2022 ANNUAL REPORT

This was a banner year not just in numbers but also in the depth of our "bench" to continue preserving, enhancing, and maintaining this natural ecosystem, most notably:

- An influx of enthused and skilled volunteers portends the continuation of a strong citizen voice in the future of this urban watershed.
- Student involvement was back up to pre-pandemic strength.
- Our spawner count was exceptional for the second year in a row.



SALMON

As we did in 2021, we open this annual report with a summary of salmon-related activities because this iconic fish lured record numbers of volunteers and visitors to Fauntleroy Creek in 2022. Such attention not only attracts resources to stewarding this watershed but also fosters citizen appreciation for the value of such life-giving systems throughout the Pacific Northwest.

EMERGENCE. Given fall 2021's 244 spawners, we expected to see a lot of home-hatch fry emerge from the gravel this winter and they did not disappoint. Dennis Hinton spotted the first fry on Feb. 19, and soon dozens were evident in the spawning reach.

OUT-MIGRATION. Volunteers installed two net traps to document coho smolts leaving for saltwater - one in the upper creek as mainstem flow exits Fauntleroy Park and one in the lower creek at the entrance to the fish ladder. They checked each trap twice daily from March 15 to May 26 and tallied just 11, all of which left early April through early May. Salmon in the Schools fry released in the park appeared to have made use of at least upper and middle reaches of the creek system.

Monitors also found 173 home-hatch fry in the lower trap before school releases began in May and another 234 in both traps during release season. This was the highest number leaving the system prematurely since 2013.

<u>RELEASE SEASON</u>. With school buildings open and public-health restrictions eased, school releases in May were similar to our norm before the pandemic. Our release team hosted 15 groups releasing 1,624 coho fry in Fauntleroy Park. Most of the 460 students we saw



Sculptor Tom Jay established a strong salmon theme in Fauntleroy, including these spawners coming in from the cove, as they did in abundance again this year.



Checking smolt traps twice daily for more than two months was a big commitment for the team of volunteer monitors Dennis Hinton coordinated.

this year came on release field trips. They were from seven elementary schools, five preschools, and Brownie troup, all in West Seattle. A total of 167 adults came along as chaperones and 79 people of all ages participated in our June 5 community release.

While volunteer Tom Trulin kept an eye on safety and took photos, Dennis Hinton dipped fish, and Pete Draughon showed students the macroinvertebrates that their fry would be eating during their year in the creek. Volunteer educator Shannon Ninburg helped teams of students explore nearby habitat, Judy Pickens did the scheduling, and Tim and Denise Wulfekuhle helped host classes that came to the lower creek for lunch. Jack Lawless reared 650 fry to ensure that every student had a fish to release; his surplus supplied the community release.





Salmon releases for all ages brought hundreds of students and area residents.

Today on Fauntleroy Creek reminded me of being in the Hoh rain forest on a fall day. Coho salmon were everywhere we looked on the south side of the ferry dock and up and down the creek at Judy's place. How many people living in Seattle can say that? WOW!

Veteran salmon watcher Gordon Thomas

SPAWNING SEASON. Salmon Watch 2022 ran Oct. 16 - Nov. 22, with an exceptional number of fish coming in Oct. 25 - Nov. 15. Volunteer watchers documented 254 coho spawners in the reach between 45th Ave. SW and Fauntleroy Way SW. This count exceeded by 10 our 2021 total, and put 2022 in the No. 2 position behind 2012's all-time high of 274.

Salmon returns to Puget Sound were robust this year but human intervention may also have played a role here. Judy Pickens secured a state permit to relocate drift logs at the creek mouth

to ensure spawners could get in from Fauntleroy Cove. Most years, we've assumed the logs would float at high tide, but piling under the states ferry trestle snagged scores of logs in a tight jam. Mark Sears led the initial work party in mid October to clear a path, then he and Tom Trulin checked the beach daily for clearance. Other factors were high tides and low barometric pressure that gave spawners the lift they needed to enter the creek. Also, timely rains flushed the creek, giving spawners the scent of fresh water they needed before committing to the creek.







(Left) A few of our 441 visitors. (Middle) Eggs set adrift when latecomers dug up early redds. (Right) Our final tally of spawners.

