

Fiscal Year 2008 Application Form

for

Centennial Clean Water Fund (Centennial)

Federal Clean Water Act Section 319

Nonpoint Source Fund (Section 319)

Washington State Water Pollution Control

Revolving Fund (SRF)

Financial Assistance

*Please carefully follow the Application Instructions
to help you complete a successful application.*

*The Application Instructions will also help you determine
the priority and eligibility of funding for projects.*

The Application Instructions immediately follow Part 3 of the Application.

This FY 2008 Application Form and other resources needed can be found at:

<http://www.ecy.wa.gov/programs/wq/funding/2008>

If you need this document in an alternate format, please contact us at 360-407-6502. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

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FY 2008 Water Quality Financial Assistance Application - Part 1



Fiscal Year 2008 Funding Application
 Centennial Clean Water Fund (Centennial)
 Federal Clean Water Act Section 319
 Nonpoint Source Fund
 Washington State Water Pollution Control
 Revolving Fund (SRF)

ECOLOGY USE

Application no. _____

See Part 3 of the Application for Application Instructions

| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| 1. PROJECT TITLE: <i>(Five words or less)</i> Biological Impairment Pollution Source Identification | |
| 2. APPLICANT NAME: <i>(Public body or private not-for-profit group per IRS 501 (C) (3))</i> Clallam County | 3. FEDERAL IDENTIFICATION NO: 91-6001298 |
| 4. APPLICANT SIGNATORY: <i>(The person whose name is listed here must sign Box 12 of this application)</i> | |
| Name: Robert Robertsen | |
| Title: Director, Department of Community Development | Telephone Number: 360-417-2323 |
| Address: 223 E. 4 St., Suite 5, Port Angeles, WA 98362 | |
| 5. APPLICANT STAFF CONTACT: | |
| Name: Ed Chadd | |
| Title: Co-manager, Streamkeepers | Telephone Number: 360-417-2281 E-Mail Address: streamkeepers@co.clallam.wa.us |
| Address: 223 E. 4 St., Suite 5, Port Angeles, WA 98362 | |
| 6. PROJECT INFORMATION: | |
| What is the population in the PROJECT area? 70,000 (est.) | |
| Is the PROJECT located in a basin with salmonid stocks listed as threatened or endangered in accordance with the Endangered Species Act? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| Is the PROJECT statewide? | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| <i>If NO, list county(ies), Water Resource Inventory Area designation(s), Legislative district(s), and Congressional district(s) where at least five percent of the PROJECT will be accomplished BELOW.</i> | |

Please Note: The total of each separate designation (County, Legislative District, Congressional District, and WRIA) must equal 100 percent (list from greatest to least percentage, and please break any ties by at least one percentage point).

| County(ies) for the Project: | |
|------------------------------|-------------|
| Name | Percent |
| Clallam County | 100% |
| | |
| | |

| State Legislative District(s) for the Project: | | | |
|------------------------------------------------|------------------------|-------------|--|
| | Number | Percent | |
| | 24th | 100% | |
| | | | |
| | | | |

| Congressional District(s) for the Project: | | | |
|--------------------------------------------|-----------------------|-------------|--|
| | Number | Percent | |
| | 6th | 100% | |
| | | | |
| | | | |

| Water Resource Inventory Area(s) for the Project: | | | |
|---------------------------------------------------|-----------|------------|--|
| | Number | Percent | |
| | 18 | 68% | |
| | 19 | 24% | |
| | 20 | 4% | |
| | 17 | 4% | |

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Provide the following geographic location information for your project. The longitude and latitude of various project sites and maps can be obtained with information provided in the *Application Instructions*. For projects where there is not a discrete location (e.g., area-wide public education and communication project), use the central point within the project boundary (polygon) for the location.

| NOTE | Site | WRIA | R | T | S |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------------|----|----|----|
| We are asking you for up to five (5) map coordinates to form "polygon(s)" of up to three (3) sites that your proposed project will target. (See <i>Application Instructions</i> for more detail, sources of maps, and latitude and longitude information.) | <i>Jimmycomelately 0.2a & 0.4 & 0.6</i> | 17 | 3 | 29 | 12 |
| | <i>Bagley 0.1</i> | 18 | 5 | 30 | 8 |
| | <i>Bagley 0.7</i> | 18 | 5 | 30 | 9 |
| | <i>Bagley 1.2 & 1.8</i> | 18 | 5 | 30 | 16 |
| | <i>Bell 0.1</i> | 18 | 3 | 30 | 22 |
| | <i>Bell 0.5 & 0.8</i> | 18 | 3 | 30 | 21 |
| | <i>Bell 1.8</i> | 18 | 3 | 30 | 20 |
| | <i>Cassalery 0.5 & 0.6 & 1.1</i> | 18 | 3 | 30 | 5 |
| | <i>Cassalery 1.6</i> | 18 | 3 | 30 | 6 |
| | <i>Dungeness 11.6</i> | 18 | 4 | 29 | 12 |
| | <i>Ennis 0.1</i> | 18 | 6 | 30 | 0 |
| | <i>Ennis 1.4 & 1.6</i> | 18 | 6 | 30 | 13 |
| | <i>Lees 0.1</i> | 18 | 6 | 30 | 12 |
| | | <i>Morse 0.3</i> | 18 | 5 | 30 |
| <i>Morse 1.1</i> | | 18 | 5 | 30 | 8 |
| <i>Morse 1.8</i> | | 18 | 5 | 30 | 17 |
| <i>Peabody 0.2 & 0.5 & 1.0</i> | | 18 | 6 | 30 | 0 |
| <i>Valley 0.4</i> | | 18 | 6 | 30 | 0 |
| <i>Clallam 2.4</i> | | 19 | 12 | 32 | 28 |
| <i>Hoko 3.2a</i> | | 19 | 13 | 32 | 22 |
| <i>Lyre 0.8a</i> | | 19 | 9 | 31 | 21 |
| <i>Lyre 4.2</i> | | 19 | 9 | 30 | 10 |
| <i>Pysht 4.2</i> | | 19 | 11 | 31 | 17 |
| <i>Pysht 6.5</i> | | 19 | 12 | 31 | 13 |
| <i>Lake 0.6</i> | | 20 | 13 | 29 | 4 |

7. PROJECT DURATION: (See *Application Instructions*)

Anticipated Start Date: August 15, 2006

Project Length: 38 months

Anticipated Project Completion Date: 8/31/10

For Water Pollution Control Facility Construction projects, indicate the anticipated Initiation of Operation Date: _____

8. PROJECT TYPE:

Note - For all projects:

Water body directly affected: (List all, including segment, reach, etc.)

See list above

or

Statewide

Is water body listed on the Clean Water Act Section 303(d) List as impaired? Yes No

If yes, what is the 303(d) listing identification? These segments will be listed in Category 5 once the 2006 list is finalized.

