

# Cowlitz Salmon Hatchery Adult Handling & Distribution

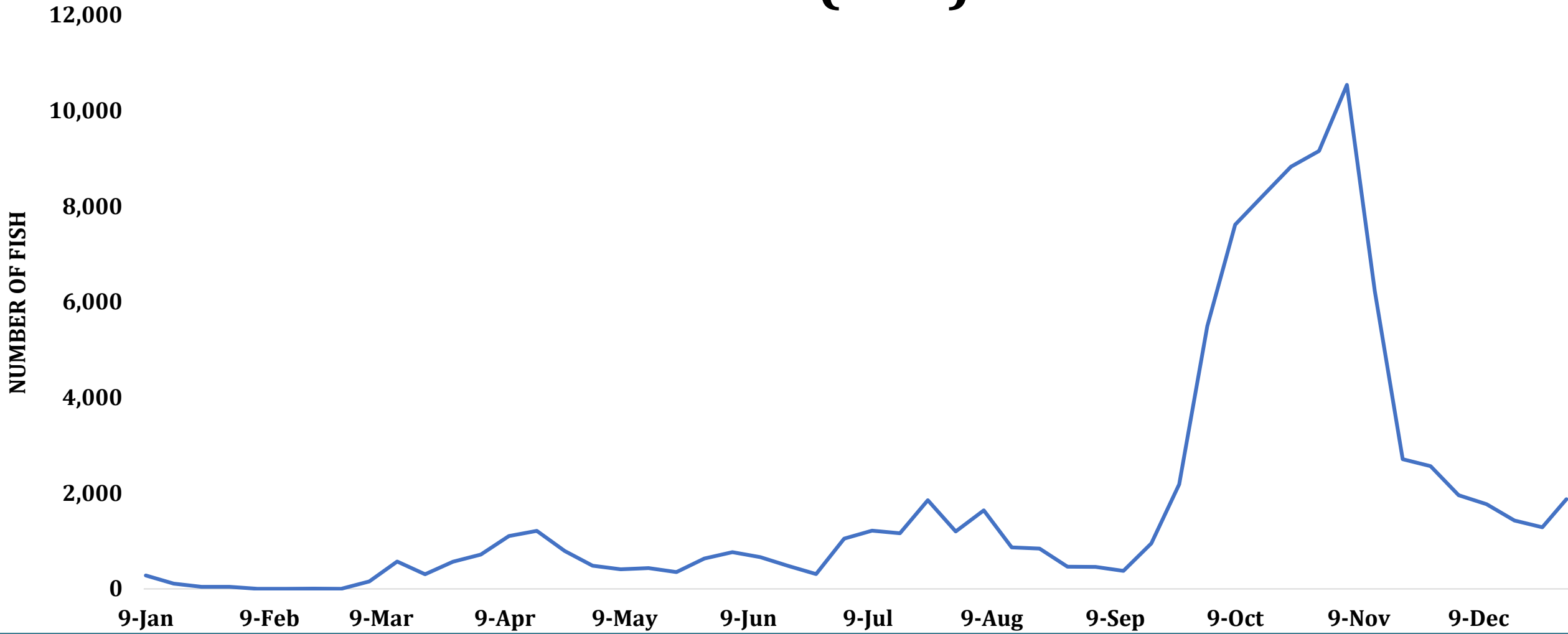
**August 22, 2023**

**Cowlitz Annual Program  
Review and Science  
Conference**

**Jamie Murphy,  
Natural Resources Biologist**



# 2022 WEEKLY RETURNS TO THE COWLITZ SALMON HATCHERY (CSH) SEPARATOR





# What we will cover:

- Total returns to the separator by species, tag, and mark
- Adult Handling Protocol
- Release sites and distribution
- Total distribution to each release site by species, tag, and mark
- Weekly collection tables/graphs

