

2001 Volunteer
SALMON WATCHER PROGRAM
in the Lake Washington Watershed
and Central Puget Sound Drainages

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King County Water and Land Resources Division, in cooperation with:
Lake Washington/Cedar/Sammamish Watershed Forum
Central Puget Sound Watershed Forum
King Conservation District
Snohomish County Surface Water Management
Bellevue Stream Team
Cities of Issaquah, Kirkland, Redmond, Renton, Seattle, and Woodinville

Alternate formats are available upon request by contacting
206-296-7592 (Voice) or 800-833-6388 (TTY).

SUMMARY

In 1996, the Bellevue Stream Team, King County Water and Land Resources Division, the Muckleshoot Indian Tribe, the Snohomish County Surface Water Management Division, and the Washington Department of Fish and Wildlife began a jointly coordinated volunteer spawning survey program in the Lake Washington Watershed (all waters draining through the Ballard Locks). In 1997, the program evolved into the Salmon Watcher Program as it is today and has been conducted annually since. The purpose of the program is to document the distribution of spawning adult salmon throughout the basin via an active public outreach and education program, and subsequently consolidate all the information into a single resource (this report). These data can be used by policy makers and the public to improve how aquatic resources are managed, to protect salmon and trout species, and to enhance their habitat.

For the 2001 program, 219 volunteers surveyed 181 sites on 68 streams throughout the Lake Washington Watershed and Central Puget Sound streams from late August 2001 to January 2002. Because volunteers collect the data in this program, the agencies are able to obtain information from far more locations than would otherwise be possible. However, data in this report should be used with the following factors in mind:

- (1) Volunteer expertise in locating and identifying fish species varied from very high to very low;
- (2) Coverage of streams by volunteers was by no means complete; therefore, fish distribution information is not complete;
- (3) Volunteers view stream sites for relatively brief periods of time during the spawning season;
- (4) Determination of survey sites was based on volunteer availability and site accessibility (and some survey locations change from year to year, even on the same creek);
- (5) Spawning fish can be difficult to see and therefore may have passed through reaches undetected; and
- (6) Volunteer data indicate only where minimum fish distributions extend to, but do not indicate reaches where fish are definitively absent (in other words, the data confirms fish presence, but does not confirm absence).

Volunteers observed the following species: sockeye, chinook, coho, kokanee, chum, and pink salmon, as well as trout species (rainbow or cutthroat). The following results were compiled from volunteer observations: (1) Coho had the widest distribution throughout the official survey area (36 streams); (2) sockeye were seen in the greatest numbers by far (over 10,000 enumerated); (3) chinook were observed in six Lake Washington basins and were observed but not verified in Longfellow Creek, which drains to Puget Sound; and (4) Kokanee observations were verified in four Lake Washington basins and were reported but unverified in three additional basins.

Maps included in this report have been published on the Internet, and can be found using the hyperlinks on this web page: <http://dnr.metrokc.gov/wlr/waterres/salmon/maps.htm>

ACKNOWLEDGEMENTS

Many thanks to all the dedicated volunteers for spending many hours in cold and wet weather to collect the information for this report—sometimes for the sixth year in a row, and sometimes without ever seeing a single fish. Without the volunteers there would be no data, no maps, no report. They help make a positive difference here in the Northwest, not only by reporting fish species, but by acting as the eyes and ears of the streams, reporting stream blockages as well as illegal and other suspect activities. You are true stewards of the resources that make the Pacific Northwest so special. *A huge Thank You!*

We also want to acknowledge the various individuals from the cooperating jurisdictions. Every year these folks meet and plan the program, organize and stage the training sessions, and invest lots of time attending to the questions of the volunteers. Thanks (in no particular order) to Roger Kelley, Darian Davis, Mike Dotson, Laura Reed, Joe Starstead, Debra Crawford, Stacey Rush, Scott Gonsar, Peter Holte, Carla Milesi, Chrys Bertolotto, Tom Barry, Jim Mattila, Michael Murphy, Jessica Kuchan, Katy Vanderpool, Hans Berge, and Robert Fuerstenberg.

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INTRODUCTION

The Salmon Watcher Program is a volunteer program that originated in 1996 to observe adult fall spawning salmonids in the Lake Washington Watershed. The Salmon Watcher Program recruits and trains volunteers to identify and watch for spawning salmon throughout the Lake Washington Watershed and Central Puget Sound drainages (Figure 1). Regional agencies who participate in the Salmon Watcher Program along with King County include the Bellevue Stream Team, Snohomish County Surface Water Management, and the cities of Issaquah, Kirkland, Redmond, Renton, Seattle, and Woodinville.

The Salmon Watcher Program was initiated to expand on current efforts undertaken by resource agencies to document the distribution of spawning salmon in the Lake Washington Watershed. In 2001, the Central Puget Sound drainages became an official part of the Salmon Watcher Program. The program actively engages the public in doing something helpful for the streams in their watershed. Salmon Watcher volunteers annually collect information on the presence of fall-spawning salmonids, including chinook, coho, sockeye, kokanee (resident form of sockeye), and chum salmon, as well as steelhead and resident trout species. Data of this type become more important as salmonids in the region, such as Puget Sound chinook, are listed under the Endangered Species Act. Volunteers in this program survey the basins that make up the Lake Washington Watershed: the Bear Creek, Cedar River, East Lake Washington, West Lake Washington, Issaquah Creek, North Lake Washington, East Lake Sammamish, and West Lake Sammamish basins.

Because volunteers do this work, this task is accomplished with reduced resources, and the watersheds' residents can become involved and educated at the same time. Further, interactions with agency personnel foster positive relationships between the public and government agencies. With monetary and temporal constraints of agency personnel, much of the data collected in this effort could not be collected otherwise.

This 2001 report is different from past reports in a few ways. For example, this report contains even more information about the activity of the volunteers than in past reports, as well as a discussion on marked fish. It should also be noted that this report summarizes only data collected by Salmon Watcher volunteers, and it is therefore in no way intended to be an exhaustive report of fish distribution in the Lake Washington Watershed and Central Puget Sound. Other fish surveys are conducted annually by county, state, city, and federal agencies and non-profit organizations. For example, surveys are conducted by volunteers for King County annually to look specifically for kokanee; the results of these surveys are reported in a separate kokanee report and are not included here.

Figure 1. Lake Washington Basins surveyed for the 2001 Salmon Watcher Program (see insert).

METHODS

Volunteers¹ are recruited annually to observe fish in streams throughout the Lake Washington Watershed² and, beginning in 2001, some streams that drain into Puget Sound, including streams on Vashon Island. Volunteers observe the stream sites from stationary locations at banks, bridges, and decks. The 219 volunteers (219 individuals, pairs, or groups, totaling 258 people plus 1 classroom) who surveyed in the Lake Washington Watershed and Central Puget Sound, plus 2 people observing outside the project area, are listed in Table 1.

Table 1. Volunteer observers for the 2001 Salmon Watcher Program.

Ann Agaard	Robin Buerki	Laura Gardner
Beverly Abbott	Kevin Burcham	Priscilla Godbee
Freddy Abramsen	Bonnie Burman	David Godfrey
Susan Adamson	Gil Cerise	Janice Godshalk-Olsen
Valerie Allard	Janet Charnley	Scott Gonsar
Scott Allen	Janeene Chilcoat	Linda Gonzalez
Ambika Anand-Prokop	Norm Christiansen	Rebecca Goyt
Dennis Anderson	Don Clark	Julie Gramm
Suzanne Anderson	Laurel Code	Erin Greenleaf
Jill & Murray Andrews	Joye Costinett	Jerry Gregory & N. Chin
Chad Armour	Richard & Myrtlema Crane	John & Sally Gummeson
Gabe Ashbaugh	Nancy Daar	George Hadley
Russ Atkins	James & Edna Dam	Nicki Hamilton
Stephani Ayers	Sarah Dammrose	Victor Hamilton
John Bagge	Alyse & Dennis DeKraker	Paul Hamner
Molly Bailey	Paula DeLucia	Martin Hanson & Donna Moore
Guy Baltzelle	Nancy Deress	Tim Hartford
Cal Bannon	Alix Despard	Jim Hearn
Ed Barnes	Barbara Dickson	Malcolm Hickey
Cathleen Barry	Shawn Dishneau	Trace & Harry Hobgood
Teresa Bartz	Bob Douglas	Joyce Hoikka & Martin Baulander
Neil Baunsgard	Scott Dungan	Ron & Eric Holberg
Mary Beauchamp	Chris Dziubek	Lon Hoover
Laurie Becharas	Nancy Edwards	Erik & Will Houser
Scott Becker	Ron Eggers	Morris Howland
Bonnie Beerman	Steve Ellis	Tiffany Hoyopatubbi
Kai Billmaier	Gary & Bob Emerson	Beth Hughes
Maureen Birrell	Mike Erickson	Abbie Hungerford
Gene Bisbee	George Fair	Joan & Terry Inge
Ted Bohn	Sara & Richard Farmer	Teresa Ives
Ken Boilsen	Lauralyn Feetham	Al Jackson
Mamie & Chuck Bolender	Mary Ellen Flanagan	Cathy Johnson
Sherry Bottoms & L. Lewis	Ana Foukimoana	R.M. Johnson
Lee Bowen	Lindsie Fratus	Scot Johnson
Ruth Boyle	Kristin Fredericks	Barbara Jurgens
Margie Bradley	Linda Gammill	David Kappel

¹ “Observers” and “volunteers” are henceforth defined as individuals, pairs, or groups who surveyed at a given location.

² In this document, the Lake Washington Watershed means all waters draining through the Ballard Locks, and the subbasins of the Lake Washington Watershed are referred to as basins (e.g., Issaquah Creek Basin).

Table 1. Continued. Volunteer observers for the 2001 Salmon Watcher Program.

Juanita Kelley	Robert Miller	Chih-Lung Shih
Heather Kennedy	Larry Milton	May Shimbo
Tiffany Kent	Mike Morgan	Vivian Shin
Melva Kilwine	JoAnn Napier	Randy Sleight
Arlene King	Dave Nazy	Diane Slota
Kaille & Eileen Kirkham	Nola Nelson	Julie Smith
Cheryl Klinker	Todd Olsen	Rebecca & Adam Smith
Doug Knight	Yoshiko Otonari	Warren Smith
John Komorowski	Barbara Owens	Alice C. Smith
John & Lillie Kovacevich	James Owensby	Jane & Karl Spreine
Yvonne & Joel Kuperberg	Joyce Paul	Dorothy & Jerry Stansberry
Missy Lacy	Allen & Suzanne Peery	Kirk Stauffer
Laura Langland	Kristin Penn	John Storz
Hope Lasseter	Carolyn Peterson	Mare Sullivan
June Lauritzen	Katie Phelps	Phil Sullivan
Michael Laurie	Judy Pickens	Nui Tateyama
Leask Family	Tom Piekarski	Craig Tenney
Chuck Lennox	Larry Poore	K.Terry Thorsos
Ardis, Bob, & Brian Lilleness	Tim Prowell	Elaine Townsend
June Link	Sherry Richardson	Sue Trevathan
Ginny Lodwig	Pat & Kevin Roberts	Elizabeth Trotter
Steve Long	Miyoko Rokumoto & Harry Blevins	Merrilee & William Vanderwaal
Odin Lonning & Ann Stater	Jessica & Linda Rumans	Whitney VanLoos
Barbara Lynum	Stacey Rush	Art & Elsa Vetter
Staci MacCorkle & Debbie Kem	Mike Russell	Lisa Vorwerk
April Magrane	Kathy Ryan	Doug Weber
Catherine Markwald	Sandy Ryan	Irv Weisser
Ron Marshall	Steve Saepoff	James Wharton
Mark Martino	Anne Samenfink	M. Whittendale
Betty Mattson	Dick & Mary Schaetzel	Emily & Mark Williams
Synava McDonald	Eva Schemmel & Ian MacCormack	Brian & Maggie Windus
Michael McGranahan	Amy & Sharon Schillinger	Connie Wurm
Doris McHenry	Mary Clare Schroeder	Kate Zandanel
Nancy McJunkin	Bill Shaul	Amber Zbitnoff & Jessica Hitch
Verna McMurray	Lisa Sheets	Frank Shipley
Jim McRoberts	Kathryn Sheldon	Alan Huggins
Susan Meyer	Patty Shelton	Donna Brathovde
David Miller	Yoshi Shelton	Maureen Corlas & Mark Simonson

Survey locations were prioritized by staff from each cooperating jurisdiction based on the need for information, and sites were surveyed based on volunteer availability. Volunteers were assigned to stream locations near their homes or customary walking places whenever possible. Not all sites watched were prioritized by agency staff; some sites were watched because of the close proximity to a volunteer's home. Volunteers were instructed to stay on public property (bridges, parks, etc.) unless they gained permission from the landowners to enter private property or the survey location was on their own property.

Volunteer Training

Agency staff held a total of nine classroom training sessions in 2001. Two field training sessions at Cottage Lake Creek and Issaquah Creek were also conducted for trained volunteers at stream sites with a variety of spawning fish species. A field training session was also held on Vashon Island at Shinglemill Creek. Additionally, Snohomish County and Friends of the Hylebos Wetlands held separate training sessions for their respective Salmon Watcher programs, which are off-shoots of the Lake Washington Watershed program reported herein. Snohomish County began county-wide volunteer salmon surveys in 1999 and held training sessions accordingly; they trade data with King County that were collected for the streams draining into the Lake Washington Watershed (North, Swamp, and Little Bear creeks systems; see Sammamish River Tributaries below). Friends of the Hylebos Wetlands, based out of Federal Way, Washington, focuses on Hylebos Creek. (Please see Appendix C for Snohomish County's annual report and Appendix D for Hylebos Creek's annual report.)

All volunteers were shown a slide presentation and taught to identify adult spawning salmon species. The slide show was also placed on King County's web site so volunteers could review it at their convenience. During the training sessions, volunteers were asked to sign up for one or more sites to survey easily accessible from their home or work location. They were given salmon identification materials, including color adult species identification cards and spawner timing charts. Volunteers were taught how to fill out and return data forms. Volunteers were also given a laminated card with contact information for an environmental hotline as well as numbers to call for various situations that might arise in the field, including drainage issues, fish kills, and suspicion of toxic pollutants.

Figure 2. Sites in the Lake Washington Basins and Central Puget Sound surveyed by Salmon Watcher volunteers in 2001 (see insert).

Data Collection and Analysis

Surveys were conducted between August 30, 2001, and January 30, 2002, though most surveys began in September and were concluded in December 2001. Volunteers were asked to watch at their survey sites for at least 15 minutes, twice per week. Prior to 2000, volunteers were asked to survey for at least 10 minutes, and prior to 1998 volunteers were asked to survey only once per week. Actual survey frequency and duration varied greatly among volunteers: the average survey frequency was biweekly but ranged from daily to monthly.

If a volunteer surveyed the same site more than one time on the same day, the highest count was used; however, often more than one volunteer surveyed the same site on a single day and both counts were used. Unidentified fish were counted and described when possible. Volunteers counted all live and dead fish they observed. Prior to 2001, all observed carcasses were included in the total count, even if the same fish had been counted on a previous visit. Beginning in 2001, dead fish observed on more than one day were noted but only included once in the total count.

For the 2001 spawning season, two new columns of data were added to the data collection sheet: volunteers were asked if they could tell whether the fish they saw had an adipose fin, and volunteers were asked if they noticed anything at their site that needed to be reported and whether they reported it. For the second year, volunteers were asked to note how many citizens they came into contact with

during their streamside duties. All data were recorded onto field data forms (Appendix B), which observers mailed to Salmon Watcher staff on a monthly basis.

Survey data are organized by basin and presented below in the Results section. Data include stream name and state stream numbers, as assigned by Williams et al. (1975), corresponding stream sites (with Site ID and river mile), dates of surveys, number of surveys, number of surveyors, and number of each species observed. Raw data are not presented in this report, but may be accessed by following the appropriate links on King County's Salmon Watcher web site:
<http://dnr.metrokc.gov/wlr/waterres/salmon/index.htm> .

Quality Assurance/Quality Control

Several means were used to assure that the data collected from volunteers were as accurate and consistent as possible during all phases of the program. As one precautionary measure, volunteers were provided with training by fish experts: data included in this report were collected either by returning volunteers or new volunteers who attended one of the training sessions for the 2001 season (most but not all returning volunteers also attended a training session in 2001 as a refresher). Volunteers were provided laminated fish identification cards and a packet of training materials with fish identification information in it. Duplicate as well as additional fish identification materials were placed on the Internet. Contact persons (fish experts) were made available to volunteers to answer questions and verify species identification when necessary; volunteers were encouraged to call upon these experts if they were unsure of species identification.

