Annual Report
2021

Mission

To promote the understanding, appreciation, and conservation of the Nisqually estuary through education, interpretation, and community science

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About Us

For almost forty years, visitors to Nisqually Reach Nature Center (NRNC) have gazed out across one of the Pacific Northwest's most remarkable ecosystems. The Nisqually Reach is a tidal world filled with richness, diversity, and mystery. While more than 80% of Puget Sound's estuarine habitat has been severely degraded, songbirds, shorebirds, waterfowl, raptors, otters, beaver, frogs, shellfish, salmon, and many other species continue to inhabit the tidelands, islands, marshes and forests of the Nisqually Reach. This tidal world, where glacier-fed waters from Mount Rainier meet the saltwater inlets of Puget Sound, is home to NRNC.

NRNC's educational programs and activities inspire students and community members of all ages to care about the natural world. Our activities stimulate discussion and help all of us appreciate the majesty and importance of the earth's natural systems and the actions we can take to sustain them.

Values

As NRNC grows and evolves, a commitment to core values becomes increasingly important. As new generations of volunteers, staff, board members and students become involved in NRNC operations and programs, that set of core values will provide guidance and ensure the organization remains true to the ideals for which it was founded.

Nisqually Reach Nature Center:

- Conducts its operations and programs with integrity and transparency;
- Collaborates with partners and stakeholders to maximize efficiency and support opportunities that best achieve mutual goals;
- Recognizes that all contributions (financial, expertise and time) are conveyed with implicit trust and an expectation that all gifts will be used efficiently and in a manner consistent with the organization's mission and vision;
- Provides innovative, educational programs delivered by competent, dedicated educators;
- Encourages enjoyment of the natural world through exploration, discovery and fun;
- Encourages conservation of the natural world through stewardship, restoration, and protection of southern Puget Sound habitats.

NRNC Staff & Board of Directors

Daniel Hull
Executive Director

April Roe
Education Director

Terence Lee
Science Director

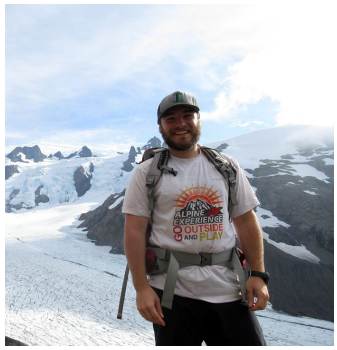
Katitza (Kat) Holthaus
President, Board

Brian Scott
Vice President, Board

Jessica York
Treasurer, Board

Suzie Scott
Secretary, Board

Daniel Krenz
Board Member



Cris Peck
Board Member

Shannon Boldt
Board Member

Derek Faust
Board Member

Education Programs

Online Curriculum

In partnership with Nisqually River Education Project and Billy Frank Jr. Wildlife Refuge, we launched a virtual field trip through Nisqually Watershed for 3rd and 4th graders! This interactive online exploration allowed students to have an up-close look at notable places within the watershed and discover Washington's stunning wildlife. This program was designed to give students the opportunity to connect with the watershed in an interactive way by using fun and engaging skits that encouraged students to learn more about the watershed and get out and visit areas of interest. This program has been shared with students in Pierce, Thurston, and King Counties, reaching over 1,100 students. You can learn more and check out the content on our website at http://nisquallyestuary.org/education/exploring-the-nisqually-watershed/.

Pop Up Aquarium

For a second year in a row, the Center had to think outside of the box to educate and connect with the community during the COVID-19 pandemic. Last year we launched the family science kits and Treasure the Adventure Hunt; this year we brought the Center outside for Pop Up Aquarium days. Over 100 people attended two weekend events to interact with volunteers and staff and learn more about the Nisqually Delta. We set up a 12x12 area under a tent and brought animals from our aquariums to the parking lot. Children and adults were elated to see and touch live sea stars and sea cucumbers! Visitors held shore crabs and learned about the vital role they play on the beach. During low tide, families explored the beach and found many more shore crabs. Our large whale bones were a huge hit with the children--they couldn't believe how heavy a Humpback whale vertebra weighed (18 lbs.)! The Nisqually Reach Nature Center looks forward to more events where we can educate our community about all things estuary and connect with the public.

