

Teacher Workshop

Virtual Session October 18, 2023

## Welcome!

#### Share in chat:

School, grade &

Why are you excited to raise salmon with students this year?

Don't hit enter yet! We'll do that all together.











#### Presenters: SISS Leadership Team

Celina Steiger, IslandWood, Urban School Programs Partnerships Manager

Ry Yahn, Seattle Public Utilities, Stormwater Education Program Manager

Dan Hannafious, IslandWood, Salmon Specialist / general Seattle Area Coordinator

David Koon, Carkeek Watershed Community Action Project, Technical and Volunteer support

Judy Pickens, Fauntleroy Watershed Council, West schools Area Coordinator

Phil Sweetland, Fauntleroy Watershed Council, West schools Area Coordinator

## Agenda

Introductions

Program Overview and Timeline

**Overview of Seattle Salmon Streams** 

SISS Website and YouTube trainings

Classroom Connections

Next Steps and Q&A

#### October 28, Saturday, at

Jefferson Community Center, Beacon Hill Topics:

Tank set up, maintenance and water quality & Curricular connections and planning.

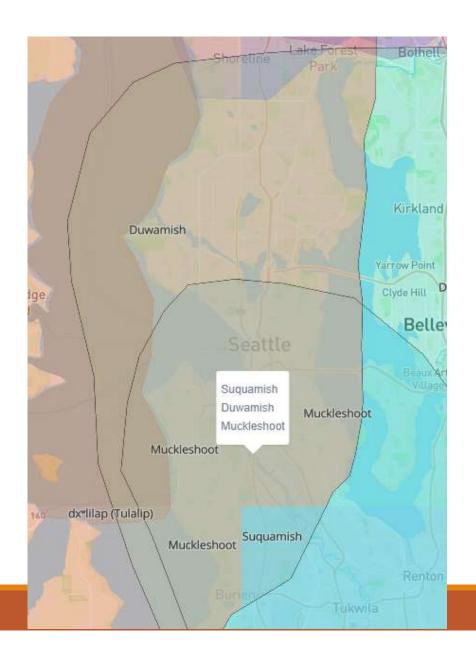
Up to 5 STEM Clock Hours if you attend both sessions.

(\$3 fee per clock hour when claiming in PDEnroller)
Fill in Exit Ticket after each session!

### **Native Lands**

Tribal communities have lived in this region since time immemorial.

Muckleshoot Tribe and
Suquamish Tribe are our local
tribes with treaty rights.
Duwamish Tribe is fighting for
federal recognition.



Native Lands Map - <a href="https://native-land.ca">https://native-land.ca</a>



WELCOME TO DUWAMISH LAND, WE ARE THE HOST TRIBE OF SEATTLE AND KING COUNTY



# WHAT IS SALMON IN THE SCHOOLS?

A program that uses the **rearing of salmon** to develop an understanding of:

- Biological processes and systems
- Local habitats and ecosystems
- Environmental stewardship
- The importance of salmon to Pacific Northwest culture and commerce.



#### Who is involved in SISS?

A coalition of City staff, community-based organizations and volunteers supporting salmon-based opportunities for public and private students in Seattle to build stewardship and environmental literacy.

SIS-Seattle provides **resources and expertise** to enable teachers to offer school-wide, hands-on learning through the rearing of salmon.

SIS-Seattle is one of **several regional intermediaries** between schools and the State Department of Fish and Wildlife, making sure that schools get eggs and that the program meets all state requirements.

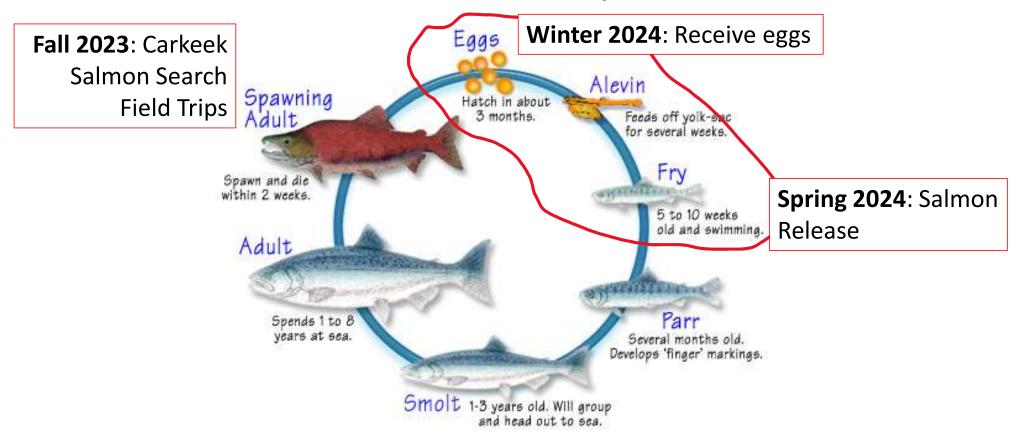
SIS-Seattle is maintained through volunteer efforts, governmental funding, and school support.

#### **PARTICIPATION**

### 74 PUBLIC AND PRIVATE SCHOOLS IN SEATTLE HAVE PERMITS FOR THIS SCHOOL YEAR.



## Salmon Life Cycle



## Salmon Year Timeline

(COHO OR CHUM)











October	November	December	January	February	March	April	May
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#### <u>October – November</u>

- Prepare tank.
- Devise ways for students to observe it.