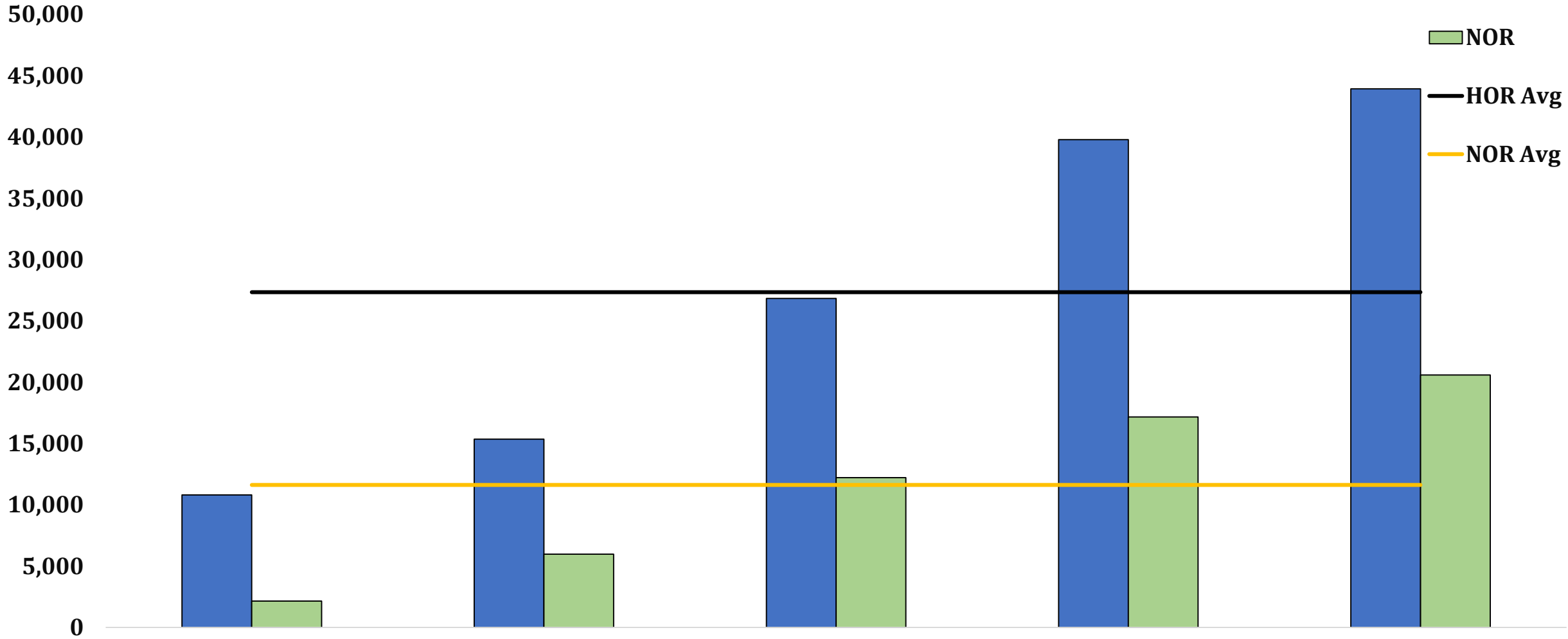


# 2022 Adult Returns



# COHO ADULT RETURNS

NUMBER OF ADULTS

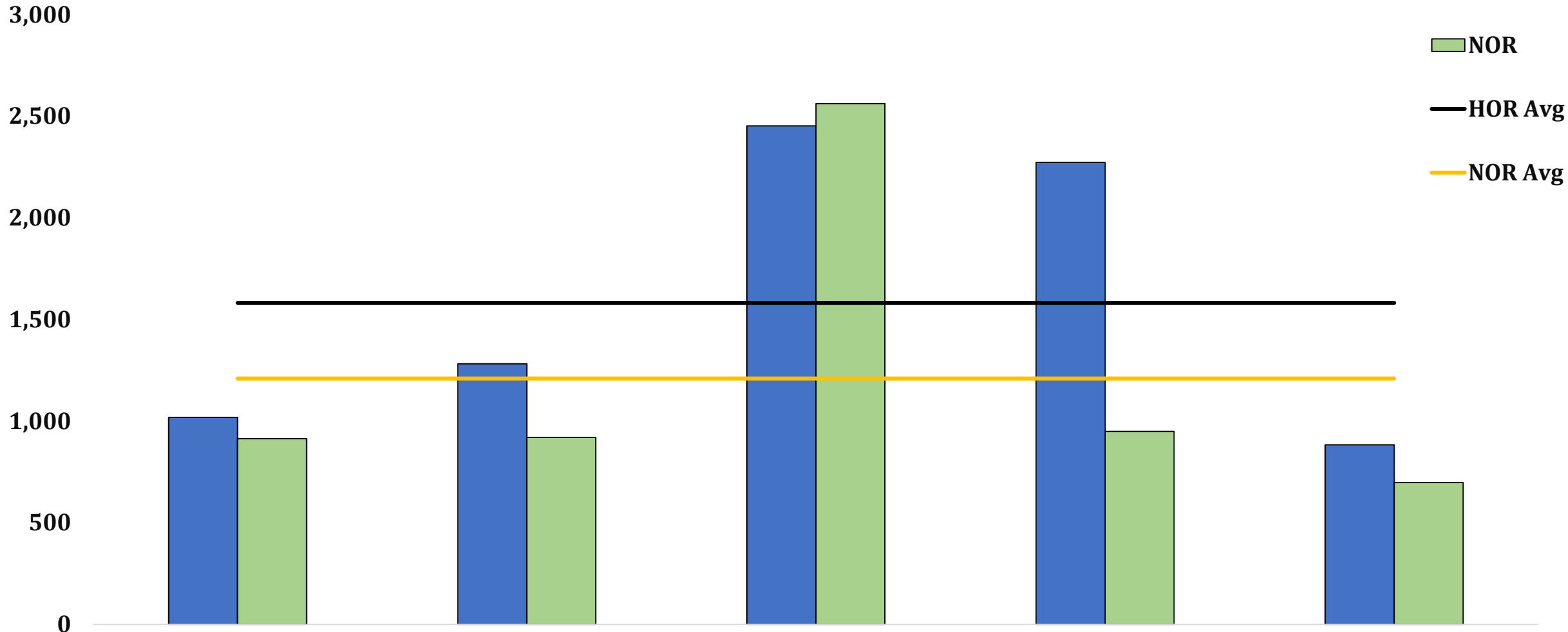


	2018	2019	2020	2021	2022
HOR	10,816	15,360	26,828	39,797	43,934
