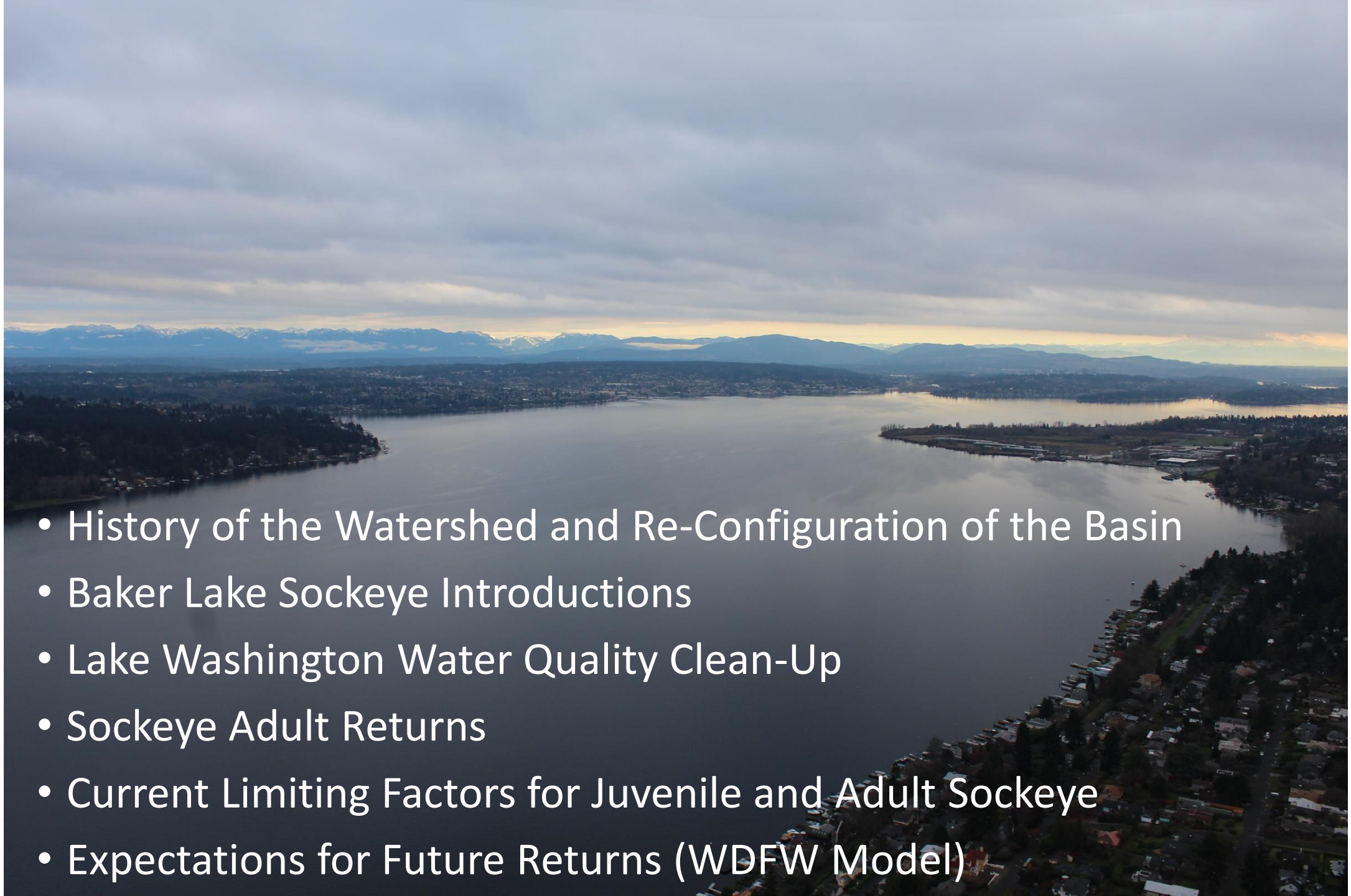
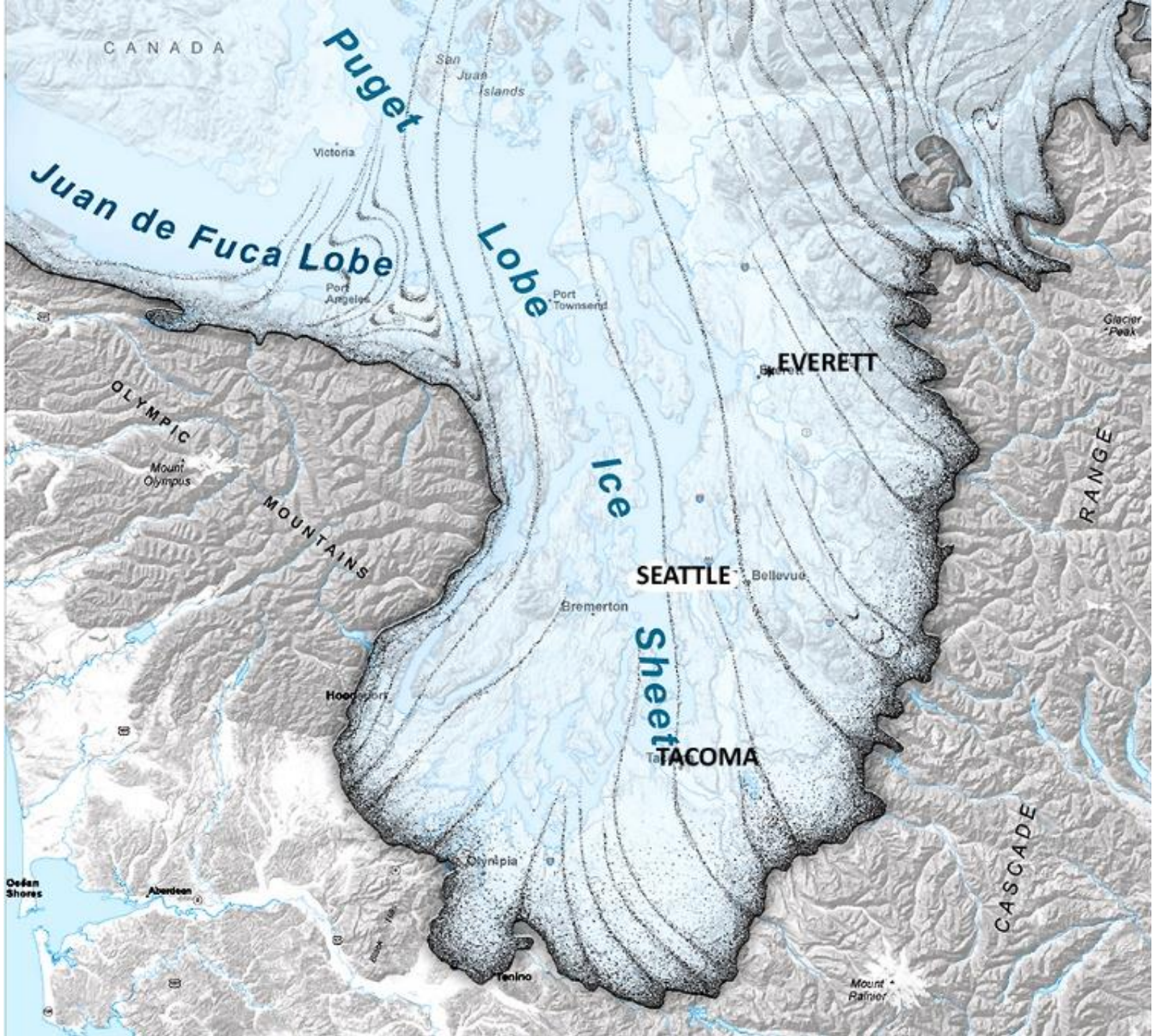
Cedar River Sockeye Past and Present

