

# Salmon Watcher Program

## Training Slideshow



20 Years  
of salmon  
watching!

## Tonight's Format:

- Salmon life cycle and habitat
  - Salmon Identification
- Things you can do to help salmon
  - Packet contents
  - Data collection
  - Tips for Watching

*You can follow along and takes notes on the slideshow printout.*

# Life Cycle of Pacific Salmon

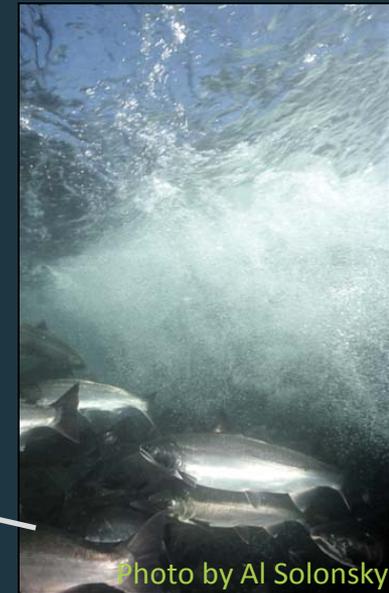
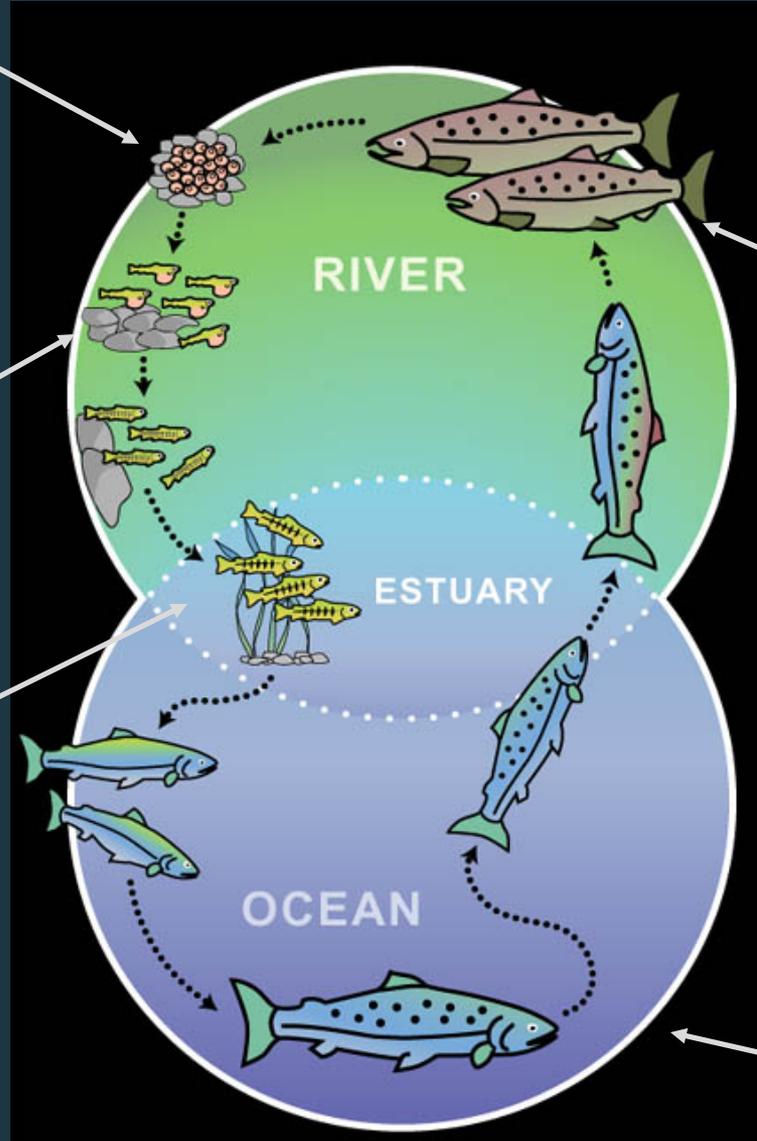


