one-time survey to either develop a rating curve for an existing control structure (irrigation weir) or to create a simple RAS model of channel.
e. Gage Data Downloads -- Assume two years so 12 trips (every other month) to download 10 gages.

Task 3.2 – GIS Mapping

a. Jacobs Project Manager, Biology and Planner will perform minimal coordination, review, and QC.
b. Assume minor technical QA, attribution, and digitizing/map production per data layer received.
c. Topology will not be corrected on source GIS data unless it is critical to the analysis model.
d. Map outputs will be provided in common file formats (PDF, JPEG).
e. Minimal metadata (capturing source information) will be created for source data if it does not exist.
f. Metadata meeting minimum FGDC standards will be created for altered or new GIS data layers.

Task 3.3 – Channel Characterization

a. Channel Classification
   WSE will lead the Channel Classification effort.
b. Habitat Classification
   i. KCFCZD will lead the habitat characterization effort with support from the interagency habitat group.
   ii. Jacobs will provide limited biology/habitat characterization support.
   iii. WSE will consult with Jacobs, habitat group and provide them with general qualitative hydrologic, hydraulic and sediment information to help them determine classifications.
c. Jacobs will provide GIS assistance and QA support for GIS products from WSE's GIS.
d. Minimal QA and collection time is allocated within the current budget for both channel and habitat characterization as it is intended that Jacobs will provide GIS assistance and QA support for GIS products from WSE's GIS, data produced by the KCFCZD, or interagency partners.
e. A companion report to the GIS data will be provided. The effort to produce this report is shared between Jacobs and WSE to document methods and resulting analysis.

Task 3.4 – Field Inspection

a. KCCD and USFWS will lead field work and GIS Mapping efforts with support from Jacobs and WSE.
b. Jacobs will provide data dictionaries based on project database to be used in field efforts by project partners.
c. Jacobs will provide GIS assistance and QA support for GIS products as part of the Strategic Field Inspection Plan and data incorporation into the geodatabase after the field inspections are completed and field conditions are verified.

d. After data is collected KCFCZD will post process the data before providing it to Jacobs for finalization and incorporation into the geodatabase.
e. Only final field verified data will be incorporated into project geodatabase.
f. Jacobs may provide GPS setup and data processing support.
g. Jacobs biologist will support KCCD and USFWS in field inspection work totaling 4-5 days.
h. WSE estimates support for field verification at 8 man field days.
i. Jacobs Project Manager will provide strategic support and QC planning/oversight of data acquisition and implementation.
j. Fish survey information and reports will be performed and completed by partners. These include completion of the Survey X4 spreadsheet, PI, and SPI scores will be completed by USFWS, WDFW or another entity, and provided to KCCD or KCFCZD in a format that is easily incorporated into the GIS geodatabase.
k. The level of effort for this task may need to be re-evaluated at the time of completion.

Task 3.5 – Water Rights Research

a. Water rights research will be completed by KCCD and/or the Washington water trust.
b. Any additional information needed to support this task will require supplemental budget and/or authorizations.

Task 3.6 – Stream Flow Hydrology

a. WSE will lead this task.
b. We are assuming at this point that money is not available and therefore, a hydrologic model will not be developed based on the following rationale:
    i. A useful hydrologic model of the basin would cost roughly $50,000 +/-, so we have assumed that a model will not be created, rather reliance will be placed on measured stream flow data.
    ii. For summer low flows, most of the water delivered to the streams will be produced by irrigation practices. Floods can be generated by either summer/fall thunderstorms, winter rain-on-snow events, or spring rains combined with ice melt.
    iii. Knowing this, WSE's approach to estimating flows will rely upon stream flow data records, combined with experience and judgment. This assumes that the stream gage network described above is established as part of this investigation.
b. If the stream flow data collection task is eliminated or postponed due to budget constraints, WSE will utilize what data is available. The client and stakeholders must understand that if the data collection effort is eliminated, stream flow estimates will have a much higher degree of uncertainty and will be based upon broad and general assumptions.
c. An allowance of approximately $30,000 is allocated to estimating stream flows. The exact methods used cannot be determined until the existing data has been reviewed and it is known whether additional data will be collected. Once these data issues have been sorted out, WSE will then develop an approach to the hydrology that will fit within the available budget.
d. If $30,000 is not adequate to provide at least the minimum level of stream flow data required, WSE will work with Jacobs and the project stakeholders to determine how best to proceed.
e. Jacobs Biologist will assist with QC for habitat low flow modeling parameters and QC of final product.