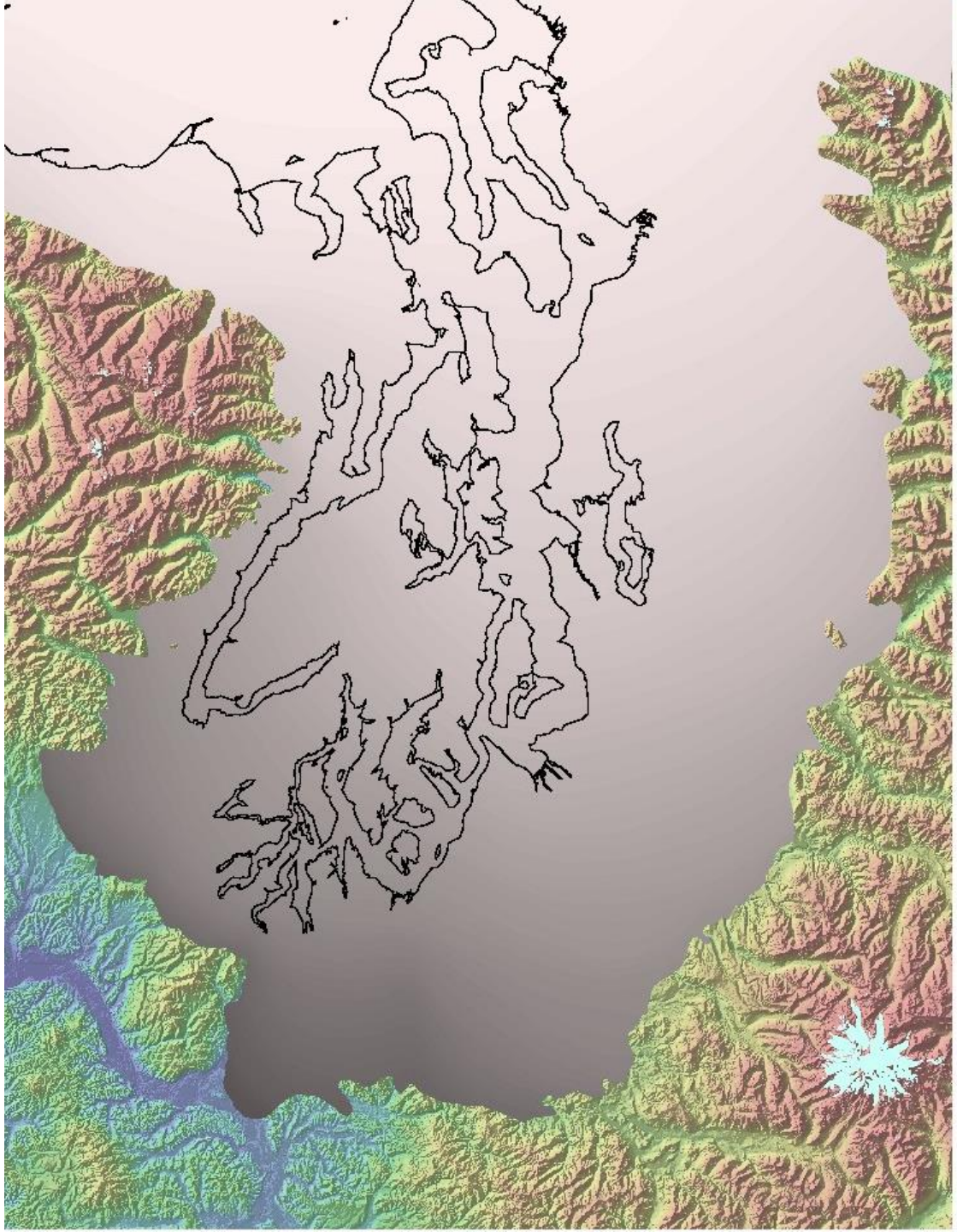


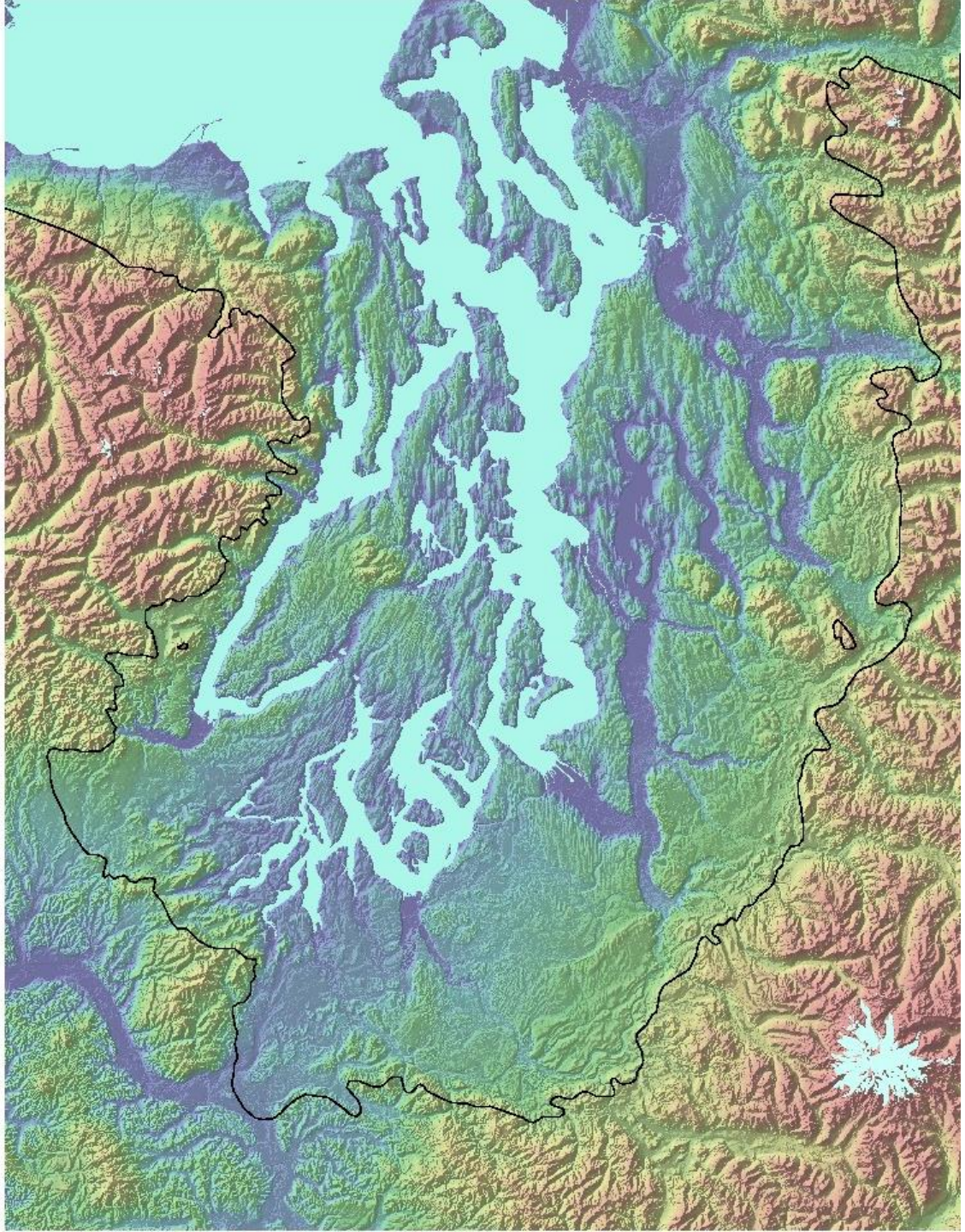
- History of the Watershed and Re-Configuration of the Basin
- Baker Lake Sockeye Introductions
- Lake Washington Water Quality Clean-Up
- Sockeye Adult Returns
- Current Limiting Factors for Juvenile and Adult Sockeye
- Expectations for Future Returns (WDFW Model)

