

**Review of 2022 Salmon Spawner
Escapements and Postseason
Abundances, and 2023 Coho and
Chinook Abundance Forecasts**

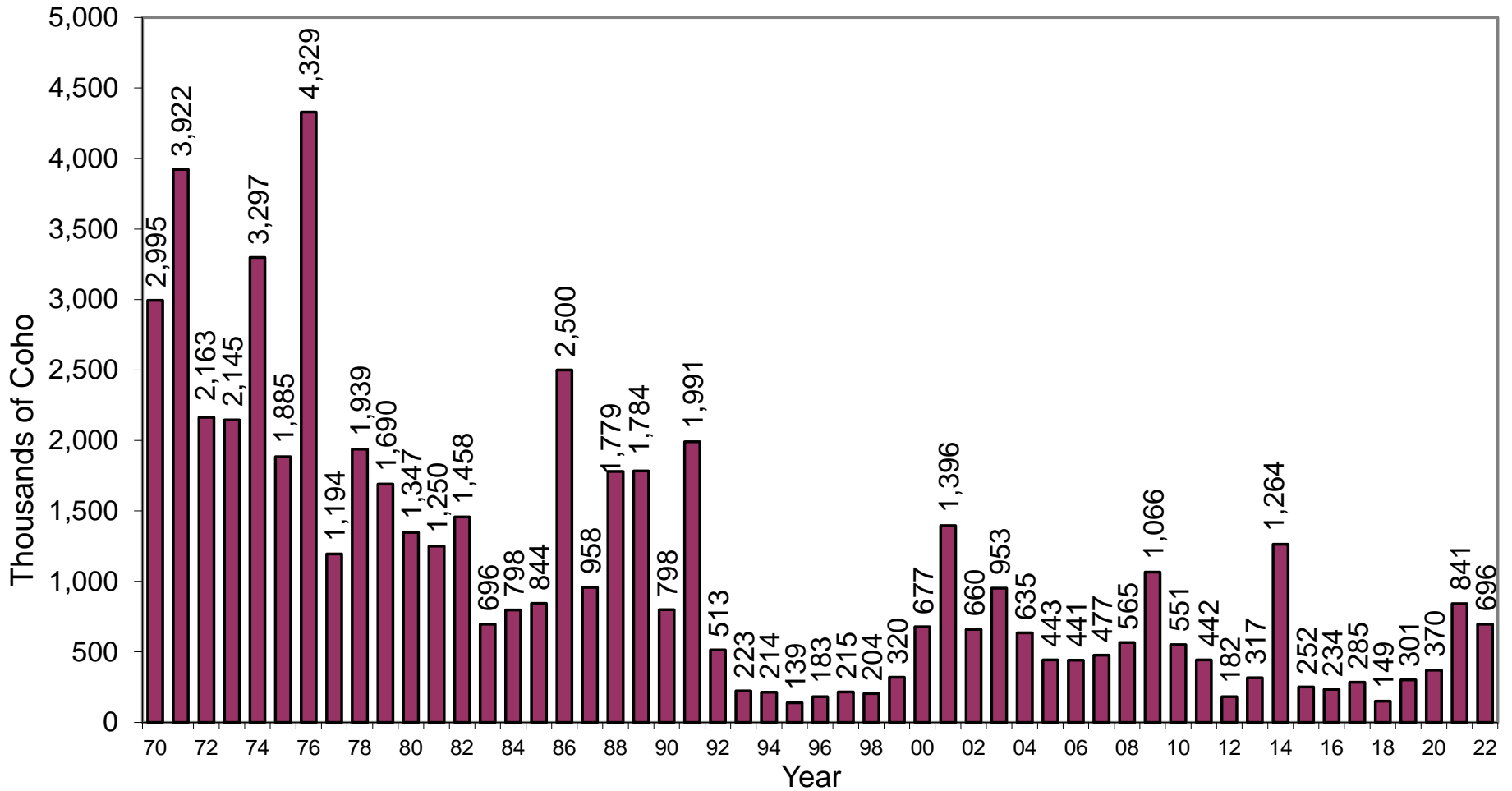
2023 Ocean Salmon Fishery Process Schedule

| | | |
|-----------|---|----------------------------|
| Feb. 27 | ODFW Ocean Salmon Industry Group Meeting | Newport and Virtual |
| Mar. 1 | CDFW Ocean Salmon Public Meeting | Virtual |
| Mar. 3 | WDFW Ocean Salmon Public Meeting | Lacey, WA and Virtual |
| Mar. 5-10 | Pacific Fishery Management Council: * Develop and adopt 2023 salmon season options for public review | Seattle, WA |
| Mar. 14 | North of Falcon (public meeting): * Col. R. salmon season negotiations | Ridgefield, WA and Virtual |
| Mar. 15 | North of Falcon 1 (public meeting): * Statewide proposals | Lacey, WA and Virtual |
| Mar. 20 | PFMC Ocean Salmon Public Hearing: Oregon | Coos Bay |
| Mar. 20 | PFMC Ocean Salmon Public Hearing: Washington | Westport, WA |
| Mar. 21 | PFMC Ocean Salmon Public Hearing: California | Santa Rosa, CA |
| April 1-7 | Pacific Fishery Management Council: * Adopt 2023 ocean salmon season regulations | Foster City, CA |
| April 21 | Oregon Fish and Wildlife Commission meeting: * Adopt 2023 ocean salmon seasons for inside state waters | Congressional District 3 |

Review of 2022 Salmon Spawning Escapements and Abundance

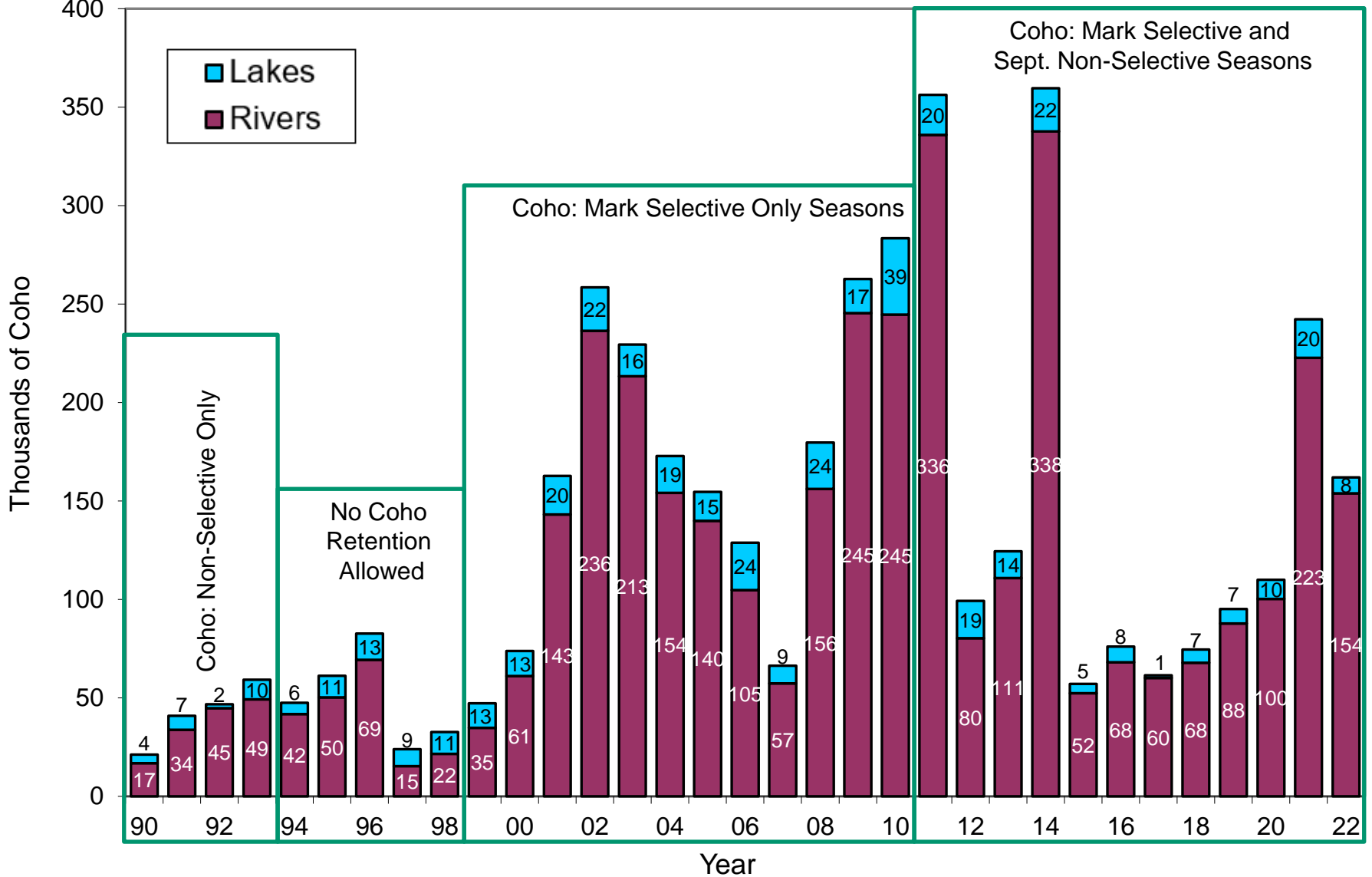
- Oregon Production Index (OPI) Coho
- Oregon Coastal Natural (OCN) Coho
- Lower Columbia River Natural (LCN) Coho
- Columbia River Chinook
- Klamath River Fall Chinook
- Sacramento River Fall Chinook