#### **Early January**

- Receive or pick up eyed eggs.
- Orient students.

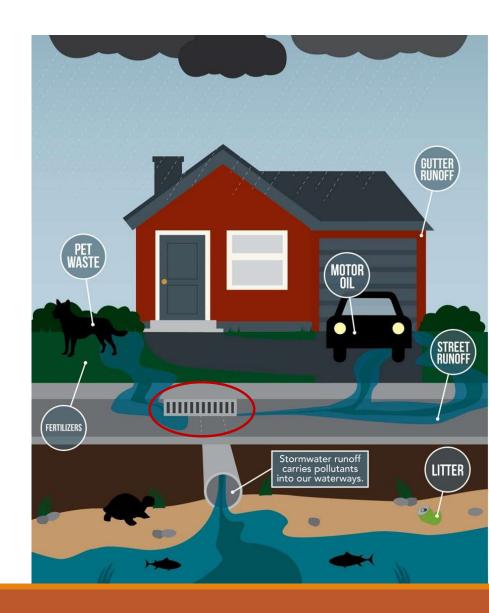
#### **Late January – Early March**

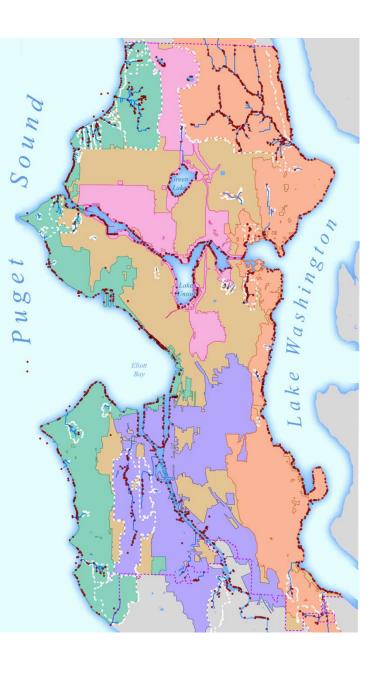
- Engage students in observing fish, including feeding and testing water quality.
- Apply other learning resources.
- Register for salmon release.

#### **April - May**

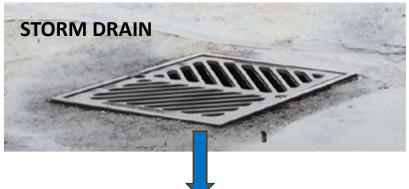
- Release fry at permit location and explore with students as you are able.
- File release report.
- Sign up for next year.

Stormwater runoff is the **biggest source of ongoing pollution** into Puget Sound and impacts the health of wildlife and people.



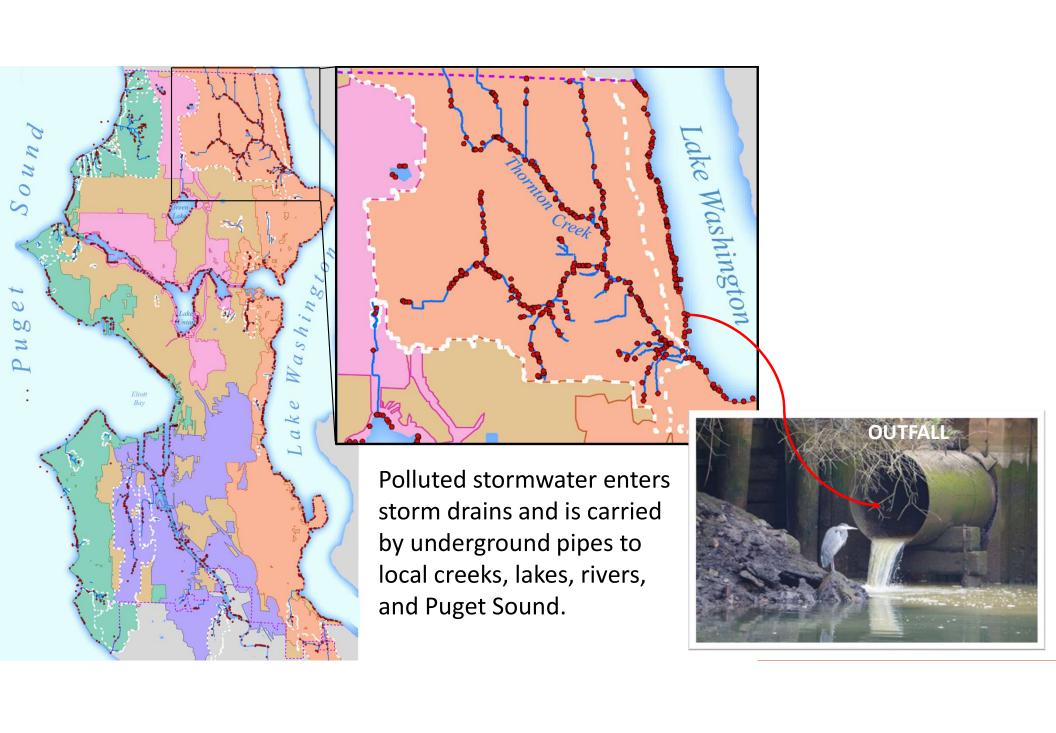


Where do our storm drains go?



Depending on where you are in the city, storm drains empty into different waterbodies.