Photo by Al Solonsky



# Good Habitat

Shade

Hiding spaces

Cold, clean water

Erosion control



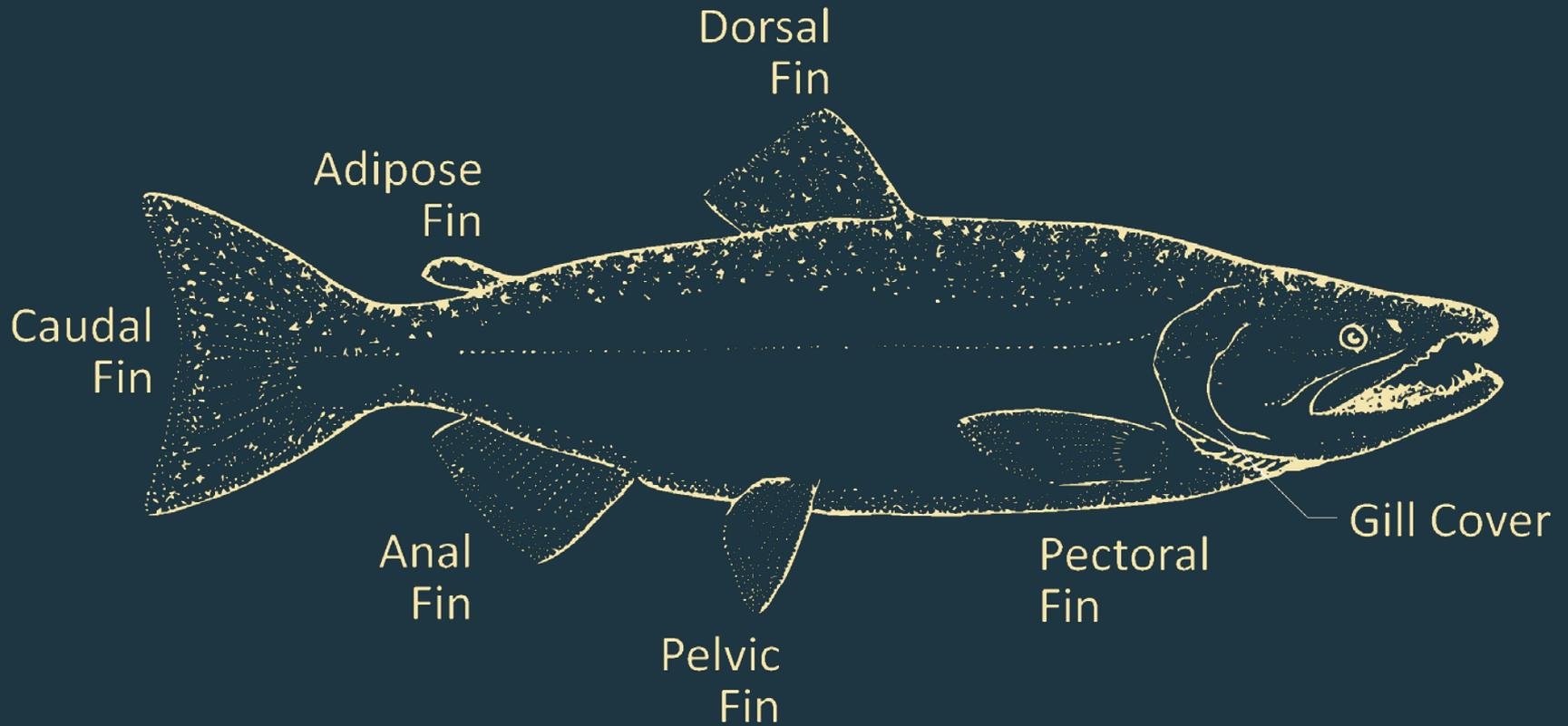
Pools

Complexity

Food supply

Clean gravel

# Key Identification Features





# Salmon Identification

What not to say:

I saw a *red* fish!

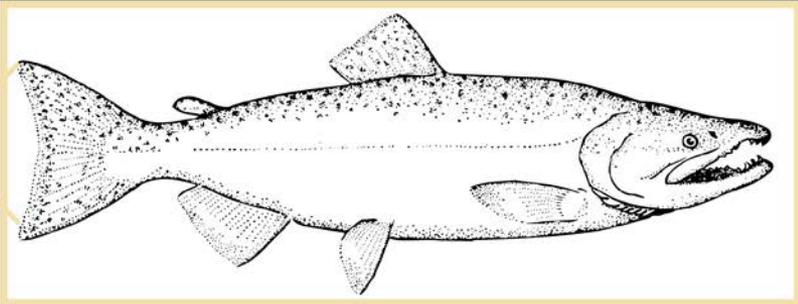
It must be a....

# What to Consider When Identifying Salmon

1. Size
2. Spots
3. Color
4. Behavior

# Chinook ("King," "Tye," "Blackmouth")

Spots on BOTH upper and lower lobe of tail



Female



Olive brown to dark brown to red

Male



18-44 inches  
(averages 27 inches in length)

Photo by Carla Milesi



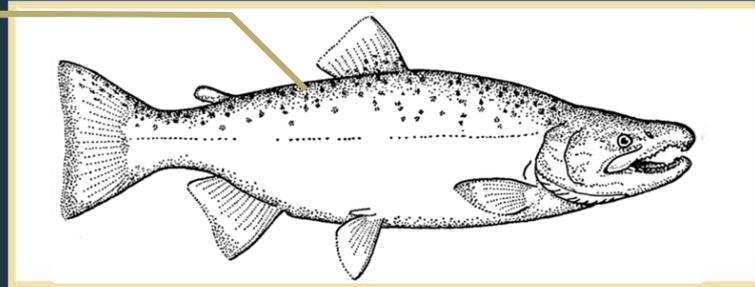
# Chinook



Photo by Geoff Clayton

# Coho ("silvers")

Round black spots



Spots on back and UPPER lobe of tail fin only



Female

Back and head dark blue-green

Lower sides red-purple



Male

18-30 inches  
(averages 24 inches in length)

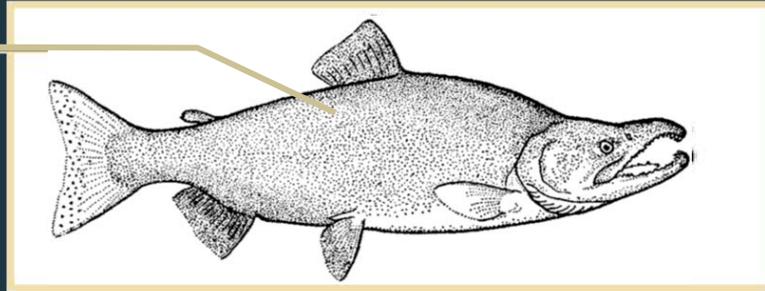
# Coho



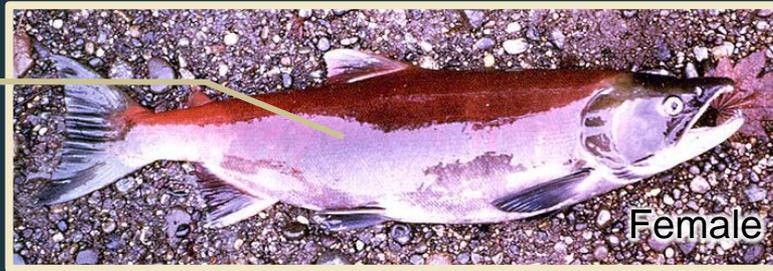
Photo by Laurie Devereaux, Bellevue Stream Team