Oregon Production Index Area Hatchery Coho Abundance Estimates, 1970-2022



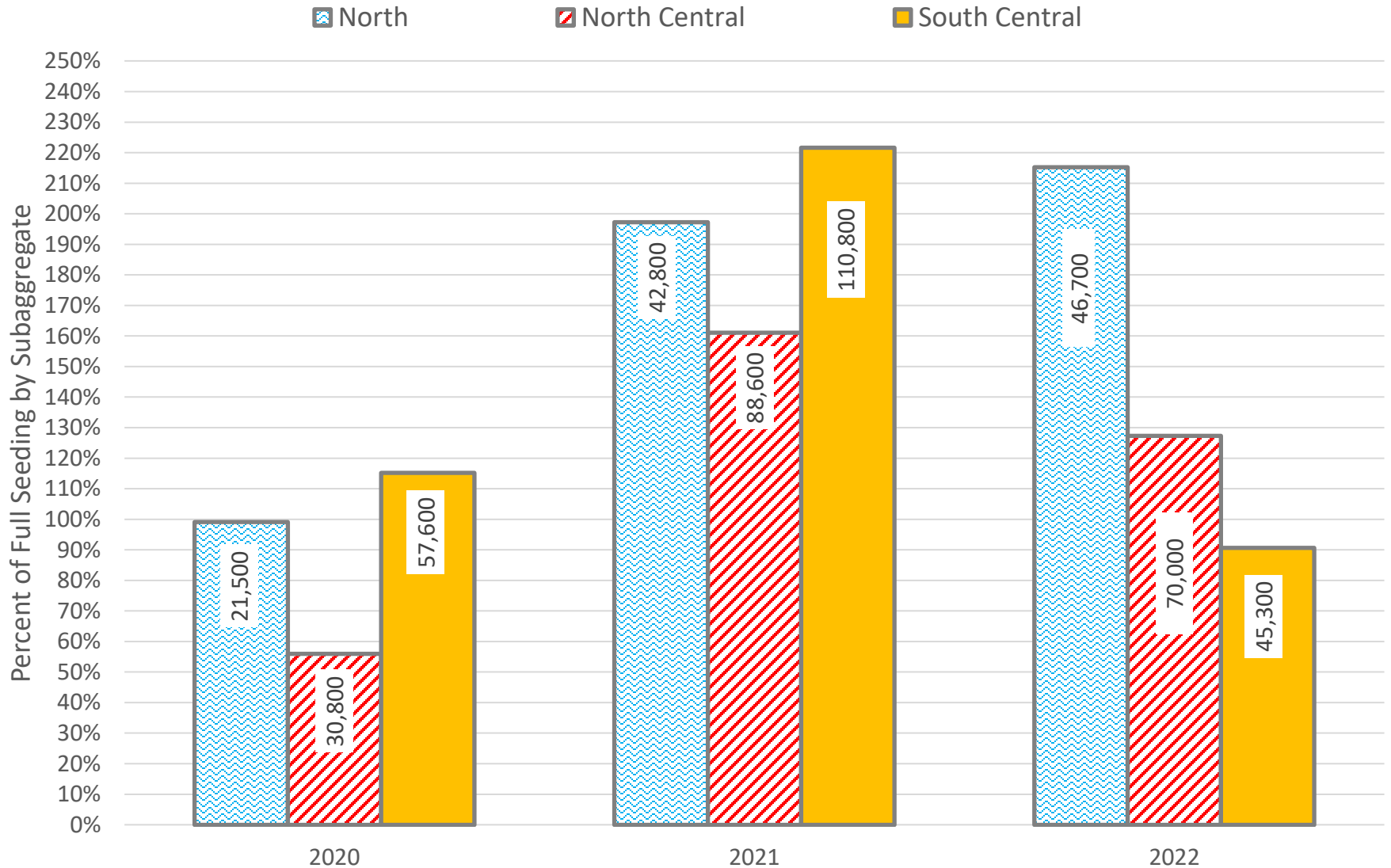
OCN Coho Spawner Escapement Rivers and Lakes, 1990-2022

(boxes show varied recreational coho seasons for Cape Falcon to Humbug Mt.)