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Type(s) of water bodies that the proposal targets : *(check all targeted)*

- Freshwater rivers
- Freshwater lakes
- Freshwater wetlands
- Ground water
- Direct marine water
- Saltwater estuary
- Other (specify)_____

Type of target the proposed project addresses : *(check all targeted)*

- Wastewater treatment plant needs
- Water reclamation and reuse
- Stormwater pollutant control needs
- Best management practices (specify)_____
- Riparian restoration
- Endangered salmonids
- Threatened salmonids
- Other Endangered Species Act protected species (identify) bull trout, bald eagle, several amphibian species, Puget Sound coho* (*candidate species)
- Commercial shellfish habitat
- Recreational shellfish habitat
- Pollutant control of impaired domestic water supply
- Public health needs (public health emergency or severe public health hazard)
- Public education and communication
- Other (specify) Pollution source identification of biologically-impaired stream segments on the 303(d) list

9. For Water Pollution Control *ACTIVITY* projects only:

a) If your project proposal is **primarily to accomplish planning, please check and complete:**

- Planning project to target:** *(check all that are applicable and describe in Part 2)*
- Clean Water Act, Section 303(d)-listed problem area (see "303(d)-listed Problem Areas" in the *Nonpoint Source Plan, Volume 1* at: http://www.ecy.wa.gov/programs/wq/nonpoint/nps_plan.html#plan_vol1)

- Ground water quality
- Surface water quantity
- Air quality from wind-blown dust
- Public health
- Commercial shellfish beds
- Recreational shellfish beds
- Domestic water supply
- Salmonid stock status
- Public education and communication
- Other: Pollution source identification of biologically-impaired stream segments on the 303(d) list

b) If your project proposal is **primarily targeting "Implementation," please check and complete:**

- Implementation project**

In the space provided below provide a full reference for the plan(s) you are implementing, including the action and page where the action can be found. Review the information on the 9 key criteria for implementation projects identified in the application instructions.

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Will the proposed project *itself* result in a load reduction of Nitrogen, and/or Phosphorus, and/or Sediment? Yes No

If yes, please check the applicable boxes below.

NOTE: The recipient of financial assistance will be responsible for reporting the annual load reduction results.

| | | |
|---------------------------------------------------------------|------------|--------------------------|
| Nutrient and sediment levels (including, but not limited to): | Nitrogen | <input type="checkbox"/> |
| | Phosphorus | <input type="checkbox"/> |
| | Sediment | <input type="checkbox"/> |

Will the proposed project target reduction of other constituents not listed above? Yes No

If yes, please check below:

| | | |
|------------------------------------------------|----------------|--------------------------|
| The proposed project will target reduction of: | Total Coliform | <input type="checkbox"/> |
| | Fecal Coliform | <input type="checkbox"/> |
| | Others? | <input type="checkbox"/> |

Please list: _____

Does your project involve riparian restoration? Yes No

If yes, please check those riparian values that can be demonstrated as measurably improved (quantitatively):

| | | |
|--------------------|--------------------------|-------|
| Shade | <input type="checkbox"/> | |
| Bank stability | <input type="checkbox"/> | |
| Organic litter | <input type="checkbox"/> | |
| Large woody debris | <input type="checkbox"/> | |
| Other (list) | <input type="checkbox"/> | _____ |

10. For Water Pollution Control *FACILITY* projects only:

Check only **one** of the six boxes below that represents the present proposal, but complete **all** prerequisite planning dates and include attachments noted.

| Proposal to obtain financial assistance for: | Prerequisite planning approval dates: |
|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Combined comprehensive, general sewer, or stormwater plan with a facilities plan | Not Applicable |
| <input type="checkbox"/> Site specific facility planning (Step 1) | Provide the date of the approved comprehensive plan that identifies the need for your project. Date of Ecology Approval: _____ (attach a copy of approval letter) |
| <input type="checkbox"/> Design (Step 2) | Provide the date of the approved facilities plan ¹ and any amendments. Date of Ecology Approval: _____ (attach a copy of approval letter) |
| <input type="checkbox"/> Construction (Step 3) | Provide the date of the approved plans and specifications and any addenda. Date of Ecology Approval: _____ (attach a copy of approval letter) |
| <input type="checkbox"/> Design and construction (Step 4) | Provide the date of the approved facilities plan and any addenda. Date of Ecology Approval: _____ (attach a copy of approval letter) |
| <input type="checkbox"/> Alternative contracting/service agreement | Provide the date of the approved facilities plan, engineering report ² , or general sewer plan and any addenda. Date approved: _____ (attach a copy of approval letter and other alternative contracting/service agreement documentation) |

¹ Site specific planning documents must be approved as "facilities plans"; plans approved as "engineering reports" will not suffice.

² If an engineering report or general sewer plan is submitted, a facilities plan must subsequently be submitted and approved.

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| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| Do you have an Ecology permit for this project? <input type="checkbox"/> Yes <input type="checkbox"/> No For wastewater facilities, provide information on effluent limits: | If yes, provide permit number: _____ BOD: _____mg/l TSS: _____mg/l |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|

For domestic wastewater and stormwater construction projects, provide the following:

Is a financial hardship assistance loan and/or grant being requested? Yes No

If yes, a Financial Hardship Analysis Form must be included with this application. (See the *FY 2008 Guidelines*, for more information.)

11. REFINANCE: (*Water Pollution Control Facility Projects only*)

If this is an application for interim or standard refinance, please mark the appropriate box. Interim Standard

If this is a standard refinance project, complete Part 3 of this application form along with Part 1 (you do not need to complete Part 2). If this is an interim refinance project, you need complete only Parts 1 and 2. If the standard refinance box is checked, attach a copy of the Declaration of Construction of Water Pollution Control Facilities.

12. FUNDING REQUEST: (*Identify the amount of funding requested to complete your project.*)

Facilities projects (including planning, design, and construction) are eligible for loan funds only.

| <i>Cross check for consistency with costs and requests in Part 2, Question 11, "Budget"</i> | Project Amount & Terms: |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Total Project Cost This amount represents the full cost of the project. | \$ <u>269,985.63</u> |
| Eligible Project Cost This amount represents that portion of the project cost that is eligible for Ecology grant or loan assistance. | \$ <u>269,985.63</u> |
| Ecology Grant Request (Activity Projects Only) This amount represents the Ecology grant request at 75 percent (0.75 multiplied by the total eligible project cost) for an activity project. Please note project ceiling amounts and match requirements. Refer to the <i>FY 2008 Funding Guidelines</i> , Volume 1. | \$ <u>164,490.00</u> |
| Ecology Loan Request (Activity or Facility Projects) This amount represents the Ecology loan request, up to 100 percent of the eligible project cost. Refer to the <i>FY 2008 Funding Guidelines</i> , Volume 1, for loan term and interest rate options. | \$ _____ Term: _____ years Interest rate: _____% |
| Federal Funds in Project (Activity Projects Only) Identify any source(s) of federal funds anticipated to complete the project. Federal agency _____ Federal agency _____ Federal agency _____ | Amount requested (or to be requested) from these agencies: \$ _____ \$ _____ \$ _____ |

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| If grant funds are not offered for your project, would you accept loan funds for part or all of the eligible project cost? (Answers will not affect your grant request priority.) <div style="text-align: center;"> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No </div> | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

| | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| If yes, indicate the total amount of Ecology loan funds you would accept, the loan term, and the interest rate. Refer to the <i>FY 2008 Funding Guidelines</i> , Volume 1, for loan term and interest rate options. | \$ _____ Term: _____ years Interest rate: _____% |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|

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13. PROJECT SUMMARY: *(50 words or less)*

TMDLs for biologically-impaired sites on the 303(d) list require an additional first step: identification of pollution and/or pollutants causing the biological impairment. Streamkeepers proposes to perform this "stressor identification" using EPA guidance documents, helping Ecology to develop a standardized investigative process and facilitating or obviating TMDLs at these sites.