Staff of the cooperating jurisdictions processed the data sheets and screened them for anything requiring immediate attention, such as an unusual fish sighting or potential water quality problems. If an unusual fish sighting was noticed on a data form, agency staff contacted the volunteer to further inquire about what characteristics they used to identify fish in an effort to ensure as much accuracy as possible. Local jurisdiction staff would also follow up on any other reported unusual circumstances as they judged appropriate.

Following data entry, the figures were verified at least once, but typically twice, by different agency staff to ensure accuracy, as well as catch anything that might need addressing. At least one of the data reviewers was familiar with the basins and the typical fish runs for the basins. If unusual fish sightings were noticed during this phase of data checking that were not previously caught, agency staff would contact the volunteer and attempt to determine the confidence level of the identification. If an unusual sighting seemed to clearly be a misidentification, changes are noted on the data sheets. If, however, a determination of the species of the fish could not be made confidently based upon the notes and memories of the observer, the data is reported herein along with a description of the unusual circumstances.

Because of the limitations of data usage from a volunteer program such as this (Limitations of Volunteer Data in the Discussion below) and despite quality control measures, the data are intended to be used only to make preliminary evaluations of the distribution of spawning salmonids in the Lake Washington Watershed and some Central Puget Sound drainages. These data cannot be used to infer population structure or size.

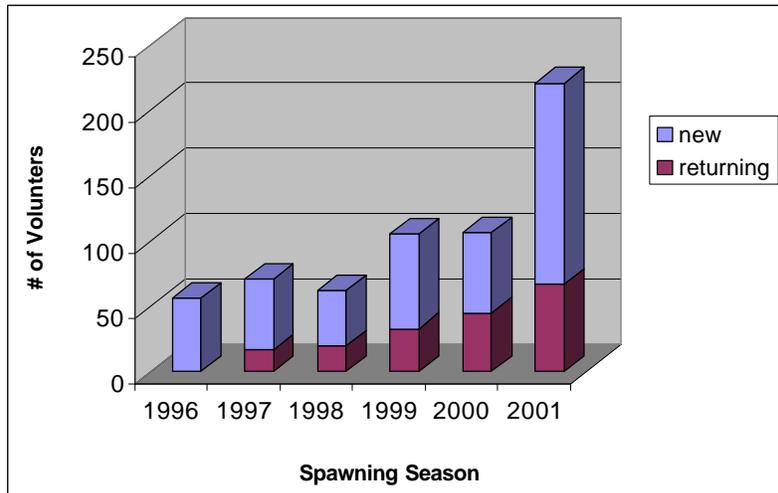
RESULTS

The streams surveyed in the Lake Washington Watershed were grouped into the following basins: Big Bear Creek, Cedar River, East Lake Washington, Issaquah Creek, North Lake Washington (split into North Lake Washington tributaries and Sammamish River tributaries), East Lake Sammamish, West Lake Sammamish, West Lake Washington, and Central Puget Sound drainages (Figure 1). In 2001, a total of 181 sites on 68 streams were surveyed in the Lake Washington Watershed and Puget Sound by 219 Salmon Watcher volunteers. Results are presented below in basin groupings. Maps are presented for each basin in the Lake Washington Watershed and depict observations of sockeye, coho, chinook, and kokanee identified during the survey. A map is presented for Central Puget Sound and indicates observations of coho and chum. Trout and unidentified species were not mapped.

Beginning with the Salmon Watcher Program report for 2000 (Vanderhoof 2001), the unique Site ID numbers that correspond with each survey site were reported, and this report will continue with that format. Prior to the 2000 report, river mile designations (RM) were used to differentiate between survey sites. However, because ascertaining an accurate river mile for a site is sometimes difficult, and different sources of RM data present differing measurements, a site's RM may change over time as measuring techniques are refined and possible mistakes are corrected. Site ID numbers are included in this report alongside the RM. A site, with its unique ID, will always have the same data associated with it, regardless of refined RMs. Additionally, a designated site may vary a few feet from year to year: (1) if a volunteer watches on the upstream side of a bridge versus the downstream side, (2) if a new volunteer happens to watch a few yards from where a previous watcher observed, or (3) if a volunteer moves a few feet to observe in an area of better spawning habitat or visibility. These variations are inherent in the nature of this type of study. Despite the slightly fuzzy nature of these RM designations, they still give a good approximation of the relative location of one site to another. It should be kept in mind while reviewing these data that all RM designations are subject to change.

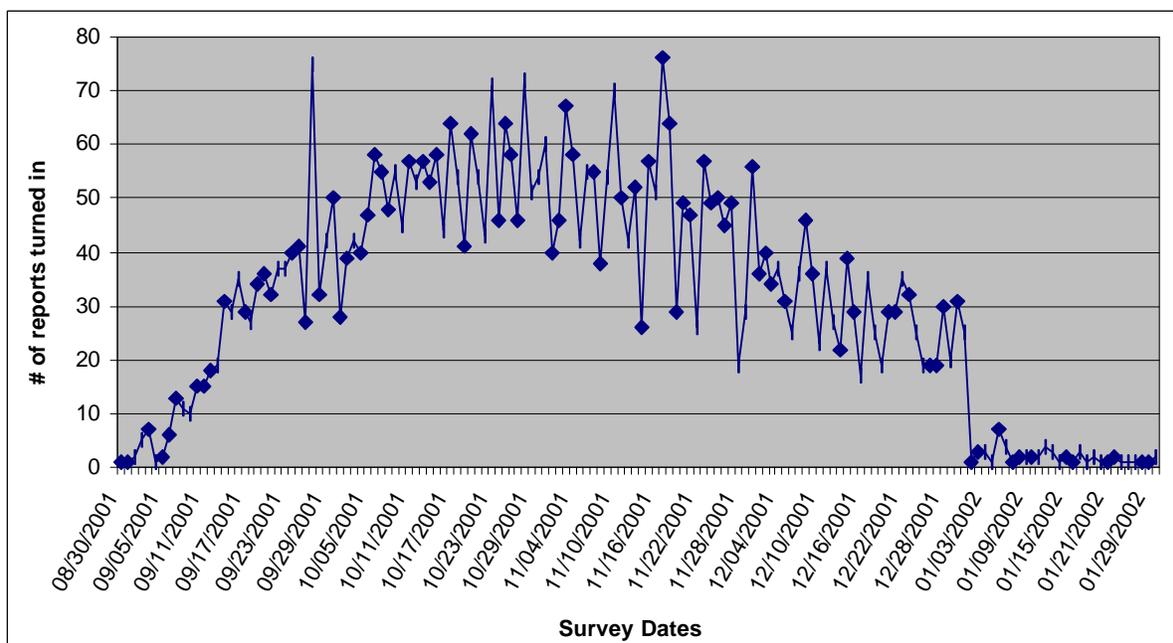
In 2001, 66 out of 219 volunteers (30.14 percent) in the Salmon Watcher Program were returnees (Figure 3). Of the 66 returnees, 2 pairs of volunteers have surveyed every year of the program. Because so many new volunteers (153) entered the program in 2001, the percentage of returning volunteers is lower than in 2000. The actual number of people who returned to the program increased from 45 to 66 (62 percent of volunteers from 2000).

Figure 3. Number of new and returning volunteers surveying in the Lake Washington Watershed for each year of the Salmon Watcher Program.



Volunteers generally watched their stream site from September until December. Because some training sessions were not held until October, and fish runs in some areas don't begin until later in the fall, many volunteers did not begin watching until October or November. Volunteers were asked to watch at their sites until the end of December; some stopped watching sooner and a few continued watching into January 2002 (Figure 4).

Figure 4. The number of reports turned in from throughout the program area each day from August 30, 2001, until January 30, 2002.

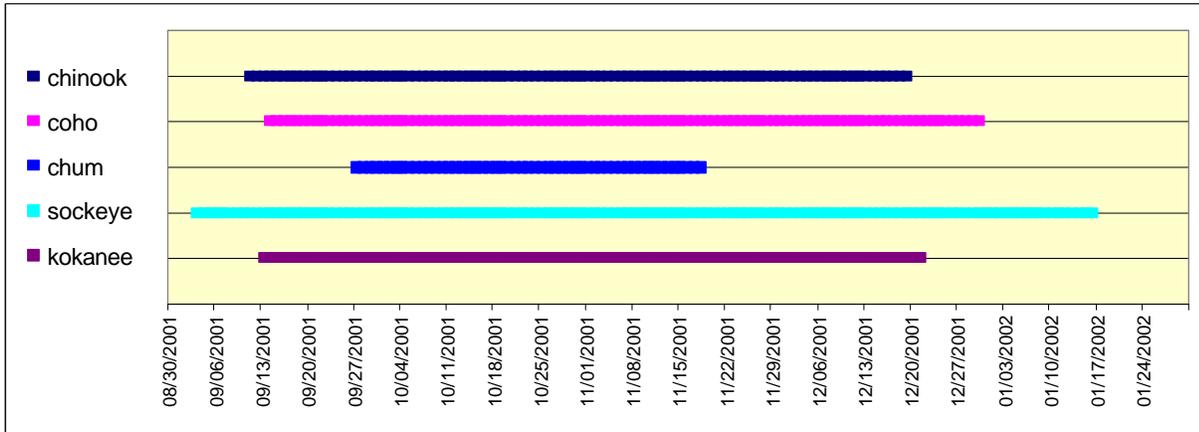


Overview

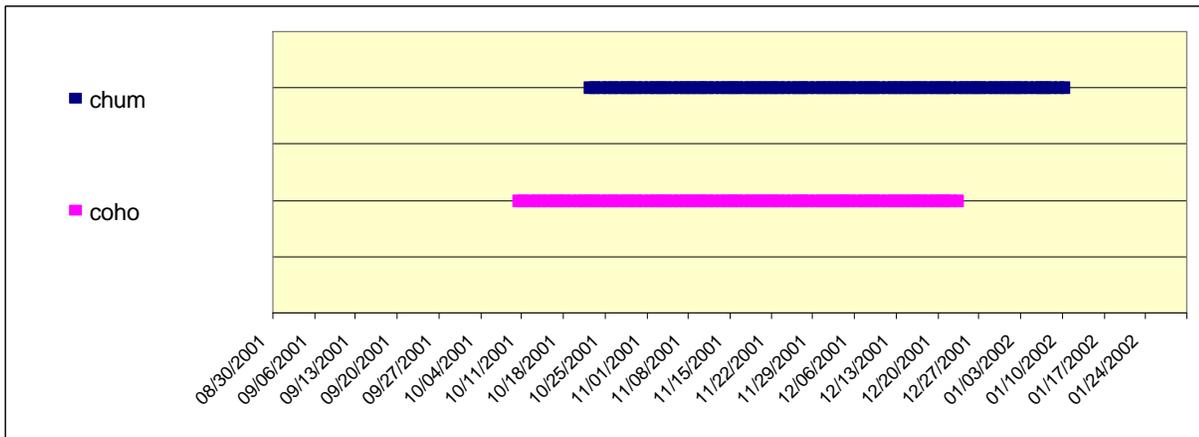
The 2001 run timing of salmonids in the project area based on volunteer data may be illustrated in relation to one another (Figure 5). It should be noted that these graphs are highly generalized.

Figure 5. Observations of live salmonids in (a) the Lake Washington Watershed and (b) the Central Puget Sound Drainages for 2001.

(a) The Lake Washington Watershed.



(b) Central Puget Sound Drainages.



Big Bear Creek Basin

Volunteers surveyed 20 sites in 6 streams in the Big Bear Creek Basin (Figure 2). From 1 to 9 sites were watched per stream, and the total number of surveys ranged from 2 to 95 per site (Table 2). Each site was monitored by either 1 or 2 volunteers, except for site 136 in Bear Creek, which was monitored by 4 volunteers.

Table 2. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers³, and years the sites were watched for each stream surveyed in the Big Bear Creek Basin for the 2001 spawning season.

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Big Bear Creek	080105	453	0.9	9/15 – 12/11	19	2	2001
		101	4.9	9/2 – 12/5	40	1	1997, 1998, 1999, 2000, 2001
		89	6	9/1 – 12/29	95	2	1998, 1999, 2000, 2001
		396	6.8	9/13 – 11/17	14	1	2001
		136	7.4	9/12 – 12/31	80	4	1998, 1999, 2000, 2001
		2	8.3	9/24 – 10/31	9	1	1996, 1997, 1998, 1999, 2000, 2001
		81	9	9/20 – 12/7	14	1	1998, 1999, 2000, 2001
		69	9.25	9/27 – 11/30	30	1	1998, 1999, 2000, 2001
		466	11.6	9/16 – 9/29	5	1	2001
Tributary		90	0.2	10/25 – 12/12	27	1	1998, 1999, 2000, 2001
Cold Creek		465	0.8	9/8 – 11/27	25	1	2001
Cottage Lake Cr.	080122	102	0.6	9/13 – 10/28	12	1	1997, 1998, 2001
		391	1.2	9/23 – 10/28	12	1	2000, 2001
		105	1.3	10/13 – 11/24	11	1	1998, 1999, 2000, 2001
		292	1.6	9/13 – 12/30	41	2	1997, 2000, 2001
		50	2.2	9/15 – 12/31	28	1	1997, 1999, 2000, 2001
		103	2.3	9/14 – 11/11	11	1	1998, 2001
Mackey Creek	080115	15	0.5	9/26 – 12/30	22	1	1996, 1997, 1998, 1999, 2000, 2001
Struve Creek	080131	364	0.3	9/23 – 12/9	20	2	1996, 2001
		32	0.5	9/15 – 9/21	2	1	1998, 1999, 2000, 2001

Salmonids were found in 4 of the 6 streams observed in Big Bear Creek Basin (Table 3). The most common salmonid species observed by volunteers was sockeye, which was found in Big Bear Creek (in the greatest quantity) and Cottage Lake Creek. Chinook and kokanee were also seen in those two creeks. Coho were seen in Big Bear Creek, Cold Creek, Cottage Lake Creek, Mackey Creek, and an unnamed tributary to Bear Creek. Additionally, pink salmon were observed by volunteers in Cottage Lake Creek and were also verified during one of the field training sessions. No adult spawners were observed in Struve Creek.

³ “Volunteer,” when used in this context, is defined as an individual, pair, or group of people who observed a stream site for adult spawning salmonids at a given time on a given date.

Table 3. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the Big Bear Creek Basin for the 2001 spawning season.

Stream	Site ID	RM	Chinook	Coho	Sockeye	Kokanee & Trout	Unidentified
Big Bear Creek	453	0.9	—	—	10/7 - 10/31 (65)	—	9/18 - 10/31 (4)
	101	4.9	9/19 - 10/17 (23)	10/9 - 10/31 (12)	9/20 - 11/2 (875)	10/1 - 10/18 (7 kokanee)	10/29 - 11/27 (6)
	89	6	9/14 - 10/20 (22)	9/14 - 10/28 (14)	9/3 - 11/7 (276)	9/14 (13 kokanee)	10/2 - 11/5 (27)
	396	6.8	10/4 - 10/6 (5)	10/12 - 10/20 (3)	10/4 - 10/23 (36)	—	9/13 - 11/17 (10)
	136	7.4	9/27 - 10/31 (43)	10/12 - 11/13 (19)	9/27 - 11/11 (181)	—	10/5 - 11/11 (37)
	2	8.3	—	10/26 - 10/31 (3)	9/27 - 10/17 (10)	—	—
	81	9	11/3 - 12/7 (4)	—	9/27 - 10/24 (9)	—	—
	69	9.25	—	10/25 - 11/30 (25)	9/28 - 10/21 (53)	—	11/15 (1)
	466	11.6	—	—	—	—	—
Tributary	90	0.2	—	10/27 - 11/21 (10)	—	11/17 (1 trout)	—
<i>Summary</i>			9/14 - 12/7 (97)	9/14 - 11/30 (86)	9/3 - 11/11 (1505)		9/13 - 11/27 (85)
Cold Creek	465	0.8	—	10/29 - 11/25 (9)	—	—	10/28 - 11/11 (6)
Cottage Lake Cr.	102	0.6	9/29 (1)	10/3 (3)	9/23 - 10/28 (68)	—	—
	391	1.2	—	—	9/23 - 10/28 (70)	9/25 (1 trout)	9/30 (1)
	105	1.3	10/13 - 10/20 (2)	—	10/13 - 11/4 (17)	—	10/13 - 11/2 (8)
	292*	1.6	9/24 - 11/8 (71)	9/26 - 10/26 (4)	9/24 - 10/22 (123)	9/13 - 10/17 (26 kokanee)	10/2 (1)
	50	2.2	9/26 - 11/5 (25)	11/27 (1)	9/26 - 10/15 (20)	—	—
	103	2.3	9/27 - 10/21 (24)	—	9/21 - 10/7 (34)	—	—
<i>Summary</i>			9/24 - 11/8 (123)	9/26 - 11/27 (8)	9/21 - 11/4 (332)		9/30 - 11/2 (10)
Mackey Creek	15	0.5	—	11/15 (1)	—	—	12/10 (1)
Struve Creek	364	0.3	—	—	—	—	—
	32	0.5	—	—	—	—	—

*Pink salmon were also reported at this site: 10/6 - 10/8 (2).