~17,000 Years Ago

<u>Vashon Glaciation Period</u>
Puget Lobe of the
Cordilleran Ice Sheet







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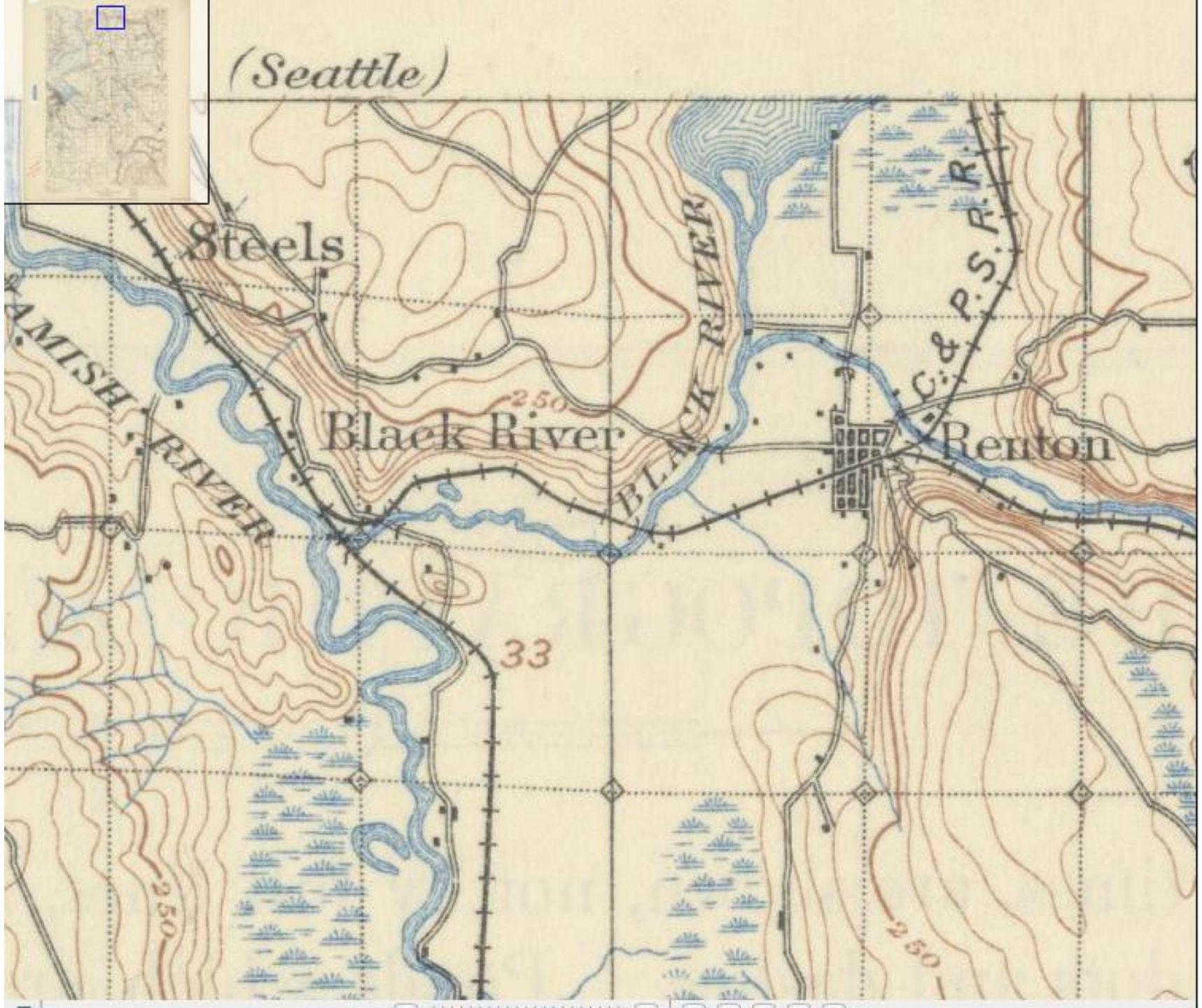
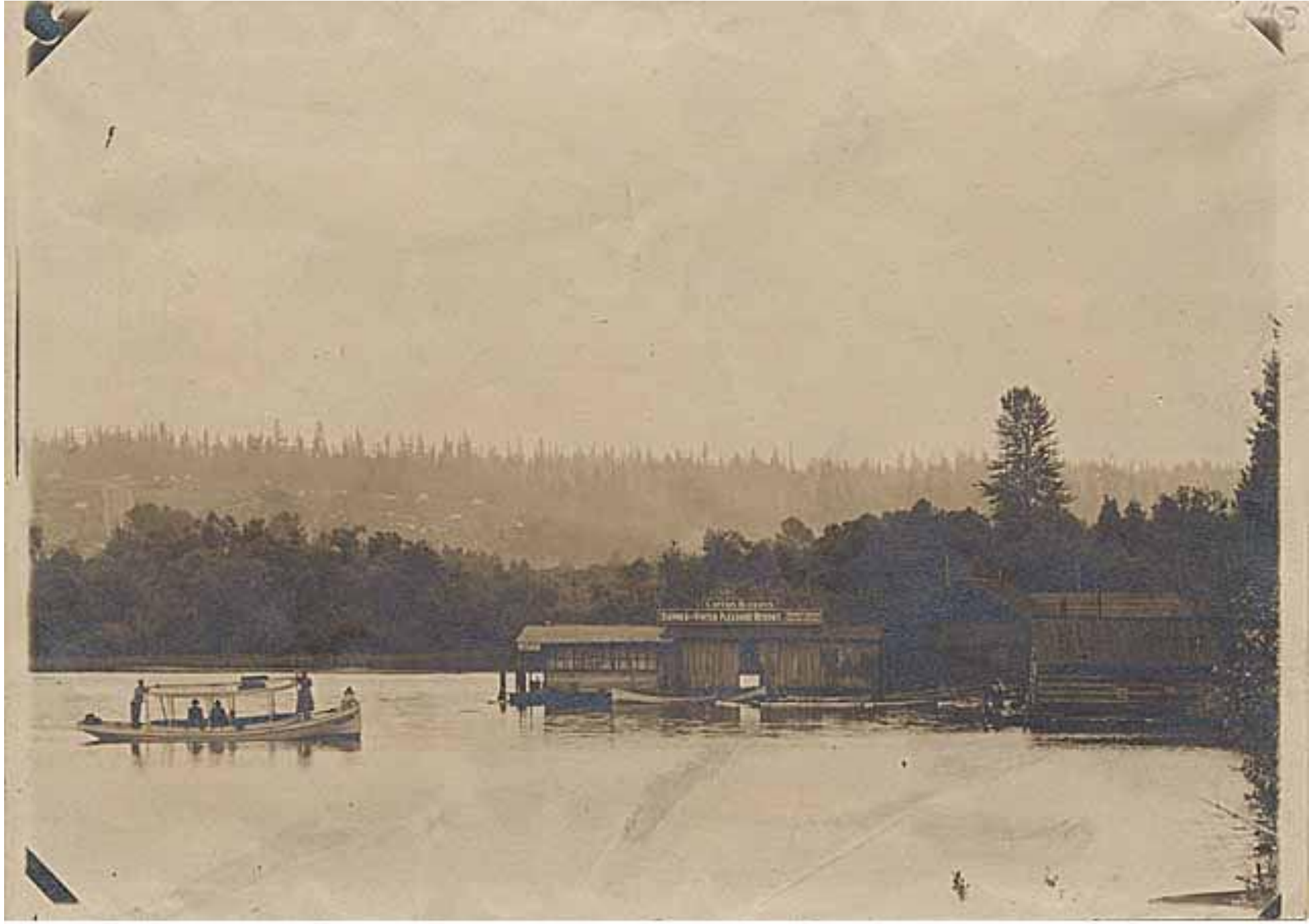
www.burkemuseum.org/waterlines


