An example report

The subtitle

Jane Doe, Eva Nováková and Matti Meikäläinen

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Citation

EE Holmes, 2022. Quarto Report Template. Northwest Fisheries Science Center.

1 Interior Columbia Snake River Chinook

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Clark (1993) vitae ante quis dui egestas fringilla ac vitae justo (Ansley and Davis 1981; Collins et al. 1996; Deuel and Clark 1968) . Pellentesque quis magna vel odio malesuada rutrum a volutpat nisl. Aliquam fermentum, urna eget tristique mattis, augue augue tristique ipsum, eget finibus nunc eros non nisi. Phasellus mattis hendrerit sapien, quis accumsan dui pretium eget. Nunc eleifend laoreet urna a luctus. Nulla vel sapien in nulla gravida tempus sit amet a metus. Vivamus porta condimentum tempus. Maecenas rhoncus elit id ultricies scelerisque. In gravida urna in ligula fringilla euismod. Curabitur efficitur porta libero ac fermentum. Cras fringilla et libero at posuere. Curabitur sodales dapibus elit a convallis.

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1.1 General location

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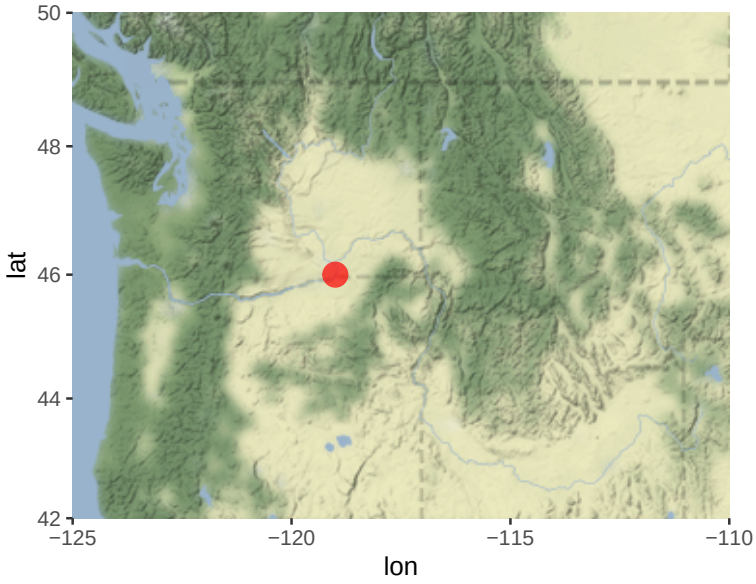

Figure 1.1: Interior Columbia Snake River Chinook. Map of the general location of the ESU.

1.2 Recent trends

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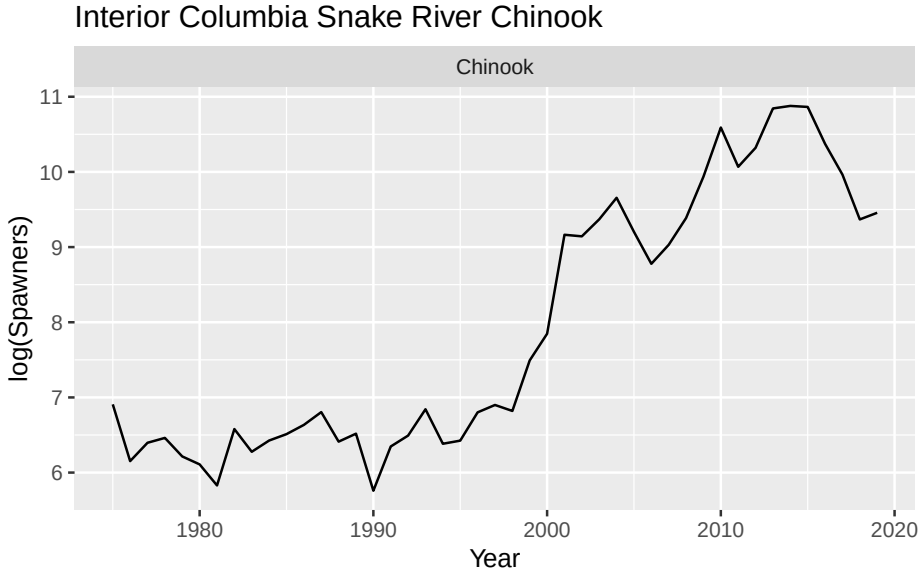

Figure 1.2: Interior Columbia Snake River Chinook. Log spawner count trends.

1.3 Population raw data

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1.3.1 Chinook

Table 1.1: Spawners and fracwild from Chinook (NMFS_POPID 56) for 2000 to 2019.

Year	Spawners	Fracwild
2000	2558	0.449
2001	9545	0.541
2002	9347	0.226
2003	11724	0.278
2004	15609	0.390
2005	9924	0.462
2006	6485	0.600
2007	8354	0.337
2008	11925	0.251
2009	20685	0.207
2010	39764	0.185
2011	23580	0.342
2012	30363	0.373
2013	51239	0.399
2014	52989	0.248
2015	52285	0.295
2016	31993	0.270
2017	21248	0.289
2018	11705	0.420
2019	12790	0.390

Note:
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** data file:
ICSRFchinook.csv mod date:
Wed Aug 10 17:57:25 2022
-0600
* These spawner counts are
from river redd surveys.

2 Upper Columbia Chinook

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2.1 General location

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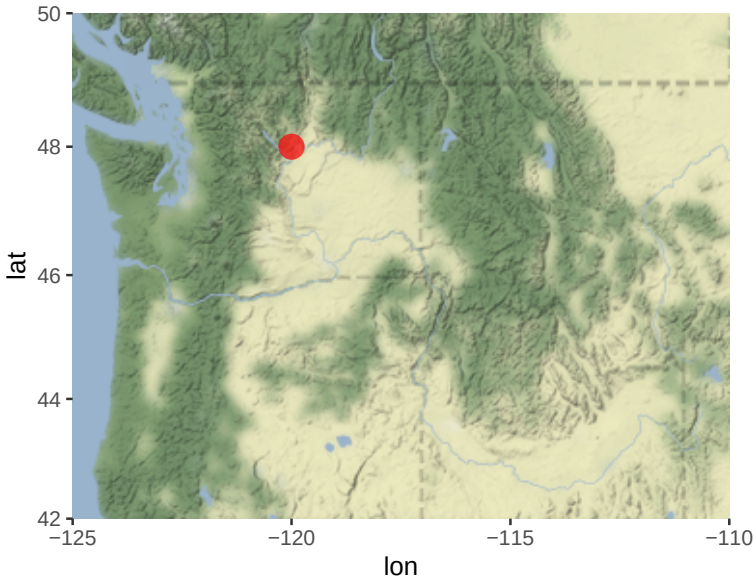

Figure 2.1: Upper Columbia Chinook. Map of the general location of the ESU.

2.2 Recent trends

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2.3 Population raw data

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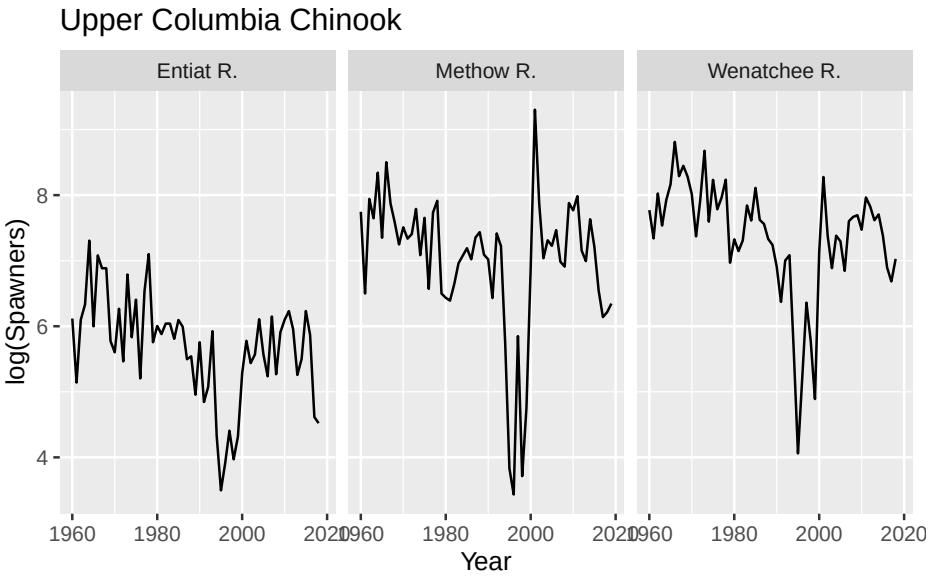

Figure 2.2: Upper Columbia Chinook. Log spawner count trends.