# Sockeye ("Red")

No obvious spots



Possible dark band



Red body,  
green head



Distinctive hump  
on males

Distinctive kype  
on males

20-28 inches  
← (averages 25 inches in length) →

# Sockeye

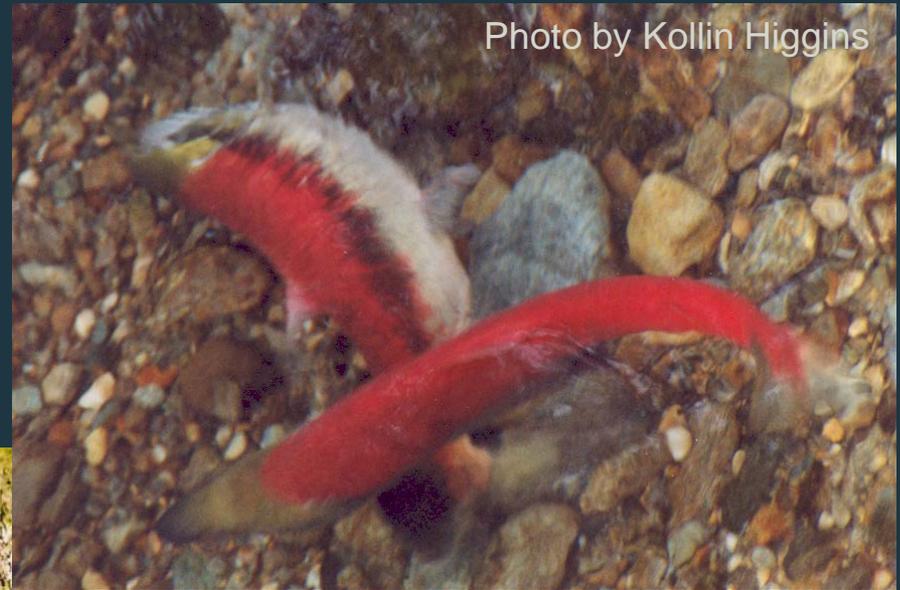


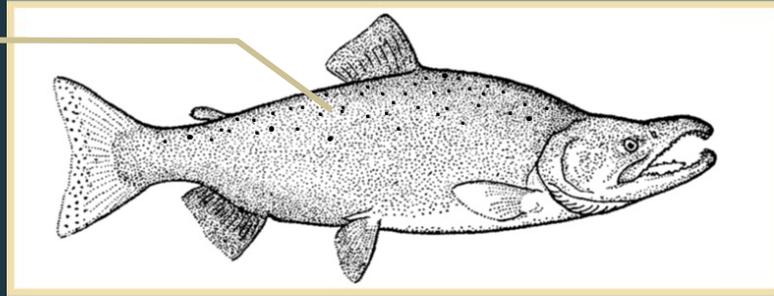
Photo by Kollin Higgins



Photo by Salmon Watcher Katie Klein

# Kokanee ("Silver Trout" or "Little Sockeye")

Small dark spots on back



Colors are not as bright as sockeye



10-20 inches  
(Averages 15 inches in length)

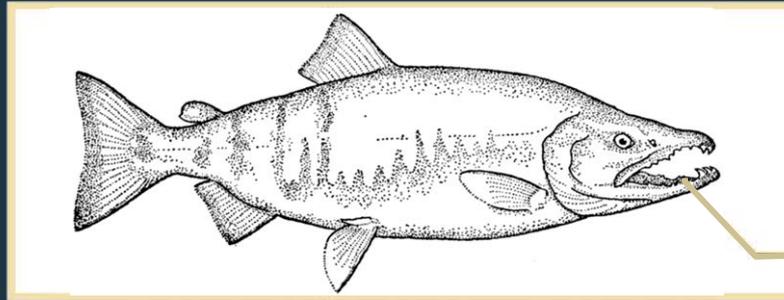


Red Body  
Green Head

# Kokanee



# Chum ("Dog", "Keta")



Well developed teeth

No distinct black spots



Female

Dark blue above with reddish-purple vertical markings



Male

22-38 inches  
(averages 24 inches in length)

# Chum



Photo by E.R. Keeley



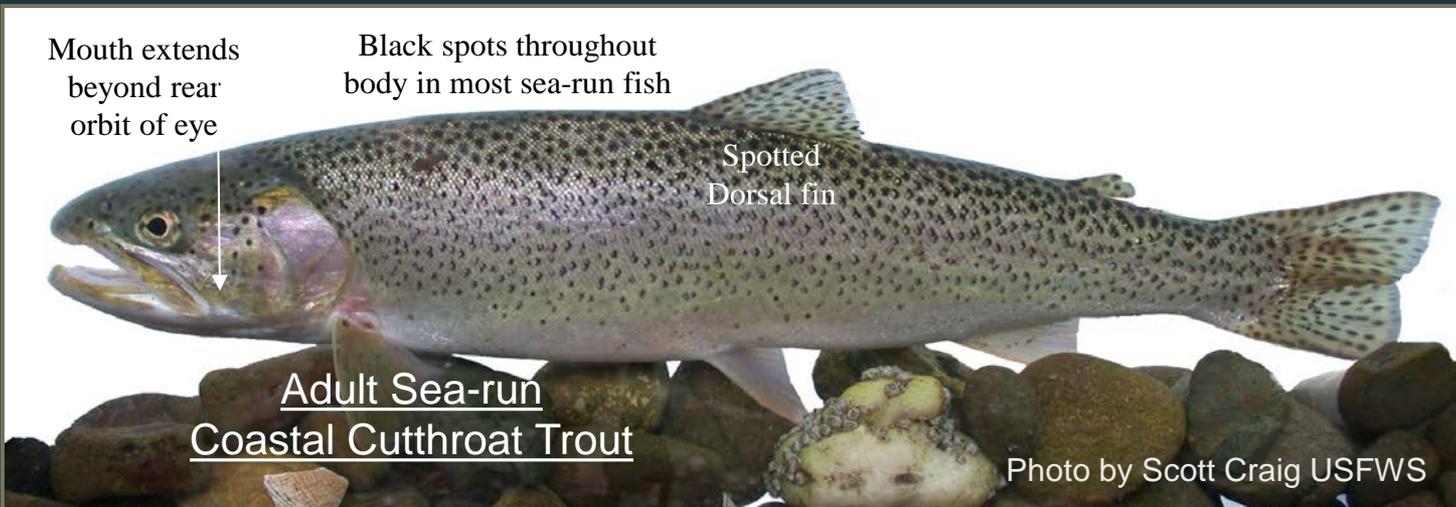
Photo by Catherine Anstett

# Cutthroat Trout



You will likely only see *juvenile* cutthroat trout. Coastal streams may see sea-run coastal cutthroat late in the season.