- Puget Sound
- Lake Washington
- Lake Union/Ship Canal
- Duwamish River
- Combined Sewer Basin
- Creek Watershed

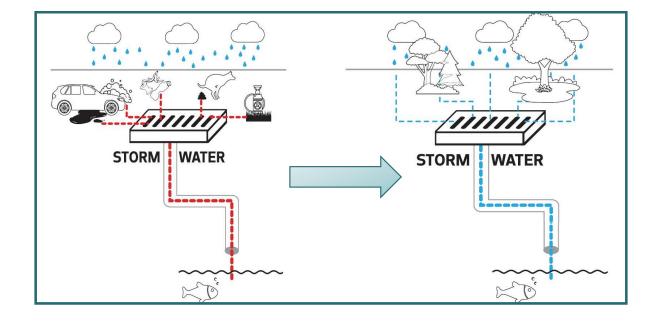


### **Protecting our Waters**



#### **STORM DRAIN CARE**

- Keep trash and plastics out of storm drains.
- Keep leaves and debris from clogging storm drains.
- Stencil a storm drain to spread awareness





#### **PET WASTE CARE**

- Pick up pet waste and throw it away, even in your yard
- Don't put pet waste in the compost, even if the bag is compostable



#### **CAR CARE**

- Wash your car at a commercial carwash or on your lawn.
- Get your car checked regularly for motor oil leaks or drips.



#### **NATURAL YARD CARE**

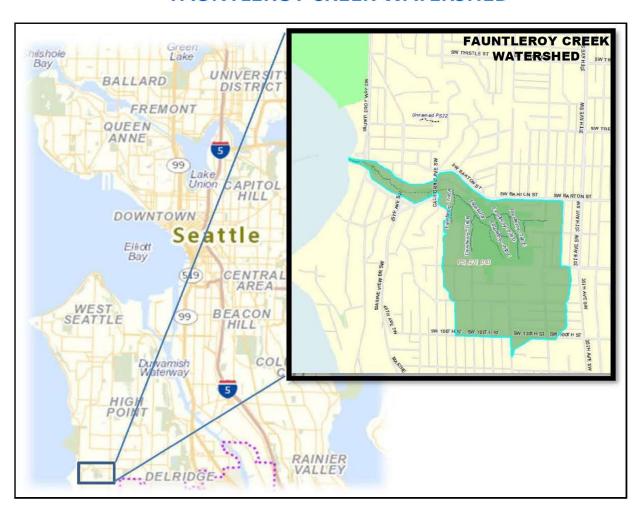
- Use compost to reduce the need for pesticides and fertilizers.
- Build or support a rain garden.
- Plant a tree.

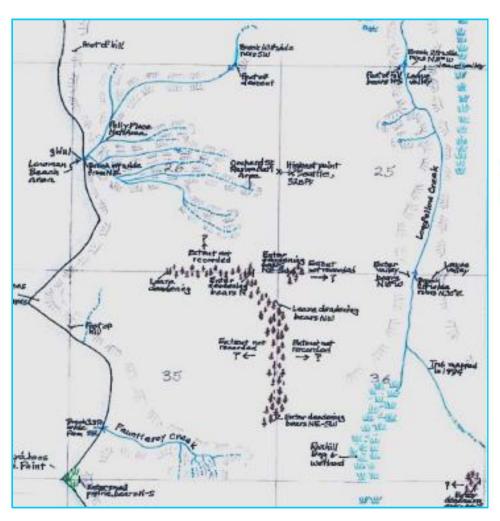


Breakout Rooms for your watershed!