2.3.1 Wenatchee R.

Table 2.1: Spawners and fracwild from Wenatchee R. (NMFS_POPID 102) for 2000 to 2018.

Year	Spawners	Fracwild
2000	1250	0.39
2001	3930	0.25
2002	1595	0.45
2003	978	0.39
2004	1605	0.63
2005	1473	0.21
2006	939	0.33
2007	2005	0.19
2008	2139	0.17
2009	2195	0.27
2010	1759	0.31
2011	2876	0.40
2012	2511	0.37
2013	2033	0.34
2014	2219	0.57
2015	1605	0.41
2016	985	0.64
2017	799	0.43
2018	1127	0.24

Note:
kable
** data file: ICUCchinook.csv mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

2.3.2 Entiat R.

Table 2.2: Spawners and fracwild from Entiat R. (NMFS_POPID 100) for 2000 to 2018.

Year	Spawners	Fracwild
2000	197	0.37
2001	323	0.70
2002	230	0.66
2003	262	0.76
2004	449	0.32
2005	263	0.49
2006	188	0.42
2007	468	0.44
2008	194	0.49
2009	368	0.49
2010	445	0.75
2011	508	0.75
2012	385	0.66
2013	192	0.79
2014	245	0.92
2015	509	0.82
2016	353	0.84
2017	101	0.62
2018	92	0.50

Note:
kable
** data file: ICUCchinook.csv mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

2.3.3 Methow R.

Table 2.3: Spawners and fracwild from Methow R. (NMFS_POPID 101) for 2000 to 2019.

Year	Spawners	Fracwild
2000	979	0.12
2001	10971	0.17
2002	2636	0.13
2003	1138	0.05
2004	1497	0.33
2005	1376	0.38
2006	1748	0.19
2007	1079	0.25
2008	1002	0.30
2009	2641	0.21
2010	2364	0.25
2011	2935	0.33
2012	1280	0.20
2013	1089	0.22
2014	2063	0.25
2015	1353	0.29
2016	697	0.46
2017	464	0.38
2018	500	0.53
2019	570	0.20

Note:
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** data file: ICUCchinook.csv mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3 Lower Columbia Chinook

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3.1 General location

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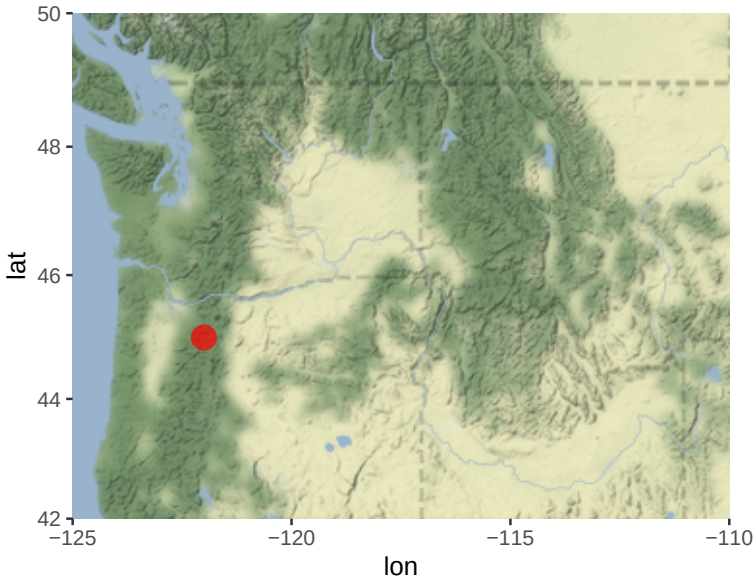

Figure 3.1: Lower Columbia Chinook. Map of the general location of the ESU.

3.2 Recent trends

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3.3 Population raw data

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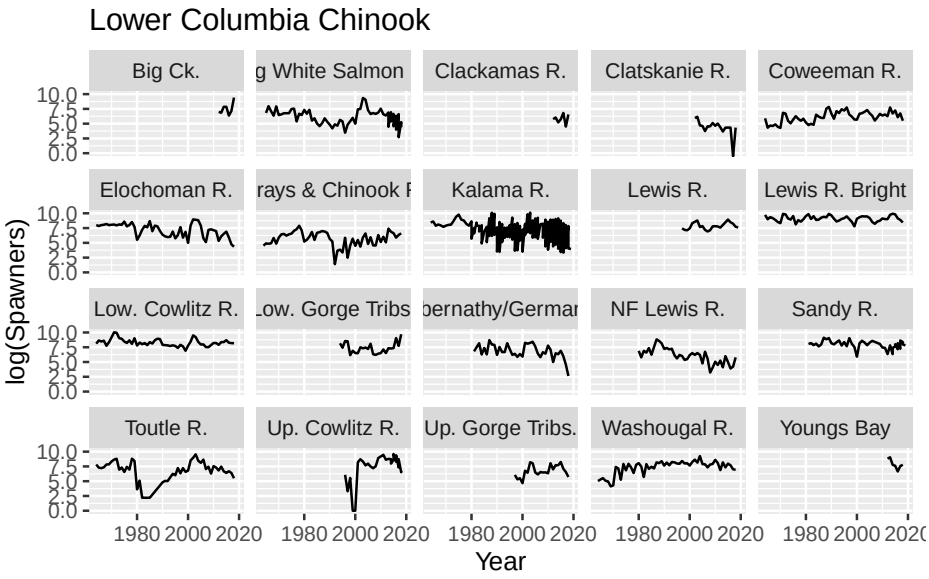

Figure 3.2: Lower Columbia Chinook. Log spawner count trends.

3.3.1 Grays & Chinook R.

Table 3.1: Spawners and fracwild from Grays & Chinook R. (NMFS_-POPID 8) for 2000 to 2018.

Year	Spawners	Fracwild
2000	89	-99.000
2001	241	-99.000
2002	78	-99.000
2003	373	-99.000
2004	726	-99.000
2005	122	-99.000
2006	383	-99.000
2007	96	-99.000
2008	95	0.347
2009	555	0.378
2010	170	0.486
2011	416	0.149
2012	160	0.219
2013	1644	0.055
2014	969	0.191
2015	762	0.289
2016	356	0.226
2017	565	0.523
2018	734	0.702

Note:
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** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3.3.2 Youngs Bay

Table 3.2: Spawners and fracwild from Youngs Bay (NMFS_POPID 33) for 2012 to 2018.

Year	Spawners	Fracwild
2012	6686	0.025
2013	8485	0.048
2014	2345	0.051
2015	2026	0.189
2016	768	0.243
2017	1927	0.097
2018	2383	0.014

Note:
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** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3.3.3 Big Ck.

Table 3.3: Spawners and fracwild from Big Ck. (NMFS_POPID 1) for 2012 to 2018.

Year	Spawners	Fracwild
2012	1096	0.050
2013	946	0.000
2014	2583	0.016
2015	2586	0.000
2016	582	0.077
2017	1279	0.000
2018	12301	0.009

Note:
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** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3.3.4 Elochoman R.

Table 3.4: Spawners and fracwild from Elochoman R. (NMFS_POPID 7) for 2000 to 2018.

Year	Spawners	Fracwild
2000	146	-99.000
2001	2806	-99.000
2002	7893	-99.000
2003	7348	-99.000
2004	6880	-99.000
2005	2699	-99.000
2006	324	-99.000
2007	168	-99.000
2008	1320	-99.000
2009	1467	-99.000
2010	1260	0.108
2011	1083	0.058
2012	206	0.301
2013	448	0.178
2014	680	0.220
2015	989	0.237
2016	368	0.249
2017	114	0.677
2018	77	0.643

Note:
kable
** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3.3.5 Clatskanie R.

Table 3.5: Spawners and fracwild from Clatskanie R. (NMFS_POPID 5) for 2002 to 2018.