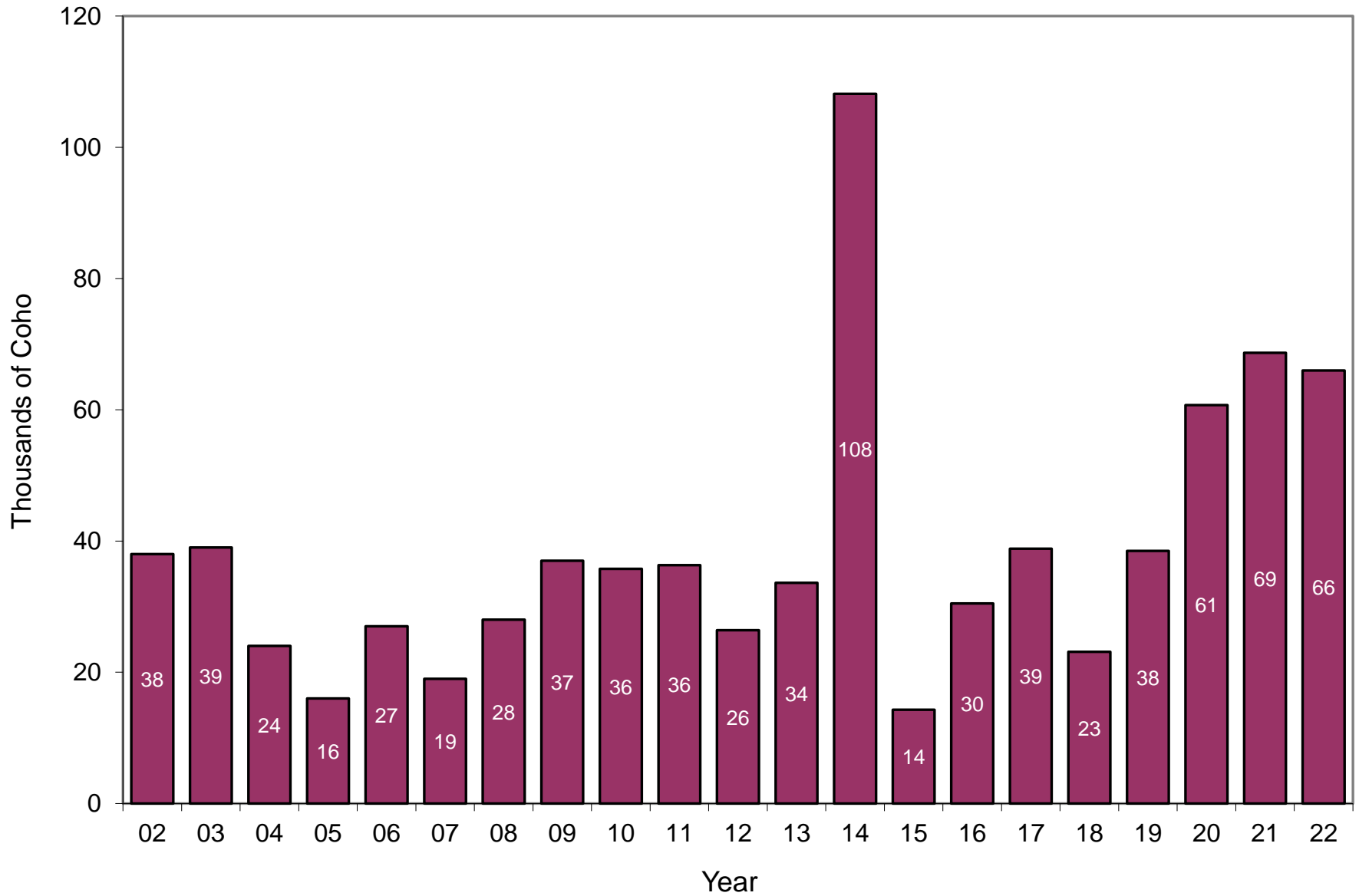


OCN Spawner Escapement by Sub-Aggregate

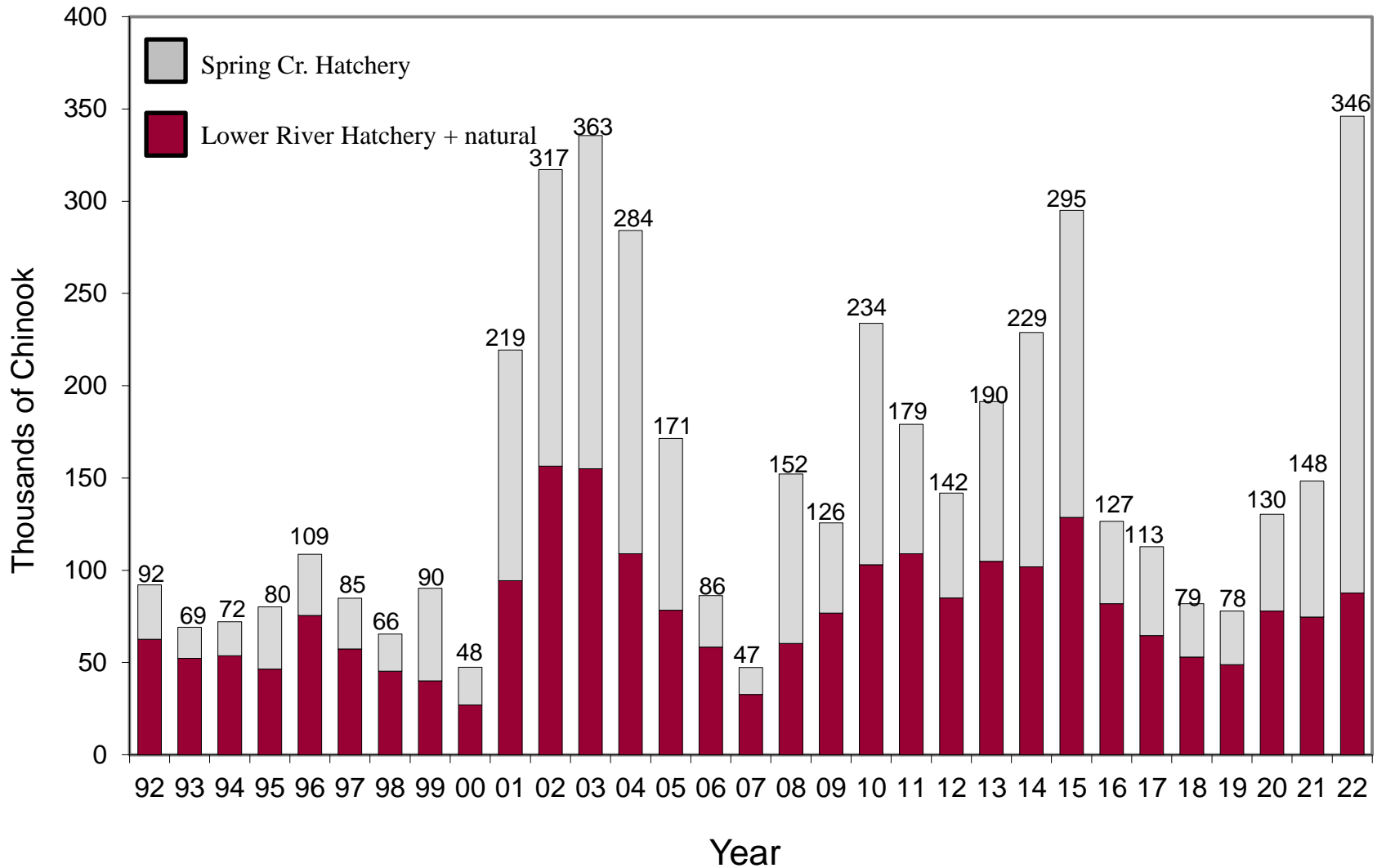
(percent of full-seeding (FS), with spawner numbers included within bars)



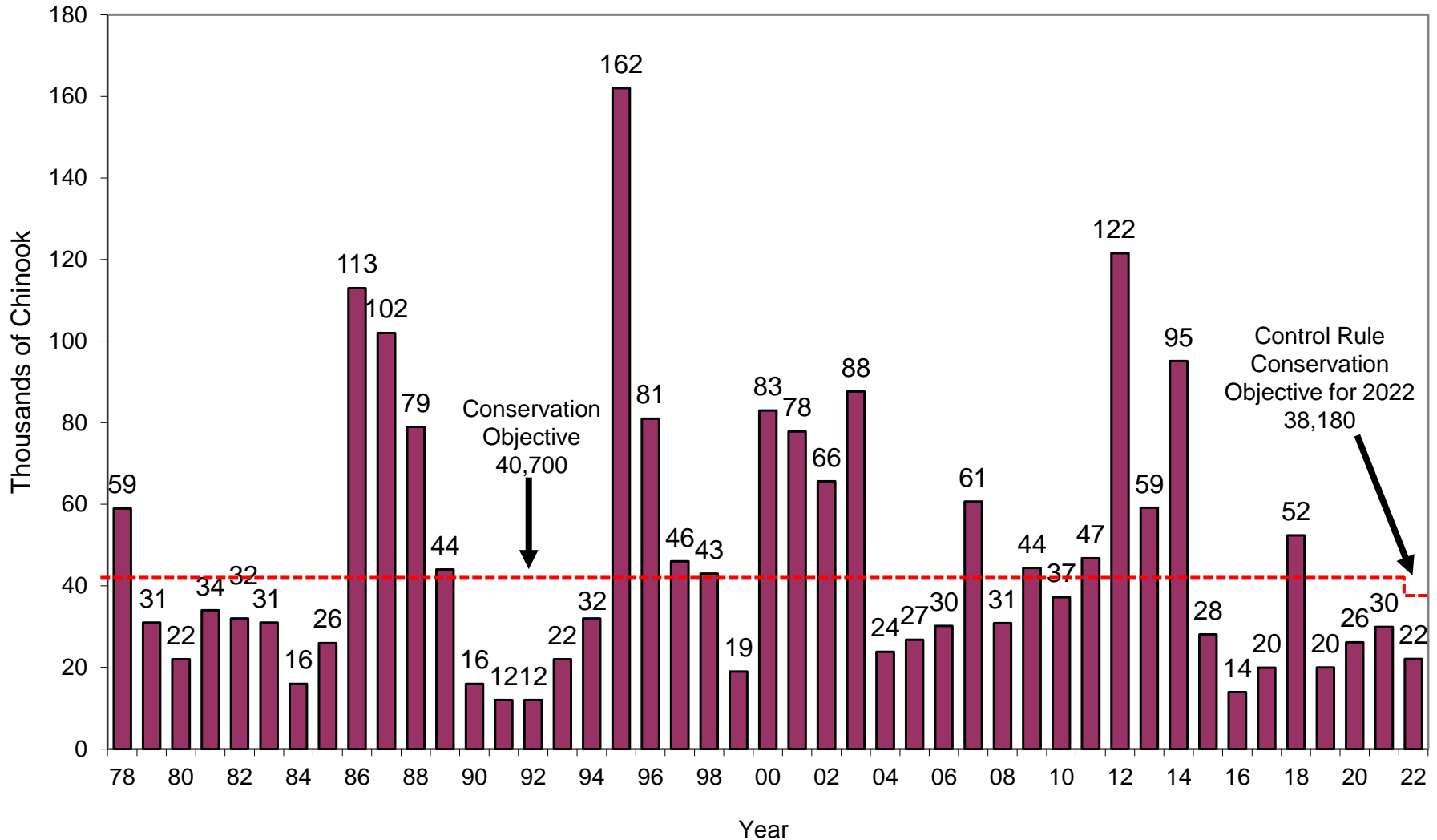
LCN Coho Escapement, 2002-2022



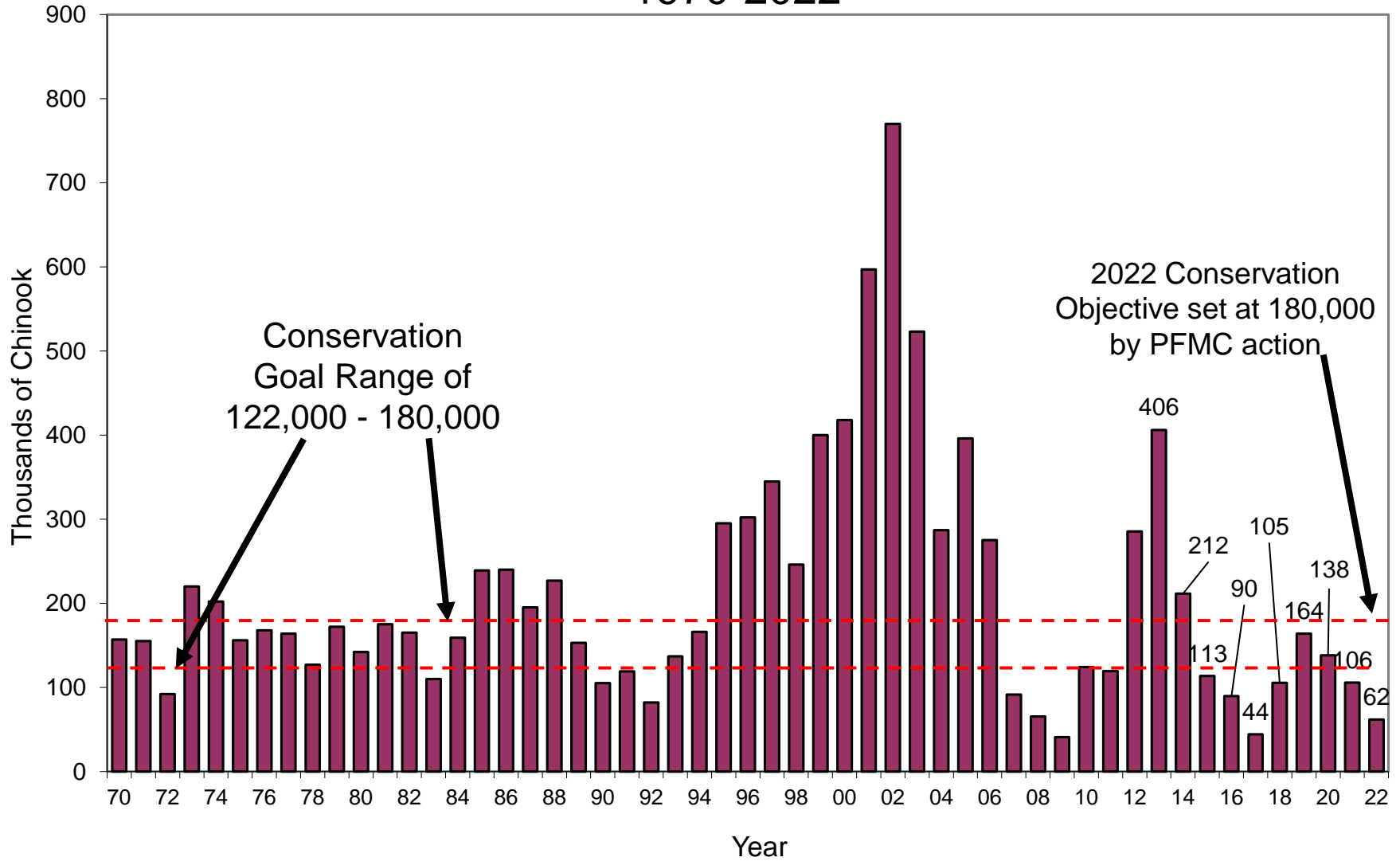
Columbia River Tule Chinook Ocean Escapement, 1992-2022