Year	Eggs	Released Fry	% of Fry From Eggs	Live Smolts Upper Creek	Live Smolts Lower Creek	Smolts to Salt	Spawners	Release & Field Trip Students ⁵	Spawning Season Visitors
2022	1,950	1,624	83	2	9	11	254	460	441
2021	1,500 ⁴	1,061		15	34	49	244	130 ²	400
2020	2,400 ²	2,069	86	22	55	77	2 ³	50 ²	5 ²
2019	2,400	2,006	83.5	4	18	22	19	730	125
2018	2,400	1,955	81	26	19	45	18	662	240
2017	2,400	1,817		18	14	32	4	744	?
2016	2,900	1,795	62	14	5	19	7	764	67
2015	2,700	1,700	63	2	33	35	0	750	?
2014	3,450	2,409	70	8	11	19	19	680	190
2013	2,800	1,987	71	65	76	141	3	543	40
2012	3,100	2,615	84	145	85	230 ¹	274	562	290
2011	2,900	2,027	70	147	36	183 ¹	14	647	100
2010	2,500	2,298	92		24	24	0	556	?
2009	2,500	1,936	77		18	18	18	500	68
2008		1,790			17	17	2	570	?
2007		2,276			24	42	89	432	141
2006		2,033			22	22	0	290	?
2005		1,138			10	10	48	300	?
2004		1,534			11	11	6	275	60
2003		1,254			37	37	4	320	192
2002		1,965					5	244	236
2001		1,050					167	710	?
2000		750					126	496	?
1999		875					100 ²	684	?
1998		unspecified					200²	419	
1997		unspecified					2 ²	350	
1996		unspecified					6	325	
1995		unspecified					11 ²	200	
1994		unspecified					2		
1993		unspecified							
1992		?							
1991		unspecified						4	
1990		unspecified							

¹Corrected ²Approximate ³1 live/1 dead at mouth ⁴ Participation reduced by pandemic ⁵Not including siblings and adults

SIDE NOTES

- Spawners schooled in the cove over a month's time before coming in.
- Spawners tussled with one another to enter the creek as the tide rose, then tussled over returning to saltwater as the tide ebbed.
- Carcasses provided much nourishment for raccoons, possums, and birds.
- Seeing spawners prompted Fauntleroy Church Senior Pastor Leah Bilinski to make the experience the focal point of a sermon about perseverance.

Spawners were a mix of hatchery-released fish (clipped adipose fin) and fish that may have originated here (school releases or home hatch). Most stayed near the fish ladder to spawn; watchers documented about a dozen up toward the 45th Ave. SW culvert blocking their passage into the middle reach.

Thinking that 14 spawners might be it, we scheduled an open creek for Oct. 29, which drew 130 visitors. Still the bright, extra-large fish came, as did visitors of all ages until we had hosted at least 441. Our cadre of 23 volunteer watchers talked with them all while recording spawner and redd locations; many also took photos and videos.

Watchers saw a lot of fingerlings from last year's spawning as well as a few cutthroat trout in for the thousands of coho eggs displaced when late spawners dug out the redds of early spawners. At day's end, Dennis Hinton reviewed watcher forms to determine how many fish to add to our tally. Watcher Alana Khayat took on the additional task of extracting every bit of informative data from those forms; find her summary at fauntleroywatershed.org/wp-content/uploads/2022/12/2022_watch_summary.pdf.

VOLUNTEER RECRUITMENT & ENGAGEMENT

As long-time volunteers retired or thought ahead to retirement, we shifted recruitment into high gear. We kept a list of one-time, occasional, and ongoing opportunities to get involved on our website and had copies available at public events. Spawning season was the most productive, when a record two dozen volunteers signed up to document fish or were attracted by spawner reports in the media.

When someone expressed interest, Judy Pickens and Dennis Hinton hosted a "tea and talk" to discern particular interests and time availability. In some instances, newcomers plugged right in; in others, we stayed in touch until a recruit was well enough acquainted to propose a way to engage. All names went on a listserv for easy communication when help was needed or when a funding opportunity suggested a new project in need of leadership.

For recruits just starting a career or wanting field experience, we teased out ways for them to add to their resumes while furthering watershed goals. Evidence of "new blood" is throughout this report.



Family members and friends who attended our annual drumming pledged how they might volunteer on Fauntleroy Creek or introduce others to nature in the watershed.