14. APPLICATION CERTIFICATION:

I CERTIFY TO THE BEST OF MY KNOWLEDGE THAT THE INFORMATION IN THIS APPLICATION IS TRUE AND CORRECT AND THAT I AM THE LEGALLY AUTHORIZED SIGNATORY OR DESIGNEE FOR THE SUBMITTAL OF THIS INFORMATION ON BEHALF OF THE APPLICANT.

Robert P. Robertsen

Printed Name

Signature

Director, Department of Community Development

October 30, 2006

Title

Date

15. APPLICATION SUBMITTAL INFORMATION:

Send one original (containing an original signature) and four copies of the entire application package to:

U.S. Postal Mailing Address:

Department of Ecology
 Water Quality Program
 Financial Management Section
 P.O. Box 47600
 Olympia, WA 98504-7600

Overnight Mail or Hand Delivery Address:

Department of Ecology
 Water Quality Program
 Financial Management Section
 300 Desmond Drive
 Lacey, WA 98503

Applications must be received at the Department of Ecology (Lacey Headquarters Office) no later than 5:00 p.m. on Tuesday, October 31, 2006. Facsimile or electronic delivery of applications will NOT be accepted as the primary means of transmittal (see below).

You must submit:

- One (1) signed paper original, and
- Four (4) paper copies.
- To help Ecology process your application, PLEASE ALSO send the application in MS Word or compatible format via floppy disk (or CD) along with your paper submittal. Disks should be marked with the Project Title and Applicant Name. Disks will only be used by Ecology and only for processing your application.

To verify delivery of the application by the deadline, consider using return receipt mail.

THIS CONCLUDES PART 1

FY 2008 Water Quality Financial Assistance Application – Part 2

Throughout the application, the project must directly address the problem causing the water quality impairment(s). The maximum number of priority points possible and considerations that evaluators will use to assign priority points are outlined at the beginning of the Application and are explained in the Application Instructions.

SECTION I. SUMMARY OF PROBLEM AND SOLUTION

1. Summarize the overall water quality problem and how it will be solved or addressed by the project.

(Provide a map of the general area and a sketch of the project area on the map. For an example, see the Application Instructions. Limit your answer to one page or less.)

Describe the problem and solution:

For Ecology's 2004 Water Quality Assessment Report, Streamkeepers helped to set a precedent by demonstrating biological impairment on a number of stream segments, based on benthic macroinvertebrate data. (This was the first time such data had been submitted for the Water Quality Assessment Report, and the only other party submitting such data was Ecology itself.) Our 2006 data submittal for the Water Quality Assessment Report, due 11/7/06, will include additional biologically-impaired stream segments, ranging across Clallam County (see map). Under the September 2006 revision of Ecology's Water Quality Program Policy, such segments will automatically be listed in Category 5 [the 303(d) list], and as such will be in need of TMDLs and cleanup plans. However, a prior step will be necessary to the formulation of these TMDLs: identification of the pollutants (if any) causing the biological impairment. Streamkeepers proposes to work on a pilot project to develop a systematic approach to investigate causal factors, using tools such as EPA's Stressor Identification document and CADDIS software. This will help Ecology develop a standard process for investigating biologically-impaired sites; and for the biologically-impaired segments that have been identified, it will either render future TMDL investigations unnecessary (if no pollutants are found or the problem gets resolved at the local level in the meantime) or help facilitate them if needed.

Biological data is arguably the most comprehensive measure of the health of an aquatic ecosystem, because any significant disturbance of that system will reflect itself in the biology. Past interpretations of the Clean Water Act have narrowed the focus to specific water pollutants, but the Act is far broader in its scope, aiming to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." And increasingly, the EPA and other states are encouraging biological assessment as a key—perhaps THE key—tool to assess aquatic resource condition, because of its breadth of scope.

Existing studies and reports indicate that in many cases, the biological impairments found in Clallam County are influenced by specific pollutants such as:

- Heat from lack of forest cover
- Sediment from upland and in-channel erosion
- Nutrients from fertilizers and increased solar exposure
- Turbidity, toxics and pathogens from stormwater runoff and septic systems
- Low dissolved oxygen from a variety of causes, including inadequate shading

In some cases, data exists documenting such pollutants. In other cases, the data is inadequate. In other cases, non-pollutant pollution factors may be the primary cause, such as hydrologic disturbance or exotic invasive plants. This project would enable more specific determination of causal factors leading to biological impairment. Such information would either determine that a TMDL was not necessary (if the pollution doesn't involve any state-designated pollutants), or facilitate a TMDL if necessary, by performing an essential first step. Alternatively, the information generated could render TMDLs unnecessary by leading to implementation of local solutions, through such local planning efforts as County ordinance revision and multi-stakeholder efforts in watershed planning and salmon recovery.

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SECTION II. WHAT SPECIFIC PUBLIC HEALTH AND WATER QUALITY THREATS OR IMPAIRMENTS ARE BEING CAUSED BY THE WATER QUALITY PROBLEM?

Special Public Health Hazard Determination (rare circumstances): (Respond to the following question [2] only if there is a documented public health emergency or hazard as described in this question.)

2. Is the public presently exposed to unrestricted contact with inadequately treated surfacing septage or raw sewage in a widespread area of human habitation (throughout a substantial portion of a town, city, tribal reservation, etc.) that places the remainder of the area or community in a significant or unacceptable health risk?

Yes No

Note: If you believe the Answer to Question 2 is Yes, see Application Instructions for necessary guidance before you check and describe any of the following:

- “Public Health Emergency” declared by the State Department of Health
 “Severe Public Health Hazard” declared by the State Department of Health
 “Severe Public Health Hazard” declared by the local health department

Regardless of the determination above, please continue to answer all questions.

Impairments or Imminent Threats of Impairment to Water Quality Standards and Designated Uses

Check those designated use impairments that are applicable to the proposed water body. Include a clear explanation regarding the water quality standards and specific designated uses that are, or are in imminent jeopardy of, being impaired. To receive points, the problem and solution must be directly linked to the impairment or imminent threat and be directly addressed by the proposed project.

For Questions 3 through 6, check and describe up to three (3) of the four (4) impairments, violations, or imminent threats that are a direct result of the stated water quality problem(s). *Please refer to the Application Instructions for the definition of “Imminent Threats of Impairment,” evaluation criteria, points available, additional resources available to applicants, etc.*

SPECIAL NOTE: Answer **up to three (3)** of the following four (4) questions (Questions 3 through 6). See *Application Instructions*.

3. **Drinking Water Quality Standard Impairments or Imminent Threats of Impairment:** (Check and describe one [1], if applicable. Provide supporting documentation if applicable and attach to Application)
- According to state and/or local health department(s), the water body has “significantly exceeded limits” for drinking water quality standards.
- Recurrent or continued health advisories have been issued by state and/or local health department(s).
- There is a documented trend toward advisory status or noncompliance, or a documented impact or threat of impact to groundwater resources.

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4. Aquatic Habitat Impairments or Imminent Threat of Impairments: (Check and describe as many as applicable.)

- Affects habitat of endangered or threatened salmonid stocks.
- Addresses “Limiting Factor(s)” identified in a “Limiting Factors Analysis” approved by the Conservation Commission.
- Addresses “Solutions” identified in the *Statewide Strategy to Recover Salmon*.
- Impairs habitat of aquatic species that are not known to be threatened or endangered.