Year	Spawners	Fracwild
2002	389	0.10
2003	475	0.10
2004	110	0.10
2005	101	0.10
2006	42	0.10
2007	94	0.10
2008	94	0.10
2009	167	0.56
2010	103	0.12
2011	152	0.08
2012	80	0.10
2013	39	0.08
2014	76	0.09
2015	76	0.09
2016	76	0.06
2017	0	-99.00
2018	76	0.01

Note:
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** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3.3.6 Mill/Abernathy/Germany Ck.

Table 3.6: Spawners and fracwild from Mill/Abernathy/Germany Ck. (NMFS_POPID 17) for 2000 to 2018.

Year	Spawners	Fracwild
2000	370	-99.000
2001	3860	-99.000
2002	3299	-99.000
2003	3792	-99.000
2004	4611	-99.000
2005	2066	-99.000
2006	622	-99.000
2007	335	-99.000
2008	780	-99.000
2009	604	-99.000
2010	2410	0.065
2011	1192	0.079
2012	147	0.143
2013	657	0.194
2014	554	0.062
2015	989	0.081
2016	397	0.219
2017	95	0.174
2018	14	0.394

Note:
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** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3.3.7 Low. Cowlitz R.

Table 3.7: Spawners and fracwild from Low. Cowlitz R. (NMFS_POPID 15) for 2000 to 2018.

Year	Spawners	Fracwild
2000	2363	-99.000
2001	4652	-99.000
2002	13514	-99.000
2003	10048	-99.000
2004	4466	-99.000
2005	2870	-99.000
2006	2944	-99.000
2007	1847	-99.000
2008	1828	-99.000
2009	2602	-99.000
2010	3734	0.683
2011	3685	0.745
2012	2725	0.570
2013	4320	0.805
2014	4347	0.672
2015	5981	0.700
2016	3885	0.741
2017	3630	0.806
2018	3553	0.845

Note:
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** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3.3.8 Coweeman R.

Table 3.8: Spawners and fracwild from Coweeman R. (NMFS_POPID 6) for 2000 to 2018.

Year	Spawners	Fracwild
2000	290	-99.000
2001	802	-99.000
2002	877	-99.000
2003	1106	-99.000
2004	1503	-99.000
2005	853	-99.000
2006	566	-99.000
2007	251	-99.000
2008	424	-99.000
2009	783	-99.000
2010	584	0.707
2011	707	0.881
2012	526	0.882
2013	2322	0.675
2014	830	0.957
2015	1391	0.977
2016	439	0.936
2017	841	0.857
2018	244	0.884

Note:
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** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3.3.9 Toutle R.

Table 3.9: Spawners and fracwild from Toutle R. (NMFS_POPID 25) for 2000 to 2018.

Year	Spawners	Fracwild
2000	879	-99.000
2001	4971	-99.000
2002	7896	-99.000
2003	13943	-99.000
2004	4711	-99.000
2005	3303	-99.000
2006	5752	-99.000
2007	1149	-99.000
2008	1725	-99.000
2009	539	-99.000
2010	1917	0.119
2011	1498	0.132
2012	907	0.259
2013	1754	0.521
2014	783	0.514
2015	598	0.632
2016	803	0.461
2017	594	0.529
2018	244	0.571

Note:
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** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3.3.10 Up. Cowlitz R.

Table 3.10: Spawners and fracwild from Up. Cowlitz R. (NMFS_POPID 27) for 2000 to 2018.

Year	Spawners	Fracwild
2000	1	-99.000
2001	3646	-99.000
2002	6113	-99.000
2003	4165	-99.000
2004	2145	-99.000
2005	2901	-99.000
2006	1782	-99.000
2007	1325	-99.000
2008	1845	-99.000
2009	7491	-99.000
2010	9808	0.215
2011	12914	0.330
2012	5564	0.350
2013	6488	0.505
2014	6231	0.363
2015	5647	0.598
2016	3959	0.774
2017	1520	0.983
2018	674	0.923
2014	2915	0.078
2015	14981	0.012
2016	11946	0.017
2017	6260	0.024
2018	779	0.198

Note:
kable
** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3.3.11 Kalama R.

Table 3.11: Spawners and fracwild from Kalama R. (NMFS_POPID 11) for 2000 to 2019.

Year	Spawners	Fracwild
2000	1420	-99.000
2001	3613	-99.000
2002	18809	-99.000
2003	24710	-99.000
2004	6612	-99.000
2005	9168	-99.000
2006	10386	-99.000
2007	3296	-99.000
2008	3734	-99.000
2009	7546	-99.000
2010	5315	0.112
2011	7591	0.056
2012	7477	0.039
2013	8487	0.096
2014	9451	0.081
2015	6423	0.451
2016	4226	0.602
2017	3041	0.570
2018	2548	0.647
2000	33	-99.000
2001	555	-99.000
2002	886	-99.000
2003	756	-99.000
2004	352	-99.000
2005	380	-99.000
2006	292	-99.000
2007	3469	0.011
2008	352	0.168
2009	80	1.000
2010	46	1.000
2011	172	1.000
2012	81	1.000
2013	107	1.000
2014	55	1.000
2015	31	1.000
2016	28	1.000
2017	60	1.000
2018	57	1.000
2019	52	1.000

Note:

3.3.12 Lewis R.

Table 3.12: Spawners and fracwild from Lewis R. (NMFS_POPID 14) for 2000 to 2019.

Year	Spawners	Fracwild
2000	1689	-99.000
2001	4132	-99.000
2002	5224	-99.000
2003	6518	-99.000
2004	2171	-99.000
2005	2536	-99.000
2006	1332	-99.000
2007	1012	-99.000
2008	1256	-99.000
2009	2437	-99.000
2010	2490	0.640
2011	2364	0.707
2012	1950	0.677
2015	7653	0.453
2016	4854	0.456
2017	3781	0.527
2018	2243	0.633
2019	2020	0.735

Note:
kable
** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3.3.13 Sandy R.

Table 3.13: Spawners and fracwild from Sandy R. (NMFS_POPID 20) for 2000 to 2019.

Year	Spawners	Fracwild
2009	3128	-99.000
2010	1713	-99.000
2011	1635	-99.000
2012	570	-99.000
2013	2489	-99.000
2014	565	-99.000
2015	2006	-99.000
2016	1281	-99.000
2017	1403	-99.000
2018	4347	-99.000
2019	2449	-99.000
2000	363	0.237
2001	3510	0.237
2002	5463	0.237
2003	3993	0.237
2004	2524	0.237
2005	3998	0.237
2006	5359	0.237
2013	2413	0.907
2014	1658	0.871
2015	3023	0.885
2016	3615	0.952
2017	5706	0.915
2018	2900	0.913

Note:
kable
** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3.3.14 Clackamas R.

Table 3.14: Spawners and fracwild from Clackamas R. (NMFS_POPID 4) for 2012 to 2018.

Year	Spawners	Fracwild
2012	321	0.187
2013	422	0.924
2014	183	0.694
2015	308	0.623
2016	910	0.781
2017	90	0.378
2018	709	0.949

Note:
kable
** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3.3.15 Washougal R.

Table 3.15: Spawners and fracwild from Washougal R. (NMFS_POPID 30) for 2000 to 2018.

Year	Spawners	Fracwild
2000	2078	-99.000
2001	3836	-99.000
2002	5725	-99.000
2003	3440	-99.000
2004	10404	-99.000
2005	2671	-99.000
2006	2600	-99.000
2007	1528	-99.000
2008	2491	-99.000
2009	2741	-99.000
2010	5530	0.107
2011	3224	0.146
2012	965	0.262
2013	3612	0.331
2014	1529	0.653
2015	2925	0.456
2016	2198	0.400
2017	1112	0.592
2018	1019	0.886

Note:
kable
** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3.3.16 Lewis R. Bright

Table 3.16: Spawners and fracwild from Lewis R. Bright (NMFS_POPID 13) for 2000 to 2018.

Year	Spawners	Fracwild
2000	8741	-99
2001	11274	-99
2002	13293	-99
2003	12912	-99
2004	12928	-99
2005	9775	-99
2006	5066	-99
2007	3708	-99
2008	5485	-99
2009	6283	-99
2010	9294	1
2011	8205	1
2012	8143	1
2013	17022	1
2014	20489	1
2015	18635	1
2016	9311	1
2017	7149	1
2018	4671	1

Note:
kable
** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3.3.17 NF Lewis R.