NOR	2,144	5,978	12,219	17,163	20,591



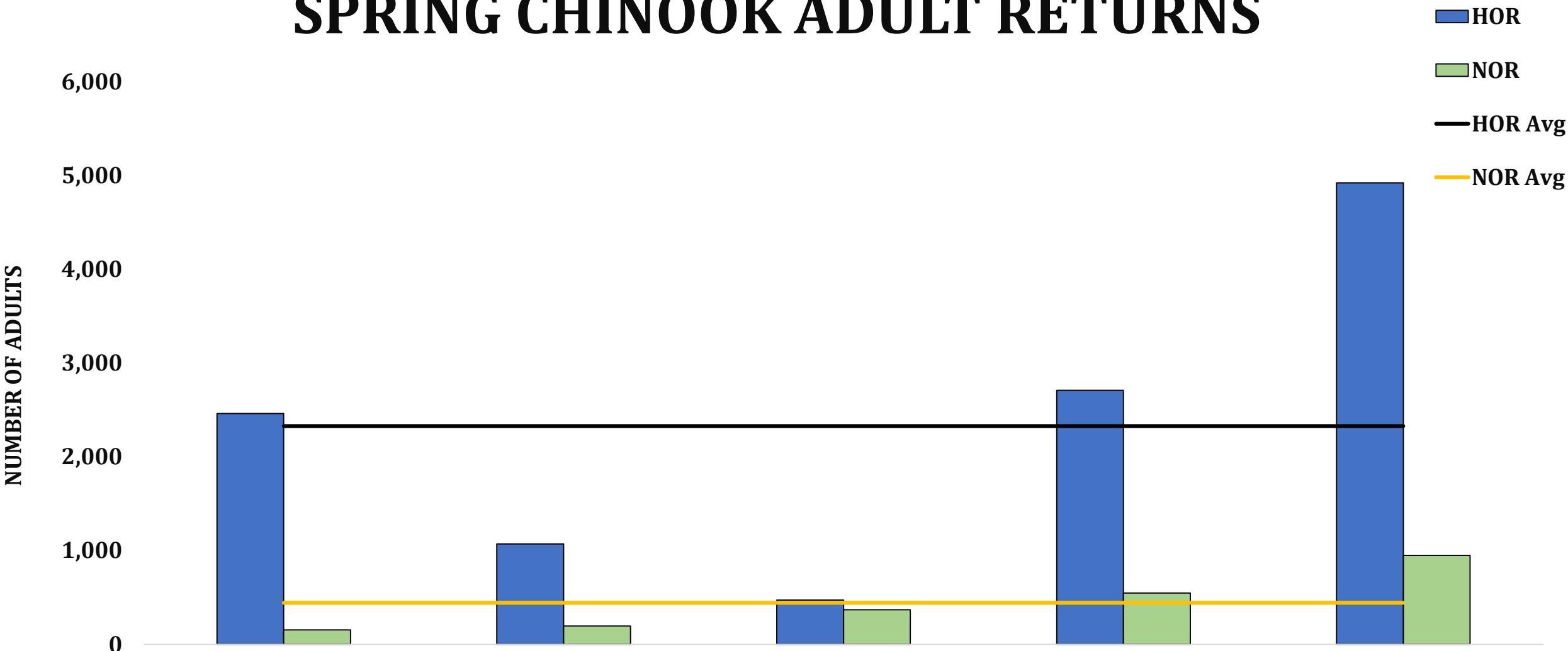
# FALL CHINOOK ADULT RETURNS

NUMBER OF ADULTS



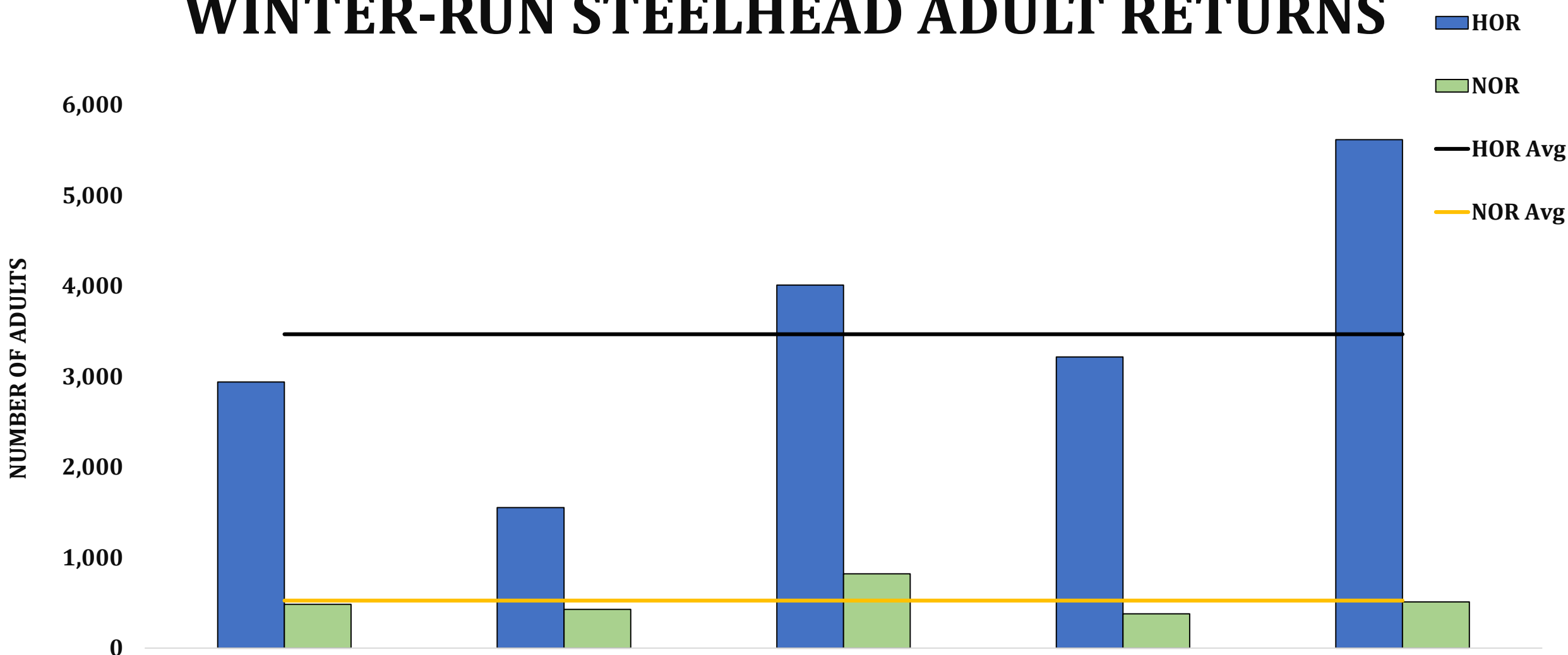
	2018	2019	2020	2021	2022
HOR	1,018	1,282	2,452	2,273	883
NOR	914	920	2,562	949	698

# SPRING CHINOOK ADULT RETURNS



	2018	2019	2020	2021	2022
<b>HOR</b>	<b>2,464</b>	<b>1,071</b>	<b>473</b>	<b>2,710</b>	<b>4,924</b>
<b>NOR</b>	<b>154</b>	<b>196</b>	<b>370</b>	<b>549</b>	<b>950</b>