Length = 6-8"



Mouth extends beyond rear orbit of eye

Black spots throughout body in most sea-run fish

Spotted Dorsal fin

Adult Sea-run Coastal Cutthroat Trout

Photo by Scott Craig USFWS

# Pink Salmon



Photo E.R. Keeley

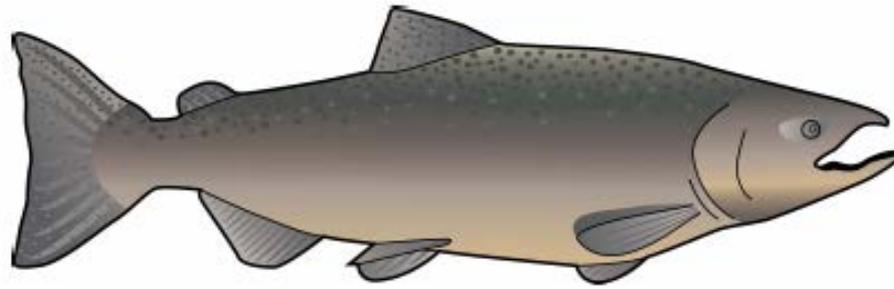
***Pink salmon spawn in  
central and south  
Puget Sound  
drainages ONLY in  
ODD numbered years***

Look at boot for scale



Photo by Kirk Anderson

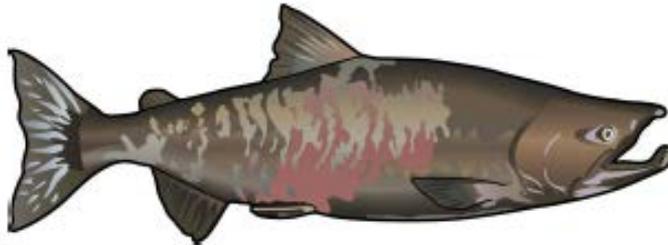
Chinook



## Spots

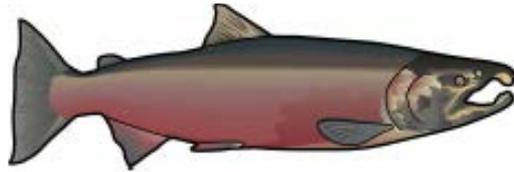
Large, splotchy,  
on top and  
bottom of tail fin

Chum



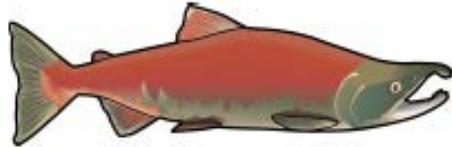
No defined spots

Coho



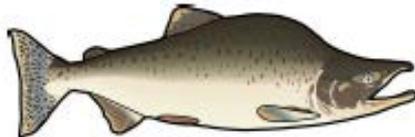
Small and distinct,  
only on top half of  
tail

Sockeye



No defined spots

Pink



Large, oval

Kokanee



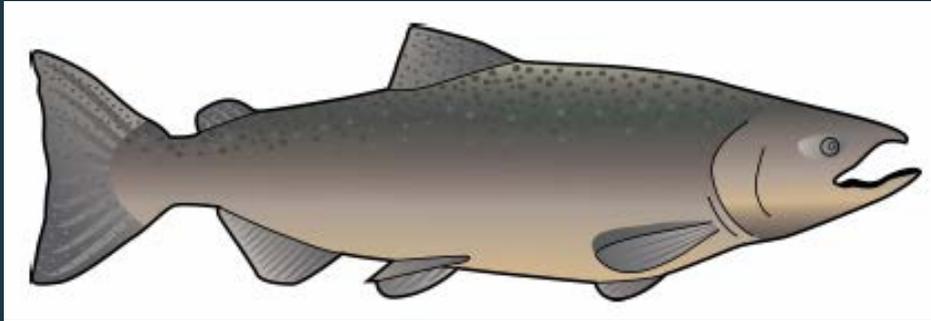
May have small spots

Cutthroat



Numerous small  
spots, top & bottom

# Chinook



Large splotchy spots

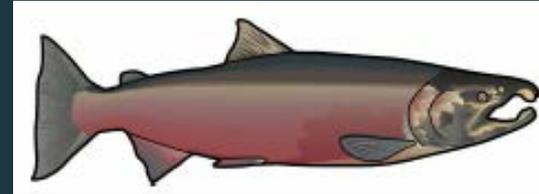
Spots on top & bottom of tail

May have red over entire body

Spawns September through mid  
December

Often seen at same time/location  
of sockeye

# Coho



Small distinct spots

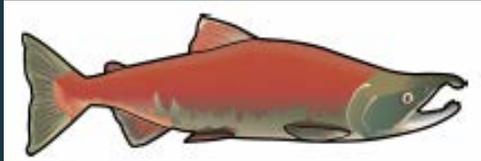
Spots only on top half of tail

Red on belly & gill cover

Spawns mid October  
through early January

Very skittish

## Sockeye



No distinct spots

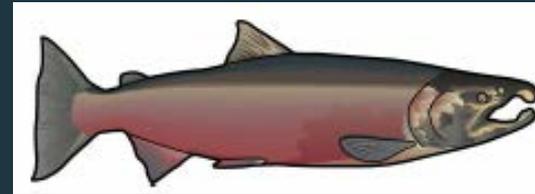
Red body

Distinct green head & tail

Spawns early August through  
late December

Spawns in large numbers

## Coho



Small distinct spots

Red on belly & gill cover

Back is dark, bluish green

Spawns mid October through  
early January

Very skittish

Salmon  
Review  
Revue















Photo by Vali Eberhardt



Photo by Catherine Anstett











In the field...