## Fauntleroy Creek

#### **FAUNTLEROY CREEK WATERSHED**

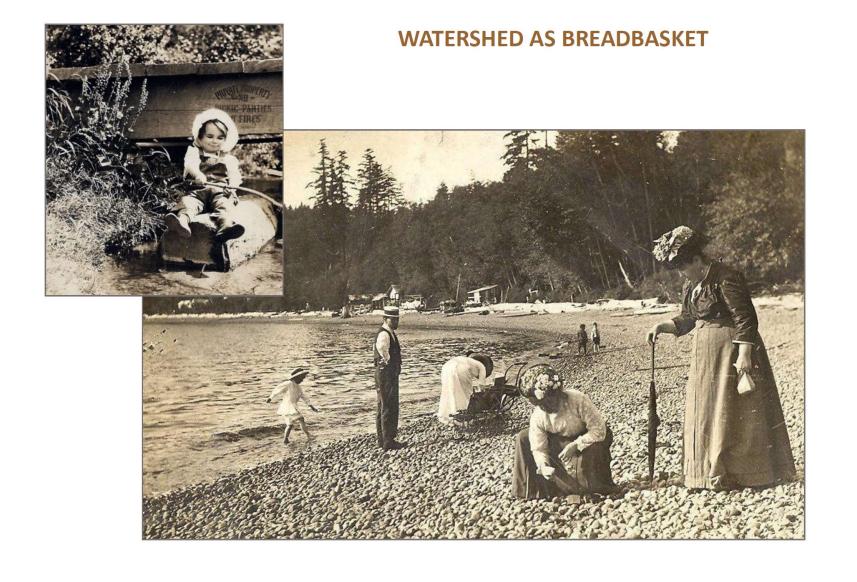


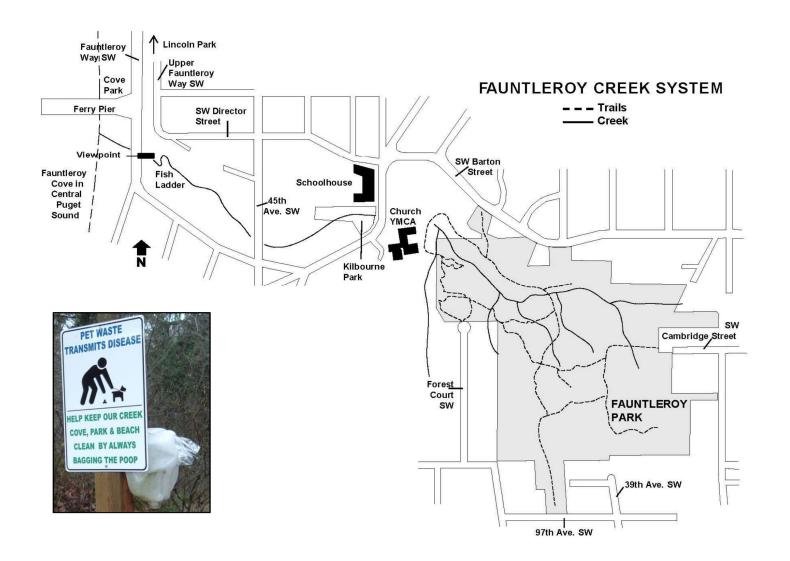


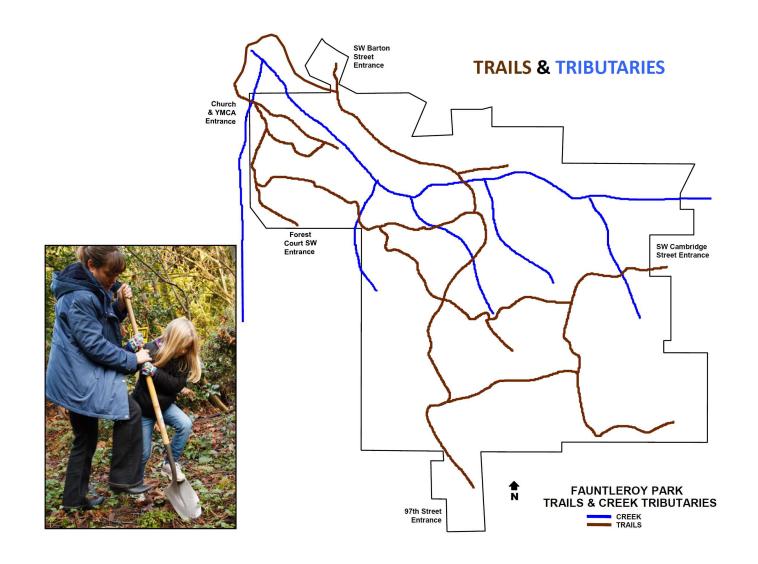
## SURVIVING DEVELOPMENT



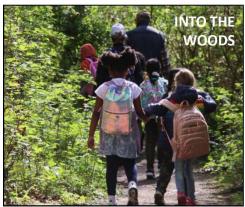
## HISTORIC & ENGINEERED BOUNDARIES









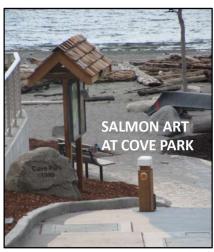














#### **CONCERNS OF NOTE**







#### **ON THE PLUS SIDE**









fauntleroywatershed.org



#### **Area Coordinators**

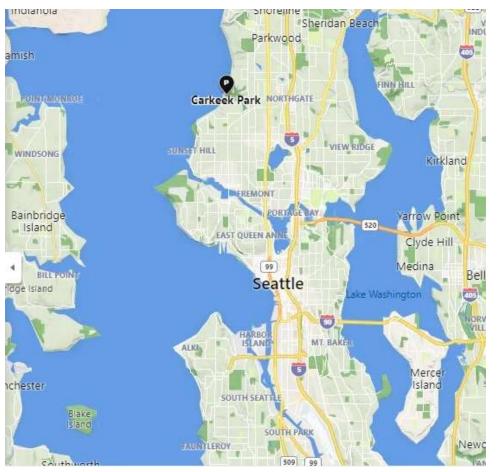
judy\_pickens@msn.com phil\_sweetland@msn.com 206-938-4203 Questions about Fauntleroy Creek

## Piper's Creek

## Salmon In Piper's Creek



### Location of Carkeek Park and the Piper's Creek Watershed





### Important Dates for Salmon in Piper's Creek

1880's - Logging began in the

Late 1800's to 1920's – Saw Mill and Brick Factory operating

1921 - Last virgin timber logged

1927 - Last wild salmon 1927

1929 - 223 acres acquired for park

1970's – Some restoration work in the park begins

1979 – CWCAP formed

1980 - Salmon enhancement began

1987 – Switch from Coho to Chum Salmon

1987 - 1999 - In-channel imprint pond

2000 - present - Off-channel imprint pond

2002 - First silt trap constructed

2006-2007 - New, improved silt traps

2009 - Improved water intake system

1987 - 2002 - Eyed eggs and fed fry from the Suquamish Tribe Minter Creek Hatchery in the South-Sound