(Seattle)
Steels
AMISH RIVER
Black River
BLACK RIVER
C. & P. S. R.
Renton
250
33
250
250

Black River

On Black River
No 106
Wilse

Captain Burrows Pleasure Resort, 1906
Captain Burrows resort at the mouth of the Black River from 1897 to 1917 [Renton Historical Society note].
Sign in image: Captain Burrows. Summer-Winter Pleasure Resort. Good Fishing-Hunting-Boating .
Renton Historical Society collection, UW (648A)



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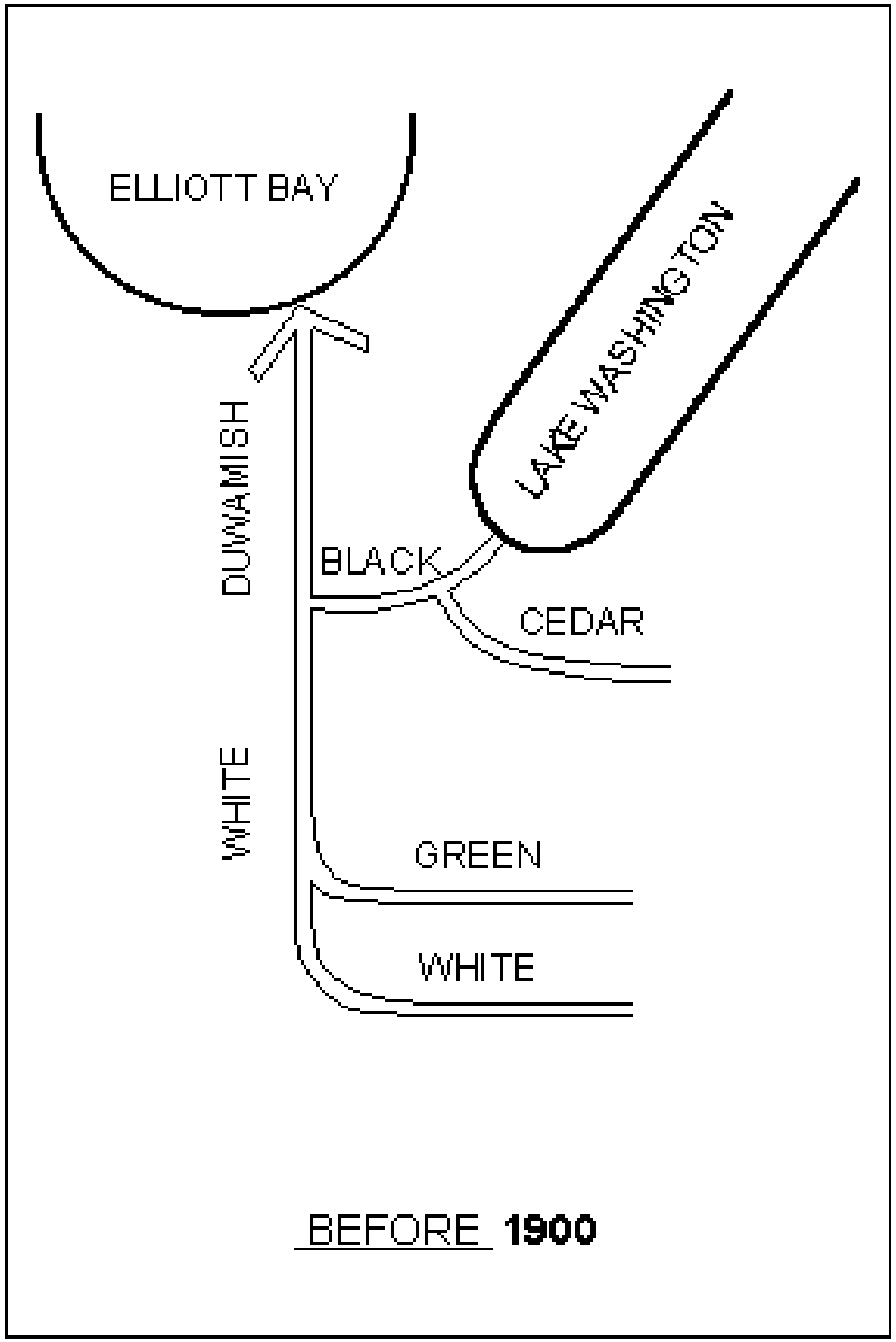
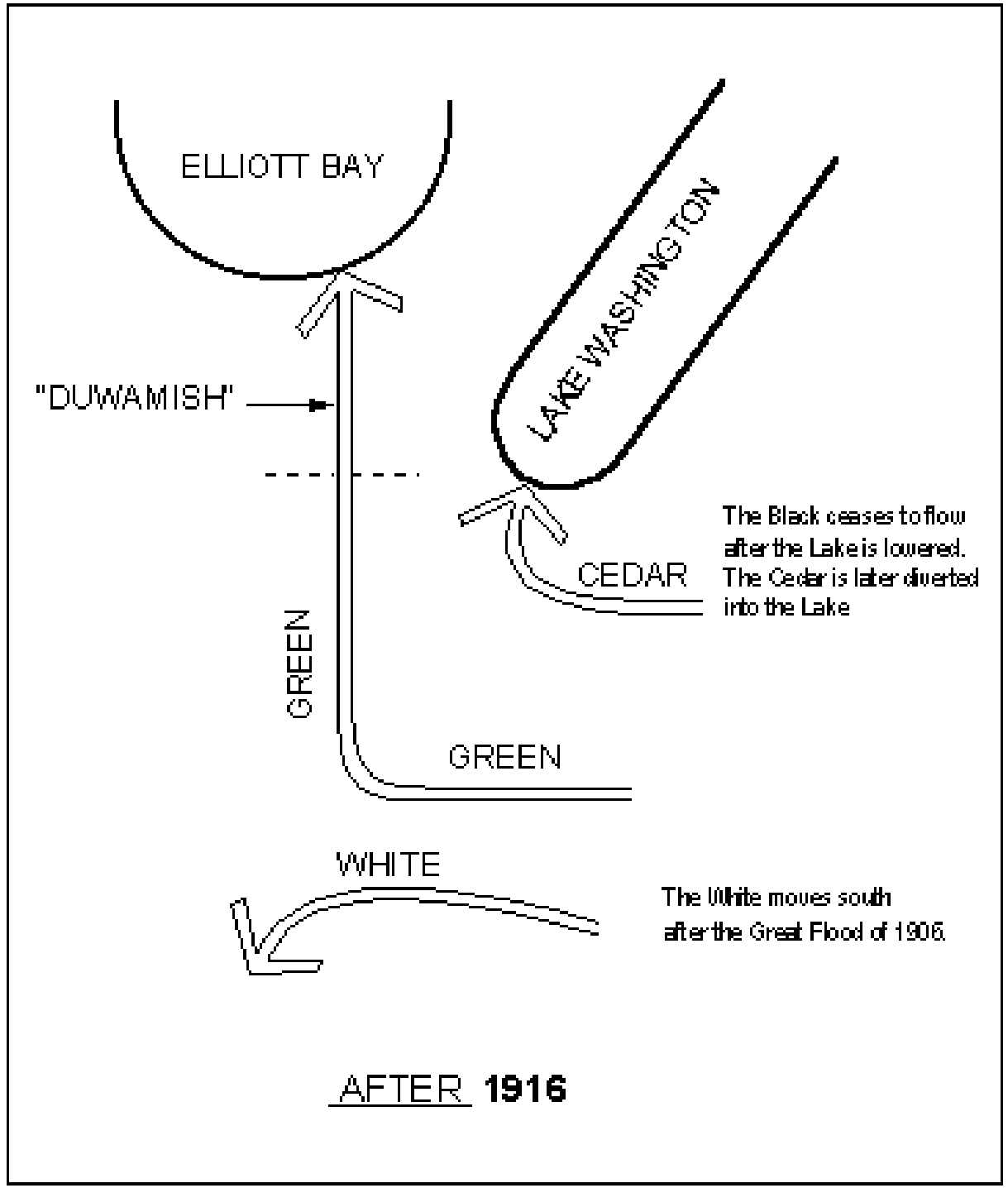
- **“The only fish in them is a species of trout, very few in number, the largest of which are about a foot in length.”**
  - **Hammond 1886, in reference to Lakes Washington and Sammamish.**