Uppermost Sightings

The most upstream point surveyed in Big Bear Creek was river mile (RM) 11.6, NE 179th St.; no fish were observed at this site, which was only monitored 5 times. Chinook were seen in Big Bear Creek up to RM 9 (Table 3) and at the uppermost point surveyed in Cottage Lake Creek, RM 2.3, at Avondale Road and 151st St. Coho were seen as far as RM 9.25 in Bear Creek (NE 179th St.) and RM 2.2 in Cottage Lake Creek (at the Tolt Pipeline east of Avondale Road). Sockeye were observed at all sites in Bear Creek except for the uppermost site and in all sites in Cottage Lake Creek. As during the 2000 surveys, kokanee were seen in Big Bear Creek up to RM 6.0, NE 133rd St.; all 13 kokanee observed at RM 6.0 were seen on the same day (September 14). Also as with the 2000 surveys, kokanee were seen in Cottage Lake Creek up to RM 1.6, between NE 141st and NE 142nd. The observations of sockeye, coho, chinook, and kokanee in the Big Bear Creek Basin determined from volunteer surveys in are shown in Figure 6.

Figure 6. Observations of salmonids in the Big Bear Creek Basin (see insert).

Timing of Salmon Runs

Most live chinook sightings in Bear Creek began in September and were concluded in October. At one site, live chinook were reported during early December, but it is possible these were misidentified. Timing was similar in Cottage Lake Creek; at only one site were live chinook still observed during early November.

Live coho were observed in Cottage Lake Creek from the second half of September through the end of October. One dead coho was observed at the end of November. In Bear Creek, the timing of live coho observations was similar to those in Cottage Lake Creek; however, at one site live coho were observed until the last week in November.

Sockeye runs in these creeks lasted a similar length of time, from September through November. In Bear Creek, over 1,500 sockeye were observed, and there was a pretty obvious peak during the first 10 days of October. Kokanee were observed from mid-September through mid-November in Big Bear Creek in Cottage Lake Creek.

Cedar River Basin

Volunteers surveyed 9 streams in the Cedar River Basin in 2001 (Figure 2). From 1 to 8 sites were watched per stream, and the total number of surveys ranged from 10 to 96 per site (Table 4). Each site was monitored by either 1 or 2 volunteers.

Table 4. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the Cedar River Basin for the 2001 spawning season.

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Cedar River (Cavanaugh Pond)	080299	201	1.3	9/6 – 12/20	23	1	2001
		202	1.5	9/1 – 10/25	10	1	1999, 2001
		203	1.6	8/30 – 11/24	20	1	2000, 2001
		204	1.8	9/16 – 11/26	12	1	1999, 2000, 2001
		205	2.9	8/31 – 12/27	47	2	1999, 2001
		206	4.3	9/27 – 11/18	11	1	1999, 2001
		207	5.3	9/2 – 12/5	33	2	1999, 2000, 2001
		139	6.4	11/18 – 1/20/02	27	1	1996, 1997, 1998, 1999, 2000, 2001
Peterson Creek	080328	461	1.5	9/3 – 12/30	17	2	2001
Rock Creek	080338	410	0.2	11/4 – 12/31	55	1	2001
		154	0.4	9/29 – 1/5/02	96	2	1999, 2000, 2001
		363	1.2	9/14 – 12/10	16	1	1996, 2001
		49	1.3	10/7 – 12/31	83	1	1998, 1999, 2000, 2001
		398	4.6	12/17 – 1/30/02	16	1	2001
Tributary 0340	080340	96	0.1	9/14 – 12/10	16	1	1998, 2000, 2001
Taylor Creek	080320	129	1.2	10/6 – 12/31	84	1	1998, 1999, 2000, 2001
		71	1.8	10/7 – 12/31	83	1	1998, 1999, 2000, 2001
		126	2.4	10/7 – 12/31	62	1	1998, 2001
Tributary 0327	080327	87	2	10/7 – 12/31	20	1	1998, 2000, 2001
Tributary 0321	080321	85	0.6	10/7 – 12/31	20	1	1998, 2001
Tributary 0323	080323	86	0.8	10/7 – 12/31	20	1	1998, 2001
Tributary 0325	080325	125	0.2	10/7 – 12/31	34	1	1998, 2001

Chinook were observed in the Cedar River and in Rock Creek. Chinook were also observed in Taylor Creek by volunteers for the first time in 2001. Coho were seen in the Cedar River and in Rock Creek. Sockeye were found in the Cedar River, Rock Creek, and Taylor Creek. Chum were also reported in the Cedar River; however, these sightings were not verified. Although it is possible chum may stray into the Cedar River, many of the sockeye in the Cedar River have vertical markings similar to chum. It is possible one or more of these chum sightings was actually sockeye. No adult spawners were observed in Peterson Creek or tributaries to Rock Creek or Taylor Creek.

Table 5. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the Cedar River Basin for the 2001 spawning season.

Stream	Site ID	R M	Chinook	Coho	Sockeye	Trout &Chum	Unidentified
Cedar River (Cavanaugh Pond)	201	1.3	—	—	9/20 – 11/12 (771)	—	10/2 – 11/26 (552)
	202	1.5	—	10/10 – 10/25 (14)	10/10 – 10/25 (29)	—	10/12 – 10/25 (8)
	203	1.6	9/30 – 10/1 (4)	10/1 – 11/17 (25)	9/24 – 11/17 (1477)	—	9/13 – 10/1 (4)
	204	1.8	—	—	9/26 – 11/20 (625)	10/24 (1 chum)	11/20 (1)
	205	2.9	10/11 – 10/12 (2)	—	9/15 – 12/27 (718)	—	8/31 – 11/18 (372)
	206	4.3	10/3 (1)	—	9/27 – 11/18 (511)	10/3 – 10/17 (5 chum)	10/3 – 11/18 (114)
	207	5.3	9/27 – 10/23 (13)	—	9/21 – 11/13 (1619)	9/23 (1 trout)	—
	139	6.4	—	—	11/18 – 1/16/02 (1713)	12/7 – 12/19 (2 trout)	—
<i>Summary</i>			9/27 – 10/23 (20)	10/1 – 11/17 (39)	9/15 – 1/16/02 (7463)	—	—
Peterson Creek	461	1.5	—	—	—	—	—
Rock Creek	410	0.2	—	11/16 – 12/10 (2)	11/4 – 11/30 (105)	—	—
	154	0.4	10/6 – 12/19 (7)	12/9 – 12/30 (14)	10/6 – 12/22 (139)	—	10/20 – 12/22 (4)
	363	1.2	—	11/16 – 12/3 (5)	11/6 – 11/30 (3)	—	—
	49	1.3	—	—	—	—	12/15 (1)
	398	4.6	—	—	—	—	—
Tributary 0340	96	0.1	—	—	—	—	—
<i>Summary</i>			10/6 – 12/19 (7)	11/16 – 12/30 (21)	10/6 – 12/22 (247)	—	—
Taylor Creek	129	1.2	10/6 – 10/11 (4)	—	10/15 – 11/25 (13)	—	—
	71	1.8	10/13 – 10/15 (3)	—	10/16 – 11/26 (55)	—	—
	126	2.4	—	—	11/10 – 11/24 (2)	—	—
Tributary 0327	87	2	—	—	—	—	
Tributary 0321	85	0.6	—	—	—	—	
Tributary 0323	86	0.8	—	—	—	—	
Tributary 0325	125	0.2	—	—	—	—	—
<i>Summary</i>			10/6 – 10/15 (7)	—	10/15 – 11/26 (70)	—	—

Uppermost Sightings

Chinook were observed as far as RM 5.3 in the Cedar River (at the Jones Road bridge). They were observed at only one location in Rock Creek, at RM 0.4 (in the King County park at SE 252nd St.). In Taylor Creek, chinook were observed up to RM 1.8 (236th Ave. SE). Coho were seen as far as RM 1.6 in the Cedar River (I-405), up to RM 1.2 in Rock Creek (SE 215th St.), and at the uppermost site surveyed in Taylor Creek (RM 2.4, 244th Ave. SE). Sockeye were observed at the uppermost site surveyed in the Cedar River: RM 6.4, Cavanaugh Pond (Table 5.). Sockeye were also observed at the uppermost sites surveyed in Taylor Creek (RM 2.4). The observations of sockeye, chinook, and coho in the Cedar River Basin determined from volunteer surveys are shown in Figure 7.

Figure 7. Observations of salmonids in the Cedar River Basin (see insert).

Timing of Observed Salmon Runs

Chinook were observed in the Cedar River from September 27 through October 23. One chinook was observed by one volunteer in October in Rock Creek, and all the other chinook in Rock Creek were observed in December by a different volunteer. Both volunteers have been in the Salmon Watcher Program for several years and are considered highly reliable. These sightings were all at RM 0.4. Chinook in Taylor Creek were all seen during October.

Coho were observed in the Cedar River from mid-October until mid-November. In Rock Creek, coho were observed from mid-November until the end of December.

The first observations of sockeye in the Cedar River were in September, and the last of the live sockeye were reported in the Cedar in mid-January, 2002. Live sockeye were observed from October through December in Rock Creek, and from October through November in Taylor Creek.

East Lake Washington Basin

Volunteers surveyed 10 streams in the East Lake Washington Basin in 2001 (Figure 2). From 1 to 9 sites were watched per stream, and the total number of surveys ranged from 4 to 96 per site (Table 6). Each site was monitored by from 1 to 5 volunteers.

Table 6. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the East Lake Washington Basin for the 2001 spawning season.

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Carillon Creek		475	0	10/20 – 12/30	19	1	2001
Coal Creek	080268	440	0.1	9/9 – 12/29	42	3	2001
		439	0.6	9/8 – 12/26	96	4	2001
		46	0.8	10/14 – 11/30	7	1	1997, 1998, 1999, 2000, 2001
		443	1.7	9/12 – 12/3	43	2	2001
		441	2	9/7 – 12/30	83	3	2001
		442	2.1	9/6 – 12/31	86	5	2001
Forbes Creek	080242	100	0.2	9/10 – 12/28	41	2	1998, 2000, 2001
		194	0.9	9/12 – 9/30	4	1	2000, 2001
Kelsey Creek	080259	445	1.6	9/11 – 12/30	33	2	2001
		13	2	9/11 – 11/27	22	2	1996, 1997, 1998, 1999, 2000, 2001
		124	2.4	9/16 – 12/29	22	1	1997, 1998, 1999, 2000, 2001
		120	3	9/3 – 12/4	54	3	1997, 1998, 1999, 2000, 2001
		216	4.4	9/24 – 12/30	48	2	1999, 2001
		121	5.3	10/4 – 12/11	23	1	1998, 1999, 2001
		449	5.6	9/16 – 12/31	32	3	2001
		496	5.9	11/23 – 12/19	7	1	2001
May Creek	080282	208	0.2	9/3 – 12/30	25	1	2001
		486	1.8	10/23 – 11/17	5	1	2001
		19	3	9/6 – 12/24	24	1	1996, 2001
		456	3.8	9/3 – 12/30	25	1	2001
Richards Creek	080261	27	0.7	9/7 – 12/29	93	5	1997, 1998, 1999, 2000, 2001
		28	1.3	9/17 – 10/29	13	1	1996, 1998, 1999, 2000, 2001
Sturtevant Creek	080260	117	0.25	10/7 – 12/28	18	1	1997, 1998, 1999, 2001
Valley Creek	080266	122	0.1	9/8 – 10/28	14	1	1997, 1999, 2000, 2001
		221	0.8	9/3 – 12/28	62	4	1999, 2000, 2001
West Trib. Kelsey Cr.	080264	116	0.3	9/3 – 11/25	21	1	1998, 1999, 2001
		325	0.7	9/10 – 12/31	26	2	1997, 2001
Yarrow Creek	080252	134	0.3	9/10 – 12/20	43	2	1998, 1999, 2000, 2001
		326	0.5	10/5 – 12/30	27	1	1997, 2001

Salmonids were found in 7 of the 10 streams surveyed (Table 7). The most fish were observed in the May Creek and Coal Creek systems; relatively few fish were found in the Kelsey Creek system. Chinook were observed in Coal Creek, May Creek, and Kelsey Creek. Sockeye were seen in those same three creeks. Coho were also seen in those streams as well as Forbes and Richards creeks.

Table 7. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the East Lake Washington Basin for the 2001 spawning season.

Stream	Site ID	RM	Chinook	Coho	Sockeye	Trout	Unidentified
Carillon Creek	475	0	—	—	—	—	11/18 (1)
Coal Creek	440	0.1	—	—	11/6 (1)	—	—
	439	0.6	9/22 – 11/7 (2)	—	—	—	9/18 – 11/18 (3)
	46	0.8	—	—	—	—	11/30 (2)
	443	1.7	—	11/23 – 11/26 (3)	11/10 – 11/26 (3)	—	11/7 – 11/23 (3)
	441	2	—	11/13 – 12/4 (2)	—	—	11/17 – 11/18 (4)
	442	2.1	—	10/28 – 11/26 (15)	11/24 – 11/25 (4)	—	10/28 – 11/24 (13)
	444	2.35	—	11/6 – 11/24 (9)	11/15 (1)	—	—
<i>Summary</i>			9/22 – 11/7 (2)	10/28 – 12/4 (29)	11/6 – 11/26 (9)	—	9/18 – 11/30 (25)
Forbes Creek	100	0.2	—	10/31 (1)	—	—	—
	194	0.9	—	—	—	—	—
Kelsey Creek	445	1.6	—	—	10/20 (2)	—	—
	13	2	—	—	10/27 (1)	—	—
	124	2.4	9/27 (1)	10/26 (1)	—	9/20 – 9/27 (2)	10/26 (1)
	120	3	—	10/20 (1)	10/30 (1)	—	11/11 (1)
	216	4.4	—	—	—	—	—
	121	5.3	—	—	—	—	—
	449	5.6	—	—	—	—	—
	496	5.9	—	—	—	—	—
214	6	—	—	—	—	—	
<i>Summary</i>			9/27 (1)	10/20 – 10/26 (2)	10/20 – 10/30 (4)	9/20 – 9/27 (2)	10/26 – 11/11 (2)
May Creek	208	0.2	10/13 – 11/4 (8)	10/5 – 11/16 (13)	10/7 – 12/6 (66)	11/10 (1)	—
	486	1.8	—	—	10/23 – 11/8 (16)	—	10/23 – 11/2 (3)
	19	3	—	—	10/28 – 11/9 (2)	—	11/1 – 12/9 (4)
	456	3.8	11/4 (1)	11/3 (1)	11/3 (2)	—	9/3 (1)
<i>Summary</i>			10/13 – 11/4 (9)	10/5 – 11/16 (14)	10/7 – 12/6 (86)	11/10 (1)	9/3 – 12/9 (8)
Richards Creek	27	0.7	—	10/26 – 11/20 (4)	—	12/20 – 12/23 (3)	10/31 (1)
	28	1.3	—	—	—	—	—
Sturtevant Creek	117	0.25	—	—	—	—	—
Valley Creek	122	0.1	—	—	—	—	—
	221	0.8	—	—	—	—	—
West Trib. Kelsey Cr.	116	0.3	—	—	—	—	—
	325	0.7	—	—	—	—	—
Yarrow Creek	134	0.3	—	—	—	—	10/31 (1)
	326	0.5	—	—	—	—	—

Uppermost Sightings

One chinook was observed in Kelsey Creek at RM 2.4 (at the junction with Richards Creek), the third of nine sites on that stream. Two chinook were observed in Coal Creek at RM 0.6, the second of seven sites on that stream. Chinook in May Creek were only observed at the very first observation site, at RM 0.2 (Lake Washington Blvd.). Sockeye were observed in Kelsey Creek to RM 3 (Kelsey Creek Farm), the third most upstream of eight sites watched in Kelsey Creek.