Klamath River Natural Fall Chinook Adult Spawner Escapement, 1978-2022



Sacramento River Adult Fall Chinook Escapement, 1970-2022



2022 Ocean Abundance Estimates for Select Salmon Stocks Preseason vs. Postseason

| Coho | Preseason Expectations | Postseason | Post - Pre |
|--------------------------------------|---------------------------|------------|------------|
| Oregon Production Index (OPI) | | | |
| Hatchery | 1,003,500 | 696,000 | -307,500 |
| Oregon Coast Natural | 222,400 | 191,500 | -30,900 |
| Lower Columbia Natural | 65,700 | 73,100 | 7,400 |

Chinook

| | | | |
|------------------------------------|------------------------------|---------|----------|
| Sacramento Index (Fall Chinook) | 396,500 | 251,200 | -145,300 |
| Klamath | age 3 - 155,000 | 162,466 | 7,466 |
| | age 4 - 43,200 | 38,427 | -4,773 |
| Rogue Fall | Index - 246,900 | NA | |
| Oregon Coast North Migrating | Above recent year average | | |

Columbia River Chinook 1/

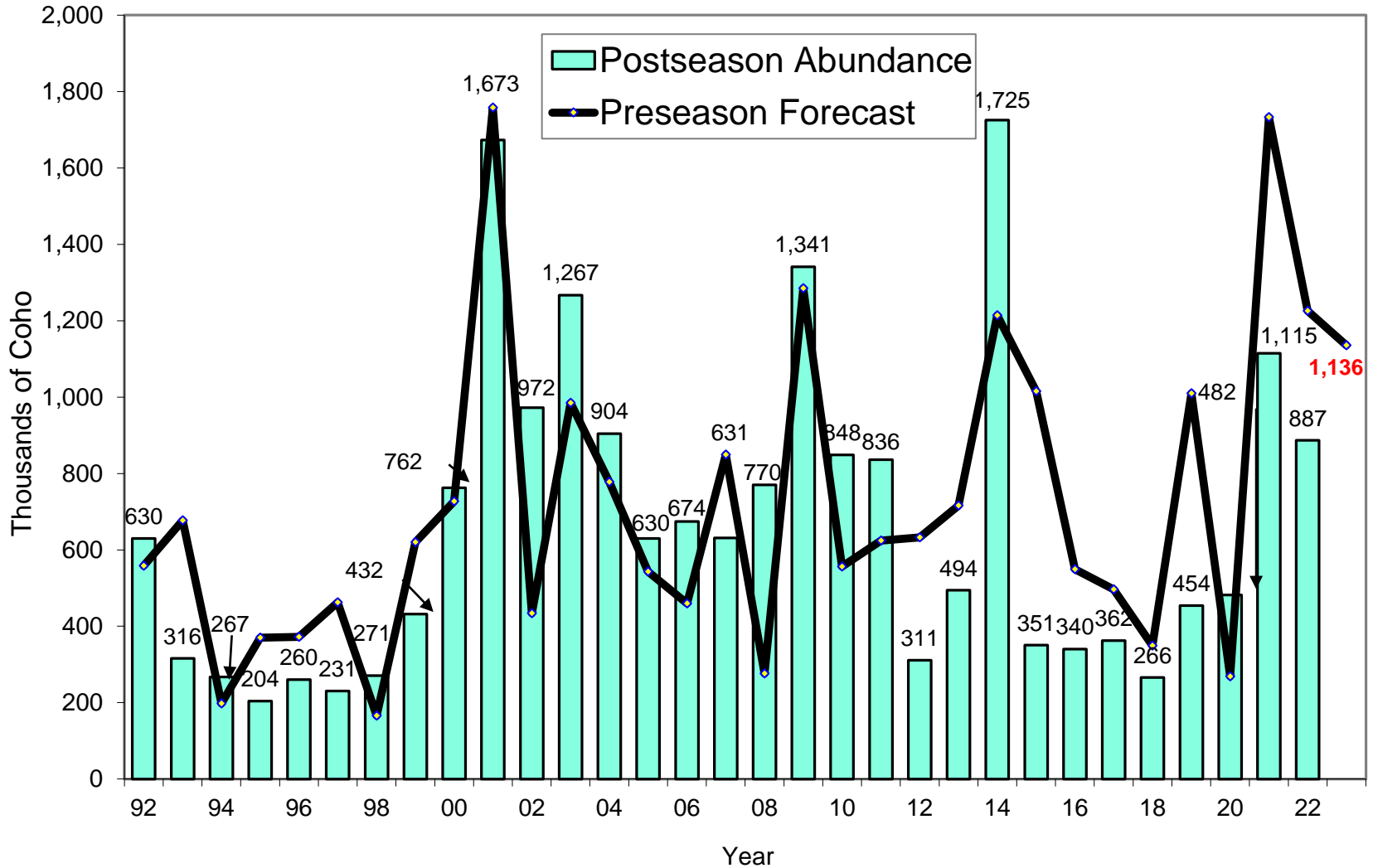
| | | | |
|-------------------|---------|---------|---------|
| Tules | 164,200 | 346,000 | 181,800 |
| Fall Brights | 320,700 | 328,800 | 8,100 |
| Lower River Wild | 10,800 | 9,300 | -1,500 |
| Upriver Spring | 122,900 | 185,200 | 62,300 |
| Willamette Spring | 51,200 | 55,400 | 4,200 |

1/ Preseason expectations to the mouth of the Columbia River.

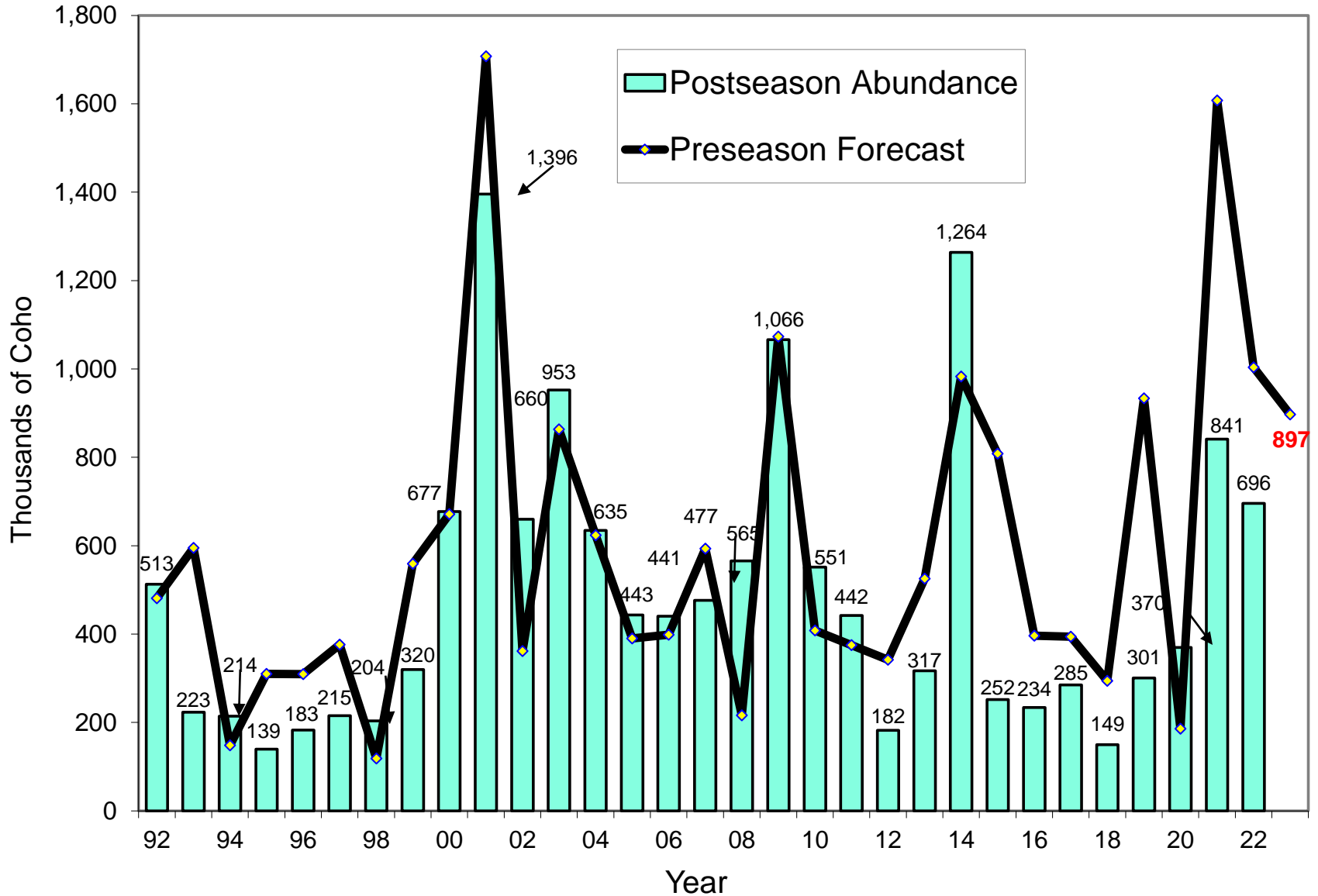
Review 2023 Salmon Forecasts

- Oregon Production Index (OPI) Coho
 - Columbia River and Coastal Hatchery
 - Oregon Coastal Natural (OCN)
 - Lower Columbia River Natural (LCN)
- Columbia River Chinook
- Klamath River Fall Chinook
- Sacramento Index (Fall Chinook)
- 2023 Forecasts
 - Comparison to Postseason Estimates and Preseason Forecasts