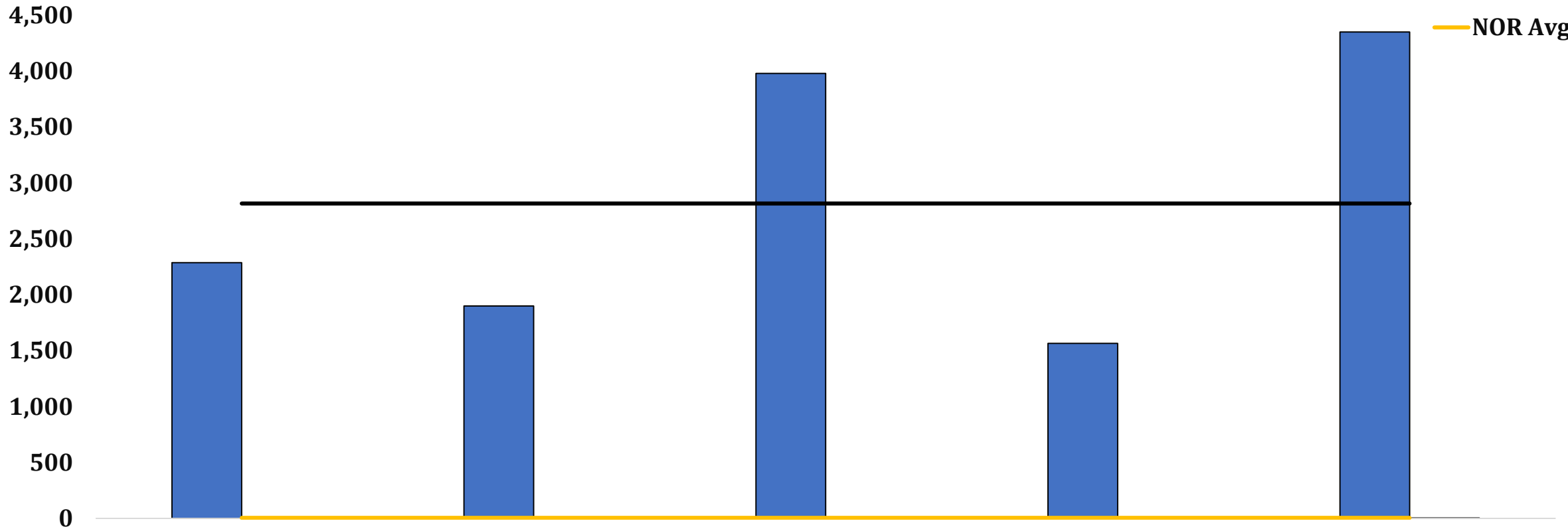
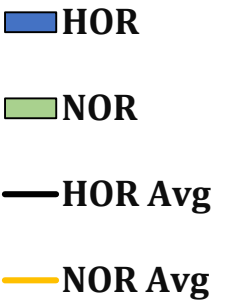
# WINTER-RUN STEELHEAD ADULT RETURNS



