North American Native Fish Association: Gerald C. Corcoran Education Grant

"Investigating Coho Pre-Spawn Mortality on Longfellow Creek, WA"

Puget Soundkeeper

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Application Guidelines

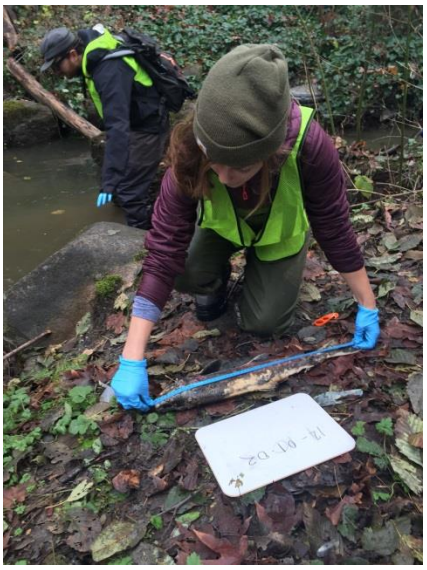
1. **Qualifying applicants must be members in good standing of NANFA. Membership dues will be accepted with funding applications, or paid separately.**

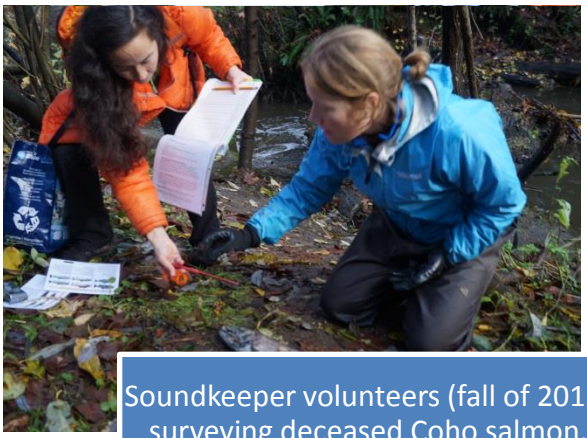
Puget Soundkeeper will contribute a $30 donation online to renew its membership.

2. **Summary statement of proposed project describing its relevancy to NANFA's stated mission.**

Each fall, thousands of Coho return to Puget Sound to spawn in their native streams. Unfortunately, Coho returning to urban streams are met by high quantities of polluted runoff, a toxic mix of chemicals that washes off of paved surfaces when it rains. This toxic cocktail can kill fish in as little as 2.5 hours, before they have a chance to spawn. On Longfellow Creek in West Seattle, extremely high "pre-spawn mortality" rates of up to 90% have been documented. For comparison, less than 2% pre-spawn mortality occurs on non-urban streams. The good news is that when stormwater passes through a natural filtration system, such as a rain garden, before entering a waterway, the Coho survive.

Puget Soundkeeper (Soundkeeper) is helping to combat this threat by involving the community in studying this issue and educating the public about solutions. This project will have two components: **public educational walks** and **official pre-spawn mortality surveys**. Through educational walks of Longfellow Creek, Soundkeeper will outline the relationship between urban development and the health of our waters. Interested volunteers will have the opportunity to become citizen scientists by conducting pre-spawn mortality surveys of Longfellow Creek daily during the fall salmon run. We believe this project to be in line with NANFA's state mission to "promote the conservation of native fishes and the protection/restoration of natural habitats."





Soundkeeper volunteers (fall of 2015) surveying deceased Coho salmon.

3. **Educational objectives.**
    a. **Conduct scientifically valid pre-spawn mortality surveys:** Soundkeeper's salmon surveys along Longfellow Creek are part of broader research to quantify pre-spawn mortality rates in urban streams. The protocol was developed the US Fish & Wildlife Service and has been used locally by agencies such as King County, NOAA, and the City of Seattle. Soundkeeper will share data collected on Longfellow Creek with other participating agencies.
    a. **Educate residents about local salmon runs:** Separate from official surveys, public educational walks of Longfellow Creek will introduce the community to a once thriving local salmon run, the complexity of the salmon life cycle, the cultural importance of salmon in the Pacific Northwest, and survey skills (ex: how to spot redds, differentiate species, record data, necropsy carcasses).
    b. **Educate residents about stormwater threats to Puget Sound:** In fall of 2015, NOAA published groundbreaking data about the deadly effects of stormwater on adult Coho salmon. Our surveys and educational walks of Longfellow Creek are a conduit for further disseminating this information to the public. Seattle residents will also learn about individual actions they can take to mitigate the problem of polluted stormwater.

4. **Description of specific and generalized target audience(s) including audience size, age/grade level ranges, and other pertinent demographics.**
    a. Volunteer surveyors (20 – 30 adults, primarily West Seattle residents)
    b. Community groups invited to participate in educational walks include local middle school high school students (100 – 200 people), West Seattle, Whitecenter and South Park residents, and local media

5. **Detailed description of proposed project including but not limited to: educational format, planned site(s), project lifespan, expected outcomes, and methods of evaluating project success.**

Soundkeeper will use funds from NANFA to recruit, train, and equip volunteer surveyors as well as develop educational materials. This program will take during the fall Coho salmon run September – December 2016 on Longfellow Creek. Volunteer surveyors will be recruited and trained in September so they are ready to begin official surveys in October when the salmon start running upstream. Educational walks of Longfellow will take place in November. A nature trail extends along Longfellow creek, allowing easy access to the stream for salmon viewing. 20 – 25 volunteers are expected to participate in the surveys. Soundkeeper will conduct 3-7 educational walks of the creek involving 50 – 100 participants.

6. **Timeline:** This project will be broken into four phases, outlined below:

i. **Development Phase:** July-September. This time will be used for developing educational materials, recruiting volunteers for the surveys and planning educational walks.
ii. **Surveys of Longfellow Creek:** October – December. Surveys of Longfellow Creek will occur daily throughout the fall Coho run. These surveys will be conducted by teams of trained volunteers who are each assigned a day of the week to survey the creek. Volunteer training will occur in September.
iii. **Educational Walks:** October - November. Educational walks of the creek will allow Soundkeeper to introduce students and interested community groups to the salmon survey process, educate residents about the problem of polluted stormwater, and equip them with actionable solutions to the problem.
iv. **Reporting:** January 2017. Soundkeeper will compile survey data to share with other participating agencies. Soundkeeper will also publish survey findings through a blog, newsletter, and social media.

7. **Itemized budget.**
   a. Waders: 5 pairs, $150 each = $750
   b. Miscellaneous survey equipment (knives, bags, gloves, write-in rain paper): $150
   c. Printing educational materials (infographics, survey instructions, flyers, brochures): $150

   Total: $1000

8. **Include a list of all cooperating individuals and organizations with contact name, email and postal addresses and telephone numbers. Indicate NANFA memberships where applicable and include a one-two sentence statement of each individual's/organization's expected contribution to the project.**
   a. **Elissa Ostergaard,** Miller-Walker Basin Steward, King County Water and Land Resources Division (Elissa.Ostergaard@kingcounty.gov). Elissa organizes pre-spawn mortality surveys on other urban creeks and will provide guidance to Soundkeeper's project on Longfellow.
   b. **Jay Davis,** Environmental Toxicologist, US Fish & Wildlife Service (jay_davis@fws.gov). Jay will provide scientific input on Soundkeeper's survey process.