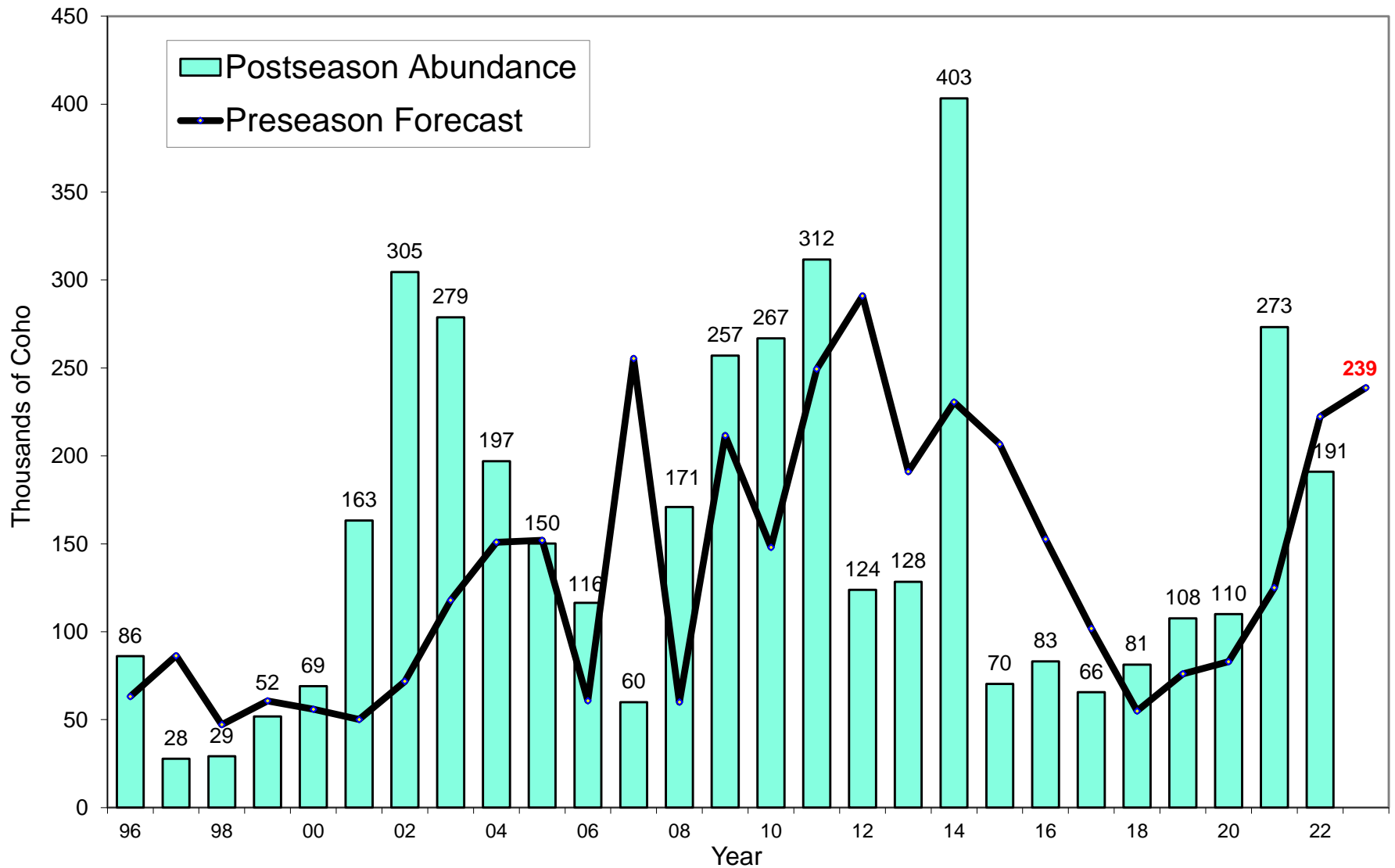
Total OPI Coho Forecast for 2023 with Preseason Forecast and Postseason Estimate Comparison



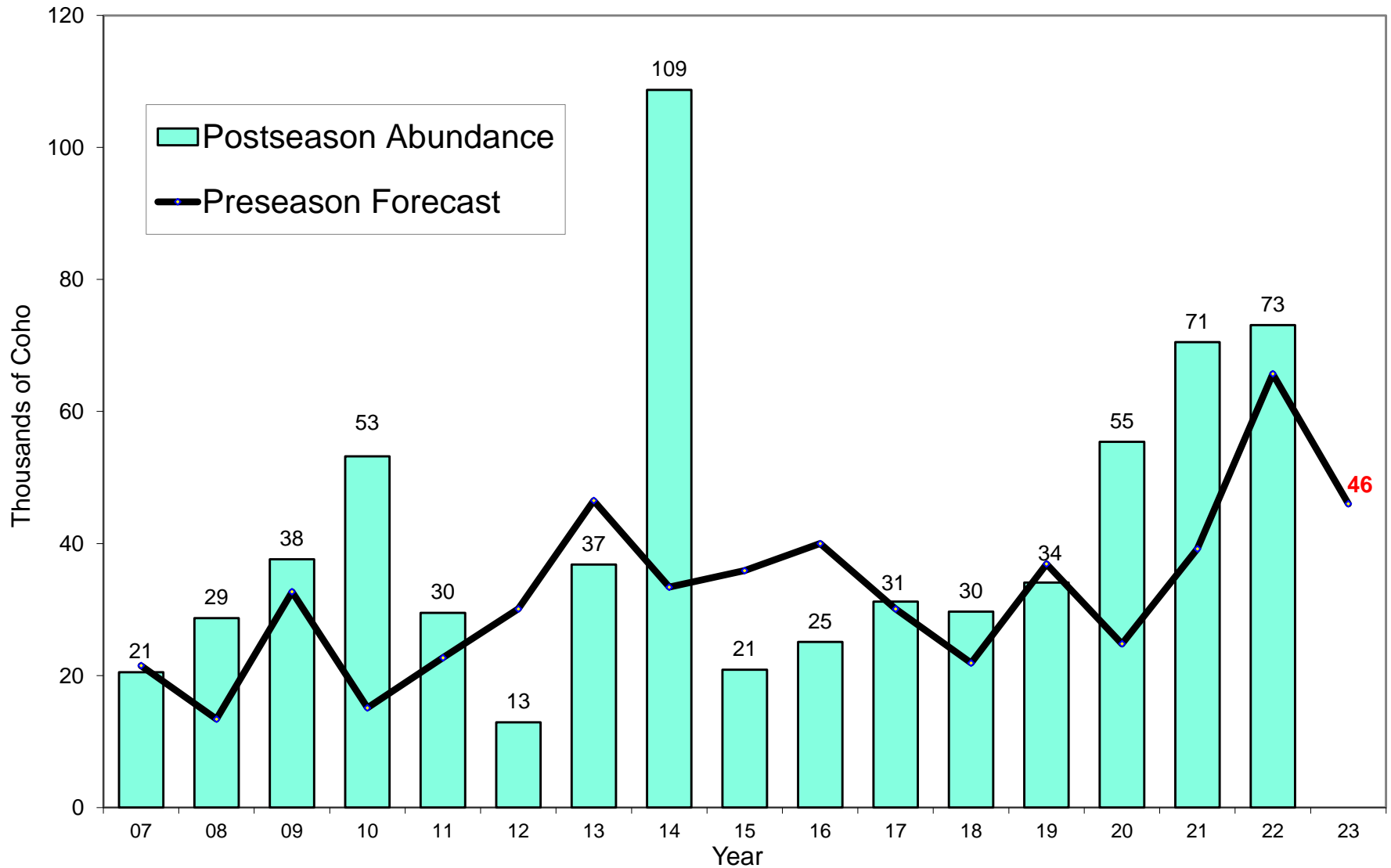
OPI Hatchery Coho Forecast for 2023 with Preseason Forecast and Postseason Estimate Comparison