2003 to present - Eyed eggs and fed fry from the Suquamish Tribe Mid-Sound Grover's Creek Hatchery

### Les Malmgren Imprint Pond in Carkeek Park



## Chum Salmon Stats for Carkeek Park

YEAR	Spring FRY delivery	DAYS IMPRINTED (1)	FRY RELEASED	Egg Tank EYED EGGS (3)	Egg Tank Fry (est.)(4)	SISS EYED EGGS	SISS	Total Release (5)	SISS (schools)	RETURN (2)
1988	9,000	n								
1989	10,000	У								
1990	10,000	У				1,000		11,000	2	
1991	30,000	Y				2,000		32,000	3	
1992	30,000	y				2,500		32,500	5	
1993	58,000	y				2,800		60,800	5	300
1994	35,000	n/sw				2,800		37,800	5	93
1995	35,000	n/sw				2,800		37,800	14	223
1996	35,000	n/sw				4,000		39,000	21	608
1997	40,000	n/sw				7,000		47,000	17	9
1998	35,000	У				4,000		39,000	21	137
1999	70,000	n/sw				5,000		75,000	23	17
2000	70,000	23				5,000		75,000	23	16
2001	70,000	13				5,000		75,000	24	141
2002	70,000	44				5,000		75,000	24	354
2003	70,000	15		ji ji		5,000		75,000	25	202
2004	48,000	15				5,000		53,000	25	87
2005	35,000	15				5,000		40,000	26	113
2006	20,000	У				5,000		25,000	25	354
2007	39,000	30				5,000		44,000	23	439
2008	56,000	15				5,000		61,000	20	79
2009	67,000	14				5,000		72,000	21	17
2010	59,000	14				5,000		64,000	19	48
2011	60,000	30				5,000		65,000	19	166
2012	70,000	30				5,000		75,000	24	163
2013	58,000	30		?		5,000		63,000	23	400
2014	74,000	30		20,000		5,000		99,000	22	551
2015	70,000	28.5		20,900		5,000	4,142	95,042	22	252
2016	64,000	25, 51		31,000		5,000	3,953	98,953	21	240
2017	67,500	22, 20		30,000		6,384	5,273	102,773	28	338
2018		46, 67	67,386	30,000	27,000	5,060	4,115	98,501	23	312
2019	69,000	37, 46	60,257	30,000	29,000	5,280	4,221	93,478	24	54
2020		62	14,854	10,000	8,800	5,280	4,765	28,419	24	190
2021	100000000000000000000000000000000000000	39, 33	67,009	30,000	27,300	1,320	1,079	95,388	6	939
2022	100000000000000000000000000000000000000	40, 44	75,422	30,000	27,000	3,960	2932	105,294	18	