Table 3.17: Spawners and fracwild from NF Lewis R. (NMFS_POPID 18) for 2000 to 2018.

Year	Spawners	Fracwild
2000	473	-99
2001	678	-99
2002	493	-99
2003	679	-99
2004	494	-99
2005	116	-99
2006	847	-99
2007	264	-99
2008	25	-99
2009	58	-99
2010	157	-99
2011	90	-99
2012	190	-99
2013	60	-99
2014	403	-99
2015	147	-99
2016	49	-99
2017	68	-99
2018	326	-99

Note:
kable
** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3.3.18 Low. Gorge Tribs.

Table 3.18: Spawners and fracwild from Low. Gorge Tribs. (NMFS_-POPID 16) for 2000 to 2018.

Year	Spawners	Fracwild
2000	681	-99.000
2001	653	-99.000
2002	1796	-99.000
2003	1503	-99.000
2004	1724	-99.000
2005	1346	-99.000
2006	3282	-99.000
2007	552	-99.000
2008	497	-99.000
2009	609	-99.000
2010	670	0.954
2011	1246	0.948
2012	671	0.941
2013	1554	0.782
2014	1451	0.820
2015	1569	0.921
2016	8514	0.968
2017	2268	0.971
2018	16221	0.988

Note:
kable
** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3.3.19 Up. Gorge Tribs.

Table 3.19: Spawners and fracwild from Up. Gorge Tribs. (NMFS_-POPID 29) for 2000 to 2018.

Year	Spawners	Fracwild
2000	105	-99.000
2001	868	-99.000
2002	621	-99.000
2003	3670	-99.000
2004	3099	-99.000
2005	656	-99.000
2006	466	-99.000
2007	701	-99.000
2008	651	-99.000
2009	661	-99.000
2010	565	0.781
2011	3084	0.369
2012	1090	0.309
2013	2239	0.272
2014	2191	0.246
2015	3826	0.320
2016	1231	0.442
2017	697	0.826
2018	303	0.716

Note:
kable
** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

3.3.20 Big White Salmon R.

Table 3.20: Spawners and fracwild from Big White Salmon R. (NMFS_-POPID 31) for 2000 to 2018.

Year	Spawners	Fracwild
2000	147	-99.000
2001	1668	-99.000
2002	1787	-99.000
2003	11480	-99.000
2004	8691	-99.000
2005	1448	-99.000
2006	755	-99.000
2007	898	-99.000
2008	770	-99.000
2009	964	-99.000
2010	1887	0.725
2011	723	0.885
2012	593	0.936
2013	984	0.658
2014	1034	0.775
2015	773	0.485
2016	565	0.680
2017	747	0.538
2018	194	0.568
2013	88	0.170
2014	217	0.097
2015	94	0.160
2016	54	0.111
2017	15	0.333
2018	82	0.110

Note:
kable
** data file: LCchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

4 Upper Willamette Chinook

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4.1 General location

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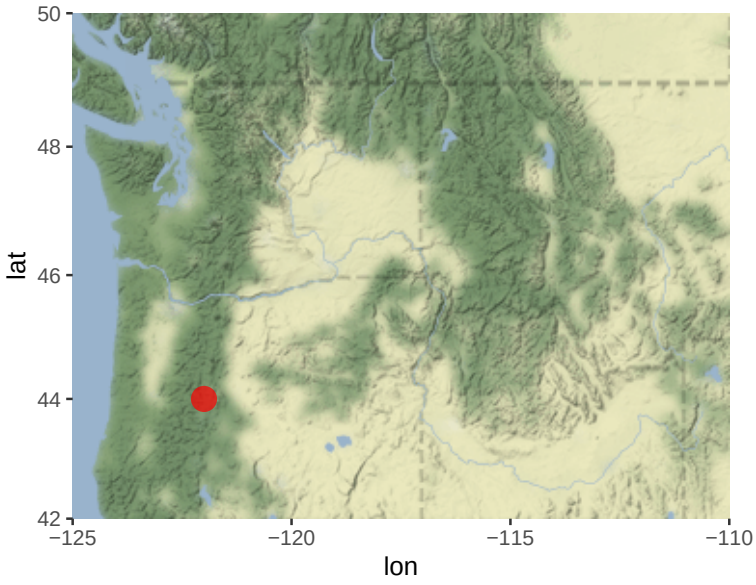

Figure 4.1: Upper Willamette Chinook. Map of the general location of the ESU.

4.2 Recent trends

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4.3 Population raw data

Morbi iaculis eget augue eget facilisis. Etiam non orci dignissim, efficitur purus viverra, pellentesque neque. Aliquam ornare, magna ut dictum mollis, nunc lorem iaculis nibh, eu consequat lectus urna euismod tortor. Etiam ut felis nisl. Nunc quis euismod felis. Vestibulum gravida nisi mi, quis mollis velit ullamcorper non. Aliquam tempus fringilla bibendum. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Fusce viverra nulla elementum libero mollis, quis cursus velit sagittis.

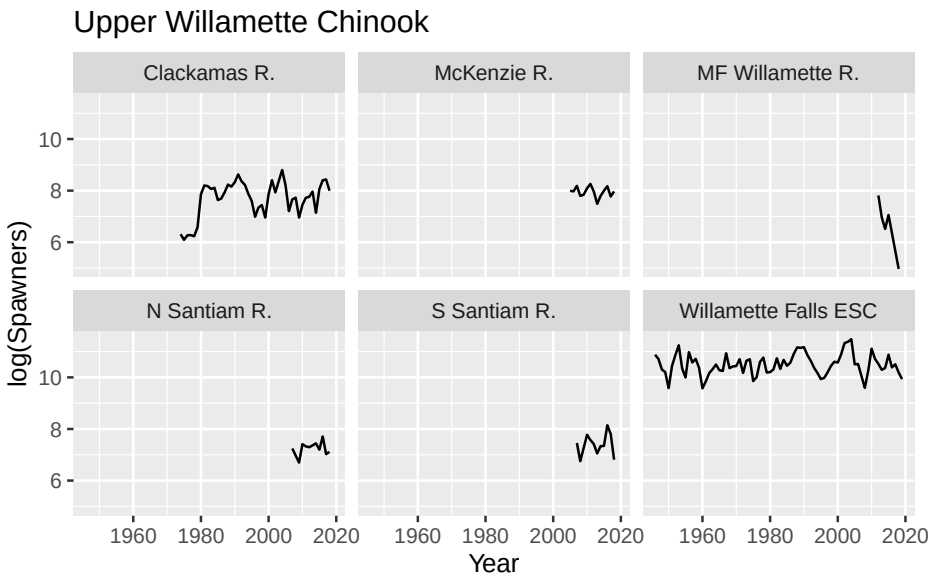

Figure 4.2: Upper Willamette Chinook. Log spawner count trends.

4.3.1 Clackamas R.

Table 4.1: Spawners and fracwild from Clackamas R. (NMFS_POPID 104) for 2000 to 2018.

Year	Spawners	Fracwild
2000	2596	0.326
2001	4474	0.326
2002	2783	0.693
2003	4313	0.784
2004	6636	0.783
2005	3695	0.621
2006	1345	0.761
2007	2122	0.712
2008	2272	0.918
2009	1049	0.922
2010	1719	0.933
2011	2263	0.899
2012	2346	0.945
2013	2869	0.955
2014	1261	0.976
2015	3161	0.962
2016	4462	0.974
2017	4591	0.985
2018	2965	0.966

Note:
kable
** data file: UWchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

4.3.2 Willamette Falls ESC

Table 4.2: Spawners and fracwild from Willamette Falls ESC (NMFS_-POPID 1052) for 2000 to 2019.

Year	Spawners	Fracwild
2000	39073	-99.00
2001	53973	-99.00
2002	83136	-99.00
2003	87749	-99.00
2004	96776	-99.00
2005	36633	-99.00
2006	37041	-99.00
2007	23134	-99.00
2008	14672	-99.00
2009	28529	-99.00
2010	67051	-99.00
2011	45147	-99.00
2012	37213	-99.00
2013	29561	-99.00
2014	31669	-99.00
2015	53088	0.18
2016	32478	0.22
2017	36628	0.17
2018	26542	0.20
2019	20617	0.34

Note:
kable
** data file: UWchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

4.3.3 N Santiam R.

Table 4.3: Spawners and fracwild from N Santiam R. (NMFS_POPID 108) for 2007 to 2018.