Task 3.7 – Channel Hydraulics

a. Jacobs Project Manager and Biologist will provide assistance with QC for habitat based hydraulic characterization, coordination with TAG, FCZD, and QC of final product.

b. An allowance of approximately $30,000 is allocated to estimating stream hydraulic data. The exact methods or locations where hydraulic information will be needed are unknown at this time and therefore, the allowance approach has been taken.
c. If $30,000 is not adequate to provide at least the minimum level of hydraulic data required, WSE will work with Jacobs and the project stakeholders to determine how best to proceed.

Task 3.8 – Sediment Transport and Deposition
a. WSE will lead this task.
b. Jacobs Project Manager and Biologist will assist with QC for the written report required on this task.

Task 3.9 – Fire Impact to Habitats and Flood Hazards
a. WSE will lead this task using qualitative judgments based upon insights gained from the recent fires.
b. Jacobs Project Manager, planner, and Biologist will assist with QC for the written report required on this task.

Task 4 – Alternatives Screening
a. Jacobs level of effort will include development of criteria and alternatives developed largely using client and stakeholder expectations, TAG and LAG input, field data and impact assessment and implementation feasibility developed as part of the assessment and compiled as part of other tasks.
b. Kramer consulting will assist to bring consistency with FbD criteria.
c. Minimal support will be provided by WSE.
d. Data layers created as a result of Task 3.1-3.10 will be used as is to identify alternatives
e. Alternatives will be developed in a GIS format and maintained in the project geodatabase.

Task 5 – Identification of Initial List of Actions
WSE will assist in the identification of sites by creating draft GIS Layer to be provided to Jacobs GIS team for cleanup and inclusion in database.

Task 6 – GIS Project Database and Summary Report
All tabular data generated during Task 3.1-3.10 will be consistent with parameters for use and storage in the project geodatabase.

Task 9 – Project Management
a. Health and Safety Plan (HASP) Development will cover all aspects of work and will require periodic updating as new activities are planned. Assume two updates during the project.
b. Progress reporting is assumed to include estimated costs to complete, updates to tasks, simple Earned Value estimate, budget management, performance review(s), etc.
c. Project Controls (contracting, invoices, other) as prime and with Sub-Consultants including contract details, documentation, updating, and finalization of invoices and monthly tracking requirements.
d. Development of project management planning documents including a Project Procedures Manual that includes QA/QC process, change management procedures, and communication protocol.

Exhibit C
Electronic Exchange of Engineering and Other Data

In this Exhibit the agency, as applicable, is to provide a description of the format and standards the consultant is to use in preparing electronic files for transmission to the agency. The format and standards to be provided may include, but are not limited to, the following:

I. Surveying, Roadway Design & Plans Preparation Section

A. Survey Data

Not anticipated at this stage.

B. Roadway Design Files

Not anticipated at this stage.

C. Computer Aided Drafting Files

AutoCAD LT 2015;

D. Specify the Agency's Right to Review Product with the Consultant

E. Specify the Electronic Deliverables to Be Provided to the Agency

To be determined

F. Specify What Agency Furnished Services and Information Is to Be Provided

To be determined

II. Any Other Electronic Files to Be Provided

Microsoft Office Products - Word, Excel, Powerpoint, Project
All spatial products will be compatible with ArcGIS 10 or later format.
The final GIS database will be delivered in a file geodatabase (.gdb).

III. Methods to Electronically Exchange Data

E-Mail, FTP site, Removeable Storage Device

A. Agency Software Suite

To be determined

B. Electronic Messaging System

To be determined

C. File Transfers Format

To be determined

Exhibit D-3
Payment (Negotiated Hourly Rate)

The CONSULTANT shall be paid by the AGENCY for completed work and services rendered under this AGREEMENT as provided hereinafter. Such payment shall be full compensation for work performed or services rendered and for all labor, materials, supplies, equipment, and incidentals necessary to complete the work. The CONSULTANT shall conform to all applicable portions of 48 CFR Part 31.