## Lake Washington

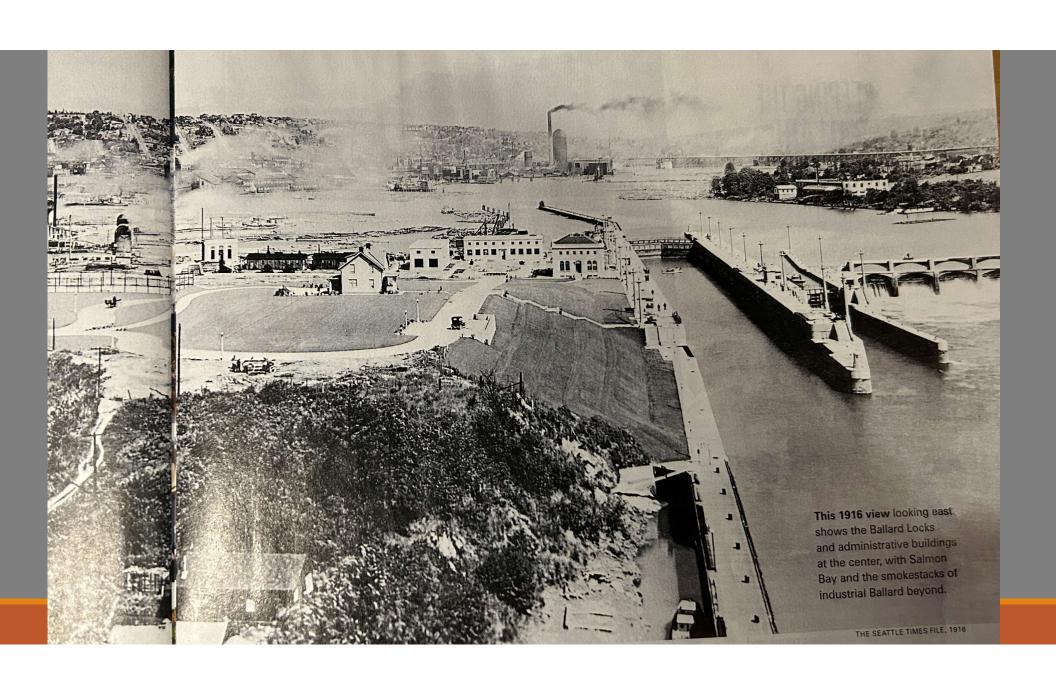


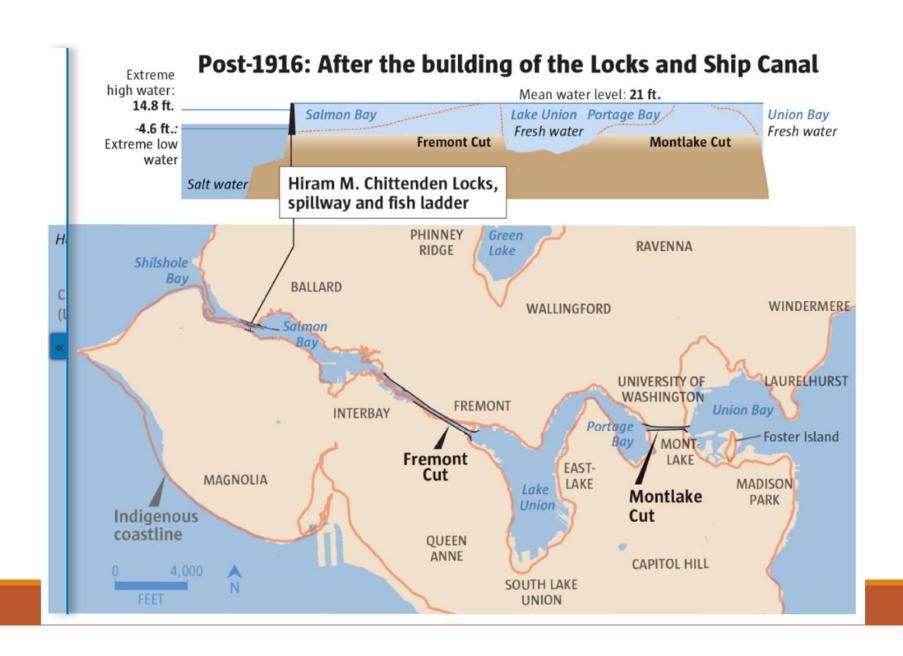
## Lake Washington Salmon

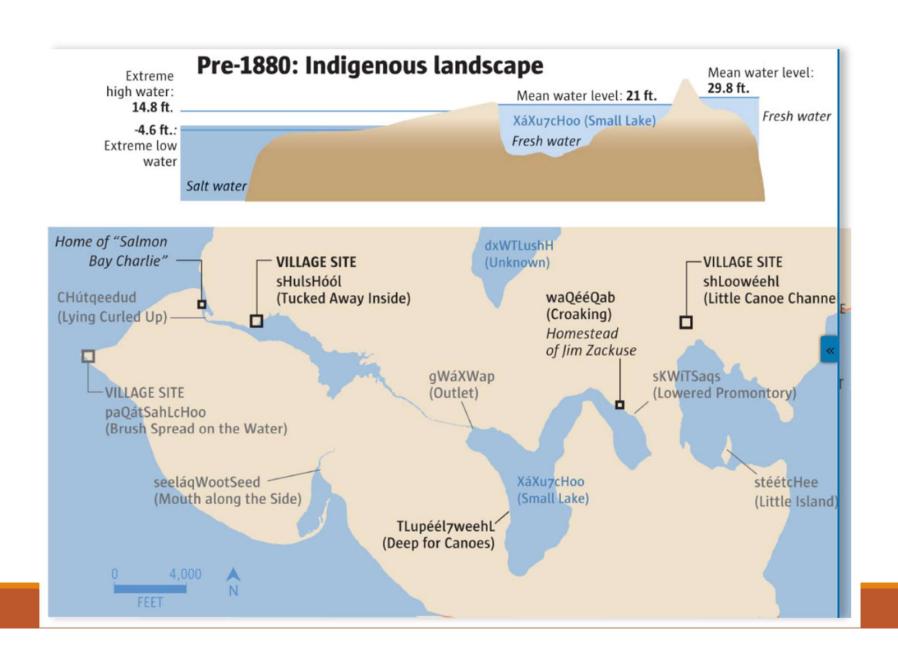


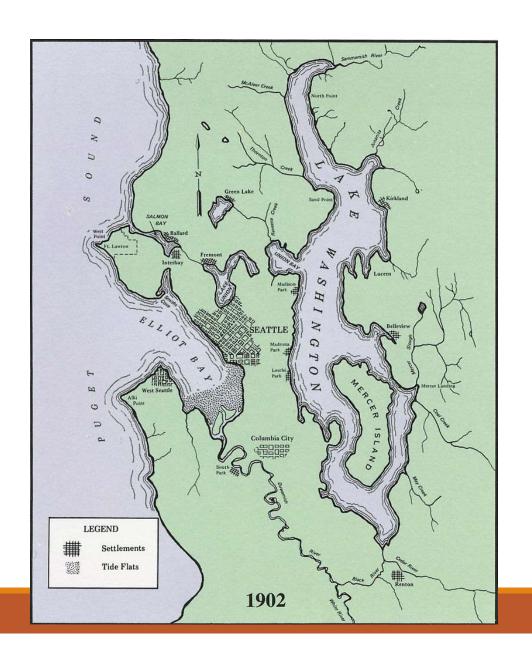


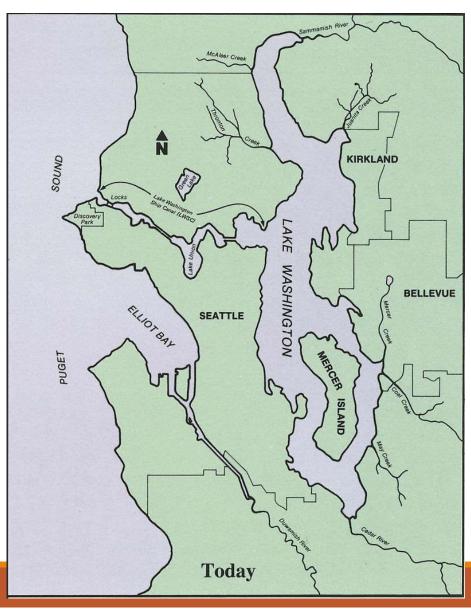
EXIL



















### **Cedar River Salmon**

- Cedar River supplies about 50% of Lake WA's water;
- Cedar River flows from the Cascade Mountains into Lake WA;
- Supports a threatened Chinook run, as well as coho, sockeye, and steelhead trout.