Sockeye were seen at the uppermost site watched in Coal Creek, RM 2.35. Coho were observed at the uppermost observed sites in Coal Creek (RM 2.35) and in May Creek (RM 3.8). Coho were also seen to RM 3.0 in Kelsey Creek, to RM 0.7 in Richards Creek (in Bannerwood Park), and to RM 0.2 in Forbes Creek (in Juanita Bay Park)—none of which were the upstream-most sites watched. The observations of sockeye, chinook, and coho in the East Lake Washington Basin determined from volunteer surveys are shown in Figure 8.

Only one fish was seen in Yarrow Creek, at RM 0.3 (100th Lane NE and NE Points Dr.), and it had a disk tag. The volunteer could not identify the species, but coho and chinook had disc tags placed on them in 2001 at the Ballard Locks. The volunteer did indicate that the fish was about 18" long and gray-green in color. No chinook this small were tagged, so the fish was likely a coho.

Figure 8. Observations of salmonids in the East Lake Washington Basin (see insert).

Timing of Salmon Runs

The only live chinook observed in Coal Creek was in September; one chinook carcass was observed in November. The single chinook observed in Kelsey Creek was seen during September. Chinook in May Creek were observed in October and November. All the live coho observed in Coal Creek were seen during November. Coho in Forbes and Kelsey Creek were all observed in October; whereas in May Creek and Richards Creek, coho were seen in October and November. Sockeye were observed in October in Kelsey Creek, November in Coal Creek, and from October through December in May Creek.

Issaquah Creek Basin

Ten sites along five streams were surveyed in the Issaquah Creek Basin in 2001 (Figure 2). Surveys took place from September 6 to December 12. From 1 to 6 sites were watched per stream, and the total number of surveys ranged from 4 to 50 per site (Table 8). Each site was monitored by either 1 or 2 volunteers.

Table 8. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the Issaquah Creek Basin for the 2001 spawning season.

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
East Fork Issaquah Cr.	080183	6	3.2	9/19 – 1/30/02	50	2	1996, 1997, 1999, 2000, 2001
Holder Creek	080178	127	1.4	9/23 – 12/29	30	1	1998, 1999, 2001
Issaquah Creek	080178	272	1.25	9/17 – 9/26	4	1	2001
		397	2.3	9/11 – 10/30	16	1	2001
		457	2.4	9/14 – 12/9	12	1	2001
		59	3.3	10/19 – 12/9	15	1	1997, 1998, 2000, 2001
		83	4.5	9/17 – 12/22	24	1	1998, 1999, 2001
		359	8.9	9/8 – 12/17	47	2	1996, 2001
N. Fork Issaquah Cr.		58	0.6	9/19 – 12/30	23	1	1998, 1999, 2001
Tibbetts Creek.	080169	455	1.4	9/15 – 9/30	4	1	2001

Salmonids were reported in three of the five streams observed: East Fork Issaquah, Issaquah, and Holder creeks (Table 9). Chinook, coho, and sockeye were all seen in Issaquah Creek. Chinook and sockeye were seen in Holder Creek, and coho and sockeye were also seen in East Fork Issaquah Creek.

Uppermost Sightings

Chinook, coho, and sockeye were observed at almost all sites watched in Issaquah Creek, including the uppermost site at RM 8.9 (Cedar Grove Rd. and SE 156th St.), which was watched for the first time since 1996. Only one site was watched in both East Fork Issaquah Creek (RM 3.2) and Holder Creek. Chinook and coho were seen at the only site in Holder Creek, at RM 1.4 (this RM designation was previously recorded as 12.7 because it had been calculated from mouth of Issaquah Creek, not the mouth of Holder Creek; RM 1.4 is located at the Hwy. 18 and Issaquah-Hobart Rd, interchange). Regardless of the RM designation change, this is the first year of the Salmon Watcher Program that volunteers recorded any species in Holder Creek⁴ (this same location was also watched in 1998 and 1999).

One first-year volunteer also reported 3 kokanee at RM 8.9 in Issaquah Creek. These fish were reported with sockeye and were not verified by a fish biologist. Previously, kokanee have been reported in Issaquah Creek no further than approximately RM 3.8, the Issaquah Salmon Hatchery (Ostergaard 1998). The same volunteer also recorded seeing a bull trout at this same location, but after talking with the volunteer, it was determined the fish was likely a chinook (and is counted in Table 9 as an unidentified species).

⁴ A King County staff member surveyed Holder Creek after hatchery personnel said they had released over 1,650 chinook above the racks on approximately September 23rd. He counted 65 live male chinook, 37 dead male chinook, 3 chinook of undetermined sex, and 3 questionable redds.

No adult spawners were observed in North Fork Issaquah Creek or Tibbetts Creek. The distributions of chinook, coho, and sockeye in the Issaquah Creek Basin determined from volunteer observations are shown in Figure 9.

Table 9. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the Issaquah Creek Basin for the 2001 spawning season.

Stream	Site ID	RM	Chinook	Coho	Sockeye	Trout and Kokanee	Unidentified
East Fork Issaquah Cr.	6	3.2	—	10/18 – 12/15 (20)	10/13 – 12/4 (23)	12/11 – 12/13 (2 trout)	11/26 (1)
Holder Creek	127	1.4	9/27 – 11/5 (26)	11/5 – 12/3 (16)	—	9/27 (2 trout)	—
Issaquah Creek	272	1.25	—	9/17 – 9/23 (4)	—	9/17 (1 trout)	9/26 (1)
	397	2.3	9/11 – 10/17 (74)	10/13 – 10/17 (70)	9/29 – 10/30 (25)	—	—
	457	2.4	9/14 – 10/26 (43)	10/19 – 10/26 (4)	10/9 – 11/2 (22)	—	9/22 – 12/9 (34)
	59	3.3	10/19 (2)	10/19 – 12/6 (288)	10/19 – 11/9 (21)	12/2 (1 trout)	10/19 – 11/18 (28)
	83	4.5	9/20 – 10/18 (62)	10/29 – 11/20 (53)	9/27 (1)	—	10/8 – 11/7 (15)
	359	8.9	9/14 – 10/16 (72)	10/18 – 11/20 (46)	9/25 – 11/12 (66)	9/14 (1 trout) 11/2 (3 kokanee)	9/25 – 12/17 (13)
<i>Summary</i>			9/11 – 10/26 (253)	9/17 – 12/6 (465)	9/25 – 11/12 (135)		9/22 – 12/17 (91)
N. Fork Issaquah Cr.	58	0.6	—	—	—	—	—
Tibbetts Creek.	455	1.4	—	—	—	—	—

Figure 9. Observations of salmonids in the Issaquah Creek Basin (see insert).

Timing of Salmon Runs

Chinook were recorded in Issaquah Creek from September through October, and from late September into the first week of November in Holder Creek. The first observations of coho in Issaquah Creek also started in September, but final observations were during the first week of December. Coho in East Fork Issaquah Creek were observed beginning October, and in Holder Creek observations began in November; coho sightings in both of these streams concluded in early December. Sockeye were observed from September through November in Issaquah Creek, and from October through December in East Fork Issaquah Creek.

North Lake Washington Tributaries

The North Lake Washington Tributaries are those streams flowing into the north end of Lake Washington (Denny, McAleer, and Thornton creeks and the Sammamish River). Volunteers surveyed 28 sites in 9 streams in 2001 (Figure 2). From 1 to 6 sites were watched per stream, and the total number of surveys ranged from 3 to 63 per site (Table 10). The majority of surveys began in September and concluded in December. Each site was monitored by 1 volunteer, except for three sites that had 2, 3, and 4 volunteers.

Table 10. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the North Lake Washington Tributaries for the 2001 spawning season.

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Brookside Creek	080049	476	0.9	9/14 – 12/8	12	1	2001
Juanita Creek	080230	389	0	9/27 – 12/28	32	2	2000, 2001
		68	0.2	10/9 – 11/1	7	1	1998, 2000, 2001
		12	0.5	10/9 – 11/1	3	1	1996, 2000, 2001
		196	1.4	9/10 – 1/15/02	63	4	2000, 2001
		390	1.6	9/19 – 11/18	13	1	2000, 2001
Simonds Trib.	080236	107	2.7	9/15 – 12/17	28	3	1998, 2000, 2001
Little Brook Creek	080039	419	0	10/7 – 12/31	12	1	2000, 2001
Maple Leaf Creek	080033	192	0.7	11/3 – 12/30	16	1	1999, 2000, 2001
McAleer Creek	080049	144	0.3	9/14 – 12/8	13	1	1997, 2001
		498	0.79	10/6 – 12/8	12	1	2001
		266	0.8	9/14 – 12/8	14	1	1999, 2000, 2001
		56	1.1	9/15 – 12/8	12	1	1997, 1998, 1999, 2000, 2001
		314	1.6	9/15 – 12/8	12	1	1997, 2000, 2001
		315	2.1	9/5 – 12/8	12	1	1997, 2001
Sammamish River	080087	392	6.8	9/14 – 12/26	20	1	2000, 2001
		41	7.3	9/23 – 12/29	18	1	1998, 1999, 2001
		451	11	9/17 – 12/30	27	1	2001
		271	12.5	9/8 – 11/24	23	1	1997, 1999, 2001
		29	13.5	9/21 – 9/26	3	1	1996, 1999, 2001
Trib 0141 to Samm R.	080141	352	0.2	9/7 – 12/29	31	1	1999, 2000, 2001
		353	0.3	9/7 – 12/29	30	1	1999, 2000, 2001
		355	0.35	9/7 – 12/24	31	1	1999, 2000, 2001
Thornton Creek	080030	183	0.1	9/17 – 11/24	14	1	1997, 2000, 2001
		184	0.2	9/17 – 12/13	17	1	1999, 2000, 2001
		186	0.9	10/7 – 12/31	14	1	1997, 1999, 2000, 2001
		387	1.15	10/13 – 12/31	11	1	2001
		385	1.2	9/18 – 9/27	4	1	2000, 2001

Salmonids were found in 5 of the 9 streams surveyed in the North Lake Washington Tributaries (Table 11). Chinook were seen only in the Sammamish River. Sockeye and coho were observed in the Sammamish River, McAleer and Juanita creeks, and Tributary 0143 to Lake Sammamish, and coho were also observed in Thornton Creek. One kokanee was seen in the Sammamish River. No salmonids were seen in Brookside Creek, Little Brook Creek, Simonds Tributary, or Maple Leaf Creek.

Uppermost Sightings

Chinook were observed in the Sammamish River at the uppermost point surveyed, at RM 13.5 (at the concrete weir in Marymoor Park). Coho, sockeye, and kokanee were all observed in the Sammamish River up to RM 12.5 (in Marymoor Park near the main entrance) (Table 11). Coho were seen as far as the uppermost survey site in McAleer Creek (RM 2.1), and sockeye were observed to the next most-upstream site at RM 1.6 (Perkins Way near 24th). In Thornton Creek, coho were seen as far as RM 0.9 (Meadowbrook Pond). Coho and sockeye were observed as far as RM 1.4 (NE 129th Pl.) in Juanita Creek (this location is as far upstream as they were observed in 2000 also). The distribution of chinook, coho, sockeye, and kokanee in the North Lake Washington Tributaries determined from volunteer observations in 2001 are shown in Figure 10.

Figure 10. Observations of salmonids in the North Lake Washington Tributaries (see insert).

Timing of Salmon Runs

Chinook were observed from mid-September until mid-November in the Sammamish River, though the numbers dropped off after mid-October. Sockeye observations throughout the basin were largely from mid-October until mid-November. Coho were observed in Juanita Creek from mid-October until mid-December; however, coho observations in the rest of the basin typically ended during November. One kokanee was observed; it was in the Sammamish River on November 3.

A large number of unidentified fish were reported in the Sammamish River. There may be so many unidentified fish in this system because it is a larger river with deeper water so conditions are more difficult for seeing identifying characteristics on a fish. For example, at RM 11 (90th St. Bridge), during the observation period from September 17 through December 30, 190 unidentified fish were reported and only 24 fish were able to be identified. It may also be more difficult to identify species when large numbers of fish are present. For example, at RM 12.5 on October 25, 65 unidentified fish were reported by one volunteer.

Table 11. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the North Lake Washington Tributaries for the 2001 spawning season.

Stream	Site ID	R M	Chinook	Coho	Sockeye	Other	Unidentified
Brookside Creek	476	0.9	—	—	—	—	—
Juanita Creek	389	0	—	10/15 (1)	—	—	—
	68	0.2	—	—	10/25 (1)	—	—
	12	0.5	—	10/30 (1)	—	—	—
	196	1.4	—	11/2 – 12/21 (7)	10/17 – 11/3 (2)	—	10/13 – 12/20 (9)
	390	1.6	—	—	—	—	—
Simonds Trib.	107	2.7	—	—	—	—	—
<i>Summary</i>			—	10/15 – 12/21 (9)	10/17 – 11/3 (3)	—	10/13 – 12/20 (9)
Little Brook Creek	419	0	—	—	—	—	—
Maple Leaf Creek	192	0.7	—	—	—	—	—
McAleer Creek	144	0.3	—	11/17 (1)	11/10 – 11/17 (3)	—	10/9 (1)
	498	0.79	—	11/10 (2)	10/26 – 11/10 (24)	—	10/30 – 11/4 (2)
	266	0.8	—	—	—	—	11/17 (1)
	56	1.1	—	10/26 (1)	—	—	11/12 (1)
	314	1.6	—	11/12 (1)	11/12 (2)	—	—
	315	2.1	—	10/26 – 11/7 (5)	—	—	10/30 – 11/7 (2)
<i>Summary</i>			—	10/26 – 11/17 (10)	10/26 – 11/17 (29)	—	10/9 – 11/17 (7)
Sammamish River	392	6.8	—	11/3 (1)	11/3 (1)	—	—
	41	7.3	9/30 – 11/11 (66)	10/5 – 10/14 (6)	9/23 – 11/11 (70)	—	—
	451	11	9/17 (21)	10/2 (3)	—	—	9/17 – 12/30 (190)
	271	12.5	9/19 – 10/15 (55)	10/20 – 11/17 (147)	10/15 – 11/11 (28)	11/3 (1 kokanee) 9/26 – 10/7 (2 trout)	10/15 – 11/17 (71)
	29	13.5	9/21 – 9/26 (57)	—	—	—	9/26 (1)
<i>Summary</i>			9/17 – 11/11 (199)	10/2 – 11/17 (157)	9/23 – 11/11 (99)	—	9/17 – 12/30 (262)
Trib 0141 to Samm R.	352	0.2	—	11/17 (1)	11/20 (1)	—	11/26 (1)
	353	0.3	—	—	—	—	—
	355	0.35	—	11/20 – 11/21 (2)	—	—	—
Thornton Creek	183	0.1	—	10/31 – 11/3 (2)	—	—	—
	184	0.2	—	—	—	—	—
	186	0.9	—	11/1 – 12/2 (4)	—	—	12/31 (1)
	387	1.15	—	—	—	—	12/1 (1)
	385	1.2	—	—	—	—	—

Sammamish River Tributaries

The Sammamish River Tributaries are those streams flowing into the Sammamish River (then into Lake Washington) from waters originating in Snohomish County⁵ (Little Bear, North, and Swamp creeks; Big Bear Creek is discussed separately above). Volunteers surveyed 28 sites on 9 Sammamish River tributaries in 2001 (Figure 2). From 1 to 11 sites were watched per stream, and the total number of surveys ranged from 4 to 58 per site (Table 12). Each site was monitored by 1 or 2 volunteers, except for two sites that had 3 and 4 volunteers, respectively.

Table 12. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the Sammamish River Tributaries for the 2001 spawning season.