	2018	2019	2020	2021	2022
HOR	2,940	1,552	4,010	3,217	5,617
NOR	484	428	822	379	512

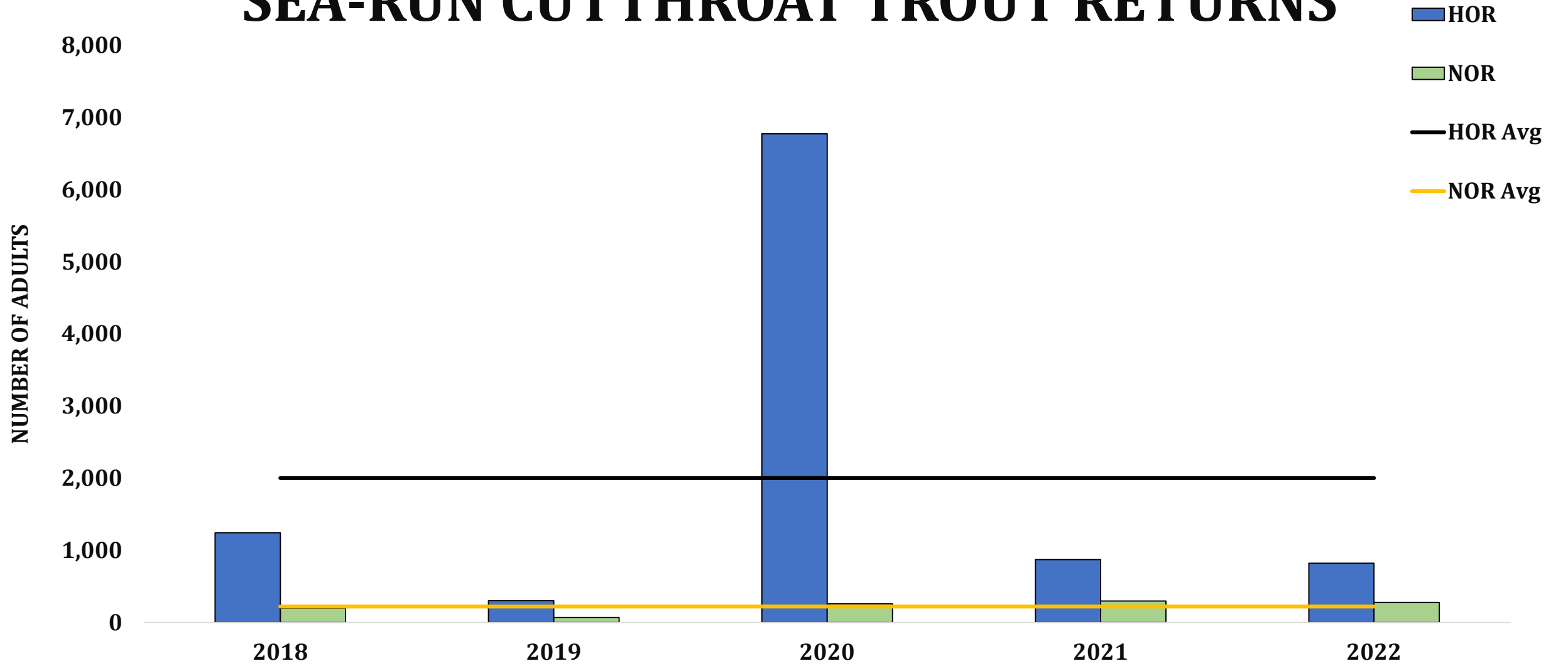


# SUMMER-RUN STEELHEAD ADULT RETURNS



	2018	2019	2020	2021	2022
<b>HOR</b>	2,288	1,900	3,980	1,565	4,351
<b>NOR</b>	8	6	3	1	5

# SEA-RUN CUTTHROAT TROUT RETURNS



<b>HOR</b>	<b>1,244</b>	<b>304</b>	<b>6,772</b>	<b>873</b>	<b>823</b>
<b>NOR</b>	<b>201</b>	<b>71</b>	<b>261</b>	<b>298</b>	<b>280</b>