- "A small salmon was said to live permanently in Lake Washington spawning in the creeks which emptied into the lake. The Duwamish of that section were said to prefer this salmon to that which entered the rivers from the Sound."
  - Smith (1940), reporting on cultural interviews with local tribal elders.

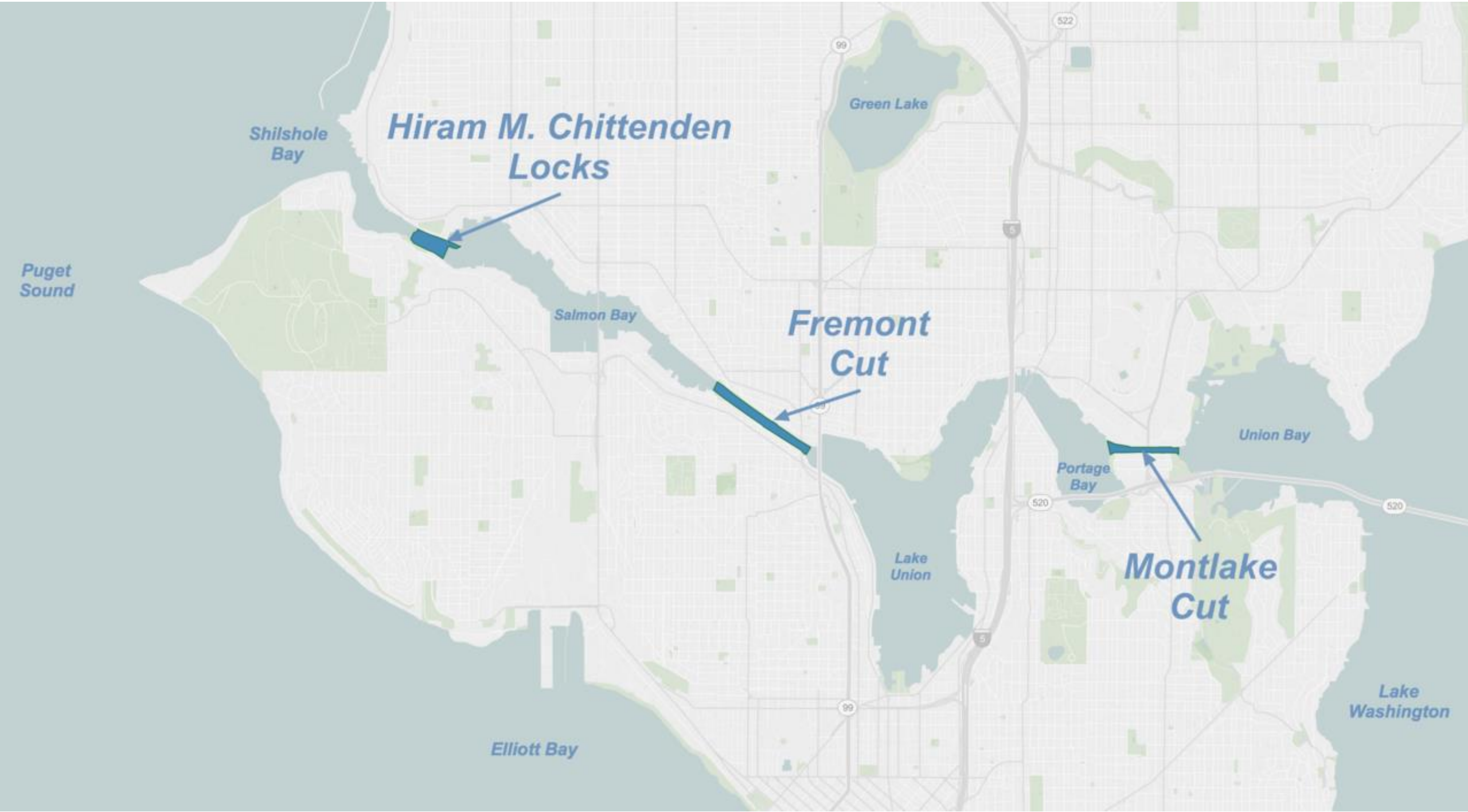

ELLIOTT BAY
LAKE WASHINGTON
DUWAMISH
BLACK
CEDAR
WHITE
GREEN
WHITE
BEFORE 1900


ELLIOTT BAY
LAKE WASHINGTON
"DUWAMISH"
CEDAR
The Black ceases to flow after the Lake is lowered. The Cedar is later diverted into the Lake
GREEN
GREEN
WHITE
The White moves south after the Great Flood of 1906
AFTER 1916