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Cutthroat Creek		413	0.7	10/3 – 12/22	21	1	2000, 2001
Great Dane Creek	080084	481	0.1	9/12 – 11/26	31	1	2001
Little Bear Creek	080080	114	0	9/12 – 12/12	22	1	1999, 2001
		67	0.2	9/15 – 12/20	27	1	1997, 1998, 1999, 2001
		311	0.4	9/16 – 10/31	16	1	1997, 2001
		176	1.3	9/12 – 12/17	58	3	1997, 2000, 2001
		478	4.4	9/23 – 12/15	28	1	2001
		230	4.5	9/12 – 12/31	54	2	1997, 1999, 2000, 2001
		477	4.6	9/25 – 10/16	2	1	2001
		93	5.9	9/12 – 11/26	31	1	1998, 2001
North Creek	080070	112	0.9	9/18 – 11/26	30	4	1998, 1999, 2000, 2001
		408	1	10/22 – 11/26	5	1	2000, 2001
		57	1.2	10/9 – 11/21	7	1	1998, 2001
		113	1.7	9/15 – 11/24	23	1	1998, 2000, 2001
		255	1.8	9/17 – 9/27	3	1	1999, 2000, 2001
		253	3	10/1 – 12/28	28	1	1997, 1999, 2000, 2001
		142	3.9	9/16 – 12/18	24	1	1997, 2001
		252	4.6	9/14 – 11/15	20	2	2001
		140	5.3	9/13 – 12/30	33	1	1997, 2001
		342	6.5	9/12 – 12/28	18	1	1998, 1999, 2001
		135	7.9	10/11 – 10/28	4	1	1997, 1998, 1999, 2000, 2001
Penny Creek		501	0.3	10/3 – 12/31	10	1	2001
Scriber Creek	080061	30	0.1	10/4 – 12/30	22	1	1996, 2001
Silver Creek	080075	43	0.8	9/11 – 12/28	15	1	1997, 1998, 1999, 2001
Sulphur Springs Cr.		260	0.25	9/14 – 10/20	11	1	2001
Swamp Creek	080059	321	1.7	9/12 – 10/13	9	1	1997, 2001
		479	6.4	10/17 – 12/29	42	1	2001
		238	9.5	10/4 – 10/30	6	1	2001

⁵ Because the affiliate Salmon Watcher Program in Snohomish County also produces a report, data reported herein from sites located in Snohomish County will also be reported by the Snohomish County program.

Salmonids were found in 7 of the 9 streams surveyed (Table 13). Sockeye were the most commonly seen species in the Sammamish River Tributaries. They were observed in North and Little Bear creeks, as were kokanee. Chinook were observed in only North Creek (as in 2000). Coho were the only species seen in Cutthroat Creek (also as in 2000). Coho were also seen in Little Bear, North, Penny, and Swamp creeks.

Table 13. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the Sammamish River Tributaries for the 2001 spawning season.

Stream	Site ID	R M	Chinook	Coho	Sockeye	Kokanee	Other	Unidentified
Cutthroat Creek	413	0.7	—	11/15 – 11/19 (3)	—	—	—	—
Great Dane Creek	481	0.1	—	—	—	—	—	11/17 – 11/22 (3)
Little Bear Creek	114	0	—	10/9 – 10/23 (7)	10/9 – 11/5 (22)	10/23 (3)	—	10/18 – 11/5 (10)
	67	0.2	—	9/22 (7)	9/20 – 10/23 (129)	—	—	—
	311	0.4	—	10/5 – 10/17 (14)	9/21 – 10/22 (119)	—	—	9/16 – 10/8 (17)
	176	1.3	—	10/4 (2)	9/18 – 11/5 (189)	9/29 – 10/25 (8)	—	10/1 (1)
	478	4.4	—	—	11/3 (4)	—	—	9/23 – 10/15 (134)
	230	4.5	—	10/7 – 11/17 (2)	10/20 – 10/27 (4)	10/7 (1)	—	10/13 (1)
	477	4.6	—	—	9/25 – 10/16 (4)	—	—	—
	93	5.9	—	—	—	—	—	11/26 (1)
<i>Summary</i>			—	9/22 – 11/17 (32)	9/18 – 11/5 (471)	9/29 – 10/25 (12)	—	9/16 – 11/26 (164)
North Creek	112	0.9	—	—	9/25 – 11/5 (63)	10/4 – 10/23 (6)	9/27 (1 chum)	9/27 (2)
	408	1	—	—	10/22 (3)	—	—	—
	57	1.2	10/9 – 10/11 (3)	—	10/9 – 10/25 (27)	—	—	—
	113	1.7	9/25 – 10/15 (5)	—	9/25 – 11/12 (41)	10/6 – 11/5 (11)	—	10/13 – 10/15 (3)
	255	1.8	—	—	—	—	—	—
	253	3	—	—	10/3 – 11/1 (37)	—	—	—
	142	3.9	—	—	9/26 – 11/6 (7)	—	—	—
	252	4.6	—	—	10/20 (2)	10/8 – 10/13 (5)	—	10/7 (1)
	140	5.3	—	—	—	—	—	—
	342	6.5	—	—	—	—	—	10/31 – 12/5 (2)
135	7.9	—	10/28 (7)	—	—	—	—	
<i>Summary</i>			9/25 – 10/15 (8)	10/28 (7)	9/25 – 11/12 (180)	10/4 – 11/5 (22)	—	9/27 – 12/5 (8)
Penny Creek	501	0.3	—	10/28 – 10/31 (5)	—	—	—	—
Scriber Creek	30	0.1	—	—	—	—	—	—
Silver Creek	43	0.8	—	—	—	—	10/9 (1 trout)	10/22 – 10/31 (3)
Sulphur Springs Cr.	260	.25	—	—	—	—	—	—
Swamp Creek	321	1.7	—	—	—	—	—	—
	479	6.4	—	10/23 – 10/30 (4)	—	—	—	11/6 (1)
	238	9.5	—	—	—	—	—	—

Uppermost Sightings

Sockeye were observed as far upstream as RM 4.6 in Little Bear Creek (at a private property). Coho and kokanee were both seen as far as RM 4.5, Little Bear Creek Rd, west of 57th Ave. SE. Only one unidentified fish was seen at the highest point watched in Little Bear Creek, RM 5.9 (189th St. SE, east of 51st Ave. SE). Coho were observed at RM 0.7 (near Hwy. 9 and Maltby Rd.), the only site watched on Cutthroat Creek, which is a tributary to Little Bear Creek.

Chinook were observed in North Creek as far as RM 1.7 (North Creek Pkwy near northern loop). The only coho observed in North Creek were reported at the uppermost site watched in that stream, RM 7.9

(between 164th and Mill Creek City Hall). Sockeye and kokanee were seen as far upstream as RM 4.6 in North Creek. One trout and three unidentified fish were reported in Silver Creek, a tributary to North Creek. One chum was reported in North Creek at RM 0.9 (North Creek Pkwy. near NE 195th), but this sighting was not verified by a fish biologist.

The only fish observed in Swamp Creek were 4 coho and one unidentified fish, and they were seen at RM 6.4 (on private property). The distributions of chinook, coho, sockeye, and kokanee in the Sammamish River Tributaries determined from volunteer observations are shown in Figure 11.

Figure 11. Observations of salmonids in the Sammamish River Tributaries (see insert).

Timing of Salmon Runs

Chinook were observed from late September until mid-October in North Creek. Most sockeye observations in both Little Bear Creek and North Creek ran from mid-September through early November. Kokanee were observed predominantly during October in Little Bear Creek and in North Creek. The only coho seen in North Creek were all seen on one day, October 28. All coho in Cutthroat Creek were seen in mid-November. In Little Bear Creek and Swamp Creek most coho were observed in October.

West Lake Sammamish Basin

Volunteers surveyed 6 sites on 4 streams in the West Lake Sammamish Basin. One or 2 sites were watched per stream, and the total number of surveys ranged from 6 to 61 per stream. Each site was monitored by 1 or 2 volunteers, except for one site that had 4 volunteers.

Table 14. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the West Lake Sammamish Basin for the 2001 spawning season.

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Lewis Creek	080162	327	0.05	9/14 – 12/25	36	2	1997, 2001
		283	0.5	9/14 – 12/25	54	2	1999, 2001
Sunrise Creek	080161	365	0.2	10/3 – 10/31	6	1	1996, 2001
Tributary 0143	080143	423	0.1	9/12 – 12/28	28	1	2000, 2001
Vasa Creek	080156	323	0	9/15 – 12/17	33	2	1997, 2001
		39	0.5	9/7 – 12/30	61	4	1996, 1999, 2000, 2001

Salmonids were found in 2 of the 4 streams surveyed (Table 15). Kokanee and sockeye were both observed in Lewis Creek. There was some confusion with kokanee versus sockeye identification in Lewis Creek, so it is possible some of the reported sockeye were actually kokanee. However, some sockeye were verified. A chum was also reported in Lewis Creek, but this sighting was unverified by a fish biologist. Kokanee were also observed in Tributary 0143, which is at the northern end of Lake Sammamish, and they were also reported in Vasa Creek.

Table 15. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the Sammamish River Tributaries for the 2001 spawning season.

Stream	Site ID	RM	Kokanee	Sockeye	Chum	Unidentified
Lewis Creek	327	0.05	11/2 – 11/30 (41)	11/9 – 12/8 (12)	—	—
	283	0.5	10/30 – 12/11 (282)	12/11 (1)	11/18 (1)	11/12 – 12/8 (5)
Sunrise Creek	365	0.2	—	—	—	—
Tributary 0143	423	0.1	—	11/20 (1)	—	—
Vasa Creek	323	0	11/3 – 11/18 (6)	—	—	—
	39	0.5	—	—	—	—

Uppermost Sightings

Kokanee and sockeye (and the one chum) were all observed at the uppermost site watched on Lewis Creek, RM 0.5 (West Lake Sammamish Pkwy.). Sockeye reported in Lewis Creek were also found up to RM 0.5. The sockeye in Tributary 0143 were observed at the only site watched in that stream, RM 0.1, very close to the mouth. The kokanee in Vasa Creek were all observed at the mouth of the creek.

Timing of Salmon Runs

Almost all live kokanee in the West Lake Sammamish Basin were observed during November (Table 15). The sockeye reported in Lewis Creek were observed in November and December.

East Lake Sammamish Basin

Volunteers surveyed 4 sites on 3 streams in the East Lake Sammamish Basin (Table 16). One or 2 sites were watched per stream, and the total number of surveys ranged from 8 to 28 per stream. Each site was monitored by 1 volunteer.

Table 16. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the East Lake Sammamish Basin for the 2001 spawning season.

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Ebright Creek	080149	7	0.2	9/16 – 12/22	25	1	1996, 2001
		468	0.9	9/22 – 12/28	28	1	2001
George Davis/Eden Creek	080144	358	0.2	9/18 – 10/16	8	1	1996, 2001
Many Springs Creek		471	0.2	9/24 – 12/11	13	1	2001

Salmonids were found in 1 of the 3 streams surveyed (Table 17). Kokanee and coho were both observed in Ebright Creek. The coho sighting was unverified by a fish biologist. No adult salmonids were reported in George Davis/Eden Creek or in Many Springs Creek.

Uppermost Sightings

All fish sighted in Ebright Creek were seen as far as the upstream-most site watched, RM 0.9 (SE 8th St.).

Timing of Salmon Runs

All fish in Ebright Creek were observed during November and December (Table 17).

Table 17. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the East Lake Sammamish Basin for the 2001 spawning season.

Stream	Site ID	RM	Coho	Kokanee	Unidentified
Ebright Creek	7	0.2	—	11/6 – 12/3 (133)	—
	468	0.9	11/18 (1)	11/7 – 12/21 (159)	11/25 – 12/13 (2)
George Davis/Eden Creek	358	0.2	—	—	—
Many Springs Creek	471	0.2	—	—	—

West Lake Washington Basin

Volunteers surveyed 1 site on Taylor Creek in the West Lake Washington Basin (Figure 2). The site was watched a total of 26 times by 2 volunteers (Table 18). No fish were observed in this stream.

Table 18. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the West Lake Washington Basin for the 2001 spawning season.

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Taylor Creek	—	223	0.1	9/9 – 12/30	26	2	2001

Central Puget Sound

Although many streams in the Central Puget Sound have been observed in the past, they were not a part of the official program until 2001 (previously, funding was only intended for the Lake Washington Watershed). So, where possible, data from past years is reported for comparison on fish sightings. But often, even if data were collected, they were not reported in way that easily facilitates comparison. Therefore, for practical purposes, 2001 is considered the first year of Salmon Watching in most of the streams in the Central Puget Sound area, including on Vashon Island.

Volunteers surveyed 31 sites in 11 streams draining directly to Central Puget Sound in 2001 (Figure 2). From 1 to 7 sites were watched per stream, and the total number of surveys ranged from 2 to 141 per site (Table 19). Most sites were monitored by 1 or 2 volunteers, except for one site that had 3 volunteers and the site at Fauntleroy Creek, which had 23 volunteers.

Table 19. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the Central Puget Sound drainages for the 2001 spawning season. Vashon Island streams are grouped separately at the bottom of the table.

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Boeing Creek	080017	436	0.1	10/13 – 1/10/02	18	1	2000, 2001
Fauntleroy Creek	090361	132	0.5	10/5/ - 11/30	141	23	1998, 1999, 2000, 2001
Longfellow Creek	090360	177	0.6	10/3 – 12/13	32	2	1999, 2000, 2001
		179	0.8	9/14 – 12/29	52	3	1999, 2000, 2001
		180	0.9	10/5 – 12/25	23	2	1999, 2000, 2001
		380	1.0	10/7 – 12/29	19	1	2000, 2001
Miller Creek	090371	417	0.1	9/24 – 1/13/02	40	2	2000, 2001
		421	0.2	10/20 – 10/28	2	1	2000, 2001
		458	0.4	9/7 – 9/27	5	1	2001
Pipers Creek	080023	70	0	10/11 – 12/1	8	1	1999, 2000, 2001
		181	0.2	9/16 – 9/29	3	1	1999, 2000, 2001
		381	0.3	9/16 – 12/9	25	2	2001
		98	0.4	9/22 – 1/2/02	25	1	1998, 1999, 2000, 2001
Venema Creek	080021	383	0.1	10/4 – 12/2	15	1	2000, 2001
Walker Creek		499	0.01	12/8 – 1/13/02	9	1	2001
		473	0.13	9/7 – 9/27	5	1	2001
Christensen Creek		497	0	12/29 – 1/5/02	2	1	2001
Fisher Creek	150140	485	0.1	11/10 – 12/21	16	1	2001
Judd Creek	150129	488	0.5	10/10 – 12/12	10	1	2001
		489	0.75	11/11 – 1/28/02	23	1	2001
		490	0.9	11/12 – 11/30	5	1	2001
		500	1.2	12/8 – 12/22	4	1	2001
		492	1.25	11/10 – 1/22/02	16	1	2001
		493	1.8	11/13 – 12/27	14	1	2001
Shinglemill Creek	150159	146	0	10/14 – 12/30	22	2	2001
		147	0.2	11/9 – 12/31	11	1	2001
		148	0.5	10/12 – 12/21	16	1	2001
		149	0.6	10/17 – 12/29	25	2	2001
		150	1.1	11/11 – 1/6/02	8	1	2001
		151	1.2	10/17 – 1/29/02	19	1	2001
		152	1.6	10/13 – 11/24	4	1	2001

Table 20. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the Puget Sound Drainages for the 2001 spawning season. Vashon Island streams are grouped separately at the bottom of the table.