VOLUNTEER TRIBUTES

STEEV WARD visited the creek in 2001 after a friend suggested we might be able to use a fish biologist. His friend was right, and Steev made many contributions before retiring in spring 2022:

- advised how to effectively count spawners.
- initiated smolt trapping to document outmigration
- focused creek restoration on improving habitat for juvenile salmon.
- resolved salmon-rearing health concerns for area schools.
- checked carcasses for pre-spawn mortality and other disease.
- enthralled students with salmon dissections.





PEGGY CUMMINGS began volunteering in 2008 by monitoring trail conditions in Fauntleroy Park and soon trained with the Green Seattle Partnership as a forest steward. When the pandemic curtailed many activities, she retired in 2020 after having

- organized work parties and helped with student fieldtrips in the park.
- served on the watershed council's executive committee and took council minutes.
- prompted a six-year, grant-funded project to eradicate invasive plant species in the Kilbourne ravine (the creek's middle reach).
- continually updated our self-guided nature walk in Fauntleroy Park.
- supported a wide variety of council activities.

HABITAT & STEWARDSHIP



Cold-weather gear was essential when EarthCorps trainees did plant maintenance in the Kilbourne ravine in December.

KILBOURNE RAVINE MAINTENANCE. When our six-year, grantfunded project to restore beneficial habitat along the middle reach of Fauntleroy Creek ended in 2019, we knew maintenance would be essential to ensure that investments made by the King Conservation District and Rose Foundation would not be lost. In 2020, we began using private donations to the Fauntleroy Watershed Stewardship Fund to have EarthCorps trainees come for one day in spring and fall to check the health of plantings and remove invasives trying to regain a toehold.

<u>RIPARIAN VEGETATION</u>. During our 2021 spawning season, volunteers noted that vegetation was again threatening to block

the channel due upstream of the creek mouth *and*

that a heavy infestation of English ivy across the channel just downstream of the 45th Ave. SW culvert also had the potential to impede spawners.

This year, staff with Seattle Public Utilities (SPU) offered to help develop a course of action, and Washington Department Fish and Wildlife (WDFW) area habitat biologist Julian Douglas joined them to take a look. Their site visit, plus strategizing with property owners, got the ball rolling at each location. SPU provided a revegetation plan for the upper site, where we offered to help if needed, organize a volunteer work party and dip into our stewardship fund for plants. Owners of the lower site chose to manage their own weeding and revegetation.



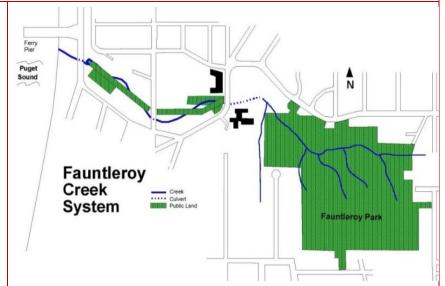
Shasta McKinley (left) and Josh Meidav (right) from Seattle Public Utilities met WDFW area habitat biologist Julian Douglas (middle) on the creek to advise what to do about vegetation choking the channel.

ABOUT THE WATERSHED

Fauntleroy Park, Fauntleroy Creek, and Fauntleroy Cove are the dominant natural features of the residential community in West Seattle for which they are named.

Fauntleroy Park is a 28-acre wooded ravine preserved as natural space. Its network of well-maintained trails provides access to explore and enjoy a remnant of the coastal forest ecosystem that once blanketed this region.

Fauntleroy Creek originates in the park and drops 300 feet over its one-mile course to Fauntleroy Cove in central Puget Sound. Springs and runoff from a 149-acre watershed sustain flow year round. Prior to the city's installation of a drainage system, the geologic watershed was about 493 acres.





Steve Winter and Tim Wulfekuhle lugged coir logs down for Mark Sears and Pete Draughon to stake into place in the lower creek.

BANK REINFORCEMENT. In July, volunteer hydrologist Steve Winter led a work party to install five fresh coir logs along a section of bank in the lower creek. Forceful flows had eroded the original coconut-fiber logs installed in 2017 and threatened trail usage. Our stewardship fund financed the project.