City of Renton created a new waterway in 1912 that diverted the lower Cedar River from the Black River into Lake Washington. (Buerge 1985)

The purpose of this 2,000 foot channel was to abate flooding and to provide a “Commercial Waterway” for sea-going vessels after the completion of the ship locks at Ballard. (The Renton Bulletin 1915)

Diverting the Cedar River into Lake Washington, UW (WWDL0540)


Hiram M. Chittenden Locks
Shilshole Bay
Puget Sound
Salmon Bay
Fremont Cut
Green Lake
Lake Union
Portage Bay
Union Bay
Montlake Cut
Lake Washington
Elliott Bay
522
99
5
520

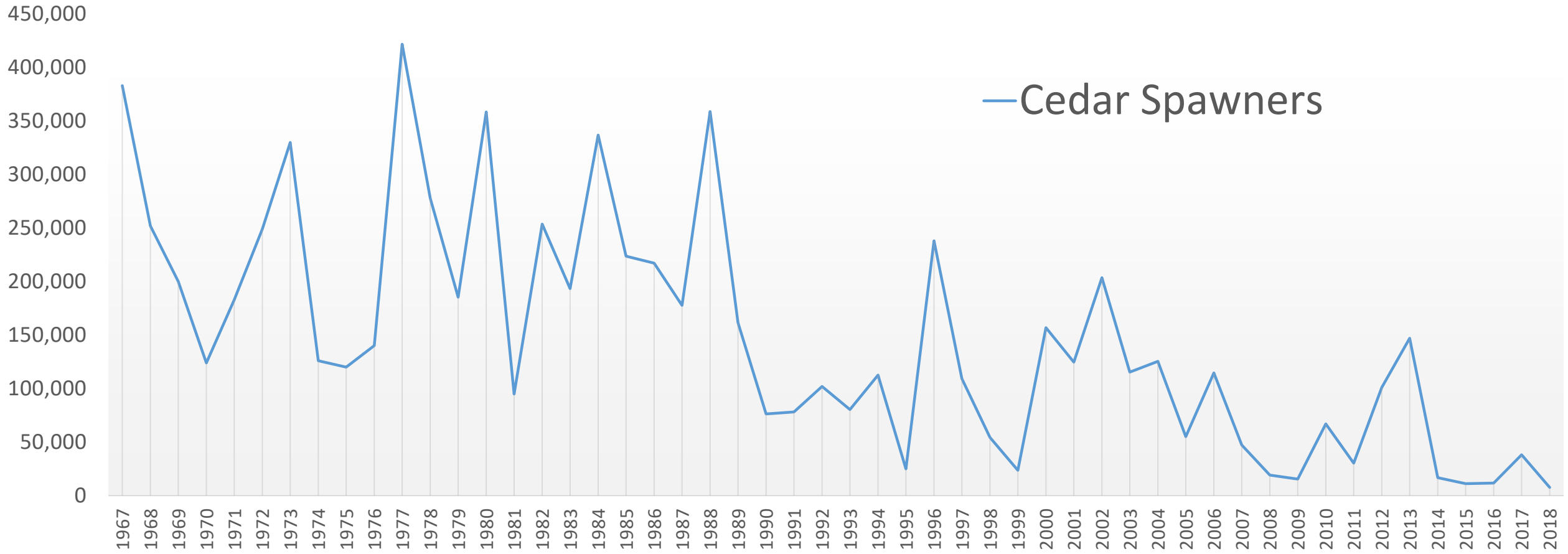
The cut that lowered Lake Washington 9-feet, diverted a watershed, and dried up the Black River, 26-Aug. 1916

Table 1.3. Releases of Baker River juvenile sockeye salmon into the Lake Washington basin (from Kolb 1971).

Brood year	Sockeye numbers released by location		
	Cedar River	Issaquah Creek	Other locations
1934	96,000	76,000	none
1936	656,000	1,257,000	567,000 [1]
1941	none	none	41,065 [2]
1942	227,139	254,298	none
1943	54,530	41,761	none
1944	32,012	none	none
Totals	1,065,681	1,629,059	617,065

[1] Bear Creek (Sammamish River tributary).
[2] Lake Washington.

1968 Cedar River Sockeye Survey


Cedar Spawners
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
1967
1968
1969
1970
1971
1972
1973
1974
1975
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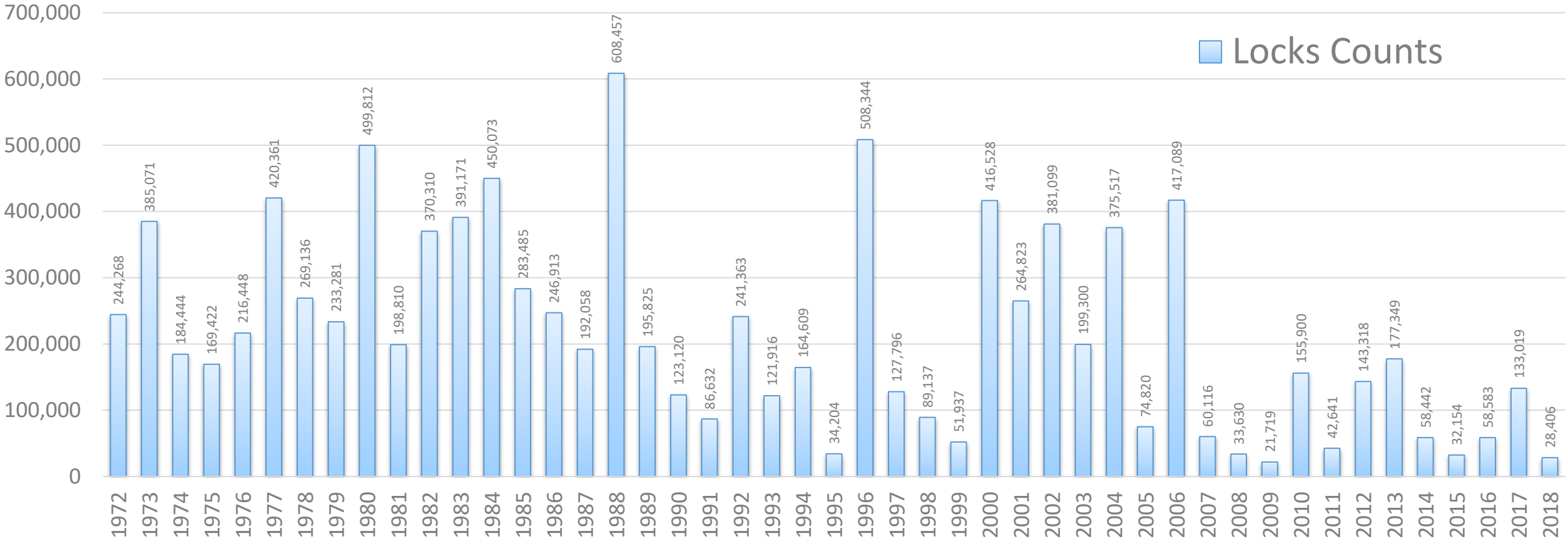
2017
2018