Google “King County Beavers” for more info!



No  
Disc/temperature  
tags in 2015



Contact Aaron Bosworth at [Aaron.Bosworth@dfw.wa.gov](mailto:Aaron.Bosworth@dfw.wa.gov)  
or 425-775-1311, ext. 102.

# Coho Pre-Spawn Mortality



Kelsey Creek, 2014



Photo by Gina Artero, Volunteer

# ALERT!

THIS STREAM MAY CONTAIN INVASIVE NEW ZEALAND MUDSNAILS



80+ NZMS

- Are highly invasive and pose a serious threat to our aquatic ecosystems, including salmon.
- Can easily be transported to new streams by people, pets, and equipment.
- Can reproduce/clone very rapidly once in a stream.
- Are very small and very hard to detect, so it's best to assume these mudsnails are in all streams.

**If you Salmon Watch at more than one site, please carefully review flyer in packet and diligently follow prevention and decontamination procedures.**



1. What do you call the metal structure in the photo?
2. Where does the water flowing into it go?
3. Is this water treated before it goes back into the environment?

Stormwater  
is not treated



# Don't Drip & Drive



**Fix That  
Leak!**

Don't Drip and Drive

July 17, 2014

Share this content:





SALMON SEASON

NOW FOR THE DATA...

**Training Packet**

**Data Sheets**

**Helpful Tips**

September 17, 2010

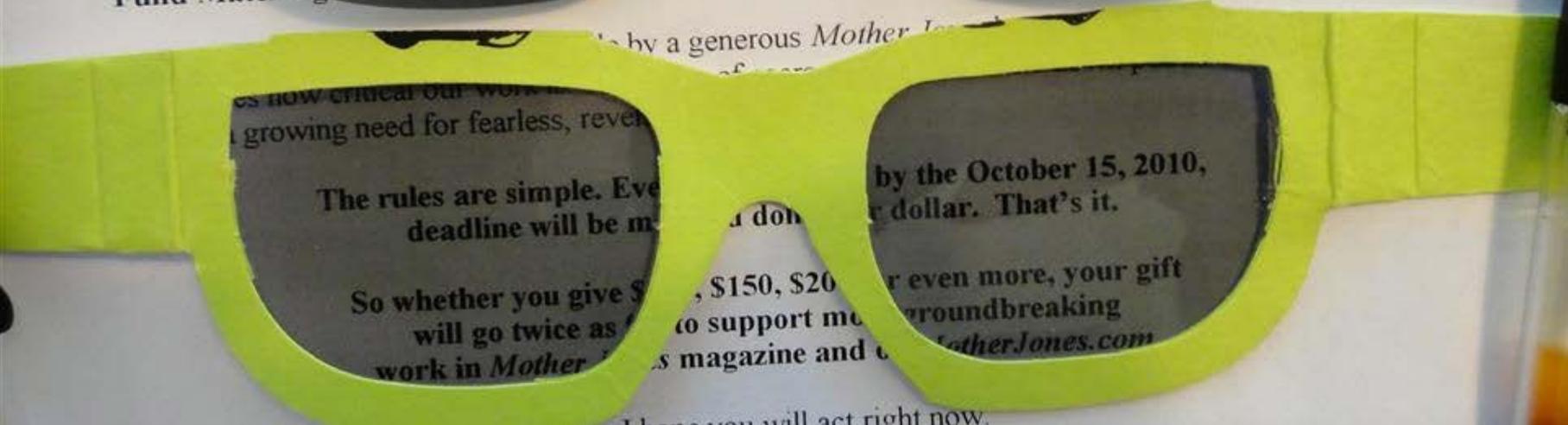
Dear Mr. Reinke,



Thanks to your support of the very best in investigative journalism, *Mother Jones* is not just writing about the most critical and controversial issues, it's actually making a difference.

Quality journalism is expensive, and that's the reason why cash-strapped media outlets are resorting to cheap filler these days. But waterpiping, honest reporting is indispensable when it comes to keeping people informed and holding our institutions accountable.

That's why I'm excited to let you know about our 2010 **Mother Jones Investigative Fund Matching Gift Campaign.**



...by a generous *Mother Jones* ...  
...how critical our work is ...  
...growing need for fearless, revealing ...  
**The rules are simple. Every dollar you donate by the October 15, 2010, deadline will be matched dollar for dollar. That's it.**  
**So whether you give \$50, \$100, \$150, \$200 or even more, your gift will go twice as far to support more groundbreaking work in *Mother Jones*'s magazine and on [MotherJones.com](http://MotherJones.com)**

Whatever you choose to give, I hope you will act right now.

As you know by now, *Mother Jones* is nonprofit and reader supported. We rely on the contributions of individual supporters like you for over half of our budget. It's not the usual way to do business, but it gives us real strength and independence. Reader support is what keeps us free from commercial sponsors and corporate boardrooms that are squeezing the



# Salmon Watcher - Monthly Data Collection Form

Month / Year Oct. , 2014 Stream: Cedar River

Site ID# 139

1. Record ALL observation dates and times, even when you see Zero fish.
2. If you can't identify a fish, record it as UNID.
3. Please input your datasheets online at least once a month – more often is great!