Nisqually Tribal Youth

Over the years, we've been fostering a partnership with the Nisqually Indian Tribe. This year, the Center hosted Tribal Family Wednesdays. This presented an opportunity for tribal families to learn more about the importance of healthy nearshore habitat and conduct fish seines with youth on the beach. On the second Wednesday, we had some excitement when one of the tribal members spotted a coyote eating what appeared to be a small seal in the middle of the mudflat. "It was great to have youth and their families join us on the beach. Learning was a two-way street where staff from the Center taught of our core programming, and NRNC staff was exposed to Nisqually Tribal cultural values surrounding the community, weaving with native plants, and the canoe journey. A real highlight for me was getting the opportunity to go out with the Tribe in their traditional canoe" says Daniel Hull, NRNC Executive Director.

Also in 2021, in collaboration with our partners at the Nisqually River Education Project (NREP), we were awarded funding from the Nisqually Charitable Fund and No Child Left Inside grant. NREP and NRNC held outdoor environmental programs with Nisqually tribal youth and a weeklong Salmon Camp. Students relished the opportunity to spend quality time outdoors and learn more about opportunities for the future.

Summer Camps

After foregoing summer camps in 2020, we were excited to plan and hold summer camps in 2021. We took extra precautions to abate COVID-19 concerns, such as holding all camps outside, requiring masks, capping enrollment at 13 students, sanitizing surfaces regularly, and separating tables 6 feet apart. We also installed an outdoor hand-washing station built by one of our dedicated volunteers, Ross Skinner.

Education Director, April Roe, developed new curriculum that complimented our core program. With proper foresight in planning, we hired a part-time education assistant position to support the needs of camp. Highlights included crab surveys, benthic surveys, fish seining, and build your own birdhouse that campers got to paint and take home.

Says summer camp volunteer, Chris Maun, “it was powerful to see the kids experience the Nisqually where it begins, as it emerges from the ice of the glacier. Campers make a connection to the Reach - where the river meets Puget Sound- enabling them to better understand the whole of the watershed.”

We also introduced a new summer camp for Gold Star family youth funded by A Hero’s Promise, a nonprofit that helps veterans and their families. For this camp, campers traveled to local parks, such as Tolmie State Park, to hike, explore, and learn about the natural environment. Campers also enjoyed the core curriculum.

Another summer camp volunteer, Eva Lang, adds, “After over a year of remote learning and long periods of isolation, many of the campers expressed their enthusiasm and appreciation for being together again. Seeing the campers' joy when socially reconnecting, is a memory that I will always cherish.”

We are so thankful for the numerous volunteers who helped to make summer camps fun and safe in 2021!

Community Monitoring Programs

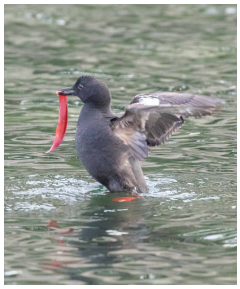
Pigeon Guillemot

This program has continued to shine like the crown jewel it is by providing the safest volunteer opportunity during the entire pandemic. It's an activity that inherently integrates social distancing AND gets folks outdoors at least once a week. In our ninth season we actually had an increase in the number of volunteers which put us at capacity for managing this program.

Adopting Survey 123 as the new data system and collaborating with other program partners from Whidbey Island resulted in our staff working overtime to ensure a smooth transition. Becoming proficient in using this new system elevated the priority of this aspect of the research and this delayed completion of the final 2020 report.

It is great to see the connections people are making with their local beaches and forming a community rich in stories like this:

"The Pigeon Guillemot has been called the "accessible alcid" because it is one of the easiest of the twenty-two species in the family of alcids for people to see, identify, and watch. Certainly, this is true in the summertime when this pigeon-sized seabird in striking black-and-white plumage appears close to the shores of the Salish Sea. While birders and beachcombers might initially mistake a Pigeon Guillemot for another alcid or duck, those fire-engine red feet and matching mouth lining make the Pigeon Guillemot a bird like no other in the Pacific Northwest. With their distinctive trills and whistles, acrobatic flights, kerplunk landings on the water, "communal water games," and regular visits onshore and to the bluffs where they nest, the Pigeon Guillemots make birding look easy and make being a seabird look like fun.