# Issues Facing Lake WA Salmon

Declining populations of all species due to:

- Increased runoff and habitat loss due to urbanizations -STORMWATER
- Warmer waters
- Increased predation
- Disease

# Salmon Recovery Efforts

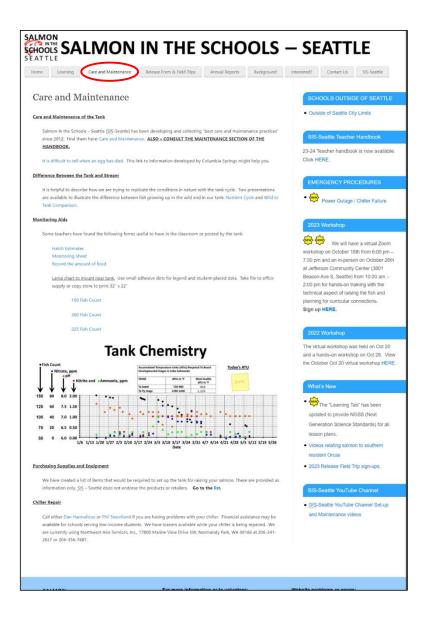


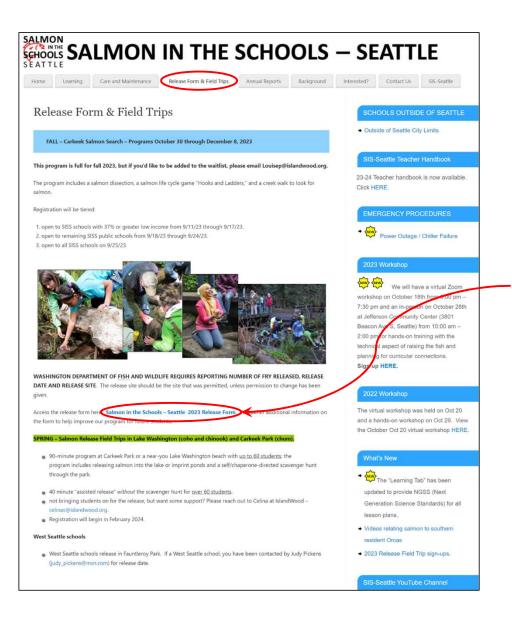
- Water levels in the Cedar River are maintained by the City at Landsburg Dam, to support adequate amounts of water for spawning
- Habitat restoration projects to reduce stormwater runoff and restore spawning/resting/feeding grounds for migrating salmon
- Water quality improvements like the Ship Canal Water Quality Project, designed to reduce sewage overflows during heavy rain events

https://www.seattletimes.com/seattle-news/something-seems-fishy-a-ballard-locks/

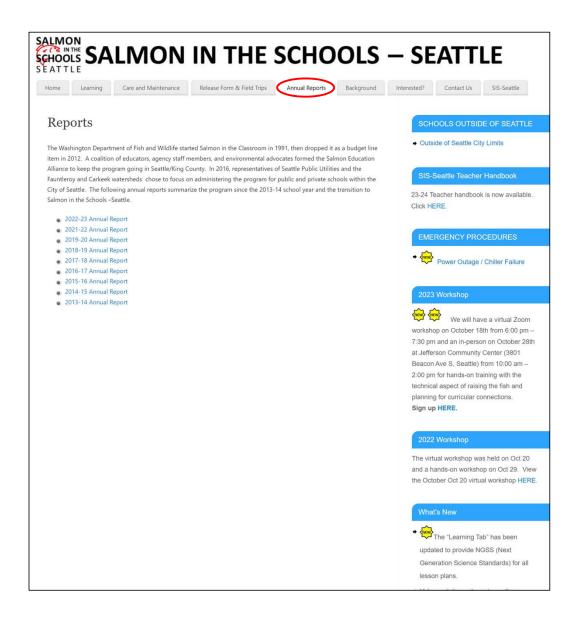
Questions about Lake Washington salmon?

# Website – sisseattle.org





Release Form submittal is required.



### SALMON IN THE SCHOOLS — SEATTLE

Home Learning Care and Maintenance

Release Form & Field Trips

Annual Reports Background

Contact Us SIS-Seattle

### Background

The Washington Department of Fish and Wildlife (WDFW) started Salmon in the Classroom in 1991 as a staffed line item in its budget. WDFW continued the program through 2012, when budget cuts led to a decision to limit the state's participation to issuing permits.