Year	Spawners	Fracwild
2007	1399	0.221
2009	809	0.443
2010	1656	0.176
2011	1521	0.363
2012	1470	0.242
2013	1578	0.223
2014	1707	0.303
2015	1338	0.271
2016	2228	0.187
2017	1125	0.375
2018	1226	0.202

Note:
kable
** data file: UWchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

4.3.4 S Santiam R.

Table 4.4: Spawners and fracwild from S Santiam R. (NMFS_POPID 109) for 2007 to 2018.

Year	Spawners	Fracwild
2007	1735	0.141
2008	855	0.378
2009	1418	0.644
2010	2378	0.158
2011	1943	0.389
2012	1662	0.327
2013	1155	0.546
2014	1533	0.579
2015	1544	0.407
2016	3443	0.145
2017	2458	0.104
2018	908	0.178

Note:
kable
** data file: UWchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

4.3.5 McKenzie R.

Table 4.5: Spawners and fracwild from McKenzie R. (NMFS_POPID 105) for 2005 to 2018.

Year	Spawners	Fracwild
2005	2967	0.720
2006	2894	0.708
2007	3585	0.715
2008	2432	0.571
2009	2540	0.470
2010	3266	0.387
2011	3871	0.649
2012	2885	0.613
2013	1786	0.673
2014	2415	0.434
2015	2973	0.562
2016	3539	0.482
2017	2377	0.630
2018	2889	0.622

Note:
kable
** data file: UWchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

4.3.6 MF Willamette R.

Table 4.6: Spawners and fracwild from MF Willamette R. (NMFS_-POPID 106) for 2012 to 2018.

Year	Spawners	Fracwild
2012	2472	0.068
2013	1058	0.051
2014	675	0.126
2015	1160	0.120
2018	143	0.021

Note:
kable
** data file: UWchinook.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

5 Interior Columbia Snake River Chinook steelhead

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5.1 General location

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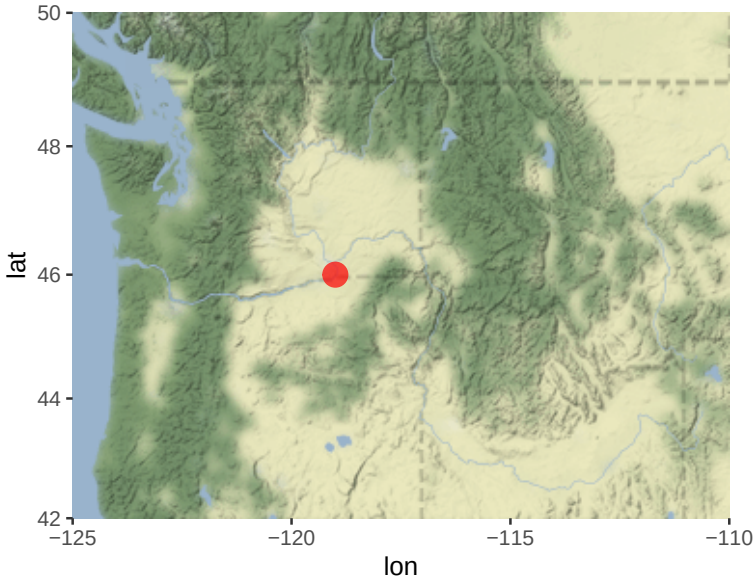

Figure 5.1: Interior Columbia Snake River Chinook steelhead. Map of the general location of the ESU.

5.2 Recent trends

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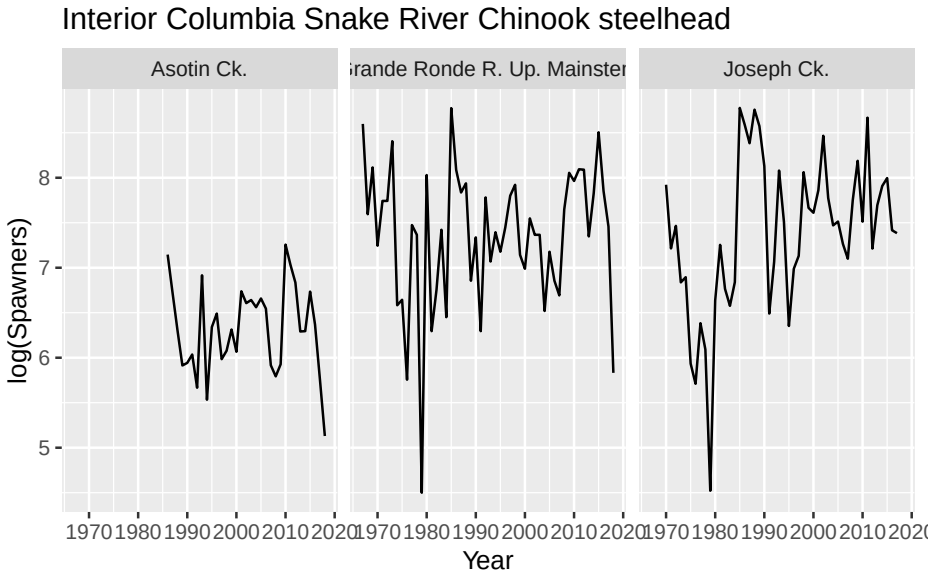

Figure 5.2: Interior Columbia Snake River Chinook steelhead. Log spawner count trends.

5.3 Population raw data

Morbi iaculis eget augue eget facilisis. Etiam non orci dignissim, efficitur purus viverra, pellentesque neque. Aliquam ornare, magna ut dictum mollis, nunc lorem iaculis nibh, eu consequat lectus urna euismod tortor. Etiam ut felis nisl. Nunc quis euismod felis. Vestibulum gravida nisi mi, quis mollis velit ullamcorper non. Aliquam tempus fringilla bibendum. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Fusce viverra nulla elementum libero mollis, quis cursus velit sagittis.

5.3.1 Asotin Ck.

Table 5.1: Spawners and fracwild from Asotin Ck. (NMFS_POPID 300) for 2000 to 2018.

Year	Spawners	Fracwild
2000	431	0.89
2001	844	0.90
2002	740	0.90
2003	766	0.90
2004	707	0.90
2005	779	0.94
2006	696	0.92
2007	371	0.83
2008	328	0.94
2009	375	0.97
2010	1418	1.00
2011	1132	1.00
2012	930	0.98
2013	540	1.00
2014	542	0.98
2015	841	1.00
2016	583	1.00
2017	316	0.99
2018	169	0.99

Note:
kable
** data file: ICSRsthd.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

5.3.2 Joseph Ck.

Table 5.2: Spawners and fracwild from Joseph Ck. (NMFS_POPID 310) for 2000 to 2017.

Year	Spawners	Fracwild
2000	2020	1.00
2001	2596	1.00
2002	4752	1.00
2003	2381	1.00
2004	1756	1.00
2005	1832	1.00
2006	1428	1.00
2007	1212	1.00
2008	2322	1.00
2009	3598	1.00
2010	1831	1.00
2011	5810	0.97
2012	1357	0.96
2013	2197	0.98
2014	2720	0.97
2015	2969	0.98
2016	1663	0.96
2017	1610	0.97

Note:
kable
** data file: ICSRsthd.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

5.3.3 Grande Ronde R. Up. Mainstem

Table 5.3: Spawners and fracwild from Grande Ronde R. Up. Mainstem (NMFS_POPID 306) for 2000 to 2018.