Yes, Pigeon Guillemots are "accessible" birds but watching them over the years provides access to the much bigger world of daily and seasonal tides, of summer sunrises, of fog and cloud cover, the community of marine birds and mammals that share the water with the guillemots. Studying the bluff face to track the guillemots' brief visits to their burrows every summer takes you deep into the region's geologic past when ice-age glaciers shaped the bluffs and shoreline. Listening to the small sounds of pebbles and sand eroding from the bluffs during a summer's hourlong survey reminds you that the earth will always be changing. Witnessing the mudslides and tree falls after heavy winter rains announces that change is happening on grander scales and at a faster pace. By paying close attention to the world through guillemot's eyes, we might learn how to best help them—as well as less "accessible" birds and wildlife—survive and thrive into the future."
-M. M. Ruth, Author and South Sound Pigeon Guillemot surveyor

As we prepare for our tenth season, we look forward to continued program growth that is possible through the collaborative efforts of the Salish Sea Guillemot Network.

Forage Fish

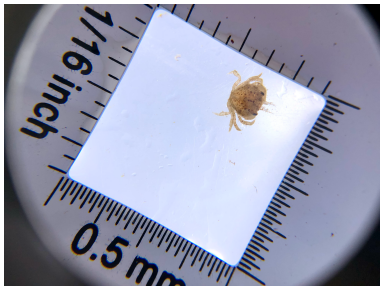
After a year of interruptions in 2020, we are pleased that beginning in September 2021, we were able to resume our monitoring efforts. This program, like the PIGU program, is also going into its 10th year of research assisting Washington Department of Fish & Wildlife and Washington Department of Natural Resources by monitoring beach spawning of Surf Smelt *Hypomesus pretiosus* and Sand lance *Ammodytes hexapterus*. The value of this work cannot be understated because of their vital role as a critical link between plankton and larger predators. Without forage fish, marine food webs would collapse. As in years past our most productive site is DuPont Wharf, but for unknown reasons we are seeing a very sharp decline in spawning compared to previous years. The great thing about long-term monitoring is that one bad year does not necessarily mean there is a bigger problem, but if this becomes a consistent, downward trend, then that would trigger some alarms, especially if it's not a geographically isolated issue. With the help of our volunteers, we intend to keep up monitoring within the Nisqually Reach Aquatic Reserve to help the state with this very important work.

"When I think about the naturalists who came before me, and all of the discoveries they made, there is a certain level of unattainable accomplishment to their findings. To see something or know something for the first time feels impossible in this fast-moving and modern world. But there are still opportunities out there to discover the unknown. At Nisqually Reach Nature Center, volunteers and staff are working diligently to better understand the biology and abundance of forage fish species in the Puget Sound. By collecting sample beach sediment and analyzing them through a microscope, we are working to compile data that leads us a step closer to answering questions we still have about this largely unknown species. It is easy to overlook the small species or not acknowledge them as being significant, especially those residing in water-- an out of sight out of mind kind of thinking. But how often in our own lives are we reminded that it is usually the little moments, the smallest gestures, the simple joys that make up the most profound moments of our lived experience. Small is beautiful and essential in creating the bigger picture."
-Chrissy Smith, NRNC Science Intern

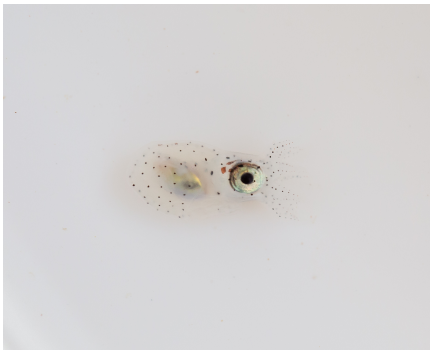
Larval Dungeness Crab Monitoring

For the third consecutive season, NRNC partnered with the Nisqually Indian Tribe, Pacific Shellfish Institute, and DNR to monitor larval crab populations using a light trap deployed at Zittel's Marina. During the season, team members check the trap four times a week starting mid-April and finishing at the end of September. NRNC volunteer, Shannon Boldt, took the lead on the weekend shift, bringing with her a science intern or her daughter, who also volunteers.

This project is focused on finding juvenile Dungeness crab in the South Sound. The process started up in response to a population crash south of the Tacoma Narrows that wasn't fixable with just a fishing closure. Studying larval recruitment of crab is one way to understand what is happening with the local populations. This work coincides with test fisheries conducted by Washington Department of Fish & Wildlife. In doing so, these efforts provide data that can be used to guide what we hope is a reopening of a once popular and productive fishery. So far, the numbers of Dungeness larvae caught still give us cause for concern, especially when compared to other areas of Puget Sound. Last season we caught a total of 22 Dungeness megalopae (larvae) and 3 instars (baby crabs) over the entire season, while in a location up near the Canadian border, they caught over 50,000 megalopae in one day! Dungeness crabs are an important part of South Sound ecosystems and an economically important species, so it is our hope, as we continue to monitor, that the numbers of Dungeness go up and stay up. This project in the Olympia area was made possible in large part due to the partnership with and support from the family-owned Zittel's Marina. Thanks to Shannon and other NRNC volunteers who put in over 110 hours combined.