1. Hourly Rates: The CONSULTANT shall be paid by the AGENCY for work done, based upon the negotiated hourly rates shown in Exhibit "E" and "F" attached hereto and by this reference made part of this AGREEMENT. The rates listed shall be applicable for the first twelve (12) month period and shall be subject to negotiation for the following twelve (12) month period upon request of the CONSULTANT or the AGENCY. If negotiations are not conducted for the second or subsequent twelve (12) month periods within ninety (90) days after completion of the previous period, the rates listed in this AGREEMENT, or subsequent written authorization(s) from the AGENCY shall be utilized. The rates are inclusive of direct salaries, payroll additives, overhead, and fee. The CONSULTANT shall maintain support data to verify the hours billed on the AGREEMENT.

2. Direct Non-Salary Costs: Direct Non-Salary Costs will be reimbursed at the Actual Cost to the CONSULTANT. These charges may include, but are not limited to, the following items: travel, printing, long distance telephone, supplies, computer charges and sub-consultant costs.

    a. Air or train travel will be reimbursed only to economy class levels unless otherwise approved by the AGENCY. The CONSULTANT shall comply with the rules and regulations regarding travel costs (excluding air, train, and rental car costs) in accordance with the AGENCY'S Travel Rules and Procedures. However, air, train, and rental car costs shall be reimbursed in accordance with 48 CFR Part 31.205-46 "Travel Costs."

    b. The billing for Direct Non-Salary Costs shall include an itemized listing of the charges directly identifiable with the PROJECT.

    c. The CONSULTANT shall maintain the original supporting documents in their office. Copies of the original supporting documents shall be supplied to the AGENCY upon request.

    d. All above charges must be necessary for the services provided under this AGREEMENT.

3. Management Reserve Fund: The AGENCY may desire to establish a Management Reserve Fund to provide the Agreement Administrator with the flexibility to authorize additional funds to the AGREEMENT for allowable unforeseen costs, or reimbursing the CONSULTANT for additional work beyond that already defined in this AGREEMENT. Such authorization(s) shall be in writing and shall not exceed the lesser of $100,000 or 10% of the Total Amount Authorized as shown in the heading of this AGREEMENT. The amount included for the Management Reserve Fund is shown in the heading of this AGREEMENT. This fund may not be replenished. Any changes requiring additional costs in excess of the Management Reserve Fund shall be made in accordance with Section XIV, "Extra Work."

4. Maximum Total Amount Payable: The Maximum Total Amount Payable by the AGENCY to the CONSULTANT under this AGREEMENT shall not exceed the amount shown in the heading of this AGREEMENT. The Maximum Total Amount Payable is comprised of the Total Amount Authorized, and the Management Reserve Fund. The Maximum Total Amount Payable does not include payment for Extra Work as stipulated in Section XIV, "Extra Work." No minimum amount payable is guaranteed under this AGREEMENT.

5. Monthly Progress Payments: Progress payments may be claimed on a monthly basis for all costs authorized in 1 and 2 above. The monthly billing shall be supported by detailed statements for hours expended at the rates established in Exhibit "E", including names and classifications of all employees, and billings for all direct non-salary expenses. To provide a means of verifying the billed salary costs for the CONSULTANT'S employees, the AGENCY may conduct employee interviews. These interviews may consist of recording the names, titles, salary rates, and present duties of those employees performing work on the PROJECT at the time of the interview.

6. Final Payment: Final Payment of any balance due the CONSULTANT of the gross amount earned will be made promptly upon its verification by the AGENCY after the completion of the work under this AGREEMENT, contingent upon receipt of all PS&E, plans, maps, notes, reports, electronic data and other related documents which are required to be furnished under this AGREEMENT. Acceptance of such Final Payment by the CONSULTANT shall constitute a release of all claims for payment, which the CONSULTANT may have against the AGENCY unless such claims are specifically reserved in writing and transmitted to the AGENCY by the CONSULTANT prior to its acceptance. Said Final Payment shall not, however, be a bar to any claims that the AGENCY may have against the CONSULTANT or to any remedies the AGENCY may pursue with respect to such claims.

   The payment of any billing will not constitute agreement as to the appropriateness of any item and at the time of final audit, all required adjustments will be made and reflected in a final payment. In the event that such final audit reveals an overpayment to the CONSULTANT, the CONSULTANT will refund such overpayment to the AGENCY within thirty (30) days of notice of the overpayment. Such refund shall not constitute a waiver by the CONSULTANT for any claims relating to the validity of a finding by the AGENCY of overpayment. The CONSULTANT has twenty (20) days after receipt of the final POST AUDIT to begin the appeal process to the AGENCY for audit findings.