Locks Counts
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
244,268
385,071
184,444
169,422
216,448
420,361
269,136
233,281
499,812
198,810
370,310
391,171
450,073
283,485
246,913
192,058
608,457
195,825
123,120
86,632
241,363
121,916
164,609
34,204
508,344
127,796
89,137
51,937
416,528
264,823
381,099
199,300
375,517
74,820
417,089
60,116
33,630
21,719
155,900
42,641
143,318
177,349
58,442
32,154
58,583
133,019
28,406
1972
1973
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2016
2017
2018

The Most Recent Sport Fishery was in 2006

WARNING
POLLUTED WATER
UNSAFE
FOR BATHING
DIRECTOR OF PUBLIC HEALTH
CITY OF SEATTLE

Blue-Green Algae Blooms

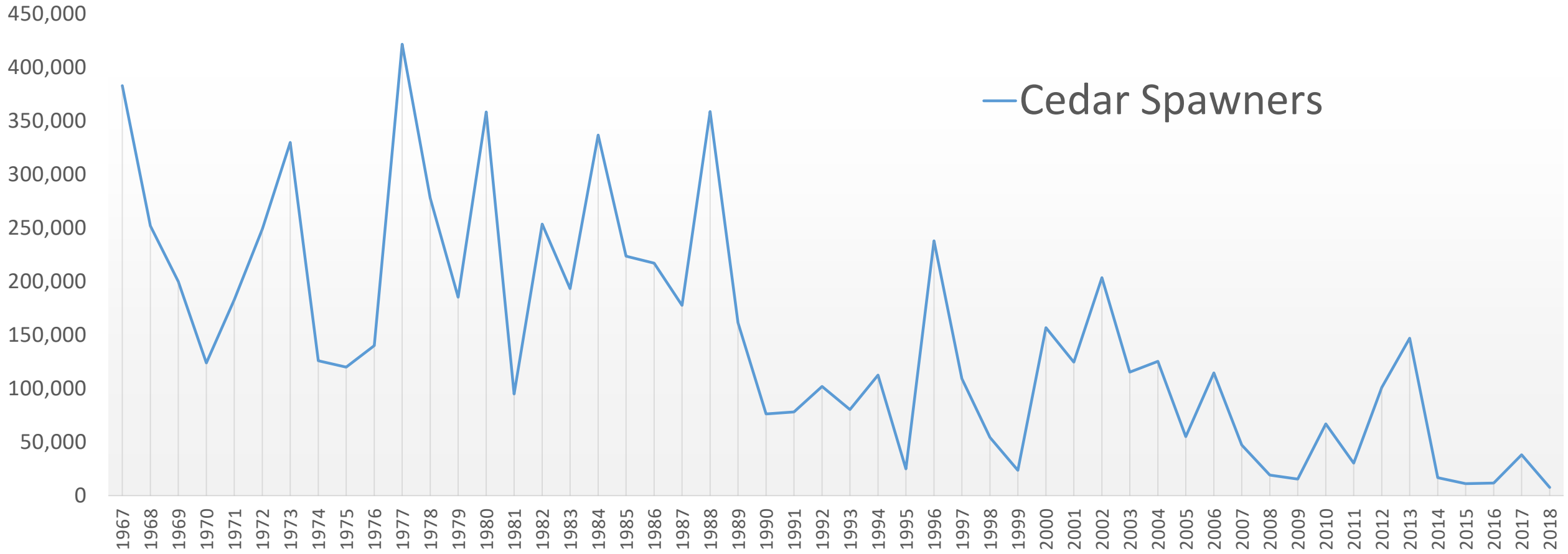
South Plant, Renton

West Point, Seattle

Operational by 1966
Discharge of sewage reduced to zero by 1968.

The lake's transparency, as low as 30 inches in 1964, reached 10 feet in 1968.

In later years the transparency would reach depths of 17 to 25 feet in the 1990s.