<u>CULVERT REPLACEMENTS</u>. Since 2017, council and church members Phil Sweetland and Judy Pickens have been involved in city planning to replace the culvert that conveys Fauntleroy Creek under the main church parking lot between Fauntleroy Park and the Kilbourne ravine. SPU also plans to replace its culvert under 45th Ave. SW, both of which block spawner access to headwaters habitat in the park.

While SPU continued design work on the replacement at 45th, the church took a hiatus from joint planning to pursue its own lines of inquiry. Key issues are the multi-million-dollar estimated cost to the congregation and public-safety concerns associated with possible daylighting of the channel. After failing to get grant funding to develop a fish-passable design aligned with church priorities, planning with the city has resumed.

SPU continues to send the church quarterly flow and condition information stemming from puncture of the church's culvert by a city contractor taking soil samples. Video shows many cracks and other condition concerns, especially with the clay portion of the culvert owned by the city. SPU established a procedure so

that, in the event of culvert failure, the city's flood-emergency team will be have the authority to respond and the bypass equipment needed to maintain creek flow.

<u>FOREST STEWARD</u>. In the spring, Charlotte Linton came on board as a forest steward for Fauntleroy Park. This program of the Green Seattle Partnership trains volunteers to monitor conditions in natural areas, lead restoration projects, and do public outreach on behalf of forested areas. At the time, Charlotte's family was about to grow, so her time in the park was precious. She did manage to devote about 15 hours removing ivy near the SW Cambridge St. entrance, and she enlisted

another volunteer to help plant 70 native shrubs near 41st Ave. SW and SW Roxbury. She lead students from Organic Sprouts



Students from Organic Sprouts Preschool got down and dirty to plant sword ferns with forest steward Charlotte Linton.



Ann Root celebrated her 96th birthday by attending the drumming, then touring the spawning reach with Dennis Hinton.

Preschool in planting another 30 shrubs near the SW 97th St. entrance.

COMMUNITY OUTREACH

Our community outreach has multiple objectives, including volunteer recruitment. This year it included hosting and participating in events after pandemic restrictions eased, as well as creating a new resource to draw residents into nature.

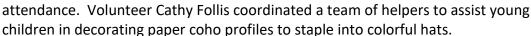
<u>SALMON DRUMMING</u>. On Oct. 16, we welcomed 30 people to our annual drumming to call in coho spawners. Jamie Shilling led the music

and helped Judy Pickens focus the event on volunteering, including the reading of tributes to retired volunteers Steev Ward and Peggy Cummings. Attendees



considered how they might somehow benefit the watershed and posted their pledges on a board displayed during spawning season.

FAUNTLEROY FALL FESTIVAL. In late October, the Fauntleroy Fall Festival was back in full force. Years ago, we introduced salmon hats as an activity, and it was again popular with many of the estimated 2,000 people in



TREE WALK. Freshly arrived in the neighborhood with a degree in botany, Lindsey Conrad inquired about volunteering and was soon creating a tree walk in Fauntleroy Park. It will use a QR code to link walkers to our

website to see photos and details about some dozen trees of interest they can see in the park. To fund signs to identify each tree *and* add to our stewardship fund for habitat maintenance, Lindsey successfully applied to the West Seattle Garden Tour for a \$4,700 grant. She is working with other volunteers, including photographers Rosalie Miller and Tom Trulin, to introduce the walk this coming spring. She will be selecting signage, filing grant reports, coordinating publicity, and hosting an information table during the 2023 garden tour in early summer, all of which will enhance her resume.

PEACE POLES. This fall, West Seattle Rotary Club's peace pole project came to the watershed. In September, Fauntleroy Church and Hazelwood Preschool dedicated a children's peace garden in the upper creek, with a pole as the centerpiece. Then in November, a ceremony at the fish-ladder viewpoint dedicated a pole in the lower-creek. At the latter, Judy Pickens spoke on behalf of the watershed council about the ability of our salmon program to nurture peaceful co-existence.



Creekside neighbors now host this peace pole in the lower creek.

RESEARCH & EDUCATION

<u>WATER-QUALITY TESTING</u>. In January, new volunteer Raegan Goff began year-long testing for water-quality in the upper and lower creek. An area resident, she came to us through a program run by the Sno-King



Raegan Goff used both creekside and at-home testing to monitor water quality.

Watershed Council as part of Global Water Watch. Trained volunteers monitor physical, chemical, and biological indicators of watershed health and report their findings to a national database. After her summary of findings to fellow members of our watershed council, we will post her report on our website.