7. Inspection of Cost Records: The CONSULTANT and their sub-consultants shall keep available for inspection by representatives of the AGENCY, STATE and the United States, for a period of three (3) years after receipt of final payment, the cost records and accounts pertaining to this AGREEMENT and all items related to or bearing upon these records with the following exception: if any litigation, claim or audit arising out of, in connection with, or related to this contract is initiated before the expiration of the three (3) year period, the cost records and accounts shall be retained until such litigation, claim, or audit involving the records is completed.

Exhibit E-2
Consultant Fee Determination - Summary Sheet
(Specific Rates of Pay)
Fee Schedule

Discipline or Job Title	Hourly Rate	Overhead @ 1.15 %	Profit @ .30 %	Rate Per Hour
Project Manager/Quality Manager	84.13	96.7495	25.239	206.1185
Project Manager/Planner	56.68	65.182	17.004	138.866
Senior Biologist	52.88	60.812	15.864	129.556
Senior Planner	52.88	60.812	15.864	129.556
Senior GIS Analyist	54.33	62.4795	16.299	133.1085
GIS QA Lead (TBD)	38.47	44.2405	11.541	94.2515
GIS Analyist/Tech.	38.36	44.114	11.508	93.982
Photo/LiDAR Lead	44.71	51.4165	13.413	109.5395
Photo/LiDAR Technician	38.26	43.999	11.478	93.737
Enterprise GIS Specialist	43.38	49.887	13.014	106.281
System Lead	68.18	78.407	20.454	167.041
Technical Editor	40.90	47.035	12.27	100.205
Project Controls	57.01	65.5615	17.103	139.6745
Civil/Structural Engineer	34.05	39.1575	10.215	83.4225
		0	0	0
		0	0	0

Exhibit F
Breakdown of Overhead Cost

Account Title	$ Beginning Total	% of Direct Labor
Direct Labor		
Overhead Expenses:		
FICA		
Unemployment		
Health/Accident Insurance		
Medical Aid & Industrial Insurance		
Holiday/Vacation/Sick Leave		
Commission/Bonus/Pension		
Total Fringe Benefits		
General Overhead:		
State B&O Taxes		
Insurance		
Administration & Time Not Assignable		
Printing, Stationery & Supplies		
Professional Services		
Travel Not Assignable		
Telephone & Telegraph Not Assignable		
Fees, Dues & Professional Meetings		
Utilities & Maintenance		
Professional Development		
Rent		
Equipment Support		
Office, Miscellaneous & Postage		
Total General Overhead		
Total Overhead (General + Fringe)		
Overhead Rate (Total Overhead / Direct Labor)		

Exhibit G-2
Subconsultant Fee Determination - Summary Sheet
(Specific Rates of Pay)
Fee Schedule

Subconsultant

Watershed Science and Engineering

Discipline or Job Title	Hourly Rate	Overhead @ 169.58 %	Profit @ 30 %	Rate Per Hour
Senior Professional	66.35	112.51633	19.905	198.77133
Senior Engineer I	56.73	96.202734	17.019	169.951734
Senior Geomorphologist	40.87	69.307346	12.261	122.438346
Senior Engineer II	41.35	70.12133	12.405	123.87633
Junior Engineer	32.21	54.621718	9.663	96.494718
GIS Specialist	35.00	59.353	10.5	104.853
Contract Administrator	30.00	50.874	9	89.874
Engineering Intern	22.50	38.1555	6.75	67.4055
		0	0	0
		0	0	0
		0	0	0
		0	0	0
		0	0	0
		0	0	0
		0	0	0
		0	0	0
		0	0	0
		0	0	0
		0	0	0
		0	0	0