Stream	Site ID	RM	Coho	Chum	Other	Unidentified
Boeing Creek	436	0.1	10/13 – 12/4 (89)	11/15 – 1/10/02 (159)	—	10/26 (1)
Fauntleroy Creek⁶	132	0.5	10/28 – 11/23 (370)	—	11/1 – 11/16 (7 trout)	10/24 – 11/20 (12)
Longfellow Creek	177	0.6	10/17 – 12/13 (41)	—	11/25 (2 chinook) 10/26 (1 trout)	10/21 – 11/23 (33)
	179	0.8	10/21 – 12/5 (216)	12/2 – 12/29 (164)	—	11/2 – 11/24 (45)
	180	0.9	10/21 – 12/23 (145)	—	—	—
	380	1.0	10/21 – 11/30 (109)	12/4 – 12/16 (55)	—	12/29 (1)
<i>Summary</i>			10/17 – 12/23 (511)	12/2 – 12/29 (219)	—	10/21 – 12/29 (79)
Miller Creek	417	0.1	10/22 – 12/7 (17)	11/21 – 12/12 (6)	—	10/22 – 12/5 (11)
	421	0.2	10/28 (3)	—	—	10/20 (2)
	458	0.4	—	—	—	—
Pipers Creek	70	0	11/6 (4)	12/1 (13)	—	11/18 (1)
	181	0.2	—	—	—	—
	381	0.3	10/22 – 11/16 (21)	10/22 – 12/9 (19)	10/22 (1 trout)	10/24 – 12/9 (5)
	98	0.4	11/3 – 11/23 (25)	11/23 – 12/10 (55)	—	12/22 – 1/2/02 (3)
<i>Summary</i>			10/22 – 11/23 (50)	10/22 – 12/10 (87)	—	10/24 – 1/2/02 (9)
Venema Creek	383	0.1	—	10/29 – 12/2 (4)	—	—
Walker Creek	499	0.01	12/8 – 12/22 (5)	—	—	12/9 – 1/6/02 (25)
	473	0.13	—	—	—	—
Christensen Creek	497	0	—	—	—	—
Fisher Creek	485	0.1	11/10 – 11/26 (3)	11/16 – 12/21 (17)	11/21 (1 trout)	11/15 – 12/12 (11)
Judd Creek	488	0.5	10/10 – 10/31 (4)	—	—	11/10 – 12/12 (58)
	489	0.75	11/25 (1)	11/23 – 1/5/02 (16)	—	11/24 – 12/30 (4)
	490	0.9	—	11/17 – 11/30 (18)	—	11/12 (1)
	500	1.2	12/8 (1)	12/8 (4)	—	12/20 (2)
	492	1.25	11/10 – 11/25 (18)	—	—	11/10 – 11/29 (2)
	493	1.8	11/13 – 11/30 (15)	—	—	—
<i>Summary</i>			10/10 – 12/8 (39)	11/17 – 1/5/02 (38)	—	11/10 – 12/30 (67)
Shinglemill Creek	146	0	11/8 – 12/1 (4)	—	—	—
	147	0.2	11/9 – 11/17 (11)	—	—	—
	148	0.5	11/6 – 11/20 (9)	—	12/21 (1 trout)	—
	149	0.6	—	—	—	—
	151	1.2	—	—	—	—
	152	1.6	11/18 – 11/24 (8)	—	—	—
<i>Summary</i>			11/6 – 12/1 (32)	—	—	—

Salmonids were found in 10 of the 11 streams surveyed (Table 20). The only stream in which salmonids were not found (Christensen Creek) was only watched twice. Coho were observed in all streams except Christensen Creek and Venema Creek, which is a tributary to Pipers Creek. Chum were observed in 6 of the 11 streams surveyed, including Boeing, Longfellow, Pipers, and Venema creeks on the mainland,

⁶ The site is on private property, and the property owners began allowing access for other Salmon Watchers in 1999. Because of the great amount of interest and so many volunteers, Salmon Watcher volunteers on Fauntleroy Creek schedule themselves in shifts so no volunteers are watching at the same time. The site at Fauntleroy Creek is watched more frequently than any other Salmon Watcher site, and this should be kept in mind when looking at the numbers of fish counted.

and Fisher and Judd Creek on Vashon Island. Chinook were reported in Longfellow Creek, but the sightings were unverified by a fish biologist.

Uppermost Sightings

Coho were seen at all sites watched on Longfellow Creek, including the most-upstream site at RM 1, SW Genesse Street. Coho were also seen at the only sites watched on Boeing and Fauntleroy Creek. Coho were observed as far as RM 0.4 in Pipers Creek (at Carkeek Park), the uppermost site surveyed, and as far as RM 0.2 in Miller Creek (in Normandy Park near 176th). They were also seen close to the mouth of Walker Creek, but not at the most upstream site, at RM 0.13. On Vashon Island, coho were seen at the only site watched on Fisher Creek, at its mouth. They were also seen at the most upstream sites watched on both Judd and Shinglemill creeks, RM 1.8 (road crossing at 204th) and RM 1.6 (in the upper ravine), respectively.

Chum were also observed at the only sites surveyed in both Boeing and Venema creeks. They were seen as far as the uppermost site surveyed in both Pipers Creek (RM 0.4) and Longfellow Creek (RM 1.0). In Miller Creek, chum were observed at the site closest to the mouth of the stream (site 417 at RM 0.1). On Vashon Island, chum were seen at the only site watched on Fisher Creek, as well as up to RM 1.2 on Judd Creek.

Figure 12. Observations of salmonids in the Central Puget Sound drainages (see insert).

Timing of Salmon Runs

Coho were seen from mid-October until December in Boeing, Longfellow, Miller, and Walker creeks, and from mid-October until mid-November in Pipers and Fauntleroy creeks. On Vashon Island, coho were seen from early October until early December in Judd Creek, and throughout November in Shinglemill Creek.

Chum were observed from late October until early December in Pipers and Venema creeks and only during December in Longfellow Creek. In Miller Creek, chum were observed from the second half of November until the first half of December. Chum were seen from mid-November until surveys ceased in mid-January, 2002, in Boeing Creek. In Vashon Island streams, chum were seen from mid-November until the second half of December in Fisher Creek and until early January, when surveys ceased, in Judd Creek.

The two chinook reported in Longfellow Creek were observed on November 25.

Tagged Fish

Clipping off the adipose fin of a salmonid is a method recently employed in Washington State to differentiate hatchery reared from naturally produced salmonids. It is likely that significant portions of the adipose fins are missed by the electronic de-fanners every year. So, because the practice of clipping adipose fins is not effective 100 percent of the time, it is still possible for a hatchery fish to have an adipose fin. It is also possible for naturally produced adult fish to not have adipose fins because of encounters with predators and certain fishing gear, or because the odds exist that a small proportion are born without them.

The year 2001 marked the first year of this program that volunteers were asked to record whether they could see if a fish had its adipose fin intact. The question as posed on the data sheet (“Were you able to identify presence/absence of adipose fin?”) may have been too vague as different volunteers answered the question in different ways. It is consequently impossible to quantitatively summarize what was observed; however, from a cursory examination of responses to the question, it appears a significant proportion of volunteers were unable to see the fish well enough to discern whether it had an adipose fin. Still, there are a few noteworthy observations one might extract from the data.

No sockeye had their adipose fins clipped at hatcheries in the Lake Washington Watershed. However, some sockeye were reported to have been seen without adipose fins, including in Cottage Lake Creek, Little Bear Creek, and North Creek. This apparent discrepancy indicates that either the fish species was misidentified or the adipose fin was actually present, but the volunteer incorrectly reported its absence, or the adipose fin was not present because of predators or fishing gear (not as a result of being produced and released from a hatchery). Coho missing adipose fins were found in Issaquah Creek, Holder Creek, and Juanita Creek.

In Central Puget Sound streams, some coho and chum were observed missing adipose fins. In Judd Creek on Vashon Island, several chum were observed without adipose fins. In Shinglemill Creek, also on Vashon, two different observers noted one coho each that was missing an adipose fin. A coho carcass was observed in Miller Creek missing its adipose fin, and in Boeing Creek 7 coho were observed without their adipose fins. One dead coho in Longfellow Creek was missing its adipose fin. Several coho and chum were both reported in Pipers Creek to be seen missing adipose fins. If these fish without adipose fins are hatchery fish, it is possible they are strays from hatcheries in north or south Puget Sound.

In addition to marking fish by removing their adipose fins, another means of marking fish is by use of plastic disc tags that are attached to the dorsal region of the fish. Some adult chinook, coho, and sockeye were tagged with yellow or red disc tags at the Ballard Locks by the Muckleshoot Indian Tribe. Chinook with yellow disc tags were observed in Issaquah Creek, the Sammamish River, Cottage Lake Creek (two chinook), and Big Bear Creek by Salmon Watcher volunteers. Coho with yellow tags were observed in Issaquah Creek and in Fauntleroy Creek. A coho tagged this way at Fauntleroy Creek apparently went through the Ballard Locks, got tagged, then went back out the Locks and swam further down Puget Sound to reach Fauntleroy Creek.

Washington Department of Fish and Wildlife conducted a small study that entailed tagging dead coho from the Issaquah Hatchery and placing the carcasses in Coal Creek. Salmon Watcher volunteers counted 9 of these fish, total; however, these carcass numbers are not included in the fish counts reported herein because the fish did not spawn in Coal Creek.

DISCUSSION

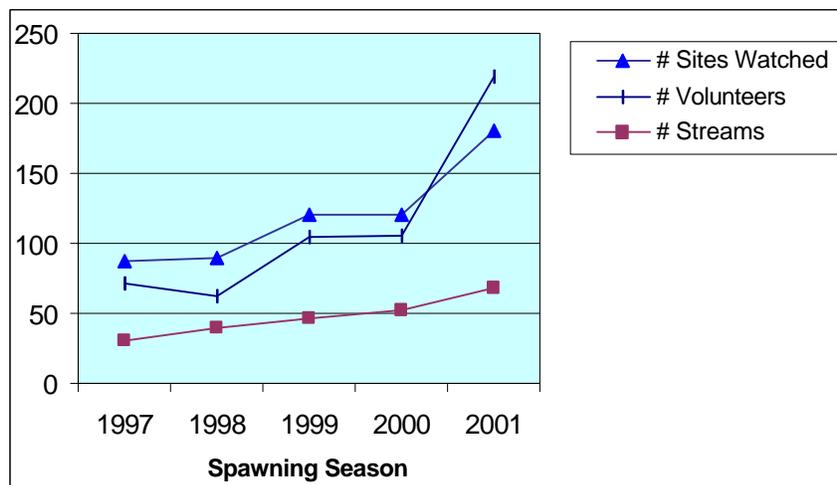
In 2001, for the sixth consecutive year, Salmon Watcher volunteers surveyed streams in the Lake Washington Watershed for live adult salmonids and carcasses. Of the 57 streams surveyed, fish were observed in 35 streams. Also in 2001, streams draining into the Central Puget Sound, including Vashon Island, were a part of the official program. Of the 11 streams surveyed in the Central Puget Sound area, fish were observed in 10 streams.

Volunteers in the 2001 spawning seasons observed streams from stationary locations. By combining Salmon Watcher data from 1996 through 2000 with the 2001 data, a map of fish distribution based on the extent of volunteer efforts may be constructed. This mapping effort may not necessarily reflect accurate fish distribution because of observer error and changes in distribution between years resulting from differing fish densities or stream blockages. It is possible fish traveled further upstream than the most upstream watch site along a given stream. In the following section, different aspects of volunteer activity and the limitations of the volunteer data are discussed, then the results of the 2001 surveys are discussed for each basin of the study. Finally, the results are examined for each species.

Volunteer Activity

The number of volunteers participating in the Salmon Watcher Program has continued to increase over the 6 years of the program (Figure 13). The increase in the number of volunteers was fairly steady for the first 5 years, but in 2001 the number of volunteers in the program more than doubled (from 106 in 2000 to 219 in 2001).

Figure 13. Number of volunteers (defined as an individual, pair, or group) watching in the Lake Washington Watershed and Puget Sound tributaries and number of sites and streams watched from 1997⁷-2001.



⁷ Numbers for 1996 are not depicted because many volunteers walked stream reaches, whereas in all other years volunteers watched from stationary positions, and many volunteers were trained differently as part of the kokanee watcher program. In 1997, 30 streams and 16 beach sites were watched; beach sites are counted here as 1 site.

“Eyes and Ears” of the Watershed

In addition to identifying the distribution of spawning salmon in the Lake Washington Watershed, the volunteers, by virtue of their frequent presence along streams, often end up accomplishing more than their charge. For example, volunteers sometimes help identify problem stream blockages, potential restoration sites, and potential illegal dumping. They become the eyes and ears of the streams and may report illegal fishing, fish kills, and other discouraged activities taking place in or near streams. Volunteers are encouraged to report this information immediately so the appropriate parties can respond as quickly as possible.

During the 2001 season, a volunteer on Bear Creek reported crates that were placed in the water so people could cross the stream, and another volunteer reported people actively driving across the creek. A volunteer in Swamp Creek reported someone with a backhoe digging into a tributary clearing out vegetation along the streamside. A volunteer on the Cedar River called about a radiator place that spills antifreeze that drains to stream and police issued citation. That same volunteer frequently encountered families engaging in illegal fishing. Whenever possible, this volunteer took the opportunities to educate the people, and often the offenders left the site after the conversation. A volunteer on a tributary draining to the Sammamish River notified the City of Redmond when she noticed a nearby portable toilet and a gasoline shack were both surrounded by waters overflowing from the river. A volunteer in Little Bear Creek notified the City of Woodinville when she saw sheets of plywood floating downstream.

Contact with Citizens

During 2001, for the second year in a row, volunteers were asked to keep track of how many citizens they came into contact with during their time by the streams. Salmon Watcher volunteers spoke with over 1,524 citizens during the 2001 spawning season. Types of citizen contacts ranged from passers-by in parks and along roads to horse-back riders to groups of school children. Table 21 details the numbers of citizens who interacted with volunteers in each basin in the study area.

Table 21. Number of citizen contacts made by Salmon Watcher volunteers in each of the surveyed basins.

Cedar River	Big Bear Creek	E. Lake Wash.	Issaquah Creek	N. Lake Wash. ¹	W. Lake Wash.	Central Puget Sound ²	W. Lake Samm.	E. Lake Samm.
153	215	267	53	184	7	600	42	3

¹ Volunteers on North Lake Washington streams in Snohomish County were not asked to record citizen contacts; if any were noted on their data sheets, they were recorded, otherwise it is presumed that this number is an underestimate.

² This number is considerably larger than the other basins because the volunteers at Fauntleroy Creek come into contact with an almost constant stream of visitors to their watch site near the Fauntleroy ferry terminal. Eighteen of these contacts are from volunteers on Vashon Island.

Time Spent by Volunteers

Salmon Watcher volunteers are asked to record the time they spend streamside for each visit. Occasionally, some volunteers forget to fill in that part of the data sheet. Nonetheless, Table 22 illustrates the approximate amount of time spent by volunteers in each basin. More than 1,700 hours were volunteered in the official program area, and another 18.8 hours in the Snoqualmie and Green River basins.

Table 22. Number of hours spent by Salmon Watcher volunteers in each of the surveyed basins.

Cedar River	Big Bear Creek	E. Lake Wash.	Issaquah Creek	N. Lake Wash.	W. Lake Wash.	Central Puget Sound	W. Lake Samm.	E. Lake Samm.
267.7	178.9	396.8	87.4	355.8	7.8	302.6	70.0	34.7

Recommendations by Volunteers

Evaluation forms were sent out after the 2001 Salmon Watcher season concluded. Volunteers were asked if they had any suggestions to help improve the program. The following list includes a few of their suggestions.

- Pair new volunteers up with veteran Salmon Watchers
- Make field trainings mandatory
- Encourage property owners along creeks to participate (many are not aware of program)

Limitations of Volunteer Data

Individuals, citizens' groups, non-profit organizations, and government agencies all use data from the Salmon Watcher Program for various reasons (for an extensive list of reasons, please see the report from the 2000 Salmon Watcher season, Vanderhoof 2001). However, several qualifications must be kept in mind when reviewing the data in this report and especially when using the data for any purpose other than describing fish distributions. The level of expertise of the volunteers varies widely: some volunteers have past experience identifying fish through professional or school training, recreational fishing, or personal interest. Other volunteers only learned to identify salmon from the Salmon Watcher training session.

Every year volunteers from previous years return and new volunteers enter the program who must learn to identify the different species of salmonids they might encounter in their assigned streams. In 2001, 66 out of 219 volunteers (30.14 percent) in the Salmon Watcher Program were returnees. The variation in numbers of new versus returning volunteers each year likely has an effect on the accuracy of identification from year to year. However, if accuracy of data is decreased because of an increase in new volunteers each year, new efforts by Salmon Watcher staff to increase the accuracy of reporting by *all* volunteers should work to offset any possible decrease and actually enhance identification every year (see "Quality Assessment/Quality Control").

Stream surveying could not possibly occur 24 hours a day; therefore, it is possible that observations of fish did not occur that might have extended the uppermost limits of known distributions. Also, adult salmon might migrate more during the night (Brannon and Salo 1982) when volunteers do not observe. Additionally, conditions were not always favorable for sighting fish: fish may have been difficult to see from banks or bridges; fish can hide around bends or under vegetation; and fish may pass unnoticed while the volunteer is observing. High flows, turbid water, and glare make fish observation difficult (polarizing glasses are recommended, but not everyone uses them, and sometimes other conditions preclude their utility). Some species, such as coho, move upstream to their spawning locations very quickly immediately after it rains and may not be seen lower in a system at all. Other species may be very difficult to distinguish from one another, such as sockeye and kokanee. Although training sessions are thorough, identification materials are provided, and technical experts are available for help with identification, some misidentifications will occur.

It is important to keep in mind that the absence of spawner sightings in a stream does not mean that spawning salmonids are not accessing that location. It does mean that fish were not seen by the volunteer at the site at the time of survey. Because of this important distinction and the other mentioned limitations of this type of survey, data in this report should be used only to indicate the presence of adult salmon of a particular species at specific locations (species distribution). All other uses and benefits derived from the compilation of this data should be used cautiously and with the specific limitations of the data in mind. Only when fish surveys are conducted comprehensively and systematically are wider uses of such data appropriate.