MACROINVERTEBRATES. Fourth grade researchers from Louisa Boren STEM came twice this year for ongoing macroinvertebrate studies in the upper and lower creek. See their full reports on our website.

In late March, volunteer educator Shannon Ninburg led Boren students in counting and measuring stonefly exoskeletons in the spawning reach as a simple way to gauge abundance of food sources for juvenile salmon.

They found 62, with most on trees and bridges near the water. The longest (6 cm) set a 20-year record.

In early November, Shannon and teacher Elizabeth Mahrt directed students sampling for macroinvertebrate abundance and diversity in the upper and lower creek. Using a Surber sampler and established protocol, the students found a variety at both sites, most of which live only in good-quality water. Abundance was highest in the lower creek, where spawner carcasses provide nutrients.

My class at Our Lady of Guadalupe participated in the salmon-rearing program back in the early 2000's. The experience I had with your program was certainly a formative one and contributed to my interest in pursuing a career in wildlife biology and conservation.

New volunteer Ryan Lewis





(Left) Students found more than half of their exoskeletons on trees in the study area. (Right) Shannon Ninburg briefed students at school about how to use the Surber sampler, then reinforced instructions creekside.

SALMON IN THE SCHOOLS. We continued our strong support for teachers using the rearing of salmon from eyed eggs to vigorous fry as a means of teaching science, math, and other subjects *and* cultivating responsible stewardship. In addition to supporting salmon releases, watershed volunteers helped keep tanks running properly. Council members Phil Sweetland and Judy Pickens served on the citywide steering committee, which

enabled 68 schools across the city to participate during the 2021-22 term.

COMMUNICATION

IN THE MEDIA. We communicated with the general public at every opportunity during the year. The *West Seattle Blog* was our primary medium, backed by *Neighbors*, the quarterly newsletter of the Fauntleroy Community Association. We also posted news on the opening page of our website and at the fish-ladder viewpoint. We kept our watershed brochure at major entrances to Fauntleroy Park and also at the viewpoint.

Articles on the West Seattle Blog (with photos and/or videos) were as follows:

- February emergence of home-hatch fry
- March annual count of stonefly exoskeletons
- May second salmon release, release wrap-up
- June community salmon release
- July installation of coir logs in lower creek
- October drumming, call for salmon watchers, sighting of first spawners, open creek
- November updates on spawner count, spawning wrap-up, peace-pole ceremony at fish-ladder viewpoint

Neighbors conveyed watershed news to community residents as follows:

- March -Peggy Cummings retirement as forest steward
- June salmon releases, out-migration report
- September new forest steward
- December wrap-up of spawning season





<u>WEBSITE</u>. After doing a major update of our website in 2021, webmaster Chris Nack made a few refinements this year and continually posted watershed news, council minutes, and reports. Data from Google Analytics show a doubling of users this year over last, as well as significant boosts in other categories, possibly



because of increased public awareness and/or improved ease of navigating the site. After landing on the home page, the highest number of users went to the creek section. About the same number came directly as through a referral source, the primary one again being the *West Seattle Blog*. Chris began putting watershed news on Instagram, which had attracted 80 followers by year's end.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Users					968	1,002	749	878	849	1,777
New Users	886	2,543	2,329	1,544	955	995	74	873	847	1,771
Sessions	1,153	3,159	2,710	1,904	1,187	1,187	1,048	1,115	1,123	2,021
Page Views	3,130	7,320	4,681	3,915	2,531	2,368	1,805	2,188	2,632	4,209
Duration	0.08	0.06	0.04	0.07	0.06	0.05	0.04	0.14	0.10	1.29
WS Blog Referrals					76	127	24		276	205
Social Media Referrals					2	10	14		6	6

Note: In 2016, teachers began going to the Salmon in the Schools-Seattle website for learning resources instead of to our site.

ADVOCACY

SEATTLE WATERSHED ALLIANCE. The alliance met three times in 2022, with Judy Pickens and Phil Sweetland representing this watershed at each. It's primary function is advocacy for watersheds across the city. Topics of concern included homelessness encampments in natural areas, permitting, signage, removal of urban fish barriers, and use of citizen-collected data in city program planning and policy making.