Describe the habitat impairment(s) or imminent threat(s) of impairment that support checked category(ies) above:

Habitats of threatened salmonid stocks: Clallam County’s streams contain several federally-listed aquatic species, including “threatened” populations of:

- a. Hood Canal Summer Chum Salmon ESU, ranging as far west as the Dungeness River (WRIA 18);
- b. Puget Sound Chinook Salmon ESU, ranging as far west as the Elwha River
- c. Coastal/Puget Sound Bull Trout DPS,
- d. Puget Sound Coho Salmon and Steelhead ESU are a candidate species, indicating a growing threat to salmonid populations; these populations occur in virtually all of the stream segments identified in this proposal.

Furthermore, Clallam County’s Planning Biologist questions the western boundary of the Puget Sound ESU, pointing out that the species listed above for Puget Sound use the entire nearshore corridor of the Olympic Peninsula, that salmonid populations west of the dividing line are not in notably better condition, and that multiple parties have called for listing WRIA 19 steelhead as a “species of concern” (Cathy Lear letter, attached).

This project would directly impact the efforts to recover these populations: Streamkeepers’ monitoring of Jimmycomelately Creek and the Dungeness River are part of the Hood Canal chum salmon recovery effort, and our program is specifically mentioned as an implementation partner in local Shared Strategy for Puget Sound documents (see attachment), which cover both chinook salmon and bull trout. Furthermore, at the very least, all but one of the stream segments dealt with in this grant feed into the nearshore and estuarine environments of the migratory corridors of the populations listed above. The project would increase Streamkeepers’ effectiveness as an implementation partner to protection and recovery efforts.

Limiting Factors Analyses (LFA’s) for WRIA’s 17 west, 18, 19, & 20 describe a variety of impacts in streams such as flooding, channel instability (incision, aggradation, and erosion), smothering of gravels, poor riparian condition, instream habitat simplification and lack of large woody debris, fish passage problems, lack of food and cover, and water quality problems such as high temperature, low dissolved oxygen, pathogens, turbidity, and fine sediment, as well as nearshore habitat degradation. The LFA’s underscore the need for better data about limiting factors as a crucial management tool, specifically mentioning the need for more data on water quality, instream and riparian habitat, % fines, peak flows, and macroinvertebrate populations. This project would improve the usefulness of the data we supply toward these efforts. For example, the WRIA 18 LFA states: “*The Streamkeepers program is collecting data on certain water quality parameters, but...it is unclear whether the sampling frequency is sufficient to sense acute water temperature concerns during late summer-early fall.*” And the WRIA 19 LFA states, “*Many of the streams in WRIA 19...have little or no water quality data...those are a research need for the future.*” This project will pinpoint these problems on the listed streams, enabling early action to remediate the problems at the local level.

In Washington’s *Statewide Strategy to Recover Salmon* (SSRS), among the basic “Building Block” foundational elements of a recovery plan are watershed assessments, data collection, monitoring, and adaptive management. Virtually all of the current local multi-stakeholder watershed-management initiatives are designed to address current habitat impairments and prevent their occurring in the future, and virtually all of their plans specifically mention Streamkeepers. Because the work done under this project would be in conjunction with these regional-scale management efforts, it will serve as an integral part of a greater whole. Specifically, the project would help implement SSRS recommendations for agencies to use the best available science by improving monitoring, collaboration, and data-sharing in support of local initiatives such as restoration projects and regulatory efforts under laws such as the Growth Management Act. And because Streamkeepers involves volunteers and provides good information to the general public, the project will help meet the SSRS long-term directive to inform, build support, involve and mobilize citizens to assist in restoration, conservation, and enhancement of salmon habitat.

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Habitat of species not known to be threatened: Both this project and Streamkeepers' mission are broad-based and address whole ecosystems, and are therefore not limited to the recovery of individual species. The benthic macroinvertebrates that we sample can be thought of as the "indicator species" that tells the condition of the system as a whole; by paying attention to the information they provide, this project should serve as an early warning of systemic disturbances that may threaten a myriad of non-listed species, and thus hopefully solve emerging problems before they become difficult and expensive to correct.

5. Impairments or Imminent Threat of Impairments of Public Recreational and Commercial Shellfish Harvesting Areas: (Check and describe one [1], if applicable; Cite orders and/or other written confirmation from DOH and attach at end of Application).

- The classification of a shellfish harvesting area within the proposed project area has been downgraded.
- The shellfish harvesting area's classification is conditionally approved, restricted, or prohibited.
- The State of Washington Department of Health (DOH) did not classify the area because preliminary data indicated the classification would be prohibited.
- A shellfish harvesting area within the proposed project area is now on the DOH's Early Warning System Threatened List.

Describe the recreational or shellfish harvesting impairment(s) or imminent threat(s) of impairment that support checked category(ies) above :

Bacterial contamination has closed recreational and/or commercial shellfish harvesting in several areas of Clallam County. The pollution source identification of freshwater streams resulting from this project will be important in determining causation and documenting remediation, by identifying pollution sources and gathering additional data as needed, both inside and outside of areas with existing TMDLs. The following areas are experiencing bacterial problems:

1. **Dungeness Bay:** Bacterial levels have been rising in Dungeness Bay since 1997. In 2000 and 2002, the WA Dept. of Health downgraded a total of 400 acres of the bay where shellfish are grown to prohibited status. This eliminated 1/3 of the shellfish growing area of the Jamestown S'Klallam tribe's oyster farm. Recreational clamming beds owned by the county are also in the prohibited area. In 2003 the entire inner bay (approx. 1000 acres) was downgraded from approved to conditionally approved (closed to harvest November-January). The 400 acres remain in prohibited status. As a result of the most recent downgrade, the rest of the Jamestown oyster beds were closed during the prime oyster marketing season. TMDLs have been completed and approved by Ecology and EPA for the Lower Dungeness Watershed and Dungeness Bay, and this project will help to implement 3 actions in the Clean Water Strategy Action Plan (Table 1, pp. 10-11):
 1. Implement freshwater quality monitoring and BMP effectiveness monitoring. Our contribution here will be to better address the problems of Cassalery Creek, which was not included in the TMDL zone but is on the 303(d) list for fecal coliform and probably contributes to marine waters which flow into Dungeness Bay during winter periods of strong easterly or southeasterly winds and neap tides (Dungeness TMDL Study, May 2002, p. 19).
 2. Conduct GIS analysis of impervious surface. In this matter, our proposed landscape-analysis project (see Task list) will dovetail with the NASA landscape-characterization project in the Dungeness watershed.
 3. Continue Streamkeeper monitoring of bacteria and baseline monitoring of streams.
2. **Sequim Bay:** Sequim Bay has two areas that are closed to shellfish harvesting due to non-point source pollution: a 300-yard radius around the end of the City of Sequim's wastewater treatment plant, and the John Wayne Marina area. The latter is an especially popular public recreational clamming beach, and an additional portion just to the south has been listed as Concerned. Part of the Sequim Bay State Park tidelands is conditionally approved for shellfish harvesting, which means that this area may be seasonally closed by DOH due to increased boat usage and septic system pumping. Pollution in Sequim Bay has been a community concern for two decades, but no TMDLs have yet been developed for Sequim Bay or its feeder creeks. Stressor identification of Jimmycomelately and Bell Creeks will help to identify and remediate contamination sources to the Bay and possibly avert TMDLs.