Date MM-DD	Start Time	End Time	# Citizens Talked With	1" - 6" Juvenile Fish (Y or N)	Species Name* <small>Only write here if you see adult salmon</small>	# Live Adult per species	# Dead Adult per species	Total Adult Fish Count (live + dead) per species	# Fish with no adipose fin ("clipped")	Did you encounter anything requiring attention? If so, did you notify anyone?	Comments Tags? (redds present, notable weather)
10-02	1000	1015	-	Y	-	0	0	0	-		
10-03	1800	1830	1	N	-	0	0	0	-		
10-07	0835	0850	-	N	SOCK	1	0	1	0		
					UNID	2	0	2	0		swam by fast
10-08	1600	1615		N	SOCK	1	1	2	0		
10-15	1700	1715	1	N	SOCK	5	1*	6(5)	0		* Same Dead Sockeye
					CHIN	1	0	1	1		
10-18	0930	0945	-	Y	-	0	0	0	-		
10-23	1230	1300	-	N	CHIN	1*	0	1	1		* See Back
					SOCK	3	1	4	0		

\*Key: COHO-Coho, CHIN-Chinook, SOCK-Sockeye, CHUM-Chum, KOKA-Kokanee, TROU-Trout, PINK-Pink, UNID-Unidentified

If you have any questions, send us an email (email preferred over phone)!  
**Jennifer Vanderhoof** at [jennifer.vanderhoof@kingcounty.gov](mailto:jennifer.vanderhoof@kingcounty.gov) (ph. 206-477-4840) or **Laurie Devereaux** at [LDevereaux@bellevuewa.gov](mailto:LDevereaux@bellevuewa.gov) (ph. 425-452-5200).  
 Your program partners are King County Water and Land Resources Division, Bellevue Stream Team, Cities of Bothell, Issaquah, Kirkland, Renton, Redmond, Seattle, and Woodinville.

Salmon Watcher - Monthly Data Collection Form

Site ID# 5

Denny Creek

**ZEROS!**

3. P... is great!

Date MM-DD	#	Fish (Y or N)	Only write here if you see adult salmon	per species	# Dead Adult per species	Total Adult Fish Count (live + dead per species)	# of fish with no adipose fin ("clipped")	Did you encounter anything requiring attention? If so, did you notify anyone?	Comments? Tags? (redds present, notable weather)
12-0	0915	0	N	—	0	0			
12-0	1115 0930	1	N	—	0	0			
12-07	1100 1115	0	Y	—	0	0			
12-15	1606 1630	0	N	—	0	0			
12-16	1430 1500	0	N	—	0	0			
12-23	1600 1615	0	N	—	0	0			

\*Key: COHO-Coho, CHIN-Chinook, SOCK-Sockeye, CHUM-Chum, KOKA-Kokanee, TROU- Trout, PINK-Pink, UNID-Unidentified

If you have any questions, send us an email (email preferred over phone)!  
 Jennifer Vanderhoof at [jennifer.vanderhoof@kingcounty.gov](mailto:jennifer.vanderhoof@kingcounty.gov) (ph. 206-477-4840) or Laurie Devereaux at [LDevereaux@bellevuewa.gov](mailto:LDevereaux@bellevuewa.gov) (ph. 425-452-5200).  
 Your program partners are King County Water and Land Resources Division, Bellevue Stream Team, Cities of Bothell, Issaquah, Kirkland, Renton, Redmond, Seattle, and Woodinville.



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Search

# Salmon Watcher

Salmon Watcher Data Online

You're in: Salmon Watcher » Administrator's Home

PRINT | SITEMAP

Salmon Watcher

Administrator's Home

Manage Users

Manage Sites

Manage Sampling Seasons

Manage Trainings

Manage Datasheets

Manage Observations

Manage Tasks

Logout

Salmon and Trout

WLR Division

Natural Resources and  
Parks

For questions about the  
Salmon Watcher Program,  
please contact Jennifer  
Vanderhoof, 206-263-6533.

For questions about the  
Water and Land  
Resources Web Site,  
please contact Fred  
Bentler.



## Administrative Needs

Volunteer List

Sampling Seasons

Training List

Admin List

Task List

Jurisdictions

## Data Entry and Checking

Enter New Observation

Datasheets without data

Diagnostic report: Observations

Enter new Datasheet

Check Data

New and Anomalous Records

## Frequently Used Queries

Observation List

Site Queries

Multiple Volunteer queries

Datasheet List

## Basic Lists

Site List

Basin List

Species List

Stream List

## Annual Report Queries

Fish Presence Tables

Observation summary

Uppermost Sites

Basin Summary Tables

Basin and jurisdiction report

New sightings report

Fish Summaries

## Top Secret

# ONLINE DATA ENTRY

- It's easy to use.
- Use your datasheets for data collection only, and enter data online regularly.



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# Salmon Watcher

Salmon Watcher Data Online

You're in: Salmon Watcher » Volunteers

Salmon Watcher

Volunteers

Logout

Salmon and Trout

WLR Division

Natural Resources and  
Parks

For questions about the  
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For questions about the  
Water and Land  
Resources Web Site,  
please contact Fred  
Bentler.



Enter New Data

Observation Data

Edit Account

## Add a new entry for the 2013 sampling season.

### Site List [Close]

Site(s): 2 -> Big Bear Creek [20525 NE 162nd St.]

### New Entry

Site: 2 \*

Date:  \* MM/DD/YY

Start Time:  hhmm (24 hour)

End Time:  hhmm (24 hour)

Number of citizens  
talked to:

Juveniles?  Yes  No

### Adult Fish

#### Adult fish observation entries:

If you saw no adult fish, leave this section blank.

Type	Live	Dead	Total	Clipped	Tagged	Comments
None	<input type="text"/>					

#### Observation comments:

Weather, water conditions, any Redds, etc.

What  
you  
see  
when  
you  
login.



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# Salmon Watcher

Salmon Watcher Data Online

You're in: Salmon Watcher » Volunteers

Salmon Watcher

Volunteers

Logout

Salmon and Trout

WLR Division

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Parks

For questions about the  
Salmon Watcher Program,  
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Vanderhoof, 206-477-4840.

For questions about the  
Water and Land  
Resources Web Site,  
please contact Fred  
Bentler.



Enter New Data

Observation Data

Edit Account

## Add a new entry for the 2013 sampling season.

### Site List [Close]

Site(s):

### New

Site:  \*

Date:  \* MM/DD/YY

Start Time:  hhmm (24 hour)

End Time:  hhmm (24 hour)

Number of citizens  
talked to:

Juveniles?  Yes  No



Choose the correct  
site from the drop-  
down list.

### Adult Fish

#### Adult fish observation entries:

If you saw no adult fish, leave this section blank.