Year	Spawners	Fracwild
2000	1084	0.76
2001	1898	0.89
2002	1581	0.92
2003	1581	1.00
2004	678	0.99
2005	1310	0.99
2006	949	0.99
2007	806	1.00
2008	2096	1.00
2009	3148	1.00
2010	2876	0.95
2011	3275	1.00
2012	3260	1.00
2013	1553	0.99
2014	2512	1.00
2015	4939	0.99
2016	2572	0.99
2017	1733	0.98
2018	341	1.00

Note:
kable
** data file: ICSRsthd.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

6 Upper Columbia steelhead

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6.1 General location

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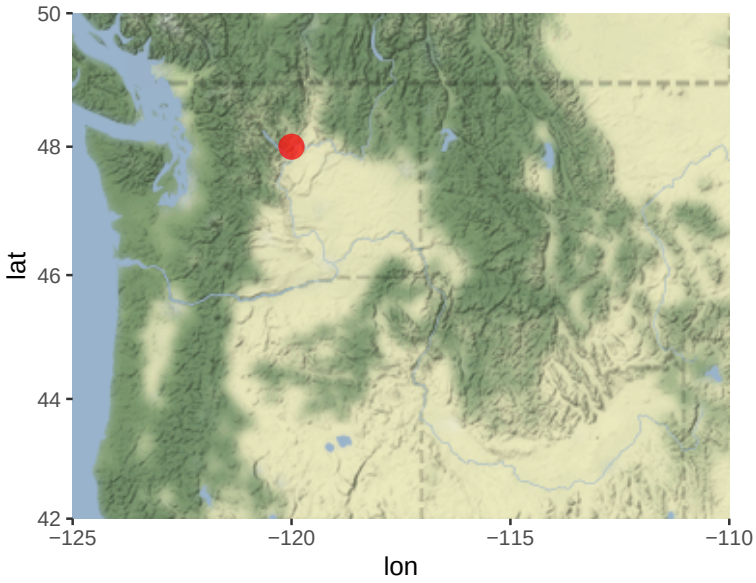

Figure 6.1: Upper Columbia steelhead. Map of the general location of the ESU.

6.2 Recent trends

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6.3 Population raw data

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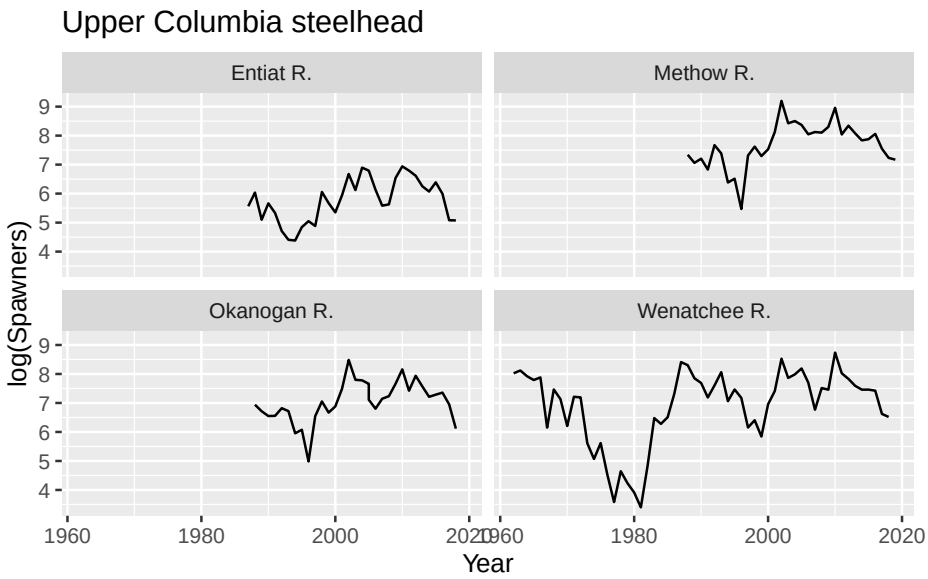

Figure 6.2: Upper Columbia steelhead. Log spawner count trends.

6.3.1 Wenatchee R.

Table 6.1: Spawners and fracwild from Wenatchee R. (NMFS_POPID 331) for 2000 to 2018.

Year	Spawners	Fracwild
2000	1049	0.34
2001	1656	0.43
2002	5051	0.39
2003	2598	0.33
2004	2940	0.22
2005	3608	0.23
2006	2214	0.41
2007	869	0.45
2008	1835	0.39
2009	1733	0.41
2010	6236	0.36
2011	3048	0.72
2012	2514	0.57
2013	1981	0.47
2014	1735	0.66
2015	1738	0.54
2016	1676	0.49
2017	752	0.49
2018	677	0.49

Note:
kable
** data file: ICUCsthd.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

6.3.2 Entiat R.

Table 6.2: Spawners and fracwild from Entiat R. (NMFS_POPID 328) for 2000 to 2018.

Year	Spawners	Fracwild
2000	211	0.24
2001	380	0.26
2002	794	0.34
2003	456	0.26
2004	988	0.10
2005	892	0.13
2006	461	0.28
2007	266	0.22
2008	278	0.44
2009	693	0.15
2010	1033	0.29
2011	892	0.33
2012	747	0.25
2013	519	0.25
2014	433	0.37
2015	595	0.39
2016	401	0.31
2017	161	0.31
2018	160	0.31

Note:
kable
** data file: ICUCsthd.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

6.3.3 Methow R.

Table 6.3: Spawners and fracwild from Methow R. (NMFS_POPID 329) for 2000 to 2019.

Year	Spawners	Fracwild
2000	1860	0.13
2001	3374	0.10
2002	9884	0.06
2003	4561	0.11
2004	4928	0.13
2005	4304	0.12
2006	3119	0.14
2007	3375	0.11
2008	3306	0.22
2009	4031	0.16
2010	7781	0.14
2011	3103	0.32
2012	4204	0.18
2013	3225	0.15
2014	2528	0.39
2015	2635	0.42
2016	3165	0.30
2017	1899	0.24
2018	1384	0.28
2019	1301	0.31

Note:
kable
** data file: ICUCsthd.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

6.3.4 Okanogan R.

Table 6.4: Spawners and fracwild from Okanogan R. (NMFS_POPID 330) for 2000 to 2018.

Year	Spawners	Fracwild
2000	973	0.07
2001	1786	0.06
2002	4842	0.03
2003	2436	0.06
2004	2391	0.08
2005	2123	0.07
2005	1226	0.12
2006	899	0.22
2007	1268	0.12
2008	1386	0.16
2009	2133	0.10
2010	3496	0.21
2011	1674	0.20
2012	2802	0.12
2013	1937	0.13
2014	1356	0.38
2015	1461	0.31
2016	1566	0.25
2017	1044	0.11
2018	453	0.27

Note:
kable
** data file: ICUCsthd.csv
mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

7 Lower Columbia steelhead

The is a new line. Clark (1993) vitae ante quis dui egestas fringilla ac vitae justo (Ansley and Davis 1981; Collins et al. 1996; Deuel and Clark 1968) . Pellentesque quis magna vel odio malesuada rutrum a volutpat nisl. Aliquam fermentum, urna eget tristique mattis, augue augue tristique ipsum, eget finibus nunc eros non nisi. Phasellus mattis hendrerit sapien, quis accumsan dui pretium eget. Nunc eleifend laoreet urna a luctus. Nulla vel sapien in nulla gravida tempus sit amet a metus. Vivamus porta condimentum tempus. Maecenas rhoncus elit id ultricies scelerisque. In gravida urna in ligula fringilla euismod. Curabitur efficitur porta libero ac fermentum. Cras fringilla et libero at posuere. Curabitur sodales dapibus elit a convallis.

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7.1 General location

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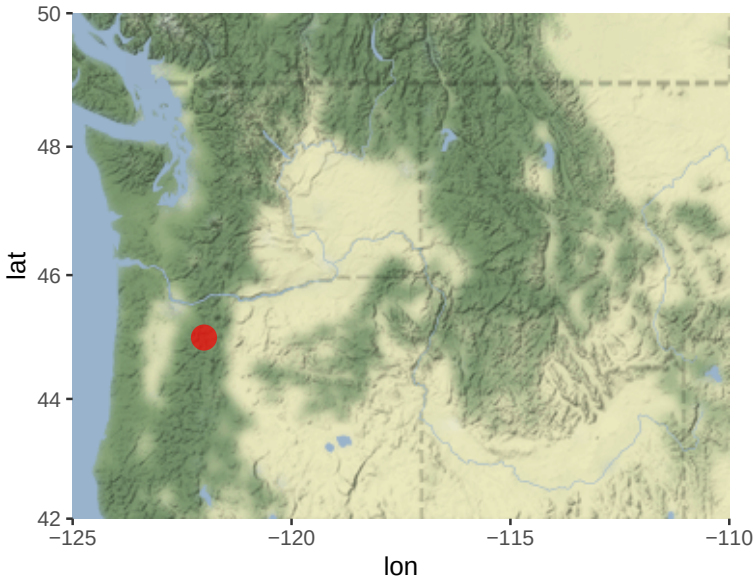

Figure 7.1: Lower Columbia steelhead. Map of the general location of the ESU.