Although these data may be used to help determine fish distributions, population estimates may not be derived from them for several reasons. It is difficult to compare the Salmon Watcher data from year to year because many variables in the observer methods exist between years:

- number of surveys in a stream
- survey locations along a stream
- the number of surveys at a site
- streams surveyed in a basin
- time of day spent observing
- survey frequency
- level of experience of observers
- type of survey (some surveys in 1996 were walking surveys)
- time spent at a given location
- beginning and ending dates of surveys

Because most or all of these parameters are different for every stream surveyed from 1996 through 2001, comparisons of raw data likely would not yield valid information about changes in populations. Therefore, the best use for the data is in determining presence of fish and mapping fish distribution. In the following discussion, distributions of salmonid species based solely upon volunteer Salmon Watcher data are discussed. When known fish distributions from Salmon Watcher data have been expanded based upon 2001 data, it is mentioned here. Figures 15 to 18 at the end of this section depict these fish distributions.

Basins

The Lake Washington Watershed study area has been broken into ten basins for the purpose of analysis and discussion. Salmonids were observed in all basins surveyed in 2001 except the West Lake Washington Basin (in which only Taylor Creek was watched).

Chinook were observed in the highest numbers in the Issaquah Creek Basin, and in the second and third highest numbers in the Bear Creek Basin and North Lake Washington tributaries, respectively. Coho were observed in the highest numbers in Central Puget Sound drainages and in the second highest numbers in the Issaquah Creek Basin. As has been the case in every year of the Salmon Watcher Program, again in 2001 sockeye were observed in the greatest numbers in the Cedar River Basin and that basin, consequently, had the most fish observed in the program area. As in the 2000 program, sockeye were observed in the second highest numbers in Bear Creek Basin, and that basin had the second most fish observed. Kokanee were seen in the highest and second highest numbers in West Lake Sammamish and East Lake Sammamish, respectively. No adult spawners were observed in 23 streams

surveyed, including North Fork Issaquah Creek and Valley Creek. Most streams without fish observations were smaller tributaries to larger streams or rivers that did have fish reported in them.

Big Bear Creek Basin

One new site in Big Bear Creek Basin (site 466, at RM 11.6) was located further upstream than sites watched in previous years. However, no fish were observed that high in the system. Sockeye and coho were observed at the next highest site at RM 9.25. Chinook were seen as far as RM 9.0. As with 2000 surveys, kokanee were observed in Big Bear Creek up to RM 6.0.

Salmon Watcher volunteers viewed Cottage Lake Creek as far as RM 2.3, where sockeye and chinook were both observed. One dead coho was observed at RM 2.2; other live coho were observed at RM 1.6. Pink salmon were also reported at RM 1.6, and were verified by a fish biologist. Kokanee were also observed in Cottage Lake Creek up to RM 1.6. One sites was also observed on Cold Creek which is upstream of Cottage Lake Creek; coho were observed in Cold Creek.

Struve Creek, Mackey Creek, and an unnamed tributary to Big Bear Creek were also watched at one site each. Coho were observed in Mackey Creek and in the unnamed tributary to Big Bear Creek, but no adult spawners were observed in Struve Creek.

Cedar River Basin

Sockeye were seen at every site in the Cedar River that was observed in 2001. The upstream-most site watched in 2001 was Cavanaugh Pond at RM 6.4. Sockeye have been observed in Cavanaugh Pond every year of the Salmon Watcher Program. Chinook were observed in the Cedar River by volunteers as far upstream as the Jones Rd. bridge at RM 5.3, which is not as far as they had to traverse to get to Rock Creek.

The upstream-most site in Rock Creek was a new site in 2001 and was located at RM 4.6 (site 398). No fish were observed at this site. The next most-upstream site was at RM 1.3, and only one dead unidentified fish was observed there. At the next site, at RM 1.2, sockeye and coho were both observed. Chinook were observed in Rock Creek for the second consecutive year of the Salmon Watcher Program; as in 2000, they were observed at site 154, RM 0.4.

Salmon Watcher volunteers viewed Taylor Creek as far upstream as RM 2.4, where sockeye were observed. In previous years, sockeye had only been seen as far as RM 1.8. Chinook were observed at RM 1.8 and 1.2 in Taylor Creek; no chinook had been observed by Salmon Watchers in Taylor Creek in previous years. Four tributaries to Taylor Creek were observed, but no fish were seen at these sites.

All sites in Taylor Creek and all sites but one in Rock Creek were watched by one particular volunteer almost daily. It is noteworthy how few fish were counted despite the amount of time the volunteer logged at these stream sites. One might speculate that had the volunteer only gone twice a week as per the protocol, most or all of these few fish might never have been counted.

No fish were observed in Peterson Creek.

East Lake Washington Basin

One new site in the East Lake Washington Basin was watched further upstream than in previous years—site 456 on May Creek at RM 3.8. Two sockeye were observed at this new sites, as well as one chinook and one coho. Previously, sockeye, chinook, and coho had been seen as far upstream as RM 3.0. Sockeye were also observed at all other sites watched in May Creek. One sockeye, one coho, and

one unidentified fish were observed in Kelsey Creek up to RM 3. One chinook, one coho, and one unidentified fish were observed at RM 2.4. Chinook as well as coho were also reported at RM 0.2, the downstream-most site. Kelsey Creek was watched at five sites above RM 3.0, all the way to RM 0.6, and no adult salmonids were observed at any of these locations.

A new site at the mouth of Carillon Creek (which drains directly into Lake Washington) was added in 2001. One unidentified fish was seen at that location on November 18. Coal Creek was observed as far upstream as RM 2.35, where coho and sockeye were observed. Chinook were reported in Coal Creek as far upstream as RM 0.6. Forbes Creek was observed up to RM 0.9, but the only fish observed in this stream was one coho at RM 0.2.

Richards Creek was observed as far upstream as RM 0.7, where coho were observed. Coho were also reported at this site in 2000. In previous years of the program, the most-upstream adult salmonid observation was one unidentified fish in 1999 at RM 1.3.

Yarrow Creek was observed as far upstream as RM 0.5, but the only fish observed in this stream was one unidentified fish at RM 0.3. This is the first observation of adult salmonids at this site during the Salmon Watcher Program. In previous years of the program, the only other fish observed in Yarrow Creek were trout and one unidentified species at RM 0.5 in 1997.

Salmon Watcher volunteers viewed West Trib Kelsey Creek as far as RM 0.7, but no salmonids were reported at either site in this stream. Salmon Watcher volunteers viewed Valley Creek as far as RM 0.8, but no salmonids were reported at either of the sites watched in this stream. No adult spawners were observed in Sturtevant Creek.

Issaquah Creek Basin

Salmon Watcher volunteers viewed Issaquah Creek as far upstream as site 359 at RM 8.9. Two volunteers reported chinook, coho, and sockeye at that site. One volunteer also reported kokanee on the same day (November 2) that sockeye were observed, but these kokanee were not verified by a fish biologist. The same volunteer also recorded seeing a bull trout on September 25, but after talking with the volunteer, it was determined the fish was likely a chinook.

East Fork Issaquah Creek was observed in one location (RM 3.2), and coho and sockeye were both observed there. Holder Creek was watched at one location, site 127 at RM 1.4. Chinook and coho were both reported at that site.

Tibbetts Creek was watched further upstream than in past years of the program; it was watched as far upstream as RM 1.4. No adult salmonids were reported in Tibbetts Creek. However, agency staff visited Tibbetts Creek on November 13 and observed kokanee at NW Sammamish Road. No adult salmonids were observed in North Fork Issaquah Creek, which was watched at RM 0.6.

North Lake Washington Tributaries

A new site was established on a stream that has not been watched previously by Salmon Watchers—Brookside Creek, site 476 at RM 0.9. No fish were observed in Brookside Creek, which is a tributary to McAleer Creek. Six sites were observed in McAleer Creek in 2001. Coho were seen at the most upstream site, site 315 at RM 2.1. Sockeye were observed at the second-most upstream site, at RM 1.6.

Salmon Watcher volunteers viewed Thornton Creek watched as far as RM 1.2 and saw coho as far upstream as RM 0.9. Volunteers also watched one site on Maple Leaf Creek and one site on Little

Brook Creek, both tributaries to Thornton Creek. No fish were seen in Maple Leaf Creek or Little Brook Creek in 2001.

In Juanita Creek, no salmonids were observed at the upstream-most site at RM 1.6. Coho and sockeye were both observed at the next most-upstream site, at site 196, RM 1.4. No adult salmonids were observed at the only site watched in the Simonds Tributary to Juanita Creek.

This is the first year that salmonids were found in Tributary 0141 to Sammamish River; 2001 marks the third year the volunteer had been on that stream. One live and one dead coho were found up to RM 0.35 (the most upstream site) and a lone dead sockeye was found at RM 0.2. In the Sammamish River, chinook were observed at four sites, including the most upstream site at RM 13.5. Coho were also observed at four sites, and sockeye were observed at three sites.

Sammamish River Tributaries

A new site was established on Great Dane Creek, which is a tributary to Little Bear Creek. The site (site 481) was located at not far upstream from its mouth, at RM 0.1. Three unidentified fish were observed at this site during the second half of November. Eight sites were watched in Little Bear Creek; only one unidentified fish was observed at the upstream-most site, site 93 at RM 5.9. Sockeye were observed at the next most-upstream site, at RM 4.6. Coho were observed as far upstream as site 230, at RM 4.5. A single kokanee was also reported at site 230, which is further upstream than kokanee had been previously seen by Salmon Watchers. This sighting was not verified by a fish biologist. In 1997, agency staff reported kokanee during kokanee surveys as far upstream as RM 4.3 (the reach walked was from 228th to 216th). Salmon Watcher volunteers have reported seeing kokanee as far upstream as RM 1.9. In Cutthroat Creek, a tributary to Little Bear Creek, coho were observed at RM 0.7, the only site watched in that stream in 2001.

A new site was also established on Sulphur Springs Creek, which is a tributary to North Creek. The site (site 260) was located at RM 0.25. No adult salmonids were observed in this stream.

Coho were observed at the most-upstream site in North Creek, site 135 at RM 7.9. Sockeye and kokanee were observed at RM 4.6. These kokanee observations extend the known distribution of kokanee in North Creek as reported by Salmon Watchers; the highest previous observation by a volunteer was in 1999 at RM 4.1. Chinook were observed by volunteers in North Creek up to RM 1.7. Coho were observed in Penny Creek at the only site observed in that stream, which is a tributary to North Creek. In Silver Creek, which drains into Penny Creek, the only fish observed were trout and three unidentified fish.

Salmon Watcher volunteers viewed three sites in Swamp Creek, the most-upstream site was at RM 9.5. The only location that fish were observed was at in Swamp Creek was at RM 4.6. Four live coho and one unidentified fish were observed at this location. No adult salmonids were observed in Scriber Creek, a tributary to Swamp Creek.

West Lake Sammamish Basin

Agency staff visited streams in the West and East Lake Sammamish basins on November 13 and saw kokanee at Vasa Creek at the lower-most site and at Lewis Creek. A volunteer had expressed concern about the ability of fish to get upstream in Sunrise Creek, so also on this date it was discovered that Sunrise Creek is in fact impassible just upstream from its mouth.

Kokanee were observed at the mouth of Vasa Creek, but not upstream at RM 0.5. In Lewis Creek, kokanee and sockeye were both observed at both sites, as far upstream as RM 0.5. One chum was reported at RM 0.5 in Lewis Creek. Sockeye were observed at site 423 on tributary 0143 to Lake Sammamish.

East Lake Sammamish Basin

A new site was added to Ebright Creek in 2001, site 468 at RM 0.9. This is the most-upstream site established in Ebright Creek. Coho and kokanee were both observed at this location, thereby extending the known distribution of these species as reported by Salmon Watchers. A new site was also established on Many Springs Creek, a stream that had not been previously watched. No adult salmonids were observed in this stream during 2001. No adult salmonids were observed at the one site along George Davis/Eden Creek, either.

During their field visit in November, agency staff also observed kokanee at Laughing Jacobs Creek, although no volunteers were stationed at this stream in 2001.

Central Puget Sound

Although the Central Puget Sound drainages were officially a part of the Salmon Watcher Program beginning in 2001, some of these streams have been observed and reported on in past years. The streams with data from past years include Boeing Creek, Fauntleroy Creek, Longfellow Creek, Miller Creek, Walker Creek, Pipers Creek, and Venema Creek. Volunteers on Shinglemill Creek have observed fish for 3 years; however, they followed different protocols prior to 2001. New sites were established in both Miller and Walker creeks that were more upstream than sites watched in previous years. However, no adult salmonids were observed at these sites. Coho were observed near the mouth of Walker Creek and at both other sites watched on Miller Creek. Chum were observed at the lowermost site watched in Miller Creek.

Coho and chum were both observed in the one site on Boeing Creek. The most-upstream site watched in Longfellow Creek in 2001 (site 380 at RM 1.0) was not the most-upstream site watched in previous years. Chum and coho were both observed at site 380; consequently, no fish have been observed above this site to date by Salmon Watchers. Two chinook were reported on November 25 at the lowest site watched in Longfellow Creek (RM 0.2). These sightings were not confirmed by a fish biologist, although surveys conducted by Washington Trout confirmed the presence of two chinook on October 29 (K. Lynch, pers. comm.).

Only one site is watched on Fauntleroy Creek, and coho are annually viewed there spawning. Fauntleroy Creek volunteers stop watching the stream as soon as the fish appear to stop coming into the stream, so carcass counts are likely lower than they might otherwise be. However, because of the very large number of volunteers, the live fish counts probably very closely resemble the total number of spawning coho for the year.

Streams on Vashon Island were watched, and their data were tabulated for the first time in 2001. These streams include Judd Creek, Fisher Creek, Christensen Creek, and Shinglemill Creek. Judd and Christensen Creeks were both watched at or near their mouths. The volunteer at Fisher Creek observed both coho and chum. Christensen Creek was only viewed twice and no salmonids were observed.

Judd Creek was watched in six locations, as far upstream as RM 1.8. Coho were observed at the uppermost site, and chum were seen as far as RM 1.2. There were also 67 unidentified fish in Judd Creek—67 fish represent almost half (47 percent) of fish observed in that creek.

Many of the volunteers along Shinglemill Creek have been participating in a grassroots volunteer program called “Salmon Stalkers” since 1999. Because they walk reaches, their data is not easily compared to data from the Salmon Watcher Program. However, beginning in 2001, volunteers began following protocols of the Salmon Watcher Program. Seven sites were watched in 2001 along Shinglemill Creek. Coho were observed up to the most-upstream site watched, site 152 at RM 1.6. The only other fish observed in Shinglemill Creek was one trout at RM 0.5.

Species

Salmon Watcher Program volunteers recorded observations of all salmonid fish located during surveys, including chinook, coho, chum, pink, and sockeye salmon, kokanee (resident form of sockeye) and trout (which may have been cutthroat or rainbow trout). Rainbow and cutthroat trout reported by volunteers are all put into one “trout” category because, with the exception of sea-run coastal cutthroat, they are not anadromous species, and because differentiating between them in the field is extremely difficult. The ratios of all fish observed, including unidentified fish, is depicted in Figure 14.

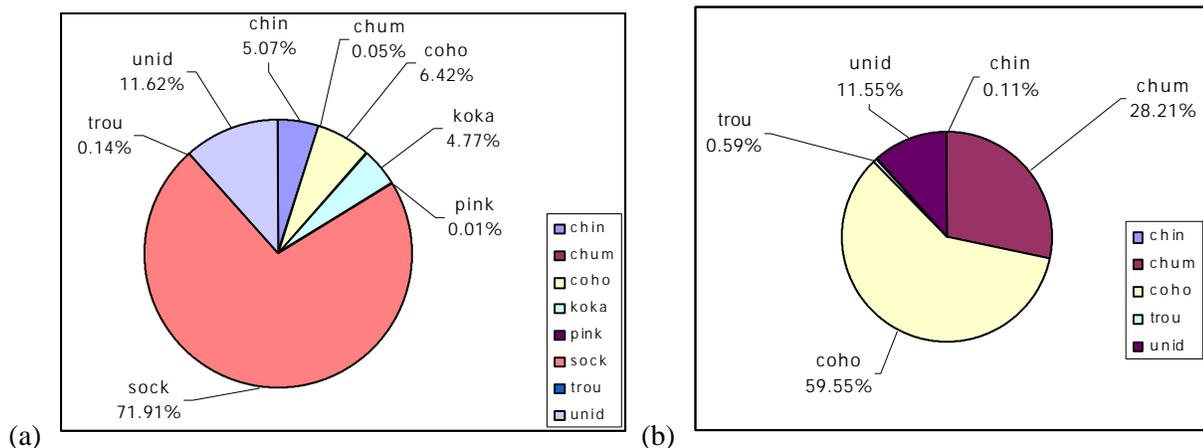
Of the 68 streams in the study area surveyed in 2001, sockeye were found in 19 streams. Coho were found in 35 streams, chinook in 13 streams, kokanee were observed in 10 streams, and trout were reported in 16 streams. Pink salmon were observed in 1 stream.