Type	Live	Dead	Total	Clipped	Tagged	Comments
<input type="text" value="None"/>	<input type="text"/>					

#### Observation comments:

Weather, water conditions, any Redds, etc.

## Add a new entry for the 2013 sampling season.

### Site List [Close]

Site(s):

### New Entry

Site:  \*

Date:  \* MM/DD/YY

Start Time:  hhmm (24 hour)

End Time:  hhmm (24 hour)

Number of citizens  
talked to:

Juveniles?  Yes  No

### Adult Fish

#### Adult fish observation entries:

If you saw no adult fish, leave this section blank.

Type	Live	Dead	Total	Clipped	Tagged	Comments
<input type="text" value="None"/>	<input type="text"/>					

#### Observation comments:

Weather, water conditions, any Redds, etc.

### Immediate Attention? [Expand]

This is an example of an observation with zero fish.

You are ready to click "Submit."

## Add a new entry for the 2013 sampling season.

### Site List [Close]

Site(s):

### New Entry

Site:  \*

Date:  \* MM/DD/YY

Start Time:  hhmm (24 hour)

End Time:  hhmm (24 hour)

Number of citizens  
talked to:

Juveniles?  Yes  No

### Adult Fish

#### Adult fish observation entries:

If you saw no adult fish, leave this section blank.

Type	Live	Dead	Total	Clipped	Tagged	Comments
<input type="text" value="Chin"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="Another?"/>

#### Observation comments:

Weather, water conditions, any Redds, etc.

### Immediate Attention? [Expand]

Click  
“Another?”  
only if you  
saw more  
than one  
species.

When you  
are done  
entering  
fish, click  
“Submit.”

## Add a new entry for the 2013 sampling season.

### Warnings

Warning No.	Type	Description
1	Warning	There have been no previous records of "chinook" for this site during "October". This is not necessarily an error; please just double-check your entries to make sure they match what's written on the form.

### Site List [Close]

Site(s): 4 -> Carey Creek [at 204th]

### New Entry

Site: 4 \*

Date: 10-1-13 \* MM/DD/YY



Start Time: 1500 hhmm (24 hour)

End Time: 1520 hhmm (24 hour)

Number of citizens talked to:

Juveniles?  Yes  No

### Adult Fish

#### Adult fish observation entries:

If you saw no adult fish, leave this section blank. 1

Type	Live	Dead	Total	Clipped	Tagged	Comments
Chin	1	1	2			<input type="text"/> <input type="button" value="Another?"/>

#### Observation comments:

Weather, water conditions, any Redds, etc.

Immediate Attention? [Expand]

Submit

Clear All

This is an example of a warning message.

If data is correct, click "Submit" again.

# SALMON WATCHER WEBSITE

www.kingcounty.gov/salmonwatcher

The screenshot shows the website's layout. At the top left is the King County logo. A search bar is in the top right. A navigation menu includes Home, How do I..., Services, About King County, and Departments. The main content area features a header for 'Salmon and trout' with a sub-header 'Science, volunteer opportunities, and Endangered Species Act response'. Below this is a breadcrumb trail: 'You're in: Salmon and trout » Salmon Watcher Program'. A left sidebar contains a menu with items like 'Salmon and trout identification', 'Salmon Watcher Program', 'Want to Volunteer?', 'Information for our Volunteers', 'Helping Salmon', 'Program Partners', 'Fish Identification Gallery', 'Salmon Watcher Monitoring Site Viewer', 'Salmon Distribution Maps', 'Annual Reports', 'Stream List', 'Salmon viewing locations', 'Kokanee', 'Bull Trout White Paper', 'Core Areas: A Framework for Identifying Critical Habitat for Salmon', 'Riparian vegetation', 'Archived news', 'Site map', and a contact form for reporting errors. The main content area has a large image of salmon in a stream. Below the image is the 'Salmon Watcher Program Volunteer Monitoring Program' section, which includes a paragraph about the program, three call-to-action links (become a volunteer, active volunteers, help salmon), and a link for reporting code violations. To the right of this text is a blue ribbon graphic that says 'BE A SALMON WATCHER' and 'Founded 1996'. Further right is a 'Learn more about salmon and other animals in the water' section with a list of links, a 'Related information' section with more links, and a 'Related agencies' section with two links. At the bottom of the page is a dark blue footer with three buttons: 'Information for...', 'Do more online', and 'Contact us'.



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Home How do I... Services About King County Departments

## Salmon and trout

Science, volunteer opportunities, and Endangered Species Act response

You're in: Salmon and trout » Salmon Watcher Program

Salmon and trout

Salmon and trout identification

Salmon Watcher Program

Want to Volunteer?

Information for our Volunteers

Helping Salmon

Program Partners

Fish Identification Gallery

Salmon Watcher Monitoring Site Viewer

Salmon Distribution Maps

Annual Reports

Stream List

Salmon viewing locations

Kokanee

Bull Trout White Paper

Core Areas: A Framework for Identifying Critical Habitat for Salmon

Riparian vegetation

Archived news

Site map

To offer a suggestion or report an error on the Natural Resources and Parks' website, please contact [Fred Bentler](#), webmaster.

### Salmon Watcher Program Volunteer Monitoring Program

Salmon Watcher is a multi-jurisdictional effort focused at protecting a Pacific Northwest treasure and educating the community in the process. The 17-year-old program involves volunteers watching streams for spawning salmon in King and Snohomish Counties. This effort mainly focuses on waters within the Lake Washington Watershed.

**Want to become a Salmon Watcher?** Go to our [Volunteer page](#).

**Already a Salmon Watcher?** Go to our page for [Active Volunteers](#). This page has info you can use once you've gone through training.

**Want to help salmon?** We've got some great ideas listed on the [Helping Salmon page](#).

**Need to report a code violation?** More information can be found on the [Helping Salmon page](#).

This program is conducted in cooperation with the King County Water and Land Resources Division, Bellevue Stream Team, Redmond Stream Team, and the cities of Seattle, Bothell, Issaquah, Kirkland, Renton, Woodinville, and the Vashon-Maury Island Land Trust, with financial support from the King County Flood Control District Cooperative Watershed Management Grant.