FERRY TERMINAL UPGRADE. Washington State Ferries continued planning an upgrade of its Fauntleroy terminal by focusing on input from three advisory groups: community, technical, and executive. Council member Judy Pickens is representing the interests of Fauntleroy Creek on the community advisory group, which reflects Fauntleroy, Vashon, and Southworth communities. After providing input on multiple options, planners decided to focus on upgrading at the present location in Fauntleroy Cove and not gain parking by widening the trestle to the north (which would have eliminated Cove Park and its salmon art). Lengthening the trestle remains on the table. Judy has been reinforcing the Fauntleroy Community Association's position that more overwater coverage would not be necessary if the ferry system fully implemented advance ticketing so that most vehicles did not need to queue on the street before getting onto the trestle.

<u>SIGNING ON</u>. We supported the State Department of Ecology's updating of requirements aimed at limiting toxic chemicals in nearshore habitat when ferry terminals clean or paint structures. Also, in response to advocacy by the Wild Fish Conservancy and others (including our watershed council), this fall, the state's commissioner of public lands prohibited commercial net-pen aquaculture in Puget Sound.

HONORABLE MENTION

Tom Trulin for taking professional photos and videos of every occasion and recruiting neighborhood volunteers.

Mark Sears and fellow "loggers" for keeping the mouth of the creek open for spawners.

Our largest corps of salmon watchers for coming in the cold and wet to document spawning season and talk with hundreds of visitors.

Alana Khayat for enthusiastically combing through watcher reports for informative data.

Betsy Lyons for valuing our on-the-ground experience while she led the culvert-replacement projects.

Phil Sweetland and Judy Pickens for welcoming drummers, watchers, visitors, and students onto their property; also for her persevering to get our state permit to relocate drift logs.

LOOKING AHEAD

New volunteers have brought fresh energy for ongoing activities and fresh projects. Here's what we anticipate achieving in for 2023:

- An updated watershed plan will come into focus.
- Our tree walk in Fauntleroy Park will go live in the spring.
- We will continue to share ideas and concerns with other watersheds across the city and advocate for mutually beneficial advances.
- We will add a member to our executive committee focused on Fauntleroy Park.
- We will continue to be a voice for the creek and nearshore habitat as the state homes in on plans for upgrading the Fauntleroy Ferry Terminal.
- We expect Fauntleroy Creek to be among sites across the city to pilot a citizen-friendly e-DNA test to distinguish among sources of E. coli bacteria.
- We expect to offer a spring/summer tour of the creek system to members of the Seattle Watershed Alliance and extend our invitation to the general public.
- We will continue to make sure that new volunteers are rewardingly engaged.

COUNCIL BUSINESS

<u>CHECKING ACCOUNT</u>. According to council treasurer Dennis Hinton, we opened the year with \$907.35 in our checking account at Washington Federal and closed it with the same amount. Small individual donations paid for photocopying our watershed brochure and other incidentals.

FAUNTLEROY WATERSHED STEWARDSHIP FUND. Since 2018, this fund administered by EarthCorps has been accepting tax-deductible donations to fund stewardship work for which grants are not available. We began 2022 year with a balance of \$15,187.99 and by year's end had received \$2,300 in additional donations. Expenditures (including a 15% administrative fee) were \$392.25 for coir logs and \$4,412.84 for two EarthCorps crew days maintaining restored habitat in the Kilbourne ravine. The balance at year's end was \$12,682.90. For details about donating, visit **fauntleroywatershed.org**.

<u>MEETINGS</u>. The council met on second Thursdays in January, March, May, September, and November. Because of the continuing pandemic, meetings were on Zoom except in September, when we met outdoors. All meetings were open to anyone interested.

<u>CONTACTS</u>. Members of the executive committee planned the agenda and took care of business between meetings. Email <u>Dennis Hinton</u> (*denhinton43@gmail.com*) or <u>Judy Pickens</u> (*judy_pickens@msn.com*) anytime with concerns, inquiries, or ideas.

For more about the watershed and what we do to restore and steward Fauntleroy Park, Fauntleroy Creek, and other natural areas, visit *fauntleroywatershed.org*.

Photos in this report are courtesy of Dennis Hinton, Connie Hinton, Tom Trulin, Mark Sears, Caitlyn Barrera, Charlotte Linton, and the West Seattle Blog.