Exhibit G-3
Breakdown of Subconsultants Overhead Cost

Account Title	$ Beginning Total	% of Direct Labor
Direct Labor		
Overhead Expenses:		
FICA		
Unemployment		
Health/Accident Insurance		
Medical Aid & Industrial Insurance		
Holiday/Vacation/Sick Leave		
Commission/Bonus/Pension		
Total Fringe Benefits		
General Overhead:		
State B&O Taxes		
Insurance		
Administration & Time Not Assignable		
Printing, Stationery & Supplies		
Professional Services		
Travel Not Assignable		
Telephone & Telegraph Not Assignable		
Fees, Dues & Professional Meetings		
Utilities & Maintenance		
Professional Development		
Rent		
Equipment Support		
Office, Miscellaneous & Postage		
Total General Overhead		
Total Overhead (General + Fringe)		
Overhead Rate (Total Overhead / Direct Labor)		

Exhibit G-2B
Subconsultant Fee Determination - Summary Sheet
(Specific Rates of Pay)
Fee Schedule

Subconsultant

Kramer Consulting

Discipline or Job Title	Hourly Rate	Overhead @ _____ %	Profit @ ____ %	Rate Per Hour
Principle Public Involvement	183	0	0	183

DOT 140-089 EF Exhibit G-2
Revised 11/11

Exhibit H
Title VI Assurances

During the performance of this AGREEMENT, the CONSULTANT, for itself, its assignees, and successors in interest agrees as follows:

1. Compliance with Regulations: The CONSULTANT shall comply with the Regulations relative to non-discrimination in federally assisted programs of the AGENCY, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the "REGULATIONS"), which are herein incorporated by reference and made a part of this AGREEMENT.

2. Non-discrimination: The CONSULTANT, with regard to the work performed during the AGREEMENT, shall not discriminate on the grounds of race, color, sex, or national origin in the selection and retention of sub-consultants, including procurement of materials and leases of equipment. The CONSULTANT shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the REGULATIONS, including employment practices when the AGREEMENT covers a program set forth in Appendix B of the REGULATIONS.

3. Solicitations for Sub-consultants, Including Procurement of Materials and Equipment: In all solicitations either by competitive bidding or negotiations made by the CONSULTANT for work to be performed under a sub-contract, including procurement of materials or leases of equipment, each potential sub-consultant or supplier shall be notified by the CONSULTANT of the CONSULTANT'S obligations under this AGREEMENT and the REGULATIONS relative to non-discrimination on the grounds of race, color, sex, or national origin.

4. Information and Reports: The CONSULTANT shall provide all information and reports required by the REGULATIONS or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by AGENCY, STATE or the Federal Highway Administration (FHWA) to be pertinent to ascertain compliance with such REGULATIONS, orders and instructions. Where any information required of a CONSULTANT is in the exclusive possession of another who fails or refuses to furnish this information, the CONSULTANT shall so certify to the AGENCY, STATE or the FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.

5. Sanctions for Non-compliance: In the event of the CONSULTANT'S non-compliance with the non-discrimination provisions of this AGREEMENT, the AGENCY shall impose such AGREEMENT sanctions as it, the STATE or the FHWA may determine to be appropriate, including, but not limited to:

   - Withholding of payments to the CONSULTANT under the AGREEMENT until the CONSULTANT complies, and/or;
   - Cancellation, termination, or suspension of the AGREEMENT, in whole or in part

6. Incorporation of Provisions: The CONSULTANT shall include the provisions of paragraphs (1) through (5) in every sub-contract, including procurement of materials and leases of equipment, unless exempt by the REGULATIONS, or directives issued pursuant thereto. The CONSULTANT shall take such action with respect to any sub-consultant or procurement as the AGENCY, STATE or FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance.

Provided, however, that in the event a CONSULTANT becomes involved in, or is threatened with, litigation with a sub-consultant or supplier as a result of such direction, the CONSULTANT may request the AGENCY and the STATE enter into such litigation to protect the interests of the AGENCY and the STATE and, in addition, the CONSULTANT may request the United States enter into such litigation to protect the interests of the United States.

Exhibit I
Payment Upon Termination of Agreement By the Agency Other Than for Fault of the Consultant

(Refer to Agreement, Section IX)

Lump Sum Contracts

A final payment shall be made to the CONSULTANT which when added to any payments previously made shall total the same percentage of the Lump Sum Amount as the work completed at the time of termination is to the total work required for the PROJECT. In addition, the CONSULTANT shall be paid for any authorized extra work completed.

Cost Plus Fixed Fee Contracts

A final payment shall be made to the CONSULTANT which when added to any payments previously made, shall total the actual costs plus the same percentage of the fixed fee as the work completed at the time of termination is to the total work required for the Project. In addition, the CONSULTANT shall be paid for any authorized extra work completed.