7.2 Recent trends

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7.3 Population raw data

Morbi iaculis eget augue eget facilisis. Etiam non orci dignissim, efficitur purus viverra, pellentesque neque. Aliquam ornare, magna ut dictum mollis, nunc lorem iaculis nibh, eu consequat lectus urna euismod tortor. Etiam ut felis nisl. Nunc quis euismod felis. Vestibulum gravida nisi mi, quis mollis velit ullamcorper non. Aliquam tempus fringilla bibendum. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Fusce viverra nulla elementum libero mollis, quis cursus velit sagittis.

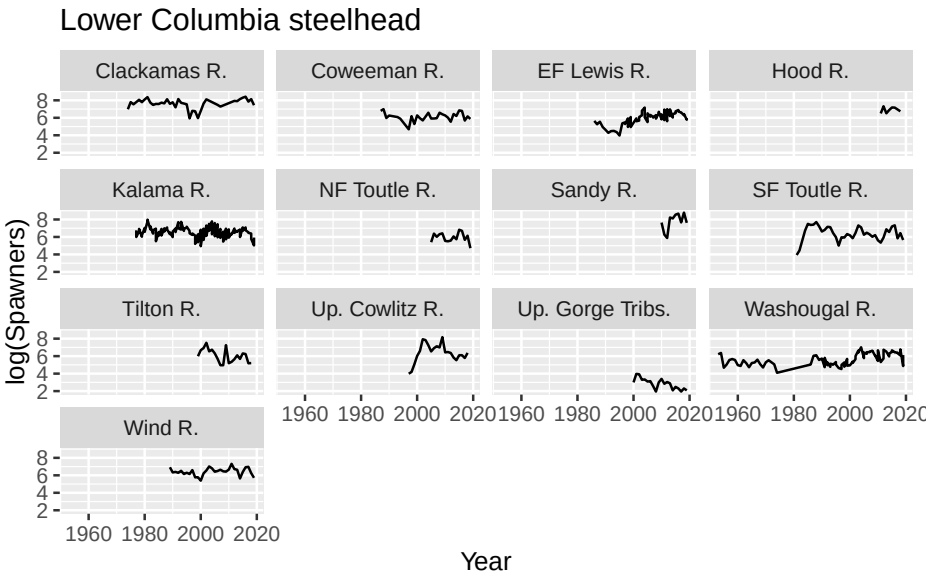

Figure 7.2: Lower Columbia steelhead. Log spawner count trends.

7.3.1 Coweeman R.

Table 7.1: Spawners and fracwild from Coweeman R. (NMFS_POPID 227) for 2000 to 2019.

Year	Spawners	Fracwild
2000	530	-99
2001	384	-99
2002	298	-99
2003	460	-99
2004	722	-99
2005	370	-99
2006	372	-99
2007	384	-99
2008	722	-99
2009	602	-99
2010	528	-99
2011	408	-99
2012	256	-99
2013	622	-99
2014	496	-99
2015	940	-99
2016	886	-99
2017	294	-99
2018	474	-99
2019	354	-99

Note:
kable
** data file: LCsthd.csv mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

7.3.2 NF Toutle R.

Table 7.2: Spawners and fracwild from NF Toutle R. (NMFS_POPID 238) for 2005 to 2019.

Year	Spawners	Fracwild
2005	222	-99
2006	592	-99
2007	410	-99
2008	554	-99
2009	610	-99
2010	256	-99
2011	246	-99
2012	266	-99
2013	430	-99
2014	310	-99
2015	922	-99
2016	816	-99
2017	290	-99
2018	466	-99
2019	112	-99

Note:
kable
** data file: LCsthd.csv mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

7.3.3 SF Toutle R.

Table 7.3: Spawners and fracwild from SF Toutle R. (NMFS_POPID 241) for 2000 to 2019.

Year	Spawners	Fracwild
2000	490	-99
2001	348	-99
2002	640	-99
2003	1510	-99
2004	1212	-99
2005	520	-99
2006	656	-99
2007	548	-99
2008	412	-99
2009	498	-99
2010	274	-99
2011	210	-99
2012	378	-99
2013	972	-99
2014	708	-99
2015	1340	-99
2016	1532	-99
2017	344	-99
2018	624	-99
2019	284	-99

Note:
kable
** data file: LCsthd.csv mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

7.3.4 Up. Cowlitz R.

Table 7.4: Spawners and fracwild from Up. Cowlitz R. (NMFS_POPID 243) for 2000 to 2018.

Year	Spawners	Fracwild
2000	412	-99.000
2001	729	-99.000
2002	2787	-99.000
2003	2532	-99.000
2004	1397	-99.000
2005	691	-99.000
2006	999	-99.000
2007	1253	-99.000
2008	1089	-99.000
2009	3556	-99.000
2010	622	-99.000
2011	646	-99.000
2012	580	1.000
2013	343	1.000
2014	253	0.095
2015	449	0.336
2016	450	0.267
2017	325	0.665
2018	586	0.683

Note:
kable
** data file: LCsthd.csv mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

7.3.5 Tilton R.

Table 7.5: Spawners and fracwild from Tilton R. (NMFS_POPID 242) for 2000 to 2018.

Year	Spawners	Fracwild
2000	797	-99.000
2001	1015	-99.000
2002	1855	-99.000
2003	695	-99.000
2004	846	-99.000
2005	555	-99.000
2006	299	-99.000
2007	143	-99.000
2008	142	-99.000
2009	1419	-99.000
2010	179	1.000
2011	209	1.000
2012	284	1.000
2013	445	1.000
2014	292	1.000
2015	549	0.661
2016	513	0.710
2017	178	0.871
2018	182	0.912

Note:
kable
** data file: LCsthd.csv mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

7.3.6 Kalama R.

Table 7.6: Spawners and fracwild from Kalama R. (NMFS_POPID 233) for 2000 to 2019.

Year	Spawners	Fracwild
2000	921	-99
2001	1042	-99
2002	1495	-99
2003	1815	-99
2004	2400	-99
2005	1982	-99
2006	1733	-99
2007	1011	-99
2008	742	-99
2009	1044	-99
2010	961	-99
2011	622	-99
2012	1061	-99
2013	811	-99
2014	948	-99
2015	1206	-99
2016	1203	-99
2017	686	-99
2018	594	-99
2019	153	-99
2000	140	-99
2001	286	-99
2002	454	-99
2003	817	-99
2004	549	-99
2005	435	-99
2006	387	-99
2007	361	-99
2008	237	-99
2009	308	-99
2010	370	-99
2011	534	-99
2012	646	-99
2013	738	-99
2014	400	-99
2015	814	-99
2016	868	-99
2017	647	-99
2018	321	-99
2019	377	-99

7.3.7 EF Lewis R.

Table 7.7: Spawners and fracwild from EF Lewis R. (NMFS_POPID 229) for 2000 to 2019.

Year	Spawners	Fracwild
2001	377	-99
2002	292	-99
2003	532	-99
2004	1298	-99
2005	246	-99
2006	458	-99
2007	448	-99
2008	548	-99
2009	688	-99
2010	336	-99
2011	308	-99
2012	272	-99
2013	488	-99
2014	414	-99
2015	678	-99
2016	984	-99
2017	746	-99
2018	538	-99
2019	322	-99
2000	229	-99
2001	271	-99
2002	440	-99
2003	910	-99
2004	425	-99
2005	673	-99
2006	560	-99
2007	412	-99
2008	365	-99
2009	800	-99
2010	600	-99
2011	1036	-99
2012	1084	-99
2013	1059	-99
2014	617	-99
2015	843	-99
2016	824	-99
2017	739	-99
2018	617	-99
2019	367	-99

Note:

7.3.8 Clackamas R.

Table 7.8: Spawners and fracwild from Clackamas R. (NMFS_POPID 226) for 2000 to 2019.