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3. **Jamestown:** One station in the Jamestown area, just east of Dungeness Bay, is of Concerned status. The project's stressor identification of Cassalery Creek, along with Lower Dungeness River and Dungeness Bay TMDL/DIP activities underway on Golden Sands and Cooper Creeks, should help to isolate and remediate pollution sources. Although Cassalery Creek is not included in the TMDL/DIP, the Clallam Conservation District is in progress on a farm source identification/BMP implementation project, and information from the project will help the District in these activities.

4. **East Straits, Pysht sub-area:** The East Straits shellfish growing area is comprised of five distinct sub-areas along a 40-mile stretch of the Strait of Juan de Fuca from Dungeness Spit west to Pysht-Pillar Point. The area is composed of recreational and forest lands. The Pysht growing area includes Pillar Point County Park, consisting of 4 acres with 250 feet of public shoreline, offering 35 camping units and RV sites and a boat launch. In 1998 the Washington State Department of Health stated in their report, *Sanitary Survey of East Straits Sub area - Pysht, January 12, 1998*, that the Pysht would be classified as an APPROVED commercial shellfish growing area. In the years following that classification, water quality degraded to a point that the site (East Straits #142) was listed as Threatened and headed for closure; in 2006, it is listed as Of Concern. The consensus among the Department of Health and commercial shellfish harvesters was to inactivate that shellfish area to avoid having to go to prohibited status (personal communication with Don Melvin, Washington State Department of Health). The site is still currently inactive. Stressor identification in the Pysht watershed would help to isolate pollution sources for remediation.

Documentation of all the above is included at the end of the application.

6. **Other Designated Use Impairments or Threats of Impairments:** (Identify and explain in accordance with Application Instructions. Check and describe as many as applicable.)

Designated use(s) are impaired or imminently threatened for:

- Swimming or water skiing
- Sport fishing
- Water quality impairments of fish migration
- Boating
- Aesthetic enjoyment
- Livestock water source that is presently functioning
- Irrigation water

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Describe specific impairment(s):

Clallam County has a myriad of fresh and nearshore waters used for recreation by the general public, including swimming, fresh and marine water sport fishing, as well as waters used for irrigation. Listed below are impairments and ways in which this project addresses those impairments:

Swimming: Hollywood Beach is a well-used bathing beach in the center of Port Angeles, at the mouth of Peabody Creek. Past collections of enterococci bacterium have shown counts exceeding the threshold for public health advisory. One pollution source at Hollywood Beach is a combined sewer overflow (CSO) into Peabody Creek; however, Streamkeepers' data indicates frequent high fecal coliform levels in Peabody Creek above the CSO input, and occasional sampling of Port Angeles Harbor near the Peabody Creek mouth and Hollywood Beach indicates elevated fecal levels as well. This project would help pinpoint pollutant pathways to Peabody Creek and Hollywood Beach.

Sport fishing, boating, wading, and aesthetic enjoyment: Sport fishing has long been a prized activity here, with motels and campgrounds filled with out-of-towners during fishing seasons. In recent years, sport fishing, and with it the local economy, has been impacted by closed and shortened seasons, restricted areas, and reduced catch limits. Beyond fishing, many recreationists come to Clallam County simply to have a chance to see salmon running in the streams, as is evidenced by the popularity of the Dungeness River Festival and the Salmon Cascades on the Sol Duc River. Needless to say, the ESA listings and limiting-factors impairments are indicative of the fact that fish runs are well below their historic levels. By helping to enable salmon recovery, this project should play a role in the eventual recovery of the sport fishery.

Some of Clallam County's best boating and crabbing opportunities are in Dungeness Bay and Sequim Bay. However, such direct-contact water uses in both of these areas have been degraded due to fecal coliform contamination. Additionally, ulvoid mat blooms in Dungeness Bay, related to elevated nutrients in the water, are suspected of smothering eel grass beds (B. Rot, Jamestown S' Klallam Tribe, personal communication), which reduces habitat for crab, shellfish, salmon, and forage fish. Furthermore, says Randy Johnson of WDFW, these ulvoid mats "stink to high heaven" (personal communication), making recreation a far less pleasurable experience. The project's source identification work on Jimmycomelately, Bell, and Cassalery Creeks should help to reduce these problems.

Water quality impairments of fish migration: There are several links between water quality and fish migration in Clallam County. First, many streams lacking intact canopy experience harmful blooms of invasive aquatic and semi-aquatic plants which can block fish migration. The WRIA 18 Limiting Factors Analysis mentions blackberries and reed canary grass in Bell Creek which completely blocked the channel; Streamkeepers observations have documented similar channel-blocking in Bell and Cassalery Creeks by watercress. Such plants not only block passage during the summer growth period; they also create a "death-zone" devoid of dissolved oxygen when the plants die off in the fall, as Streamkeepers data documents on Bell Creek. Furthermore, the WRIA 19 Limiting Factors Analysis states that elevated temperatures in the Hoko River led to a shifted out-migration timing of salmon which was out of phase with estuarine food supplies. Stressor identification on all of these streams should help to pinpoint problems for remediation.

Irrigation and livestock water: Six irrigation ditches in the Sequim-Dungeness Valley are listed as not meeting water quality standards for fecal coliform bacteria (Table 2, *Clean Water Strategy for Addressing Bacteria Pollution in Dungeness Bay and Watershed, and Water Cleanup Detailed Implementation Plan*), yet farmers use these ditches to irrigate their crops and water livestock. Organic farmers, including Nash Huber (the largest commercial organic operation in Washington State) are concerned with water quality threats to organic certification, as well as public health (N. Huber, personal communication). Bell Creek intermingles with irrigation ditch water, and all of the ditches are subject to the same stormwater inputs as are the streams in the Valley, so stressor identification, as well as our coordination with TMDL implementation on the Lower Dungeness, should help to clean up the irrigation water.

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7. **Total Maximum Daily Load (TMDL) Development, Watershed Plan Development, or Implementation of a best management practice (BMP):** (Check only the box that best describes the stage the proposed project fits in the TMDL, watershed plan, or other pollution control project process.)

7. A. **Planning Projects**

- The proposed project will substantially assist initial TMDL development.

Provide name of TMDL, watershed plan, or specific BMPs, and a brief description of your progress:

The basic purpose of this project is to perform work essential to the formulation of TMDLs on the 303(d)-listed stream segments listed in Part 1, Question 6. These TMDLs have not yet been scheduled. Stressor-identification work prior to TMDL scheduling offers the opportunity for local jurisdictions to implement BMPs that can solve problems in a timely way, before TMDLs are needed, and while solutions might be less expensive.

As described in Part 2, Question 5, this project will also support actions identified in the completed *Detailed Implementation Plan for the Lower Dungeness Watershed and Dungeness Bay Total Maximum Daily Loads*. The project would not duplicate but rather support monitoring being done by Clallam County and the Jamestown S'Klallam Tribe to implement the two TMDLs.

SECTION III. HOW DOES YOUR PROPOSED PROJECT ADDRESS THE WATER QUALITY PROBLEM AND WHAT ARE YOUR MEASURES OF SUCCESS? (Water quality goals, outcomes, and milestones you will achieve or address.)

8. **Check one or more of the Water Quality “GOALS” the proposed project will directly address; complete one of the sentences below and include waterbodies affected:**

- A. “Severe Public Health Hazard” or “Public Health Emergency” will be eliminated.
- B. The projects will contribute toward designated uses being restored or protected, 303(d)-listed water bodies restored to water quality standards, or healthy waters kept from being degraded.