Specific Rates of Pay Contracts

A final payment shall be made to the CONSULTANT for actual hours charged at the time of termination of this AGREEMENT plus any direct nonsalary costs incurred at the time of termination of this AGREEMENT.

Cost Per Unit of Work Contracts

A final payment shall be made to the CONSULTANT for actual units of work completed at the time of termination of this AGREEMENT.

Exhibit K
Consultant Claim Procedures

The purpose of this exhibit is to describe a procedure regarding claim(s) on a consultant agreement. The following procedures should only be utilized on consultant claims greater than $1,000. If the consultant's claim(s) are a total of $1,000 or less, it would not be cost effective to proceed through the outlined steps. It is suggested that the Director of Public Works or Agency Engineer negotiate a fair and reasonable price for the consultant's claim(s) that total $1,000 or less.

This exhibit will outline the procedures to be followed by the consultant and the agency to consider a potential claim by the consultant.

Step 1 – Consultant Files a Claim with the Agency Project Manager

If the consultant determines that they were requested to perform additional services that were outside of the agreement's scope of work, they may be entitled to a claim. The first step that must be completed is the request for consideration of the claim to the Agency's project manager.

The consultant's claim must outline the following:

- Summation of hours by classification for each firm that is included in the claim;
- Any correspondence that directed the consultant to perform the additional work;
- Timeframe of the additional work that was outside of the project scope;
- Summary of direct labor dollars, overhead costs, profit and reimbursable costs associated with the additional work; and
- Explanation as to why the consultant believes the additional work was outside of the agreement scope of work.

Step 2 – Review by Agency Personnel Regarding the Consultant's Claim for Additional Compensation

After the consultant has completed step 1, the next step in the process is to forward the request to the Agency's project manager. The project manager will review the consultant's claim and will met with the Director of Public Works or Agency Engineer to determine if the Agency agrees with the claim. If the FHWA is participating in the project's funding, forward a copy of the consultant's claim and the Agency's recommendation for federal participation in the claim to the WSDOT Highways and Local Programs through the Region Local Programs Engineer. If the claim is not eligible for federal participation, payment will need to be from agency funds.

If the Agency project manager, Director of Public Works or Agency Engineer, WSDOT Highways and Local Programs (if applicable), and FHWA (if applicable) agree with the consultant's claim, send a request memo, including backup documentation to the consultant to either supplement the agreement, or create a new agreement for the claim. After the request has been approved, the Agency shall write the supplement and/or new agreement and pay the consultant the amount of the claim. Inform the consultant that the final payment for the agreement is subject to audit. No further action in needed regarding the claim procedures.

If the Agency does not agree with the consultant's claim, proceed to step 3 of the procedures.

Step 3 – Preparation of Support Documentation Regarding Consultant's Claim(s)

If the Agency does not agree with the consultant's claim, the project manager shall prepare a summary for the Director of Public Works or Agency Engineer that included the following:

- Copy of information supplied by the consultant regarding the claim;
- Agency's summation of hours by classification for each firm that should be included in the claim;
- Any correspondence that directed the consultant to perform the additional work;
- Agency's summary of direct labor dollars, overhead costs, profit and reimbursable costs associated with the additional work;
- Explanation regarding those areas in which the Agency does/does not agree with the consultant's claim(s);
- Explanation to describe what has been instituted to preclude future consultant claim(s); and
- Recommendations to resolve the claim.

Step 4 – Director of Public Works or Agency Engineer Reviews Consultant Claim and Agency Documentation

The Director of Pubic Works or Agency Engineer shall review and administratively approve or disapprove the claim, or portions thereof, which may include getting Agency Council or Commission approval (as appropriate to agency dispute resolution procedures). If the project involves federal participation, obtain concurrence from WSDOT Highways and Local Programs and FHWA regarding final settlement of the claim. If the claim is not eligible for federal participation, payment will need to be from agency funds.

Step 5 – Informing Consultant of Decision Regarding the Claim

The Director of Public Works or Agency Engineer shall notify (in writing) the consultant of their final decision regarding the consultant's claim(s). Include the final dollar amount of the accepted claim (s) and rationale utilized for the decision.