# ADULT HANDLING PROTOCOL

6/8/2023 Update										
COWLITZ COMPLEX ADULT HANDLING - CSH				DISPOSITION OF ADULTS THAT ARRIVE AT COWLITZ SALMON HATCHERY						
BY 2023	ORIGIN	MARKS IN FISH	GUST BACK	BREMER BR.	PACKWOOD	CISPUS R.	SCANEWA	RETAIN AT HATCHERY	LOWER RIVER	
SPRING CHINOOK	Hatchery (HOR)	Ad Clipped Only			25% AHN	25% AHN	50% AHN			
	Hatchery (HOR)	UM+CWT			25% AHN	25% AHN	50% AHN	All		
	Hatchery (HOR)	Ad Clip+CWT						All		
	Hatchery (HOR) KAL	Ad Clip+RV						All		
	Wild (NOR)	Unmarked					All <sup>1</sup>			
	Wild (NOR)	Unmarked+PIT					All <sup>1</sup>			
	After July 1st, send HOR Sp Chinook upstream and use Copper Canyon Creek Kayak Take-out site to release NOR Sp Chinook into Lake Scanewa.									
	Hatchery (HOR)	Ad Clipped Only				50% AHN	50% AHN			
	Hatchery (HOR)	UM+CWT				50% AHN	50% AHN			
	Hatchery (HOR)	Ad Clip+CWT							All	
Hatchery (HOR) KAL	Ad Clip+RV							All		
Wild (NOR)	Unmarked				50%	50%	100%			
Wild (NOR)	Unmarked+PIT				50%	50%	100%			
BY 2023	ORIGIN	MARKS IN FISH	GUST BACK	BREMER BR.	PACKWOOD	CISPUS R.	SCANEWA	RETAIN AT HATCHERY	LOWER RIVER	
FALL CHINOOK	Hatchery (HOR)	Ad Clipped Only	>75%	<25%				Broodstock		
	Integrated (H/W)	Ad Clipped+CWT						100%		
	Wild (NOR)	Unmarked		AHN				Collect at a 1:2 *		
	Wild (NOR)	Unmarked+CWT		100%						
* Per NOAA approval collect UM fish at less than 1 fish to broodstock, 2 fish to the Tilton River, not to exceed 30% retention to hatchery overall, also meet minimum demographic replacement with HOR Ad only fish. Transport up to 1,600 HOR fall Chinook to the Tilton River. The demographic replacement will be a minimum of 2 HOR fish transported for every 1 NOR fish taken to brood.										
BY 2023	ORIGIN	MARKS IN FISH	GUST BACK	BREMER BR.	PACKWOOD	CISPUS R.	SCANEWA	RETAIN AT HATCHERY	LOWER RIVER	
COHO	Hatchery (HOR)	Ad Clipped Only	>75% <sup>2</sup>	<25% <sup>2</sup>				Broodstock		
	Integrated (H/W) <sup>1</sup>	Ad Clipped+CWT			25%	25%	50% <sup>1</sup>			
	Integrated (H/W) (flow/spill)	Ad Clipped+CWT			50%	50%				
	Wild (NOR)	Unmarked +CWT		Jacks			Adults/AHN <sup>1</sup>	Broodstock		
	Wild (NOR)	Unmarked		ALL						
	Wild (NOR)	Unmarked +CWT+PIT					AHN <sup>1</sup>	Broodstock		
Maximum HOR coho adult transport of 12,000 to Tilton and 40,000 to Upper Cowlitz										
<sup>1</sup> If flow or access conditions do not permit planting adults at Scanewa then plant approximately 50% to Cispus & 50% to Packwood.										
<sup>2</sup> Hatchery fish releases to Bremmer Bridge are intended to occur late in the season to avoid attracting anglers to the Bremmer Bridge site during low water.										
BY 2023	ORIGIN	MARKS IN FISH	GUST BACK	BREMER BR.	PACKWOOD	CISPUS R.	SCANEWA	RETAIN AT HATCHERY	LOWER RIVER	
ANADROMOUS COASTAL CUTTHROAT	Hatchery (HOR)	Ad Clipped Only						Per brood	All AHN *	
	Wild (NOR)	Unmarked		All						
	Wild NOR	UM+Dorsal CWT		All						
	Wild (NOR)	Unmarked +CWT					All <sup>a</sup>			
All hatchery fish mass marked.										
<sup>a</sup> Caudal clip recycled fish.										
<sup>a</sup> See NOTES tab. - Cispus preferred when Scanewa not available.										
BY 2023	ORIGIN	MARKS IN FISH	GUST BACK	BREMER BR.	PACKWOOD	CISPUS R.	SCANEWA	RETAIN AT HATCHERY	LOWER RIVER	
WINTER STEELHEAD	Hatchery (HOR)	Ad Clipped Only						All		
	Integrated (H/W)	AD+CWT			50% AHN	50% AHN		Broodstock		
	Integrated (H/W)	AD+RV (UCR)			50% AHN	50% AHN		Broodstock		
	Integrated (H/W)	AD+LV (Tilton)	>75% AHN	<25% AHN				Broodstock		
	Wild (NOR)	UM+Dorsal CWT		All AHN <sup>3</sup>				Broodstock		
	Wild (NOR)	Unmarked +CWT					All/AHN <sup>3,4</sup>	Broodstock		
	Wild (NOR)	Unmarked		All AHN <sup>3</sup>				Broodstock		
<sup>a</sup> See NOTES tab. - Caudal clipped fish re-returning after live spawning will be distributed to their respective origins.										
<sup>1</sup> If flow or access conditions do not permit planting adults at Scanewa then plant approximately 50% to Cispus & 50% to Packwood.										
BY 2023	ORIGIN	MARKS IN FISH	TILTON		PACKWOOD	CISPUS R.	SCANEWA	RETAIN AT HATCHERY	LOWER RIVER	
SUMMER STEELHEAD	Hatchery Origin	Ad Clipped						AHN <sup>a</sup>	6,600 <sup>1</sup>	
	Wild (NOR)	Unmarked							All	
All hatchery fish mass marked.										
<sup>a</sup> Final disposition to be determined by Fish Management annually. Fish may be donated to food banks, planted in other lakes etc....										
<sup>1</sup> Fish will be opercal punched and recycled downstream from June 1st-Aug 31th. Approx. 200 fish per week to I-5 boat launch PENDING FISH MANAGEMENT/FTC review/modification.										