"Working on the Larval Dungeness Monitoring project has been an amazing learning experience for all of us. Sampling from the waters of South Puget Sound using the light trap gives us a peek into what's happening in the water column below, and the data we gather will help inform future management decisions involving our beloved Dungeness. Plus, checking the trap is like unwrapping a present--each day is different, and we never know what we're going to find! Our samples are teaming with life, from other larval crab species, baby octopuses, small fish, worms, and isopods (to name a few), and it's exhilarating and eye opening to get a glimpse of what's swimming around under the surface. It really brings home the importance of the work we do to conserve and recover the vibrant ecosystem that is Puget Sound" -Shannon Boldt, Community Science Volunteer and NRNC Board Member



If you'd like to learn more about larval Dungeness crab monitoring, you can visit one of these two sites:

-Pacific Northwest Crab Research Group (the overarching collaborative research group for the entire region) https://www.pnwcrab.com/the-group

-Pacific Shellfish Institute, Light Trap Monitoring: https://pacshell.org/light-trap.asp

As indicated by the educational curriculum developed by Katie Houle, Research Biologist and South Sound team collaborator at Pacific Shellfish Institute, "these are tiny crabs with big impact!"

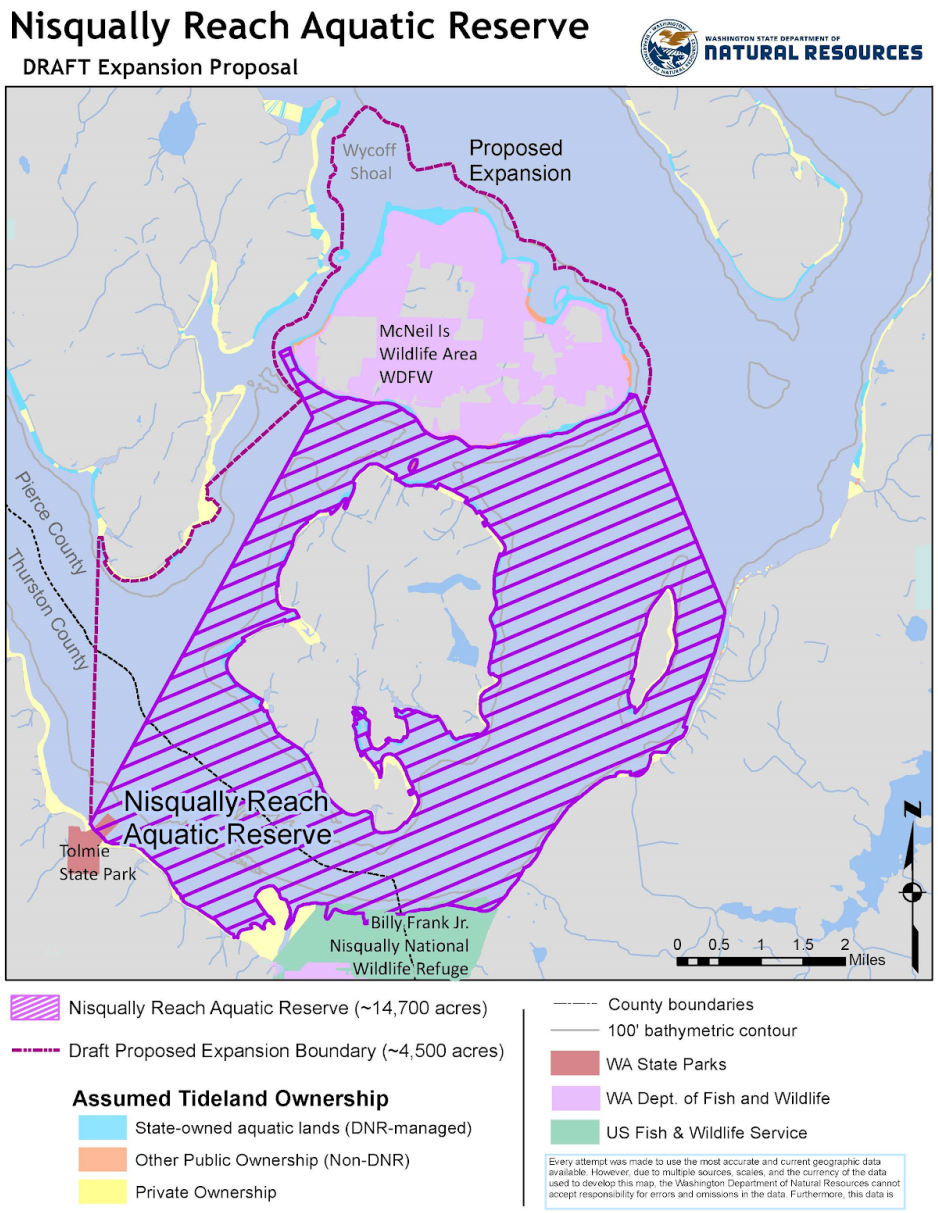
Nisqually Aquatic Reserve Expansion

NRNC worked with the Washington Department of Natural Resources (DNR) and stakeholders to propose an expansion of the Nisqually Reach Aquatic Reserve by approximately 5,000 acres (see map) back in 2019. This proposal is still currently in arbitration with local tribes, and we are hopeful the proposal will move forward in 2022. Once all parties are in agreement, the Public Lands Commissioner will need to sign the final document.

An Aquatic Reserve is a DNR-designated conservation area that has a site proponent, such as NRNC, or a community organization. The Nisqually Reach Aquatic Reserve (NRAR) is part of DNR's Aquatic Reserves Program. DNR establishes aquatic reserves throughout the state to protect important native aquatic ecosystems.

An aquatic reserve can be designated for any of the following purposes, singly or in combination: educational, environmental, or scientific. NRAR was designated as an educational, environmental, and scientific reserve. DNR's Aquatic Reserve Program brings together local and state governments, nongovernmental organizations, tribes, and citizens to develop and carry out site-specific management plans to protect the aforementioned values.

If you are interested in learning more or getting involved, visit our website at http://nisquallyestuary.org/citizen-science/aquatic-reserve/.