All designated uses of Jimmycomelately, Bell, Bagley, Morse, Lees, Ennis, Peabody, Valley, and Lake Creeks, and of the Dungeness, Lyre, Pysht, Clallam, and Hoko Rivers, will ultimately be restored.

- C. Regulatory compliance with a consent decree, compliance order, etc.

9. **Describe the qualitative and quantitative Water Quality Project “OUTCOMES” expected as a result of the activities you will complete in this project. These OUTCOMES must lead to the GOAL(S).**

Describe the water quality project outcomes (see Application Instructions for examples):

The project will help to prevent and remediate impairments to designated uses in the waters listed in Part 1, Question 6 by identifying the factors in these waters leading to impairment, an essential first step to the required cleanup process described in the Clean Water Act. Specifically, all documents in the EPA Stressor Identification process will be completed for each of these water bodies, and the information will be widely shared. Then local jurisdictions and landowners will have an opportunity to implement BMPs and thus obviate the need for TMDLs, or else the TMDL process will be greatly accelerated on these waters.

10. **Identify and describe the Water Quality Project “MILESTONES” that will measurably lead to achieving the Water Quality OUTCOMES and GOAL(S).**

All milestones, with completion dates, are listed in Question 11 below, under “Required Performance” for each task.

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Project Scope of Work and Management Team

11. Outline and explain the tasks, including activities, objectives, and milestones (referred to in the financial assistance agreement as “required performance”) needed to address the water quality problem(s) in a timely manner. **(Please note the point assignment and propose what is clearly the most efficient allocation of staff resources to bring about the OUTCOMES proposed and tangible water quality improvements.)**

Use the format shown in the Application Instructions. Include Task 1- Project administration/ management and follow the same format with all remaining tasks.

Task 1 - Project administration, management, and assessment

Activities:

- A. The RECIPIENT will administer and manage the project. Responsibilities will include, but not be limited to: maintenance of project records; submittal of payment vouchers, fiscal forms, and progress reports; compliance with applicable procurement and interlocal agreement requirements; attainment of all required permits, licenses, easements, or property rights necessary for the project; conducting, coordinating, and scheduling of all project activities; quality control; and submittal of required performance items.
- B. The RECIPIENT will ensure that every effort is made to maintain effective communication with the RECIPIENT’s designees, the DEPARTMENT, all affected local, state, or federal jurisdictions, and/or any interested individuals or groups. The RECIPIENT will carry out this project in accordance with completion dates outlined in this agreement.
- C. The RECIPIENT shall submit all invoice requests and supportive documentation, to the Financial Manager of the DEPARTMENT.
- D. The RECIPIENT shall submit as a portion of the quality assurance and project plan, on its own, or in the final report for DEPARTMENT approval a “Post Project Assessment Plan” that explains how the RECIPIENT will assist the DEPARTMENT 3 to 5 years after the expiration of the AGREEMENT, as it assesses project effectiveness.

Required Performance:

1. Effective administration and management of this grant project.
2. Maintenance of all project records.
3. Submittal of all required performance items, (including the Post Project Assessment Plan), progress reports, financial vouchers, and maintenance of all project records.

Total Task Cost: \$14,036.56

Task 2 – Stressor identification of biologically-impaired segments on the 2006 303(d) list

Activities: The RECIPIENT and designees will perform stressor identification on all stream segments in Clallam County that have been listed as biologically impaired on the 2006 303(d) list, following procedures in EPA’s “Stressor Identification Guidance” and using EPA’s Causal Analysis/Diagnosis Decision Information System (CADDIS) tool, and will share findings with Ecology and local entities.

Required Performance:

1. (Stressor Identification Step 1) Gather existing data for each segment listed in Part 1, Question 6, and assign a member of Streamkeepers’ volunteer Research Team to analyze and summarize the data for each segment, by 6/30/08.
2. By 7/31/08, hold a workshop under the guidance of a consultant to perform Stressor Identification Steps 2-5 with one or more stream segments:
 - a. (Step 2) Formulate possible stressor scenarios that might explain the impairments.
 - b. (Step 3) Analyze those scenarios.
 - c. (Step 4) Produce conclusions about which stressors are causing the impairments.

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- d. (Step 5) Reconsider the impairment and determine needs for further data and analysis.
3. Research team members and Streamkeepers staff will complete draft versions of Steps 2-5 with the rest of the segments, by 8/31/08.
4. Hold meetings with Streamkeepers' volunteer Research Team and Technical Advisory Committee to review and finalize drafts, by 10/15/08.
5. Write final drafts of Stressor Identification worksheets for all segments, by 10/31/08.
6. Share findings with Ecology and local entities by 11/15/08.

Total Task Cost: \$70,882.50

Task 3 – Stormwater monitoring planning & implementation

Activities: A major candidate cause for biological impairment at most of the identified sites is hydrological disturbance due to land clearing, impervious surfaces, stormwater conveyances, and other development activities, which leads to differences in the pathways and timing of stormwater runoff and associated sediment movement. However, data on such hydrological disturbance and its impacts is largely lacking. In such cases, EPA's Stressor Identification Guidance recommends that "it will be appropriate and prudent to plan a sampling and testing program that will generate a set of potentially decisive positive and negative evidence." In order to incorporate such critical stormwater data into Task 2, Step 1 above, a stormwater sampling plan will be implemented.

- A. The RECIPIENT and designees will formulate a stormwater sampling plan that will:
 - 1) Take into account all existing data and monitoring efforts, as well as perceived data gaps;
 - 2) Focus on needs for the stressor identification described in Task 2, but consider other relevant state, regional, and local watershed-management programs, directives, and goals, including, but not limited to, TMDLs, 303(d) listings & 305(b) reporting requirements, Washington's Water Quality Management Plan to Control Nonpoint Source Pollution, the Washington Comprehensive Monitoring Strategy and Action Plan for Watershed Health and Salmon Recovery, the Statewide Salmon Recovery Plan and salmon-recovery actions under the Puget Sound Shared Strategy, WRIA-based watershed planning, and local plans and ordinances;
 - 3) Consult with Streamkeepers' technical and volunteer advisory committees, the Clallam County Departments of Community Development, Health, and Public Works, and the public as needed;
 - 4) Consider established best scientific methods and protocols, for instance from EPA, USGS, and Ecology;
 - 5) Consider resources (human, material, financial) available to carry out the plan;
 - 6) Perform field-testing as necessary prior to finalization of plans;
 - 7) Result in a written plan and approved Quality Assurance Project Plan (QAPP), explaining purpose; parameters to be monitored; guidelines to be used to inform spatial, temporal, and seasonal sampling design; candidate monitoring sites; and data recipients.
- B. The RECIPIENT and designees will implement the plan described above by:
 - 1) Recruiting, training, deploying, supporting, and assuring quality work of volunteers
 - 2) Managing data and controlling its quality
 - 3) Documenting Quality Control and Quality Assurance procedures, and managing the data in the Clallam County Water Resources database
 - 4) Purchasing necessary equipment, supplies, and services, and/or seeking additional funding as necessary
 - 5) Revising the plan as needed due to findings or circumstances
 - 6) Uploading the data to Ecology's Environmental Information Management database system.
 - 7) Analyzing the data and incorporating findings into Stressor Identification worksheets.