Year	Spawners	Fracwild
2000	879	0.848
2001	2048	0.727
2002	3330	0.698
2006	1763	0.660
2007	1450	0.833
2012	2790	0.980
2013	2700	0.899
2014	3421	0.995
2015	4024	0.929
2016	4509	0.919
2017	2558	0.989
2018	3428	0.884
2019	1702	0.881

Note:
kable
** data file: LCsthd.csv mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

7.3.9 Sandy R.

Table 7.9: Spawners and fracwild from Sandy R. (NMFS_POPID 240) for 2010 to 2019.

Year	Spawners	Fracwild
2010	2096	0.715
2011	527	1.000
2012	357	1.000
2013	3747	0.936
2014	3344	0.972
2015	5189	0.900
2016	5831	0.941
2017	2127	0.999
2018	6539	0.915
2019	2032	0.933

Note:
kable
** data file: LCsthd.csv mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

7.3.10 Washougal R.

Table 7.10: Spawners and fracwild from Washougal R. (NMFS_POPID 246) for 2000 to 2019.

Year	Spawners	Fracwild
2001	216	-99
2002	286	-99
2003	764	-99
2004	1114	-99
2005	320	-99
2006	524	-99
2007	632	-99
2008	732	-99
2009	418	-99
2010	232	-99
2011	204	-99
2012	306	-99
2013	678	-99
2014	388	-99
2015	648	-99
2016	636	-99
2017	602	-99
2018	438	-99
2019	130	-99
2000	140	-99
2001	184	-99
2002	404	-99
2003	607	-99
2005	608	-99
2006	636	-99
2007	681	-99
2008	755	-99
2009	433 412	-99
2010	787	-99
2012	842	-99
2014	544	-99
2015	783	-99
2016	624	-99
2017	567	-99
2018	876	-99
2019	456	-99

Note:
kable
** data file: LCsthd.csv mod

7.3.11 Up. Gorge Tribs.

Table 7.11: Spawners and fracwild from Up. Gorge Tribs. (NMFS_-POPID 244) for 2000 to 2019.

Year	Spawners	Fracwild
2000	20	-99
2001	53	-99
2002	51	-99
2003	27	-99
2004	28	-99
2005	22	-99
2006	23	-99
2007	13	-99
2008	7	-99
2009	20	-99
2010	30	-99
2011	17	-99
2012	21	-99
2013	18	-99
2014	8	-99
2015	12	-99
2016	10	-99
2017	7	-99
2018	10	-99
2019	8	-99

Note:
kable
** data file: LCsthd.csv mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

7.3.12 Hood R.

Table 7.12: Spawners and fracwild from Hood R. (NMFS_POPID 231) for 2011 to 2018.

Year	Spawners	Fracwild
2011	664	0.408
2012	1506	0.434
2013	675	0.441
2014	974	0.182
2015	1316	0.937
2016	1293	0.478
2017	1047	0.490
2018	846	0.539

Note:
kable
** data file: LCsthd.csv mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

7.3.13 Wind R.

Table 7.13: Spawners and fracwild from Wind R. (NMFS_POPID 247) for 2000 to 2019.

Year	Spawners	Fracwild
2000	218	1.000
2001	503	0.966
2002	700	0.986
2003	1113	1.000
2004	898	0.994
2005	608	0.987
2006	661	0.995
2007	766	1.000
2008	638	1.000
2009	614	0.985
2010	772	0.992
2011	1501	0.997
2012	819	0.995
2013	763	0.996
2014	281	1.000
2015	593	0.973
2016	1018	0.995
2017	1064	0.995
2018	516	1.000
2019	303	1.000

Note:
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* These spawner counts are from river redd surveys.

8 Upper Willamette steelhead

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8.1 General location

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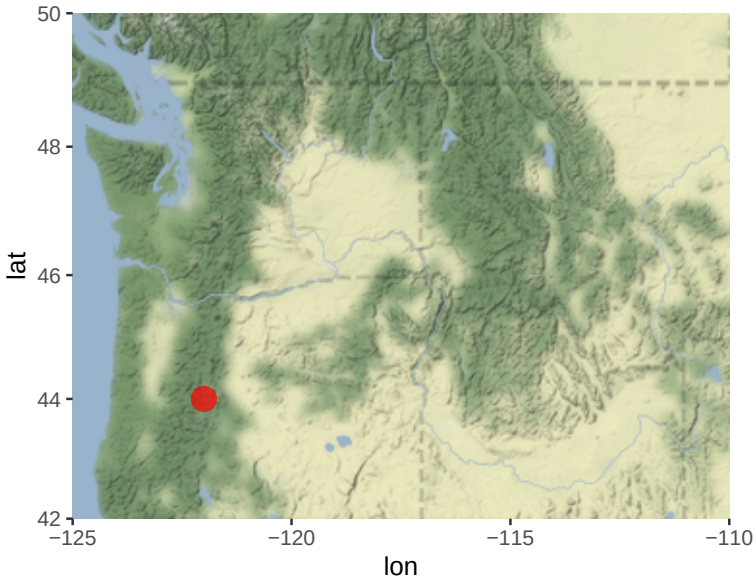

Figure 8.1: Upper Willamette steelhead. Map of the general location of the ESU.

8.2 Recent trends

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8.3 Population raw data

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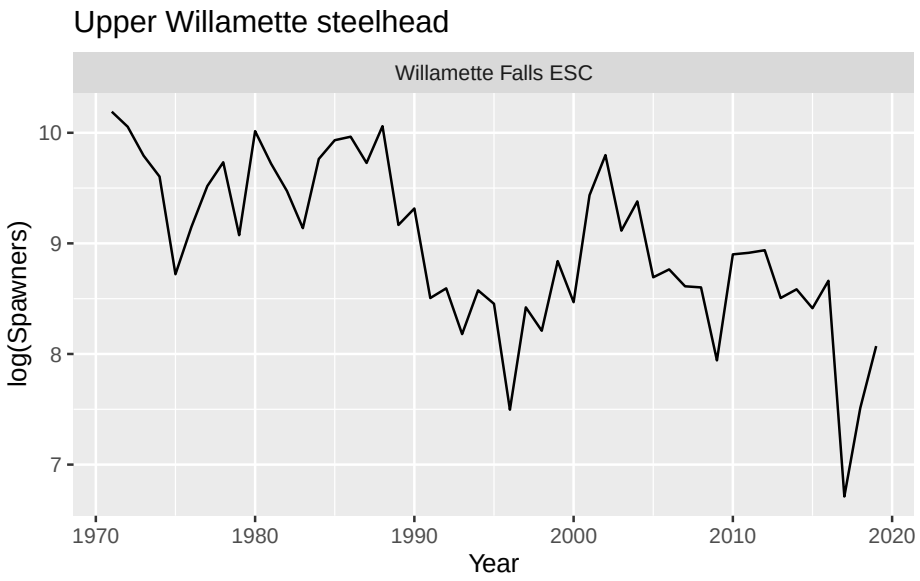

Figure 8.2: Upper Willamette steelhead. Log spawner count trends.

8.3.1 Willamette Falls ESC

Table 8.1: Spawners and fracwild from Willamette Falls ESC (NMFS_-POPID 1053) for 2000 to 2019.

Year	Spawners	Fracwild
2000	4761	1
2001	12525	1
2002	17998	1
2003	9092	1
2004	11842	1
2005	5963	1
2006	6404	1
2007	5497	1
2008	5442	1
2009	2813	1
2010	7337	1
2011	7441	1
2012	7616	1
2013	4944	1
2014	5349	1
2015	4508	1
2016	5778	1
2017	822	1
2018	1829	1
2019	3202	1

Note:
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** data file: UWsthd.csv mod date: Wed Aug 10 17:57:25 2022 -0600
* These spawner counts are from river redd surveys.

9 Conclusion

We want to reference the Interior Columbia Upper Columbia Entiat population Table 2.2. It is in Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nam commodo sit amet nibh non molestie. Maecenas hendrerit nisl velit, a condimentum enim lobortis sit amet. Ut vitae nunc sed mauris condimentum fermentum. Mauris pellentesque nec neque id elementum. Suspendisse a quam aliquam, facilisis urna venenatis, malesuada diam. Pellentesque in fringilla orci. Cras sed purus urna. Ut pharetra enim ut ligula egestas mattis. I need to reference the work of Hardy (1978).

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