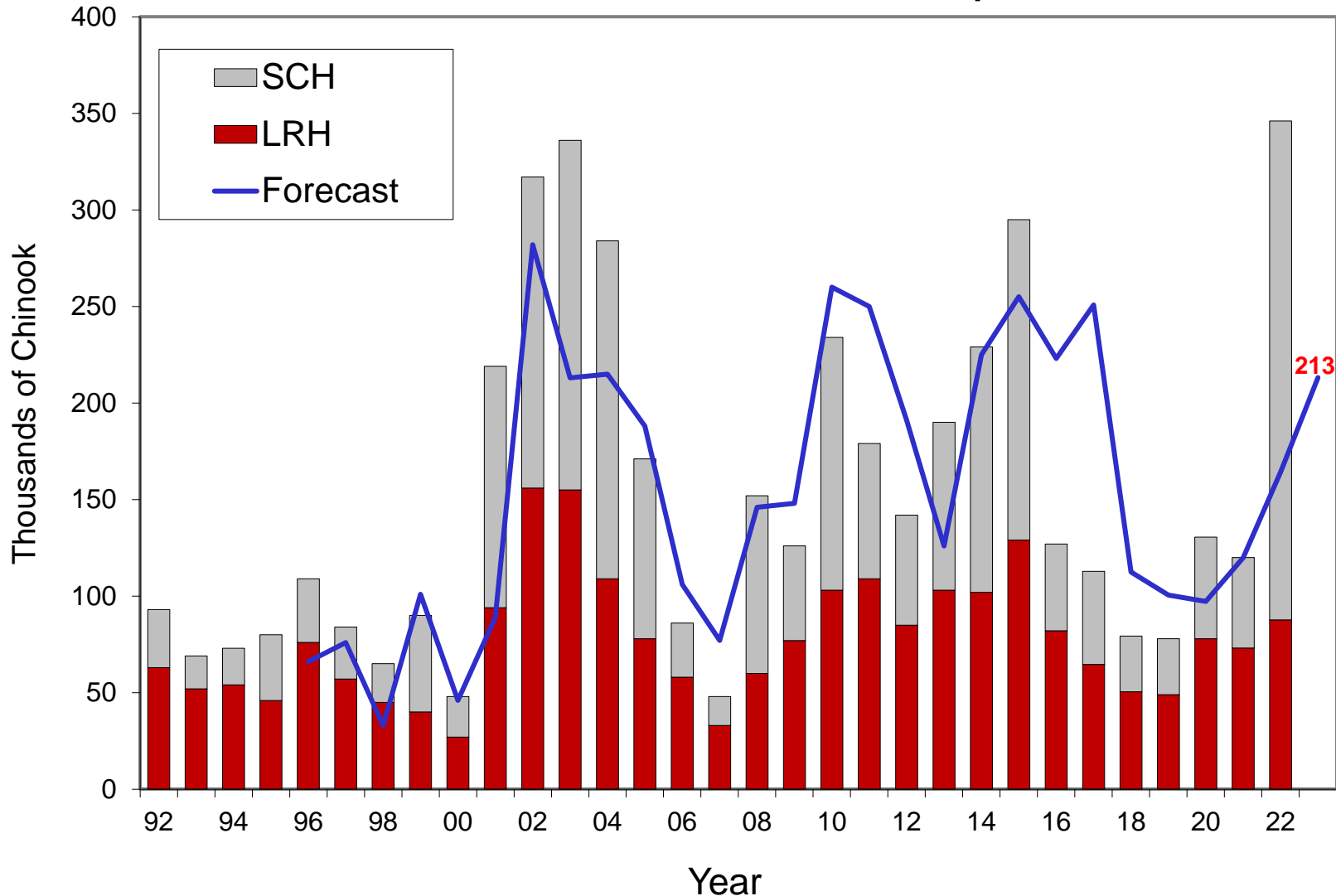
OCN Coho Forecast for 2023 with Preseason Forecast and Postseason Estimate Comparison



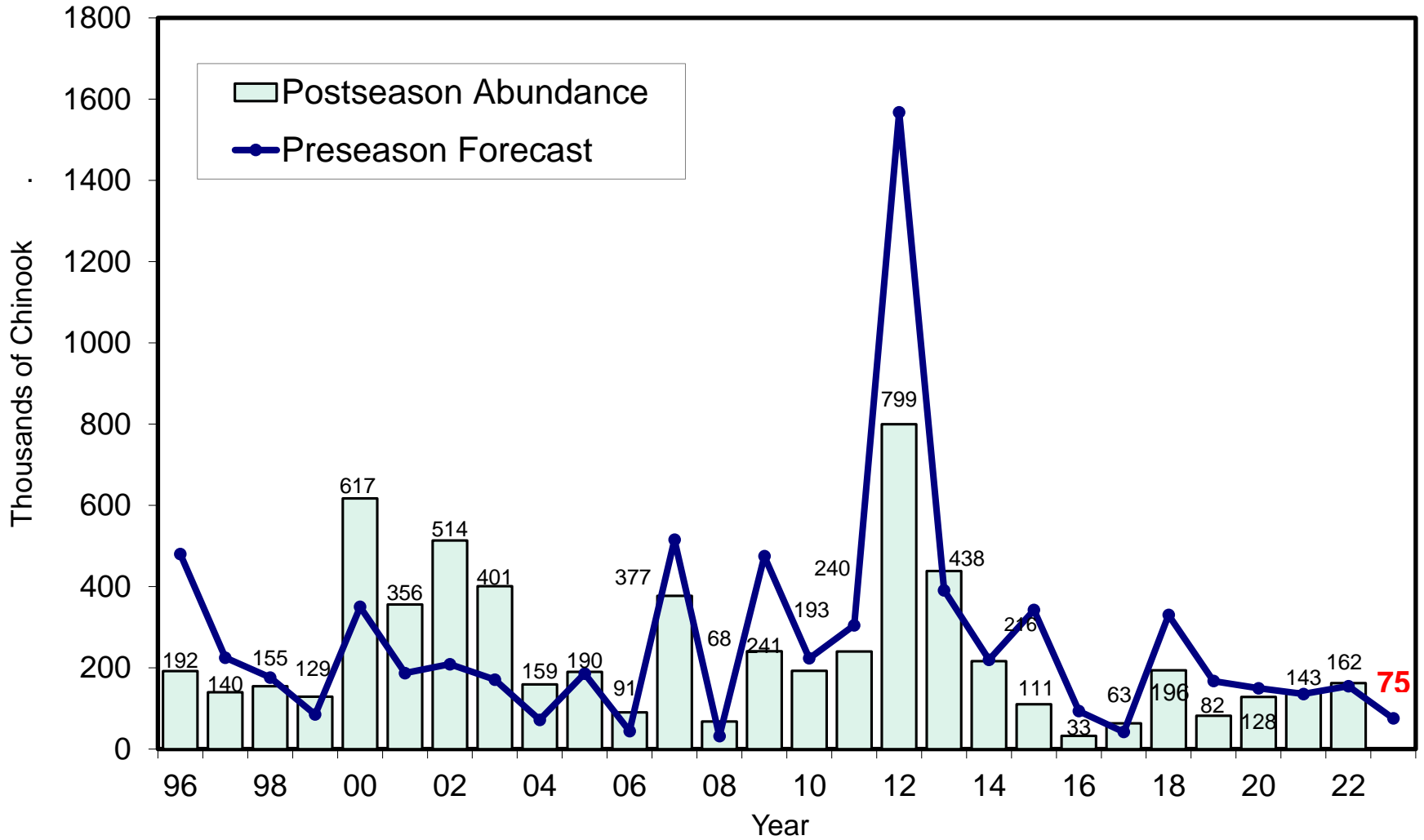
LCN Coho Forecast for 2023 with Preseason Forecast and Postseason Estimate Comparison



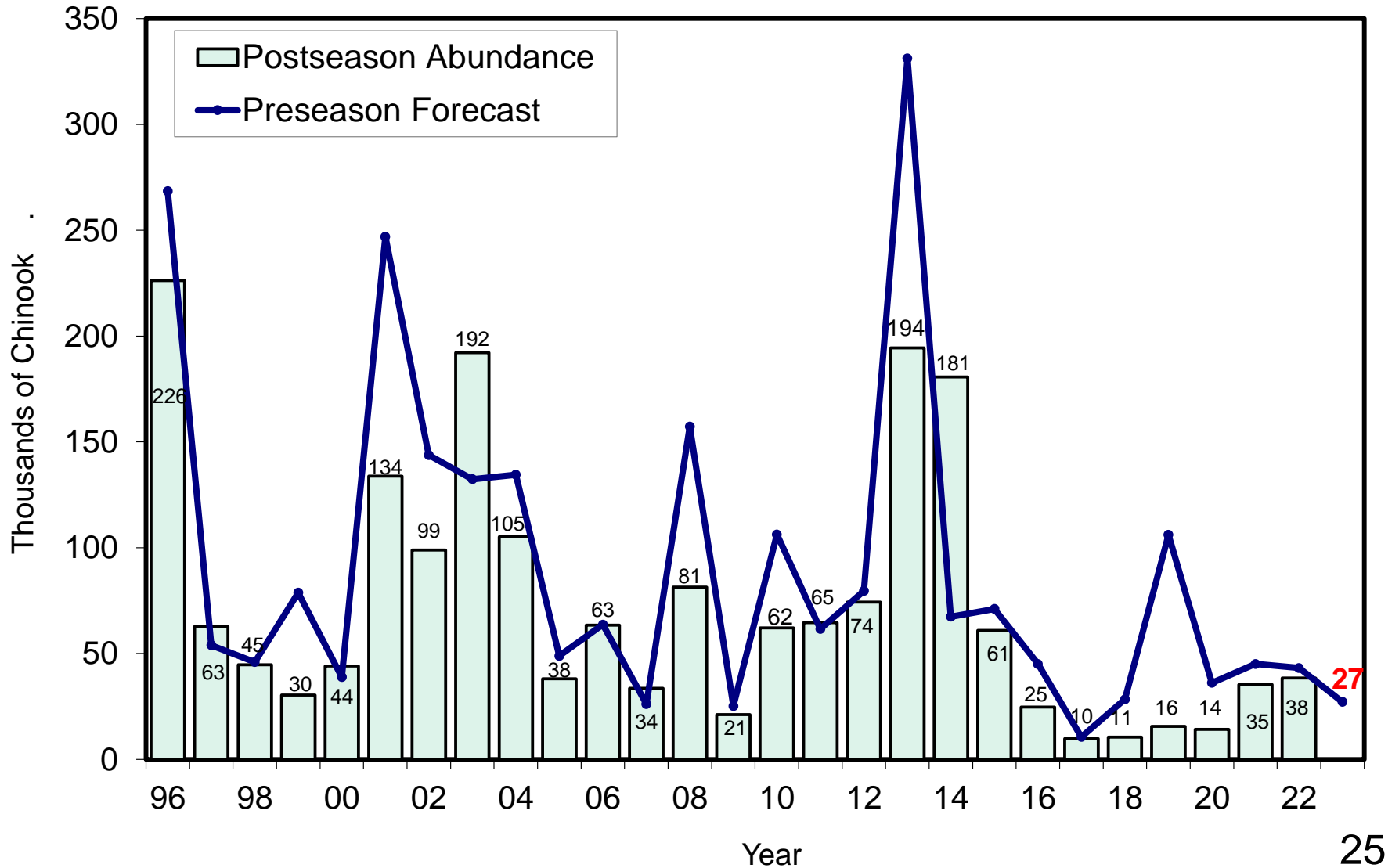
Columbia R. Tule Chinook Ocean Escapement Forecast for 2023 with Postseason Estimate and Preseason Forecast Comparison