Sockeye was by far the most abundant species counted by volunteers (Figure 14). Coho was the second most commonly observed species. The third most commonly observed species was chinook, followed in order of decreasing counts by kokanee, chum, and trout.

If a volunteer was unable to positively identify a fish species, the fish was tallied as “unidentified” (reporting a fish as unidentified was preferable to falsely identifying a species). Out of the 16,846 total adult fish observed in 2001, 1,956 were unidentified (11.6 percent). Unidentified adult salmonids were counted in 34 streams. Especially large numbers of unidentified fish were reported in just a few streams. For example, the three streams with the most unidentified fish were the Cedar River (over 1,000), Sammamish River (over 250), and Little Bear Creek (over 150).

Volunteers made note of unidentified fry and/or juvenile fish in 36 streams in 9 basins, though it is probable they were present at more sites and not noted. Additionally, volunteers in the Sammamish River Tributaries located in Snohomish County are not asked to record observations of juveniles.

Figure 14. Percentage of total fish observed in 2001 by volunteers in (a) the Lake Washington Watershed and in (b) Central Puget Sound.



Chinook Salmon

Chinook were observed in 7 basins in the study area during the 2001 surveys (Figure 15). A total of 726 live fish and 53 carcasses were found in 13 streams throughout the Lake Washington Watershed (in order of most to least fish seen): Issaquah Creek, Sammamish River, Cottage Lake Creek, Big Bear Creek, Holder Creek, Cedar River, May Creek, North Creek, Rock Creek, Taylor Creek, Coal Creek, Longfellow Creek, and Kelsey Creek. Except for Longfellow Creek, no chinook were observed in any of the Puget Sound drainages. One possible explanation for this is that the Puget Sound streams in the Salmon Watcher Program are all either very small or have a steep gradient, or both, and these conditions are not favorable for spawning salmon.

Chinook were reported for the first time in Holder Creek; they were seen up to RM 1.4. Chinook were reported for the first time in Coal Creek; they were seen up to RM 0.6. Chinook were reported for the first time in Taylor Creek (tributary to the Cedar River); they were seen in two locations, at RM 1.2 and 1.8.

The known chinook distribution as observed by volunteers is expanded in Issaquah Creek to RM 8.9; previously, the furthest upstream chinook had been seen in Issaquah Creek was at RM 5.8. One single chinook was reported in May Creek at 3.8 RM; previously, the furthest upstream chinook had been seen in May Creek was at RM 0.5. This single sighting was not verified by fish biologists, but chinook were seen by agency staff as far as RM 3.0 in 1996. If this fish was verified as a chinook, the known distribution of chinook would be expanded in May Creek.

Chinook were reported by Salmon Watchers in Longfellow Creek at RM 0.6. This sighting was not verified by a fish biologist; however, surveyors from Washington Trout did report one male and one female chinook in Longfellow Creek on October 29 (K. Lynch, pers. comm.). The observation of chinook in Longfellow Creek by Washington Trout is the first verified sighting of chinook in that stream.

Sockeye Salmon

Sockeye were by far the most numerous fish counted by volunteers. Sockeye were observed in 7 basins (Figure 16). A total of 9,542 live fish and 1,129 carcasses were observed in 18 streams (in order of most to least fish seen): Cedar River, Big Bear Creek, Little Bear Creek, Cottage Lake Creek, Rock Creek,

North Creek, Issaquah Creek, Sammamish River, May Creek, Taylor Creek, McAleer Creek, East Fork Issaquah Creek, Lewis Creek, Coal Creek, Juanita Creek, Kelsey Creek (including Mercer Slough), Tributary 0143 to Lake Sammamish, and Tributary 0141 to the Sammamish River. Because sockeye require a lake environment for part of their life history (Wydoski and Whitney 1979), they are not expected in Puget Sound streams, such as the streams on Vashon Island.

Sockeye were observed by volunteers for the first time in 2001 at two locations in Lewis Creek (0.05 and 0.5 RM), and in Coal Creek for the first time—in four locations, as far as RM 2.35.

The known sockeye distribution as observed by Salmon Watchers in 2001 is expanded in Taylor Creek to 2.4 RM, in May Creek to RM 3.8, in McAleer Creek to RM 1.6, Cottage Lake Creek to 2.3 RM, in Tributary 0141 to the Sammamish River to 0.2 RM,

Coho Salmon

Coho were observed in 8 basins (Figure 17). A total of 1,606 live fish and 554 carcasses were found in 36 streams (in order of most to least fish seen): Longfellow Creek, Issaquah Creek, Fauntleroy Creek, Sammamish River, Boeing Creek, Big Bear Creek, Pipers Creek, Cedar River, Judd Creek, Little Bear Creek, Shinglemill Creek, Coal Creek, Rock Creek, East Fork Issaquah Creek, Miller Creek, Holder Creek, May Creek, McAleer Creek, trib to Big Bear Creek, Cold Creek, Juanita Creek, Cottage Lake Creek, North Creek, Thornton Creek, Penny Creek, Walker Creek, Richards Creek, Swamp Creek, Cutthroat Creek, Fisher Creek, Trib 0141 to Samm R., Kelsey Creek, Ebright Creek, Forbes Creek, and Mackey Creek.

Coho were observed in several streams that were watched for the first time in 2001, including Shinglemill, Judd, and Fisher creeks on Vashon Island. Other streams in which coho were found that were newly a part of the official program in 2001 include Boeing Creek, Fauntleroy Creek, Miller Creek, and Walker Creek.

Coho were reported for the first time in Holder Creek; they were seen up to RM 1.4 (note that in previous reports, this RM designation was incorrectly listed as RM 12.7). Coho were reported for the first time in Penny Creek; they were seen up to RM 0.3. Coho were reported for the first time in Cold Creek at RM 0.8 (note the mouth of Cold Creek is at RM 3.5 in Cottage Lake Creek, and no coho have been reported in Cottage Lake Creek that far north yet by Salmon Watchers). Coho were reported for the first time in Forbes Creek; they were seen up to 0.2 RM. Coho were reported for the first time in Juanita Creek; they were seen up to 1.4 RM. Coho were reported for the first time in trib 0141 to the Sammamish River; they were seen up to RM 0.35. Coho were reported for the first time in Ebright Creek; they were seen up to 0.9 RM.

The known coho distribution as observed by Salmon Watchers is expanded up to 1.0 RM in Longfellow Creek, in McAleer Creek up to RM 2.1, in Cottage Lake Creek to RM 2.2 (see above), in May Creek to RM 3.8, and in East Fork Issaquah Creek to RM 3.2, which is much far further than they have been observed previously (to RM 0.4).

Kokanee

Kokanee, although not anadromous, are of interest to regional fisheries managers because their numbers appear to be depressed from historic levels. Kokanee were observed in 7 basins (Figure 18). A total of 680 live fish and 28 carcasses were found in 10 streams (in order of most to least fish seen): Lewis

Creek, Ebright Creek, Cottage Lake Creek, North Creek, Big Bear Creek, Little Bear Creek, Vasa Creek, Cedar River, Issaquah Creek, and the Sammamish River.

When reviewing kokanee observations, it should be remembered that differentiating between large kokanee and small sockeye is sometimes difficult, and it is possible a few misidentifications were made. Kokanee were reported in Issaquah Creek much further upstream in the system than they have been seen in the past, and they were observed with sockeye. It is possible these fish were actually sockeye. Also, kokanee were observed in the Cedar River; although it is possible kokanee are in the Cedar River, they were also sighted along with sockeye and were not verified by fish biologists. If these fish were verified as kokanee, the known distribution of kokanee would be expanded in both of these systems.

During the 2001 surveys, the known distribution of kokanee as observed by Salmon Watchers is expanded in Ebright Creek to 0.9 RM, in Little Bear Creek to 4.5 RM, and in North Creek to RM 4.6.

Chum

A total of 435 live chum and 103 carcasses were found in 10 streams (in order of most to least fish seen): Longfellow Creek, Boeing Creek, Pipers Creek, Judd Creek, Fisher Creek, Cedar River, Miller Creek, Venema Creek, North Creek, and Lewis Creek. Some of these streams drain into the Lake Washington Watershed (Cedar River, North Creek, Lewis Creek) and not directly into Central Puget Sound. Chum are known to stray, so these sightings may have been chum; however, many sockeye, especially in the Cedar River system, have markings similar to chum. It is possible some sockeye were misidentified as chum.

Other Species

Two pink salmon were reported in Cottage Lake Creek. These strays were also viewed by Salmon Watcher staff.

Trout were reported in 16 streams in 7 basins. Trout may have been cutthroat or rainbow trout, or possibly steelhead. Salmon Watcher volunteers were taught to differentiate between cutthroat, rainbow, and steelhead trout, but when processing data, any counts of these fish are grouped into "trout" because, with the exception of sea-run coastal cutthroat and steelhead, they are not anadromous species, and because differentiating between them in the field is very difficult.

Fish of unidentified species were observed throughout the study area. The Cedar River, Sammamish River, and Little Bear Creek had the most unidentified species reported.

Figure 15. Distribution of chinook salmon in the program area based on Salmon Watcher observations (see insert).

Figure 16. Distribution of sockeye salmon in the program area based on Salmon Watcher observations (see insert).

Figure 17. Distribution of coho salmon in the program area based on Salmon Watcher observations (see insert).

Figure 18. Distribution of kokanee in the program area based on Salmon Watcher observations (see insert).

GLOSSARY

- anadromous* Fish that leave freshwater and migrate to the ocean to mature then return to freshwater to spawn (Williams et al. 1997).
- basin* The land area above a given point in a watershed whose run-off drains into a major constituent of the watershed. As applied in this report, used to refer to subbasins within the Lake Washington Watershed.
- escapement* That portion of an anadromous fish population that escapes the commercial and recreational fisheries and reaches the freshwater spawning grounds (Meehan 1991).
- kokanee* Non-anadromous sockeye (*Oncorhynchus nerka*); lives its entire life in a freshwater lake, then returns to its native stream to spawn.
- natal* Pertaining to the place of birth; a natal stream refers to the stream where a juvenile salmon was hatched.
- redd* Nest made in gravel, consisting of a depression hydraulically dug by a fish for egg deposition (and then filled) and associated gravel mounds (Meehan 1991). Spawning salmon dig a depression in the gravel by lying on their sides and rubbing against the gravel with their sides and tail, pumping the water to move the stones. After the female deposits eggs into the depression, the male salmon fertilizes them, then the female digs another depression immediately upstream. The stones from the second depression (called the pit) move downstream to cover the incubating eggs. The pair may do this more than once, even three or four times. New redds usually look like mounds of light-colored gravel with a slight depression in the gravel just upstream of the mound.
- river mile* Statute mile as measured along the center line of a river; river miles are measured from the mouth in an upstream direction (e.g., RM 1.3), but can also be used as a discrete measure of distance in a river or stream (e.g., 1-3 river miles).
- salmonid* Fish species belonging to the Salmonidae family, which includes salmon, trout, char, and whitefish.
- watershed* Entire area that contributes both surface and underground water to a particular lake or river (Williams et al. 1997). As applied in this report, used to refer to the Lake Washington Watershed: all waters draining through the Ballard Locks.

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APPENDICES

- A. Report on streams outside the Program area
- B. Data Collection Form used in 2001
- C. Summary of the Snohomish County 2001 Salmon Watcher surveys
- D. Summary of the 2001 Hylebos Creek Salmon Survey

Appendix A.

Streams outside the Program Area

Snoqualmie Basin

Volunteers surveyed 1 site 17 times on a tributary to Tuck Creek in the Snoqualmie Basin (Table A1).

Table A1. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the Snoqualmie Basin for the 2001 spawning season.

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Tributary 070272 to Tuck Creek	070272	487	0	10/20 – 12/23	17	1	2001

Coho and unidentified salmonids were found at the only site surveyed near the mouth of Tributary 070272 to Tuck Creek (Table A2.). This tributary empties into Tuck Creek at approximately RM 3.2. The coho were observed from mid-November until surveys ceased near the end of December.

Table A2. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the Snoqualmie River Basin for the 2001 spawning season.

Stream	Site ID	RM	Coho	Unidentified
Tuck Creek	487	0	11/18 – 12/23 (59)	11/19 – 12/1 (14)

Green River Basin

Volunteers surveyed 1 site 32 times on Newaukum Creek in the Green River Basin (Table A3.).

Table A3. Stream number, site ID, site location (listed in river miles, RM), survey dates, total number of surveys, number of volunteers, and years the sites were watched for each stream surveyed in the Green River Basin for the 2001 spawning season.

Stream	Stream #	Site ID	RM	Survey Dates	# Surveys	# Vols.	Years Watched
Newaukum Creek	090014	495	4.2	9/28 – 12/30	32	1	2001

Chinook and coho were observed at the only site surveyed in this stream, at RM 4.2 (228th Ave SE & SE 400th St.) (Table A4.). Initial chinook and coho observations began the first date of the surveys, at the end of September. Chinook were seen until mid-October, and coho were seen through the first week of November.

Table A4. Site ID, RM, and fish counts (live and dead) with dates seen at each stream surveyed in the Green River Basin for the 2001 spawning season.

Stream	Site ID	RM	Chinook	Coho
Newaukum Creek	495	4.2	9/28 – 10/20 (25)	9/28 – 11/7 (30)

Appendix B.

Data Collection Form used in 2001

Salmon Watcher - Monthly Data Collection Form

AFFIX LABEL HERE

Month/Year _____ /2001 Stream Name _____

Name _____ phone _____ Location Observed / Site ID# _____

1. Fill out this form in pencil as your observations are made. EVEN IF YOU DON'T SEE ANY FISH, record your observation date and time and record 0 fish seen.
2. If you observe more than once a day, record all your observations under the same date, on a different line and the different times.
3. Identify any live or dead salmon you see. When you are reasonably certain of your identification (more than 70% sure), record it on this form. If you can't identify it, write UNID and describe it as best you can. (Especially note size, color, spots on back, spots on tail - upper or lower part.)
4. Record other observations you make, too, such as spawning activity, other wildlife, a neighbor's comment, sounds of splashing from non-visible areas, etc. in the Comments portion of the form.

Date	Start Time	End Time	Species Name* <small>Only write here if you see adult salmon</small>	# Live Adult Fish per species	# Dead Adult Fish per species	Total Adult Fish Count (live + dead)	Juvenile Fish < 6"-8" (Y or N)	# Citizens Talked With	Did you encounter anything requiring immediate attention? If so, did you notify anyone?	Were you able to identify presence/absence of adipose fin?	Comments (water clarity, redds present, mussels) Tags? (use back)

***Key:** COHO-Coho, CHIN-Chinook, SOCK-Sockeye, CHUM-Chum, KOKA-Kokanee, CUTT-Cutthroat trout, TROU-Rainbow or steelhead trout, UNID-Unidentified

Total time spent observing: _____ **Please return form during the first week of the following month.**

This project is sponsored by the Lake Washington Forum, King Conservation District, Washington Department of Fish and Wildlife, Muckleshoot Indian Tribe, King County Water and Land Resources Division, Snohomish County Surface Water Management, Cities of Bellevue, Issaquah, Kirkland, Renton, Redmond, Seattle, and Woodinville.

If you have any questions, call Michael Murphy at (206) 296-8008. **Thank you so much!**

Please do not write below this line
 Data entered on _____ Initial _____. First data check on _____ Initial _____. Second data check on _____ Initial _____. Observations IDs _____.

Copied for: _____ Date: _____

Appendix C.
Summary of the Snohomish County
2001 Salmon Watcher surveys

Appendix D.
Summary of the 2001 Hylebos Creek Salmon Survey

2001 Hylebos Creek Salmon Survey

As part of the 2001 Salmon Watchers program volunteers for the Friends of the Hylebos spent almost 90 hours watching for salmon in Hylebos Creek. In total, they spotted over 90 salmon, including 73 Coho, 1 Chinook, 17 unidentified and 4 carcasses.