Step 6 – Preparation of Supplement or New Agreement for the Consultant's Claim(s)

The agency shall write the supplement and/or new agreement and pay the consultant the amount of the claim. Inform the consultant that the final payment for the agreement is subject to audit.

Exhibit M-1(a)
Certification Of Consultant

Project No. _____

Local Agency

I hereby certify that I am _____ and duly authorized representative of the firm of Jacobs Engineering Group Inc. whose address is _____ and that neither I nor the above firm I here represent has:

(a) Employed or retained for a commission, percentage, brokerage, contingent fee, or other consideration, any firm or person (other than a bona fide employee working solely for me or the above CONSULTANT) to solicit or secure the AGREEMENT;

(b) Agreed, as an express or implied condition for obtaining this contract, to employ or retain the services of any firm or person in connection with carrying out this AGREEMENT; or

(c) Paid, or agreed to pay, to any firm, organization or person (other than a bona fide employee working solely for me or the above CONSULTANT) any fee, contribution, donation, or consideration of any kind for, or in connection with, procuring or carrying out this AGREEMENT; except as hereby expressly stated (if any);

I acknowledge that this certificate is to be available to the Washington State Department of Transportation and the Federal Highway Administration, U.S. Department of Transportation in connection with this AGREEMENT involving participation of Federal-aid highway funds, and is subject to applicable State and Federal laws, both criminal and civil.

_____ Date

_____ Signature

Exhibit M-1(b)
Certification Of Agency Official

I hereby certify that I am the AGENCY Official of the Local Agency of Kittitas County Public Works, Washington, and that the consulting firm or its representative has not been required, directly or indirectly as an express or implied condition in connection with obtaining or carrying out this AGREEMENT to:

(a) Employ or retain, or agree to employ to retain, any firm or person; or

(b) Pay, or agree to pay, to any firm, person, or organization, any fee, contribution, donation, or consideration of any kind; except as hereby expressly stated (if any):

I acknowledge that this certificate is to be available to the Washington State Department of Transportation and the Federal Highway Administration, U.S. Department of Transportation, in connection with this AGREEMENT involving participation of Federal-aid highway funds, and is subject to applicable State and Federal laws, both criminal and civil.

Date

Signature

Exhibit M-2

Certification Regarding Debarment, Suspension, and Other Responsibility Matters-Primary Covered Transactions

I. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

A. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;

B. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission or fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction; violation of federal or state antitrust statues or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

C. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (I) (B). of this certification; and

D. Have not within a three (3) year period preceding this application/proposal had one or more public transactions (federal, state, or local) terminated for cause or default.

II. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Consultant (Firm): Jacobs Engineering Group Inc.

_____ (Date)

_____ (Signature) President or Authorized Official of Consultant

Exhibit M-3
Certification Regarding The Restrictions of The use of Federal Funds for Lobbying

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

1. No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts which exceed $100,000 and that all such subrecipients shall certify and disclose accordingly.

Consultant (Firm): Jacobs Engineering Group Inc.

_____ (Date)

_____ (Signature) President or Authorized Official of Consultant

Exhibit A-1
Scope of Work

Project No. _____

See attached Scope of Work dated September 19, 2014; whereas the CONSULTANT shall not perform services exceeding the cumulative amount specified for the tasks in the Scope of Service and authorized by this contract. This Scope of Work prepared by the CLIENT is estimated to cost $652,378. This amount is authorized for expenditure; however, it is conditionally limited to $532,680 until additional funds are acquired and authorized by the CLIENT. Until that time, the following work totaling $119,698 will be delayed and authorized at a later date and/or eliminated by the CLIENT: Kramer Consulting Public Involvement/Floodplain by Design consistency (multiple sub-tasks) $17,951; Task 100 Management Reserve $28,997; Task 2.5 - Phase 1 Presentation (multiple sub-tasks/Three meetings) $12,424; Task 2.6 - Alternative Screening Criteria Meetings and Preparation $7,139; Task 6 - Complete Project GIS Database (Multiple sub-tasks) $27,296; Task 7 - Present Results to TAG/LAG/Public $11,021; Task 8 - Phase 2 Scope Development $14,870

Documents To Be Furnished By The Consultant

Jacobs Supplemental Assumptions by task number December 22, 2014

Level of Effort/Estimate December 24, 2014