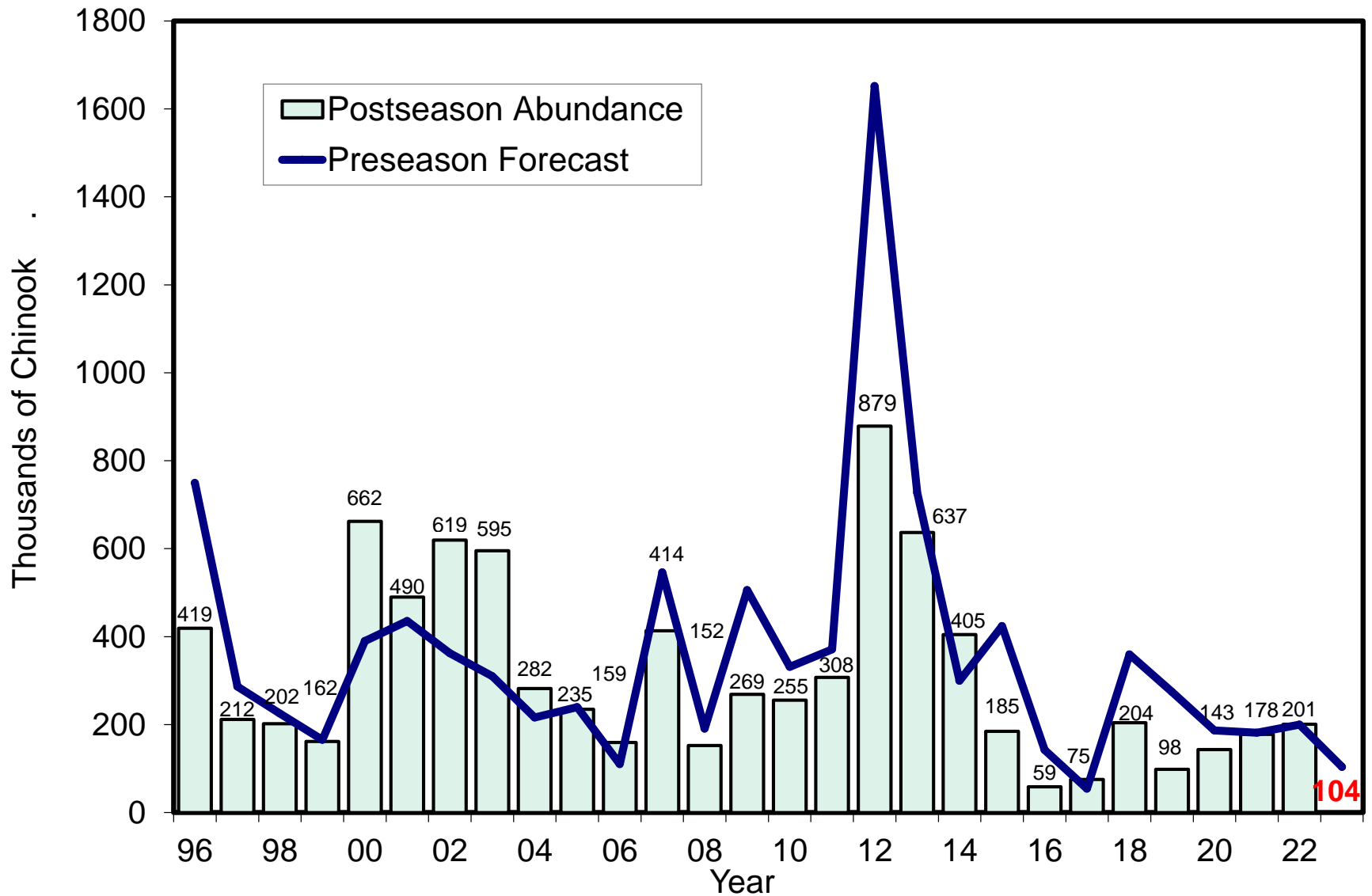
Klamath R. Fall Chinook Age-3 Forecast for 2023 with Preseason Forecast and Postseason Estimate Comparison



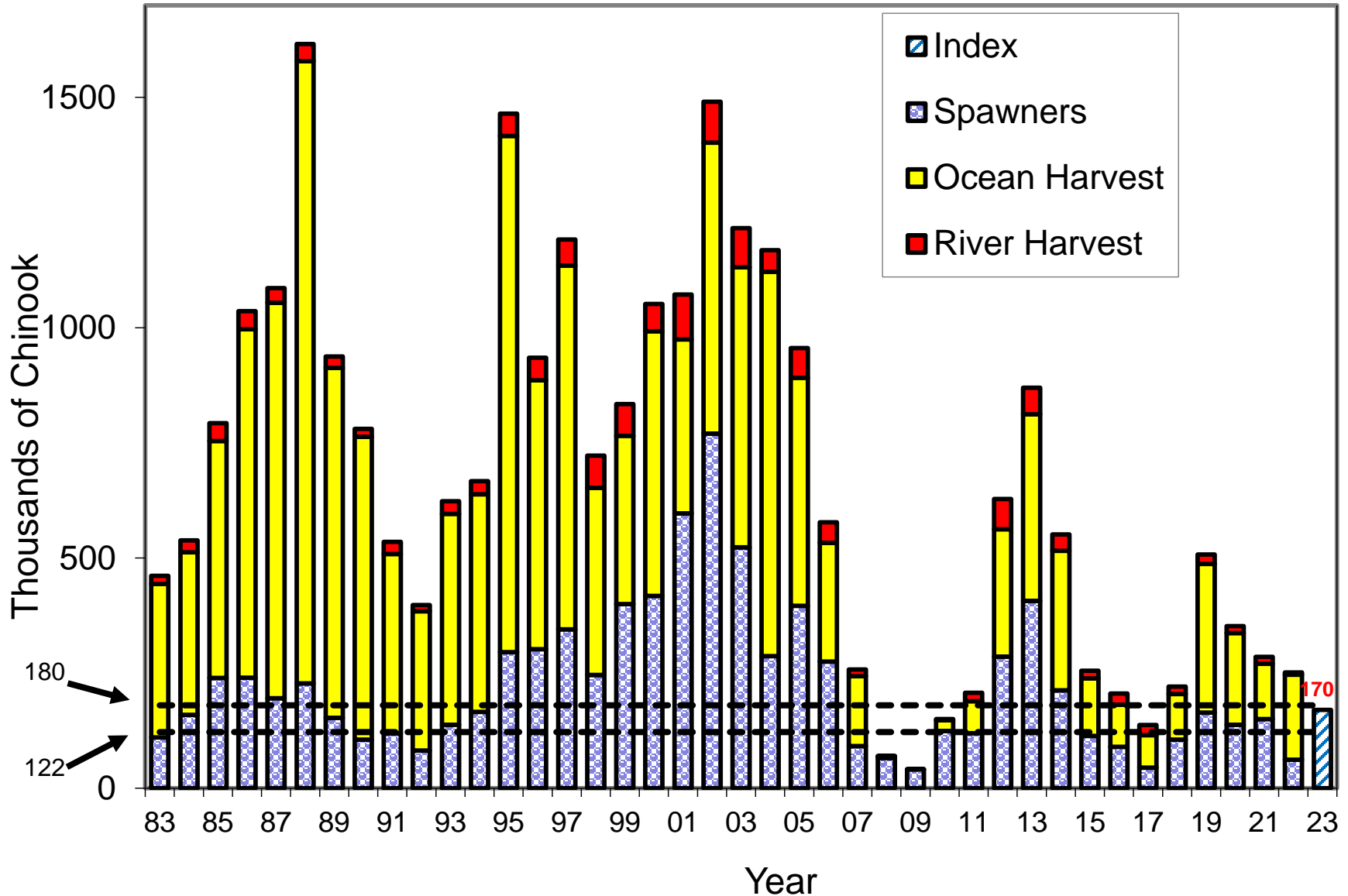
Klamath R. Fall Chinook Age-4 Forecast for 2023 with Preseason Forecast and Postseason Estimate Comparison



Klamath R. Fall Chinook Adult (all ages) Forecast for 2023 with Preseason Forecast and Postseason Estimate Comparison



Sacramento R. Fall Chinook Escapements and Harvest, 1983-2022; and 2023 Index



Preliminary 2023 Ocean Abundance Forecasts for Select Salmon Stocks

| Coho | Preseason Expectations | Comments |
|--------------------------------------|---------------------------|--------------------------------|
| Oregon Production Index (OPI) | | |
| Hatchery | 896,900 | 106.6K less than 2022 Forecast |
| Oregon Coast Natural | 238,800 | 16.3K more than 2022 Forecast |
| Lower Columbia Natural | 45,500 | 20.2K less than 2022 Forecast |

Chinook

| | | |
|---|-----------------------------------|--|
| Sacramento Index (Fall Chinook) | 169,800 | 226,700 less than 2022 Forecast |
| Klamath | age 3 - 75,300 age 4 - 27,200 | 79.7K less than 2022 Forecast 16K less than 2022 Forecast |
| Rogue Fall | Index - 218,300 | 28.6K less than 2022 Forecast |
| Oregon Coast North Migrating | Similar to recent year average | Improved spawner density from 2021 |
| Columbia River Chinook ^{1/} | | |
| Tules | 213,200 | 49K more than 2022 Forecast |
| Fall Brights | 332,200 | 11.5K more than 2022 Forecast |
| Lower River Wild | 8,600 | 2.2K less than 2022 Forecast |
| Upriver Spring | 198,600 | 75.7K more than 2022 Forecast |
| Willamette Spring | 71,000 | 19.8K more than 2022 Forecast |

^{1/} Preseason expectations to the mouth of the Columbia River.