Required Performance:

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1. Written sampling plan and QAPP by September 2007
2. Sampling to begin October 2007 and continue through April 2008
3. Data finalized by May 2008
4. Data analyzed and incorporated into Stressor Identification worksheets by 8/31/08

Total Task Cost: \$99,003.44

Task 4 – Land use/land cover analysis

Activities: EPA's stressor-identification process involves establishing causal chains running from initiating stressors (usually human-induced watershed disturbances) to biological responses. Each step in these causal chains needs to be quantified in order to formulate models that can be tested for validity. In order to quantify the initiating stressors, spatial data must be gathered and analyzed characterizing the landscape and its various disturbances from original condition.

A. The RECIPIENT and designees will use the watershed-processes model developed in *Protecting Aquatic Ecosystems* (WA Dept. of Ecology, 2005) to classify and quantify disturbances to these processes due to changes in the landscape. This publication provides a watershed process model based on energy/materials pathways which can be quantified through spatial analysis of approximately 30 readily-available GIS layers, such as satellite data, soils and climate maps, and habitat surveys. Using these layers, original analysis, and field work, the RECIPIENT and designees will generate spatial data on the degree of disturbance to these processes in the contributing basins of the sites under investigation. (This part of the project will also coincide with a NASA -funded geographic modeling project in the Dungeness watershed.)

B. The RECIPIENT and designees will correlate data from the identified stream sites with watershed processes in their contributing basins, making connections between particular stressors (human-caused changes in watershed processes) and responses (impairment of biological condition).

C. The RECIPIENT and designees will use this information to perform modeling required by EPA's stressor-identification process.

Required Performance:

1. Gather GIS coverages from existing sources (e.g., USGS, WA DNR, Clallam County) by December 2007.
2. Model and map streams to accurate locations, using LIDAR data as possible, in the basins in question, by December 2007.
3. Incorporate the accurate stream locations into the National Hydrography Dataset and/or the Pacific Northwest Hydro Framework, once either or both of these datasets are ready to incorporate Clallam County data, hopefully by May 2008.
4. Restructure Clallam County's internal GIS data and practices to utilize the routing/event table structure of the Hydro Framework, including general attribute population; creation of user-level data layers (shapefiles for GIS software); accessing currently unusable data sources and connecting them to the stream layer (e.g., SSHIAP); adapting stream monitoring data to the new data structure; and creating usable interfaces with existing data in the data management system, as well as translational features that would interface with other GIS applications, by July 2008. This will enable more powerful spatial analyses, as needed, in the interactive information-gathering round of the Stressor Identification process (see Task 6 below).
5. Create a GIS coverage of roads in the basins in question, based on the federal, state, and county coverages, and orthophotos, by February 2008.
6. Using spatial analysis, quantify disturbances to watershed processes in the basins contributing to the stream segments listed in Part 1, Question 6, using the model developed in the Ecology publication *Protecting Aquatic Ecosystems*.
7. Correlate model results with biological condition and incorporate findings into Stressor Identification worksheets, by August 2008.

Total Task Cost: \$34,932.81

Task 5 – Analysis of physical habitat data

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Activities: Many of the potential stressors mentioned in EPA's Stressor Identification Guidance document are alterations of physical habitat. Streamkeepers has a considerable body of data on physical habitat features, but the data have not been analyzed to quantify degree of disturbance. The RECIPIENT and designees will analyze Streamkeepers' physical-habitat data and correlate findings with biological condition.

Required Performance:

1. Summary of analytical findings, incorporated into Stressor Identification worksheets, by 8/31/08.

Total Task Cost: \$19,904.69

Task 6 – Iterative data gathering and analysis, and completion of the Stressor Identification process

Activities: The Stressor Identification process requires evaluation of areas in which further data is needed to have confidence in the analysis. Then that data must be gathered, analyzed, and incorporated into the Stressor Identification analysis.

- A. As data gaps are identified in Task 2.5 above, the RECIPIENT and designees will devise a sampling plan to gather the needed data.
- B. The RECIPIENT and designees will write a Quality Assurance Project Plan as needed to implement this plan, following procedures similar to those in Task 3A above.
- C. The RECIPIENT will implement the plan in a manner similar to that in Task 3B above.
- D. The RECIPIENT will share findings with Ecology and local entities.

Required Performance:

1. Written sampling plan and QAPP by December 2008
2. Sampling to begin by January 2009 and continue through December 2009
3. Data finalized by January 2010
4. Iterative stressor-identification process (see Task 2, #1-5 above) complete by April 2010
5. Share findings with Ecology and local entities by June 2010

Total Task Cost: \$31,225.63

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Provide the following project budget information:

Project Cost by Task Elements

| Proposed Project Budget and Time Frame | | |
|-------------------------------------------------------|---------------|---------------------------|
| Task elements | Cost | Months needed to complete |
| 1. Project administration/management | \$ 14,036.56 | 38 |
| 2. Stressor identification process | \$ 70,882.50 | 16.5 |
| 3. Stormwater monitoring | \$ 99,003.44 | 14 |
| 4. Land use/land cover analysis | \$ 34,932.81 | 14 |
| 5. Physical habitat data analysis | \$ 19,904.69 | 14 |
| 6. Iterative data & completion of stressor ID process | \$ 31,225.63 | 20 |
| Total project cost and months needed to complete: | \$ 269,985.63 | 38 |

Project Cost by Budget Object

| | | |
|----------------------------------------------------|-----------------------|-----------------------------------------------------------|
| Salaries: | \$ <u>104,991.68</u> | |
| Benefits: | \$ <u>67,125.83</u> | |
| Indirect costs: | \$ <u>21,528.13</u> | (May include up to 25% of employee salaries and benefits) |
| Contracts: | \$ <u>33,600.00</u> | |
| Materials, goods, and services (list major items): | \$ <u>540.00</u> | |
| Equipment (list major items): | \$ <u>38,550.00</u> | |
| 4 ea. Isco storm samplers | \$ <u>(15,400.00)</u> | |
| 2 ea. Datasonde multimeters | \$ <u>(13,300.00)</u> | |
| 2 ea. Datasonde loggers | \$ <u>(4,800.00)</u> | |
| 30 ea. Staff gages | \$ <u>(2,250.00)</u> | |
| 1 ea. Price AA flow meter | \$ <u>(850.00)</u> | |
| 1 ea. Bridge board | \$ <u>(300.00)</u> | |
| 1 ea. Sounding reel | \$ <u>(1100.00)</u> | |
| 1 ea. 15/30 lb. weight set | \$ <u>(550.00)</u> | |
| Travel: | \$ <u>3,650.00</u> | |
| Total project cost: | \$ <u>269,985.63</u> | |

If you are requesting grant funding for an activity proposal, provide the following information about costs and matching funds: (Note: this information must correspond to Part 1, Question 9)

| | |
|-------------------------------------------------------------------------|----------------------|
| Total eligible project cost: | \$ <u>269,985.63</u> |
| Funds requested from Ecology: | \$ <u>164,490.00</u> |
| List other funding sources and amounts, including local matching funds: | \$ <u>105,495.63</u> |
| Funding source: <u>Clallam County salary/benefits/indirect</u> | \$ <u>19,490.63</u> |
| Funding source: <u>Interlocal contributions (technical advisors)</u> | \$ <u>5,750.00</u> |
| Funding source: <u>In-kind volunteer professional services</u> | \$ <u>58,475.00</u> |
| Funding source: <u>In-kind volunteer non-professional services</u> | \$ <u>21,780.00</u> |

(Note: Local match represents 39% of total project costs.)