### Learn more about salmon and other animals in the water

- Fish identification gallery
- Biodiversity in King County
- Find out what salmon are commonly seen in your stream
- Beavers in King County

### Related information

- Miller and Walker creeks: Community Salmon Investigation
- Pre-spawn mortality of coho (a NOAA web page)
- The Dirt: hands-on volunteer opportunities
- King County watersheds map

### Related agencies

- Department of Natural Resources and Parks
- Water and Land Resources Division

Information for...

Do more online

Contact us

# SALMON WATCHER WEBSITE

[www.kingcounty.gov/salmonwatcher](http://www.kingcounty.gov/salmonwatcher)

- Stream-specific fish ID help!
- The slide show is online
- Fish ID Gallery
- Annual reports & maps since 1998

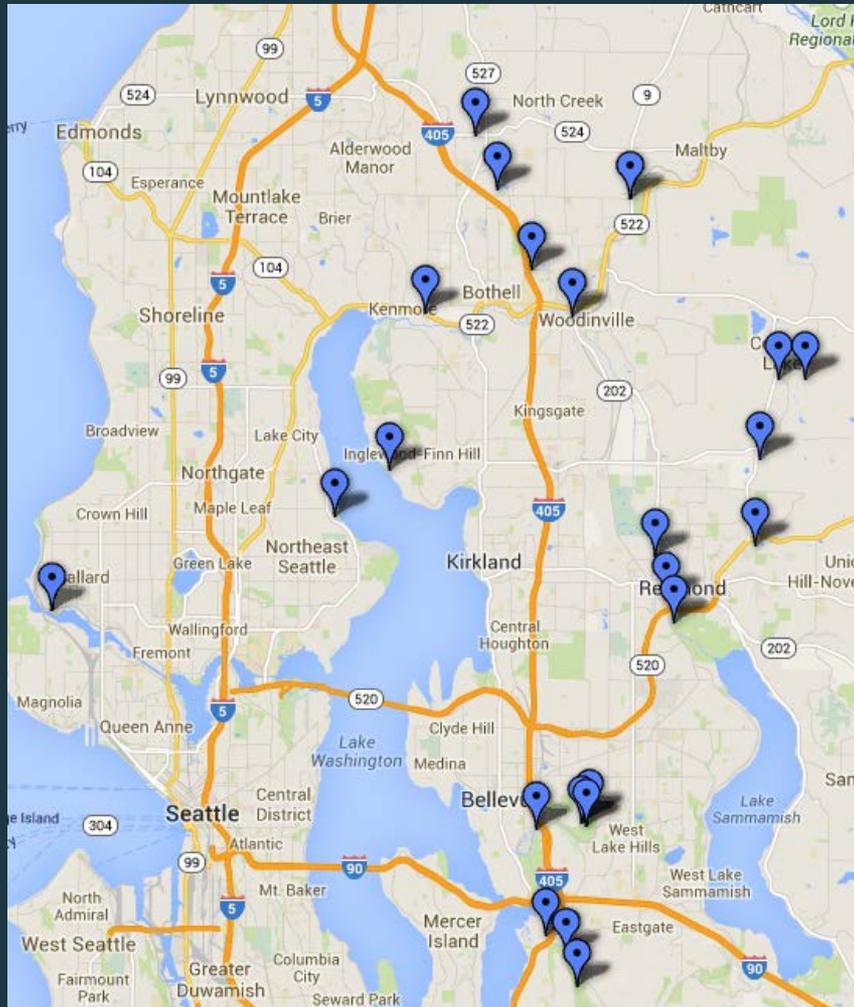
\*\*And of course, fish for us on Facebook – and use it to communicate with other volunteers!\*\*

**facebook**

# INTERACTIVE FISH DATA MAP

- See what's being seen & learn interesting facts.
- Not all sites are live yet – ~30 public sites.
- Data is pulled from the database weekly, so please try to enter your data regularly.
- We need site photos! Post site photos to our Facebook page.

# INTERACTIVE FISH MAP, cont.



## Salmon Sighting on

**Latest Salmon Sighting:** No sightings reported yet, check back soon!



### Did you Know?

Salmon habitat in Coal Creek is still affected by intensive logging and minning done in the late 1800s and early 1900s.

However, conditions are getting better thanks to restoration efforts. Which include:

- Installing logs and rootwads that are anchored by boulders to reinforce streambanks and reduce erosion
- Using logs to create pools so that juvenile salmon have a place to hide from predators
- Logs also provide shade to the river which keeps water temperatures down

Want to learn more about salmon and how you can help?

Visit [www.cedarriver.org](http://www.cedarriver.org)

# WHAT YOU SHOULD BRING



- Data sheets
- Pen or pencil
- Salmon ID materials
- Digital Camera /mobile
- First fish form
- Polarized glasses
  - Raingear
  - Clipboard
- A Buddy! (for fun & safety)
  - Orange vest (optional for safety)

# IMPORTANT TIPS!

- Stay on public property at all times unless your coordinator has written permission from the property owner (or you are the property owner).
- View after a rain, as soon as the water clears
- Use polarized glasses
- Allow 15 solid minutes at a stationary viewing spot
- Be there before it gets too dark
- Wear dark clothes and move slowly – sudden movements or loud talking might frighten fish

# SALMON WATCHING BASICS

When do we start watching?

Right now!!

How often do we watch?

Twice a week.

How long do we watch for?

15 minutes.

When do we stop watching?

End of December.

# CHOOSING A SITE

Here's how it works:

- **BEFORE YOU GET UP**, please fill out the questions on the back of the agenda. This is important.
- Next, find the table for your area
- Choose a site – prefer multiple sites are all in one stream
- Fill out a waiver form
- **NEW:** Fill out your profile in the database and collect your login credentials!



Thank you for your contribution!  
We couldn't do it without you.