Volunteers

Volunteers are the backbone of our nonprofit organization. Whether it was volunteering for our education programs, community monitoring programs, fundraising efforts, serving as board or committee members, or the infrastructure work guiding our mission and taking care of the facility, we could not have accomplished it without our volunteers. In 2021, our volunteers completed a total of 3,862 hours, which is valued at $130,342.50 by Independent Sector.

Last year volunteers helped us work with our summer camp kids, put together newsletters and social media posts, design graphics and flyers for our programs and events, plan our cocktail social, install new lighting, clean the center inside and out, maintain aquariums, rebuild our stairway, stain our deck rail and stairway, staff our feast event, run our fundraising campaigns, keep our community science surveys and lab work going, coordinate volunteers, crunch data, and write reports…whew, that's a long list!!

We would also like to take this time to give kudos to our board members, who are also volunteers. Together they put in over 1500 hours and dedicated themselves to helping keep the center on track and moving forward with our mission during these trying times.

We are ever so grateful for all our volunteers!! Thank you for being you and for joining us on our journey through 2021!

By The Numbers

As NRNC continues to grow, we work to find new ways to fund the very important work of accomplishing our mission. Our income in 2021 was supported mostly by grants, comprising of 67 percent of our overall income. However, we are starting to see growth in our donations and fundraising efforts to balance our budget. Our creative fundraising efforts generated 14 percent of our income. We were so happy to hold a successful and safe in-person Feast at the Reach where we brought in $19,298. Our guest speaker, WA State Commissioner of Public Lands, Hilary Franz, was a major highlight for us, as was being back in the company of our wonderful supporters. We also ran our first ever T-shirt design contest and were in awe at all of the amazing entries we received. Our winner was Becca Aguon with her gorgeous Mt. Rainier design (see below!). Earlier in the year we partnered with Sandstone Distillery to hold a virtual cocktail fundraiser spotlighting our Pigeon Guillemot program. Terence Lee gave us the lowdown on the Guillemots while we sipped away at our tasty cocktail creations—what a fun night!

NRNC, like many other organizations, continues to feel the impacts of the COVID-19 pandemic. Even so, our supporters kept us going by donating 9% of our total income. Generous donations from you help NRNC realize our vision, especially when times are tough. This financial support was instrumental in us being able to accomplish our mission.