Total project cost: \$ 269,985.63

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Describe the status of matching funds:

- Clallam County has already allocated funds for their cash salary/benefits/indirect contribution in the 2007 calendar year.
- Interlocal: Streamkeepers' technical advisory committee consists of several dozen natural-resource professionals working for other agencies, who have advised the program since 1999. We expect a core group of 6-8 of these advisors to work with us on the stressor-identification process.
- In-kind volunteer professional services are from Streamkeeper volunteers with highly-advanced skills (see attached commitment letters), who have formed a Volunteer Research Team within our organization.
- In-kind regular volunteer services will not be a problem to obtain, since volunteer field work is the heart of our program. In 2005, for example, we generated 3600 volunteer hours, so the projections are well within the scope of our capacity.

12. Describe the project management team, members' relevant skills and experience, and the percentage of their time they will devote to the project.

Management team description:

Ed Chadd, who will manage this project, co-founded Streamkeepers in 1999 and has been co-managing it since. Ed plans to devote approximately 15% of his time to the project. To do this, he will minimize time spent on regular programming and avoid other special projects. The "slack" will be taken up by his co-manager, Hannah Merrill, and Streamkeepers' 150-strong volunteer corps, which over the years has become increasingly self-sufficient.

Adar Feller is already on the Clallam County payroll for "technical extra help." She has been assisting Streamkeepers for three years, supervising field work, managing and assuring quality of data, performing data analysis, and working with GIS software. She has a B.S. in Conservation Biology and experience in both private and government-sponsored research activities.

Streamkeepers has a long and distinguished history. Our ambient monitoring program Quality Assurance Project Plan, covering chemical, physical, and biological components of stream health, was approved by Ecology in 2000 and then cited with praise in the 2001 WDFW publication, *Inventory and Monitoring of Salmon Habitat in the Pacific Northwest*. We have taken on a host of special monitoring projects for outside clients and provided data to scores of watershed research and management efforts. Recently, our participation was requested by Ecology for their planning effort on the Statewide Status & Trends Monitoring Framework, because, in the words of Rob Plotnikoff, our program is "so far ahead of others in the volunteer monitoring world."

We have excellent resources available for the other services we will require:

- Tom Shindler, Clallam County Dept. of Community Development's database & GIS coordinator for more than 10 years and is one of two senior GIS staff in the County system, with a solid grounding in mapping, software, databases, geoscience, and interactive Web applications.
- Rob Plotnikoff has agreed to consult on the Stressor Identification process. A Senior Scientist with Tetra Tech, he recently left his position with the Environmental Assessment Program at the WA Dept. of Ecology.
- Christopher May of Battelle Marine Sciences Laboratory has offered to consult on the stormwater monitoring plan. He has a long resume of work in academia, agencies, and research institutions, with many publications to his name. He is adjunct faculty at both the University of Washington and Western Washington University.
- Robert Knapp will be our GIS technician. He is a graduate student at Western Washington University, specializing in GIS applications to natural resource management.
- The volunteers on our Volunteer Research Team have strong research and technical backgrounds (see letters of commitment).
- Mike McHenry, fisheries biologist with the Lower Elwha Klallam Tribe, is an expert on physical habitat monitoring and assessment, and he has agreed to advise on that task.
- Leska Fore, a bio-statistician with extensive work for government agencies, has agreed to consult on statistical questions.

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SECTION IV. LOCAL INITIATIVES YOU HAVE TAKEN OR ARE TAKING THAT WILL HELP TO MAKE YOUR PROJECT A SUCCESS.

13. Explain the following:

- The tasks you have completed and/or the status of the tasks needed to ensure that you are ready to proceed with the proposed project within six months of preparation of a financial assistance agreement.
- Include provisions and commitments to maintain and monitor the project after state assistance has ended, at least through the Post Project Assessment Period. (See *Application Instructions*)

Local initiatives and future commitments:

We are ready to begin the project. All of the necessary staff, consultants, and volunteers are already on board. We will be submitting the data to Ecology by 11/7/06 that will support 303(d) biological-impairment listings for the stream segments listed in Part 1, Question 6. These listings, and the follow-up investigation necessary to identify or rule out specific pollutants in their causal pathways, are the crux of our project.

This project fits squarely into the priorities set in the 2005-2007 Puget Sound Conservation and Recovery Plan. In the section on “The Role of Science,” the plan calls for expanding the knowledge base through collaborations with partner agencies, including citizen monitoring groups, and using the knowledge gathered to solve water quality problems in a timely way (see attached excerpt).

Because Streamkeepers is an ongoing program, regular data collection will continue prior to, during, and subsequent to the project. Furthermore, the Clallam County Environmental Health division will be conducting additional bacterial monitoring under the “Clallam County Monitoring” grant received from the Centennial Clean Water Fund in 2005 (grant # G0500025), as well as a countywide Septics of Concern project (see attached letter).

The ultimate assessment tool for this project is future bioassessment data from the stream segments in question. Streamkeepers will continue to monitor these segments, because they are part of the long-term monitoring effort that is the heart of our program. Annual review by our Technical and Volunteer Advisory Committees is also a regular part of our program, and those groups will assist Streamkeeper staff in performing the Post-Project Assessment. Our organizational makeup as part of Clallam County government insures that the information we generate will help to inform County decision-making, including activities such as the following:

- Development and implementation of ordinances under the Growth and Shoreline Management Acts, including Critical Areas ordinances: These ordinances will require updating in future years.
- Potential implementation of a countywide Stormwater Management Plan: An ordinance was drafted by the County Planning Commission in 2004 and is waiting for further action by the County Commissioners.
- TMDL implementation in the Dungeness watershed: Streamkeepers is already tied in to this effort.
- Watershed planning under SHB2514: WRIA 17 west/18 will soon be moving into Phase IV implementation, and WRIs 19 & 20 are still finalizing their plans. Each of these plans will specifically mention Streamkeepers as an implementer. For example, the WRIA 17W/18 plan states: “Support funding and expansion as needed to enable fullest possible use of the Streamkeepers volunteer monitoring program” (excerpt attached).
- Salmon-recovery activities under SHB2496 and the Puget Sound Shared Strategy: A 2003 Shared Strategy document states that “Streamkeepers could assist [the local components of the Shared Strategy plan] by monitoring as appropriate, as well as securing funding for specific monitoring tasks” (excerpt attached).

All of these plans involve water-quality goals, and the conclusions arrived at by the project will feed into these plans, with the hoped-for result that pollution problems will be mitigated before TMDLs are necessary, saving both time and money.

Streamkeepers commits to report to Ecology three to five years after completion of the project (at Ecology’s discretion) on progress toward meeting the water quality goals and outcomes described here, including which of the stream segments in question are no longer biologically impaired, and what activities have happened and are ongoing to eliminate the impairments.

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SECTION V. STATE OF WASHINGTON AND FEDERAL MANDATES ADDRESSED BY THE PROPOSED PROJECT (excluding TMDLs)

14. Check and describe only ONE of the following that best fits the project proposal.

- The project proposal mainly involves remediation of an existing water quality problem (excluding TMDLs addressed in Question 7).

Describe:

Under the EPA's interpretation of the Clean Water Act, Ecology must perform stressor identification on 303(d)-listed biologically impaired stream segments. However, Ecology has never done this work and is not currently in a good position to do so. We propose to do this work on Ecology's behalf.

THIS CONCLUDES PART 2