Annual estimates of *wild* adult coho spawner abundance in coastal river basins within the Oregon Coast ESU (OCN), 2012-2022

23-Feb-23

| Data Source: | | GRTS Est. | | | | | | | | | | | Prev. 10yr Average |
|------------------------------|-----------------------------------|--|----------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|--------------------|
| Geographic Scale | | Wild Coho Spawner Abundance by Return Year | | | | | | | | | | | |
| Population / Strata / ESU | Estimate Type | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | |
| North Coast: | | | | | | | | | | | | | |
| Necanicum R. | Spawning Ground Survey | 902 | 798 | 5,727 | 847 | 936 | 529 | 393 | 698 | No Est. | No Est. | No Est. | 1,354 |
| Nehalem R. | Spawning Ground Survey | 2,963 | 4,539 | 30,577 | 3,079 | 7,549 | 5,486 | 4,190 | 12,383 | No Est. | No Est. | No Est. | 8,846 |
| Tillamook Bay | Spawning Ground Survey | 1,686 | 4,402 | 20,090 | 1,345 | 7,102 | 2,927 | 2,035 | 3,961 | No Est. | No Est. | No Est. | 5,444 |
| Nestucca R. | Spawning Ground Survey | 1,751 | 946 | 6,369 | 1,029 | 2,412 | 4,495 | 1,072 | 4,602 | No Est. | No Est. | No Est. | 2,835 |
| N Coast Dependents | Spawning Ground Survey | 218 | 271 | 4,607 | 440 | 699 | 206 | 262 | 616 | No Est. | No Est. | No Est. | 915 |
| Total | | 7,520 | 10,956 | 67,370 | 6,740 | 18,698 | 13,643 | 7,952 | 22,260 | 21,480 | 42,811 | 46,692 | 21,943 |
| | | 8% | 9% | 19% | 12% | 25% | 22% | 11% | 23% | 20% | 18% | 29% | 17% |
| Mid Coast: | | | | | | | | | | | | | |
| Salmon R. | Spawning Ground Survey | 297 | 1,165 | 3,680 | 332 | 1,054 | 450 | 103 | 215 | No Est. | 571 | 1,780 | 874 |
| Siletz R. | Spawning Ground Survey | 4,495 | 7,660 | 19,496 | 2,216 | 3,015 | 5,202 | 4,064 | 4,509 | No Est. | 15,428 | 15,434 | 7,343 |
| Yaquina R. | Spawning Ground Survey | 6,268 | 3,553 | 25,582 | 2,400 | 3,730 | 2,491 | 4,672 | 3,452 | No Est. | 16,721 | 6,477 | 7,652 |
| Beaver Cr. | Spawning Ground Survey | 1,878 | 2,015 | 6,564 | 332 | 1,709 | 1,553 | 494 | 814 | No Est. | 2,483 | 1,703 | 1,982 |
| | Spawning Ground Survey * | 8,470 | 9,283 | 25,733 | 6,162 | 7,366 | 4,288 | 5,062 | 4,850 | No Est. | 13,158 | 18,162 | 9,375 |
| Aelsea R. | Isea Hatchery Weir Passage | n.a | n.a | 122 | 23 | 9 | 89 | 50 | 65 | 60 | 475 | 300 | 112 |
| | Total | 8,470 | 9,283 | 25,855 | 6,185 | 7,375 | 4,377 | 5,112 | 4,915 | No Est. | 13,633 | 18,462 | 9,467 |
| Siuslaw R. | Spawning Ground Survey | 11,946 | 14,118 | 38,896 | 10,352 | 9,141 | 7,129 | 6,635 | 5,881 | No Est. | 38,031 | 24,578 | 15,792 |
| Mid-Coast Dependents | Spawning Ground Survey | 492 | 1,929 | 1,890 | 856 | 464 | 1,646 | 958 | 289 | No Est. | 1,747 | 1,568 | 1,141 |
| Total | | 33,846 | 39,723 | 121,963 | 22,673 | 26,488 | 22,848 | 22,038 | 20,075 | 30,825 | 88,614 | 70,002 | 42,909 |
| | | 34% | 32% | 34% | 40% | 35% | 37% | 30% | 21% | 28% | 37% | 43% | 33% |
| Umpqua: | | | | | | | | | | | | | |
| Lower Umpqua R. | Spawning Ground Survey | 3,731 | 7,792 | 36,942 | 3,725 | 4,422 | 10,848 | 14,080 | 9,152 | No Est. | 23,714 | No Est. | 12,712 |
| Middle Umpqua R. | Spawning Ground Survey | 2,447 | 4,272 | 13,939 | 2,245 | 1,159 | 1,788 | 3,888 | 3,104 | No Est. | 6,354 | No Est. | 4,355 |
| | Spawning Ground Survey * | 21 | 37 | 298 | 0 | 0 | 0 | 0 | 0 | No Est. | 0 | No Est. | 40 |
| North Umpqua R. | Winchester Dam Count ^b | 3,113 | 2,737 | 3,681 | 3,012 | 1,148 | 1,772 | 2,942 | 3,302 | 3,003 | 4,795 | 1,449 | 2,951 |
| | Total | 3,134 | 2,774 | 3,979 | 3,012 | 1,148 | 1,772 | 2,942 | 3,302 | 3,003 | 4,795 | 1,449 | 2,986 |
| South Umpqua R. | Spawning Ground Survey | 11,636 | 12,178 | 11,412 | 5,878 | 765 | 1,084 | 3,125 | 3,600 | No Est. | 14,403 | No Est. | 7,120 |
| Total | | 20,948 | 27,016 | 66,272 | 14,860 | 7,494 | 15,492 | 24,035 | 19,158 | 33,644 | 49,266 | 9,692 | 27,819 |
| | | 21% | 22% | 18% | 26% | 10% | 25% | 32% | 20% | 31% | 20% | 6% | 23% |
| Lakes: ^c | | | | | | | | | | | | | |
| Siltcoos Lake | Spawning Ground Survey | 3,945 | 3,797 | 7,178 | 1,558 | 2,421 | 715 | 2,256 | 1,065 | 2,832 | 3,885 | 3,073 | 2,965 |
| Tahkenitch Lake | Spawning Ground Survey | 5,675 | 3,413 | 3,691 | 1,085 | 1,249 | 269 | 1,678 | 1,405 | 1,526 | 2,398 | 1,595 | 2,239 |
| Tenmile Lake | Spawning Ground Survey | 9,302 | 6,449 | 11,141 | 2,086 | 4,374 | 318 | 2,770 | 4,963 | 5,364 | 13,381 | 3,407 | 6,015 |
| Total | | 18,922 | 13,659 | 22,010 | 4,729 | 8,044 | 1,302 | 6,704 | 7,433 | 9,722 | 19,664 | 8,075 | 11,219 |
| | | 19% | 11% | 6% | 8% | 11% | 2% | 9% | 8% | 9% | 8% | 5% | 9% |
| Mid-South Coast: | | | | | | | | | | | | | |
| Coos Bay | Spawning Ground Survey | 9,414 | 6,884 | 38,880 | 3,030 | 4,624 | 2,689 | 7,292 | 13,289 | No Est. | No Est. | 7,549 | 10,763 |
| Coquille R. | Spawning Ground Survey | 5,911 | 23,637 | 41,660 | 3,357 | 9,494 | 4,641 | 5,688 | 11,841 | No Est. | No Est. | 18,970 | 13,279 |
| Floras Creek | Spawning Ground Survey | 2,502 | 1,936 | 1,022 | 1,585 | 942 | 693 | 628 | 904 | No Est. | No Est. | 867 | 1,277 |
| Sixes R. | Spawning Ground Survey | 34 | 567 | 410 | 168 | 120 | 69 | 174 | 155 | No Est. | No Est. | 116 | 212 |
| Mid-South Dependents | Spawning Ground Survey | 48 | 32 | 105 | 0 | 0 | 0 | 10 | 23 | No Est. | No Est. | 0 | 27 |
| Total | | 17,909 | 33,056 | 82,077 | 8,140 | 15,180 | 8,092 | 13,792 | 26,212 | 14,261 | 41,830 | 27,502 | 26,055 |
| | | 18% | 27% | 23% | 14% | 20% | 13% | 19% | 28% | 13% | 17% | 17% | 19% |
| Oregon Coastal ESU | | 99,145 | 124,410 | 359,692 | 57,142 | 75,904 | 61,377 | 74,521 | 95,138 | 109,932 | 242,185 | 161,963 | 129,945 |
| Spawner/Spawner Ratio | | 0.38 | 0.44 | 1.01 | 0.58 | 0.61 | 0.17 | 1.30 | 1.25 | 1.79 | 3.25 | 1.70 | 1.08 |

Southern Oregon / Northern California Coast ESU

| | | | | | | | | | | | | | |
|------------------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Rogue (Huntley Seining) | | 5,792 | 12,354 | 2,664 | 4,487 | 7,568 | 4,773 | 9,238 | 2,686 | 1,825 | 8,992 | 7,865 | 6,038 |
| Spawner/Spawner Ratio | | 2.07 | 2.88 | 0.53 | 0.77 | 0.61 | 1.79 | 2.06 | 0.35 | 0.38 | 0.97 | 2.93 | 1.24 |