A coalition of educators, agency staff members, and environmental advocates formed the "Salmon Education Alliance" to administer the program throughout King County and a few schools in adjacent counties, starting with the 2012-13 school year. At that time, the name "Salmon in the Schools" began to encourage tank placement so the entire school could be aware of the annual project. Members of the leadership team represented Seattle Public Utilities, Friends of the Issaquah Salmon Hatchery (FISH), and the Fauntleroy Watershed Council. FISH was fiscal agent for the program and provided administrative services

Area coordinators throughout the region worked directly with teachers, from securing eggs to assisting with releases in local creeks and Lake Washington. Seattle Public Utilities and Seattle Parks and Recreation funded a technical specialist who, along with a technical volunteer and area coordinators, provided timely troubleshooting of equipment problems and helped new teachers and volunteers gain confidence in managing their tanks.

Toward the end of the 2015-16 school year, two factors led the leadership team to separate program administration geographically: the FISH board decided to scale back its role and the only secure source of operating revenue proved to be annual budgeting for water-quality/stewardship education by Seattle Public Utilities and Federal Way Surface Water Management. Now, "Salmon in the Schools – Seattle" (SIS-Seattle) coordinates the program within the city and other entities do so for clusters of schools elsewhere in the region.

 $\underline{\sf SIS}\text{-}\mathsf{Seattle's} \ \mathsf{leadership} \ \mathsf{team} \ \mathsf{consists} \ \mathsf{of} \ \mathsf{representatives} \ \mathsf{from} \ \mathsf{Seattle} \ \mathsf{Public} \ \mathsf{Utilities}, \ \mathsf{Fauntleroy} \ \mathsf{Watershed} \ \mathsf{Council}, \ \mathsf{and} \ \mathsf{Council}, \ \mathsf{and} \ \mathsf{Council}, \$ Carkeek Watershed Community Action Project. We welcome new members who are interested in fostering this wellrespected program and helping SIS-Seattle realize more opportunities in support of participating schools. Contact us!

### SCHOOLS OUTSIDE OF SEATTLE

→ Outside of Seattle City Limits

### SIS-Seattle Teacher Handbook

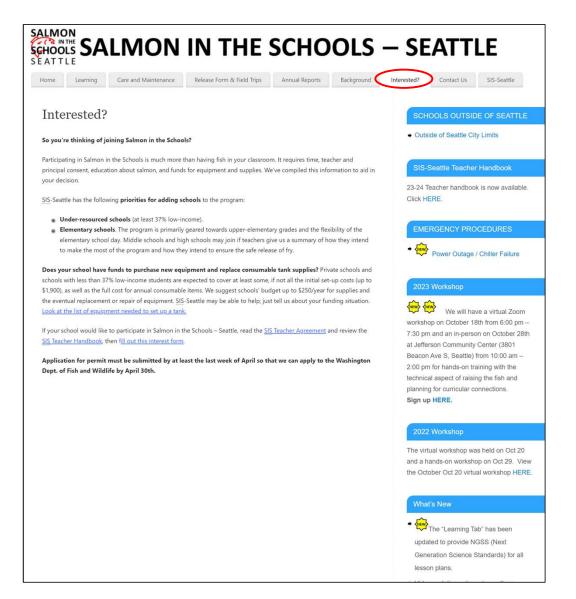
23-24 Teacher handbook is now available. Click HERE.

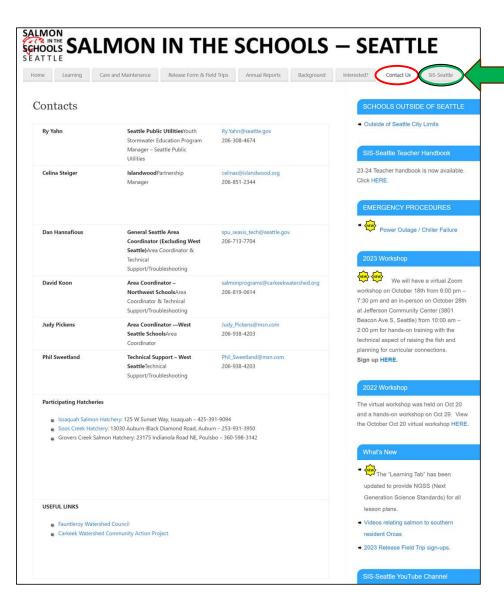
Power Outage / Chiller Failure

We will have a virtual Zoom workshop on October 18th from 6:00 pm -7:30 pm and an in-person on October 28th at Jefferson Community Center (3801 Beacon Ave S, Seattle) from 10:00 am -2:00 pm for hands-on training with the technical aspect of raising the fish and planning for curricular connections. Sign up HERE.

The virtual workshop was held on Oct 20 and a hands-on workshop on Oct 29. View the October Oct 20 virtual workshop HERE.

The "Learning Tab" has been updated to provide NGSS (Next Generation Science Standards) for all lesson plans.





This is our administration tab

## **OUR BASIC 'ASK' OF TEACHERS**

Orienting



Observing



Sharing



**Exploring** 



Other opportunities for action and learning:



Storm Drain Stenciling through SPU (spring)



IslandWood Field Trips in Seattle – Carkeek fall salmon, Creekosystem Field Study (spring), Salmon release (spring)



Nature Vision or Mountains to Sound Field Trips

# Questions?

Tanks and set up? Covered Saturday Oct 28!

Who do you go to with questions and for help? Your Area Coordinator!

QUICK survey (please do this if you want clock hours):

https://forms.office.com/r/BWqxSUx5Lk