Construction on Luhr Landing

After months of hard work dictated by the weather and the tides, the Luhr Beach boat launch, parking lot updates and pier removal were finally completed! The boat launch was redone and now has an accessible platform for easier access to move vessels on and out of water, with accessible parking.

As part of this project, stormwater was diverted and channeled into a bioswale, and new, ecologically sound, large woody debris was placed to protect the lot from erosion. A total of twenty-two creosote-coated pilings from the old pier were removed in two sessions-- thirteen by excavator, and later, nine by a floating crane. While we are sad that our pier is gone, we are happy that toxic chemicals are no longer leaching into our estuary. Before piling removal occurred, our purple martin boxes were removed, but no worries, WDFW installed some new fancy boxes for us, well ahead of the spring migration! Also, as part of the project, a new bathroom was installed at the top of the hill–yay!! The Washington Recreation and Conservation Grant funded the project, and it was executed by the Washington Department of Fish and Wildlife (WDFW). We are very thankful for the fantastic work by both WDFW crews and Puget Paving, with such variable weather and tidal conditions. All parties concerned with this project worked well with NRNC in planning and communicating to maintain our access to the building during the much-needed upgrade to our site.

Looking to the Future

Education Programming

- We have a new education director in 2022! Welcome, Hannah Kornbrath!
- We are looking forward to in person education programming at the center this year.
- We'll have summer camps: 4 sessions of Classic Beach Camps and a week of Science Adventure Camp. Registration is open, see our webpage for details. http://nisquallyestuary.org/education/summer-camps/
- Field trips will be starting back up soon!
- Through April we have an amazing traveling Orca display up—come by the center to check it out! https://www.orca-story.com/traveling-exhibit
- We'll be working with our partners at the Nisqually River Foundation on the No Child Left Inside project to get Nisqually Tribal Youth out exploring and engaging in the watershed.
- We are planning to do more outreach with JBLM and military families, working with the American Legion and A Hero's Promise to bring them summer camp and field trip opportunities.

Community Monitoring Programs

- Larval Crab monitoring will run from April – September.
- Pigeon Guillemot breeding survey season starts the beginning of June.
- A team of key volunteers is gearing up to update the Pigeon Guillemot species account in Cornell's Birds of North America! This will be a 1-2 year endeavor, and we're honored to take on this task!
- Ocean acidification (DNR AneMoNe) will also be starting in April and continuing through August or September.
- Forage Fish labs will continue through spring and summer; surveys will resume in the fall including visits to Eagle Island where we hope to find more sand lance spawning next season.

Aquatic Reserve Expansion

- We will continue our work to expand the Aquatic Reserve another 5000 acres by collaborating with our partners and stakeholders to get an agreement on conservation in the area proposed.

Operations

- We'll be re-opening to the public on March 26!! Join us!
- In 2022, we are also very excited to commemorate our 40th Anniversary. Follow us on Facebook, Instagram, or our website for special 40th anniversary programming.
- This year marks 10 years of monitoring FF and PIGU in the Aquatic Reserve.

Stay tuned for updates on social media and our website at:

- Facebook: https://www.facebook.com/nisquallyreachnaturecenter
- Instagram: @Nisquallyreachnaturecenter
- NRNC website: www.nisquallyestuary.org

Our Partners & Supporters

A big thanks goes out to the many organizations that helped NRNC accomplish our mission in 2021. This list includes but is not limited to:

Dawkins Charitable Trust

ROSE FOUNDATION for COMMUNITIES and the ENVIRONMENT

PUGET SOUNDKEEPER®

THE RUSSELL FAMILY FOUNDATION

Greater Gig Harbor Foundation
Building, Bridging, Enriching!

South Sound GREEN
Global Rivers Environmental Education Network

Nisqually Indian Tribe
Squally-Absch
People of the river, people of the grass

NISQUALLY RIVER EDUCATION PROJECT

Washington Department of FISH and WILDLIFE

Heritage BANK

WASHINGTON DEPARTMENT OF NATURAL RESOURCES

Pierce County

U.S. FISH & WILDLIFE SERVICE
DEPARTMENT OF THE INTERIOR

Peninsula Light Co.
a mutual corporation · since 1925

KGI WATERSHED COUNCIL

HARBOR WILDWATCH
PUGET SOUND ESTUARIUM
SEA DISCOVERY CENTER
PORT TOWNSEND MARINE SCIENCE CENTER
LANGLEY WHALE CENTER
Marine Life Center