Cedar Spawners
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
1967
1968
1969
1970
1971
1972
1973
1974
1975
1976
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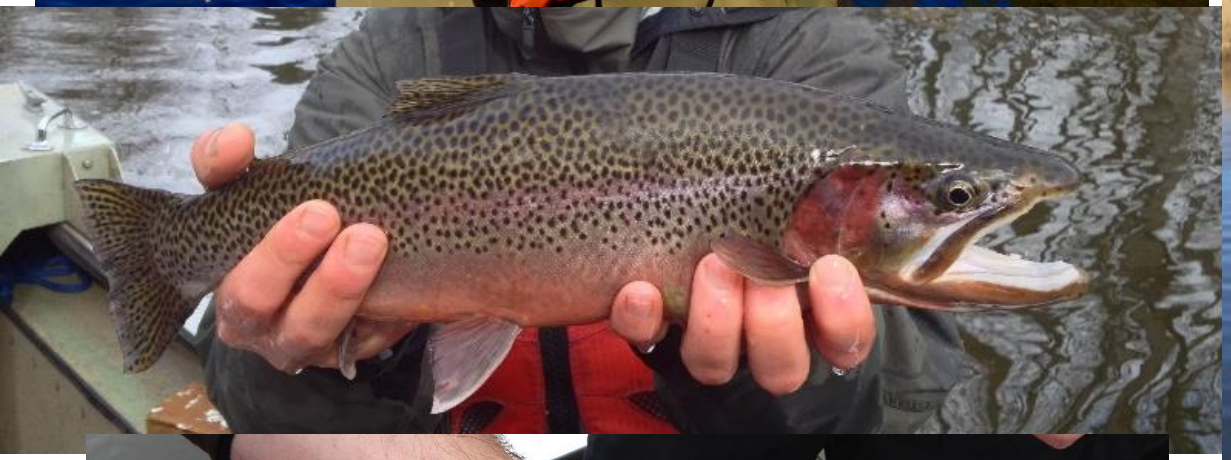
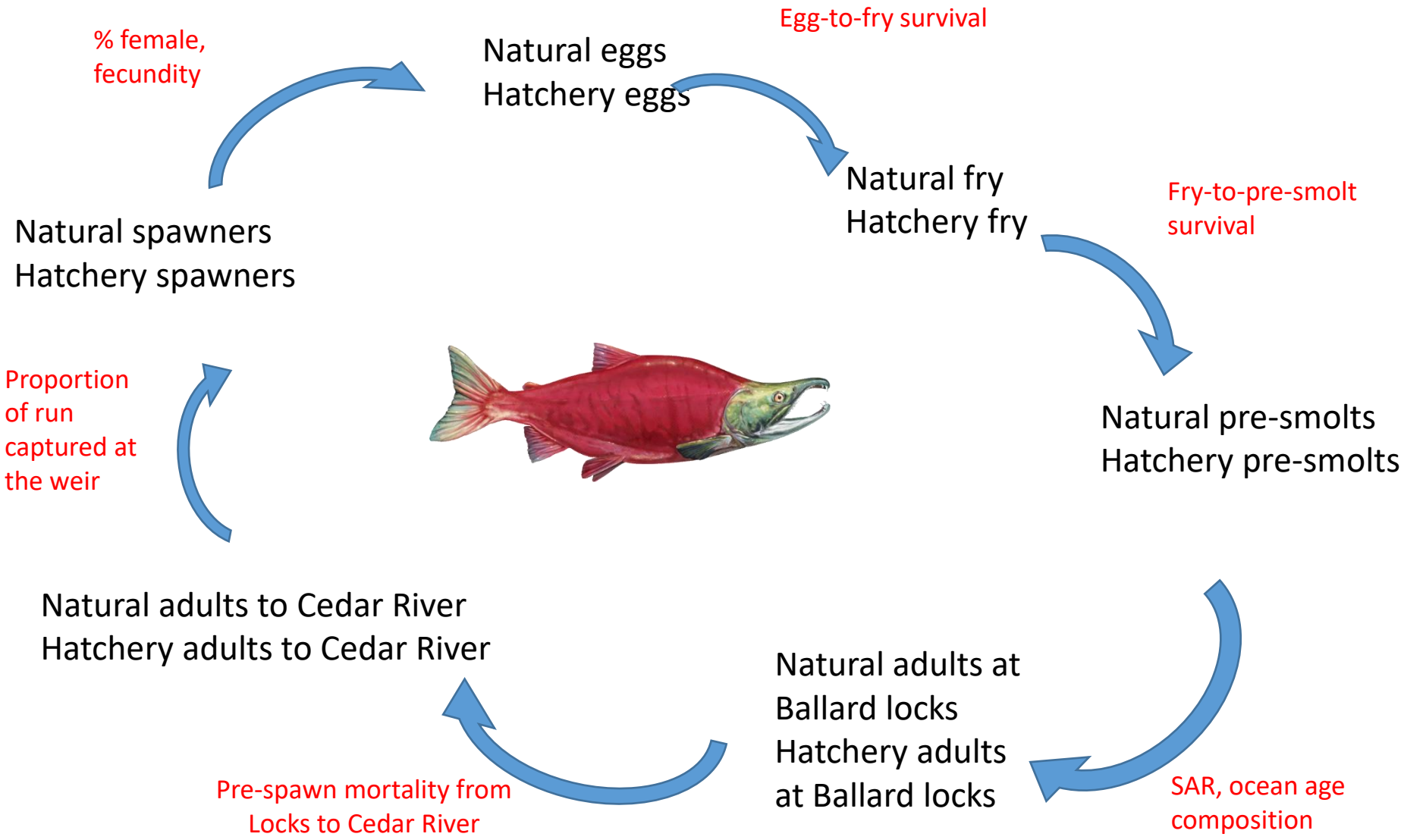
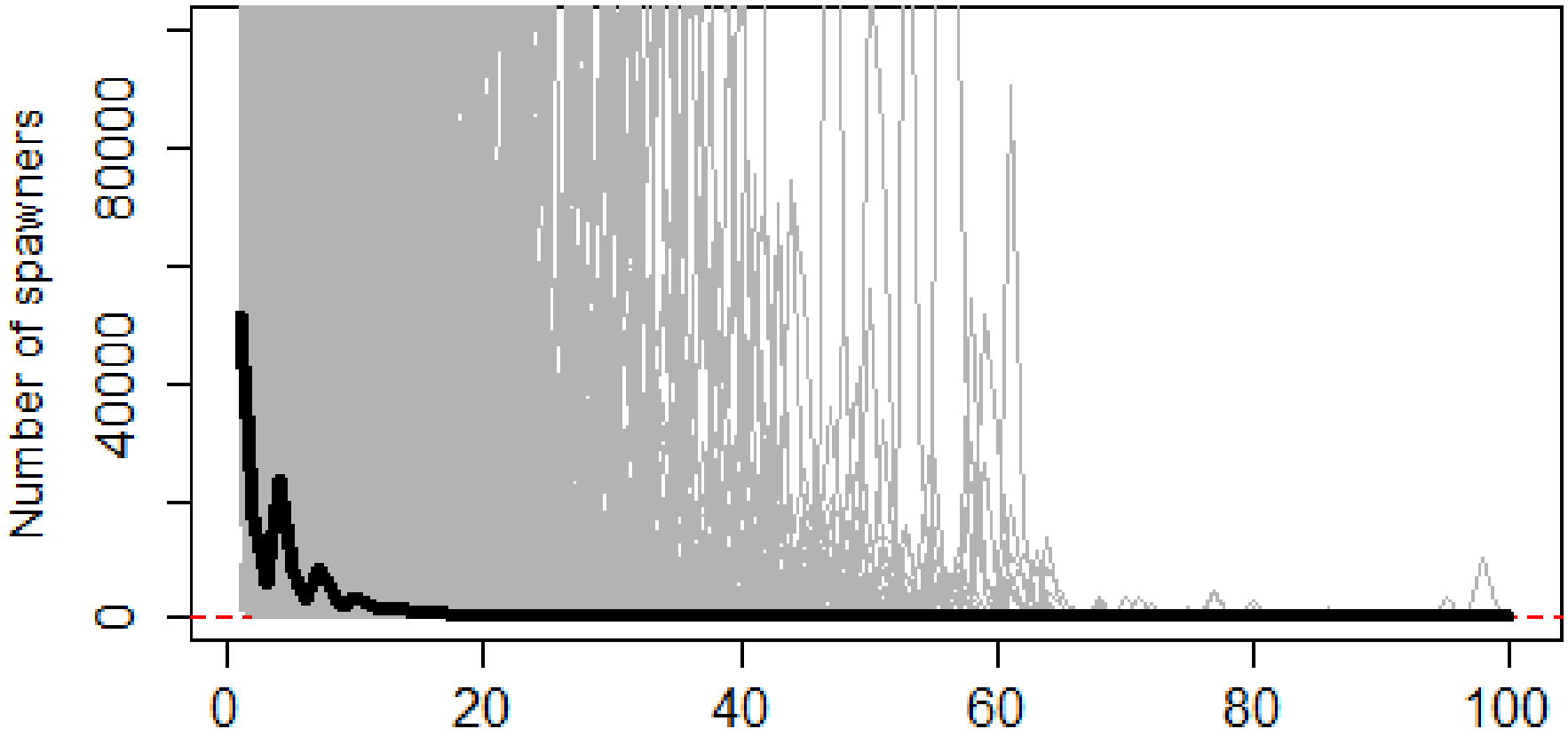
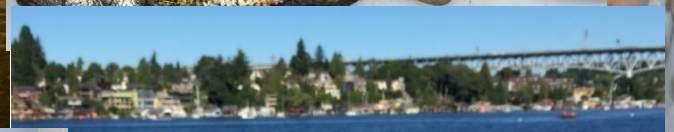


Cedar River Sockeye Life Cycle Model



Results—current conditions