4/12/2022 Update

**COWLITZ COMPLEX ADULT HANDLING - CSH**

**DISPOSITION  
OF ADULTS THAT ARRIVE AT  
COWLITZ SALMON HATCHERY**

BY 2021	ORIGIN	MARKS IN FISH	GUST BACK.	BREMER BR.	PACKWOOD	CISPUS R.	SCANEWA	RETAIN AT HATCHERY	LOWER RIVER	
SPRING CHINOOK	Hatchery (HOR)	Ad Clipped Only			25% AHN	25% AHN	50% AHN			
	Hatchery (HOR)	Ad Clip+CWT						All		
	Wild (NOR)	Unmarked					All <sup>1</sup>			
	SCANEWA NOT AVAILABLE or AFTER JUNE 16TH TO THE END OF SUMMER WHEN LAKE TEMPS DROP BELOW 18 DEGREES C									
	Hatchery (HOR)	Ad Clipped Only			50% AHN	50% AHN				
	Hatchery (HOR)	Ad Clip+CWT							All	
	Wild (NOR)	Unmarked			50%	50%				

Note: Take scales & length on all unmarked.

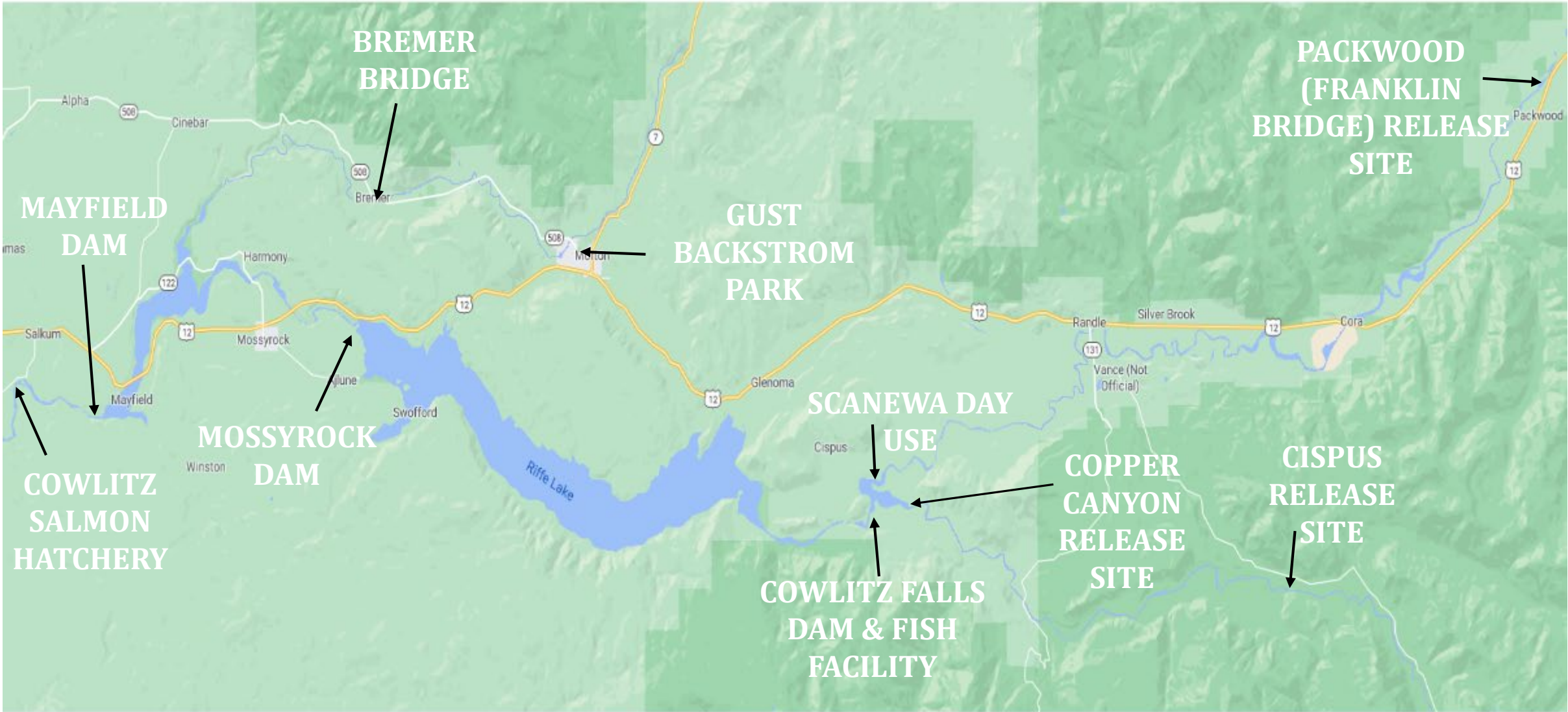
BY 2021	ORIGIN	MARKS IN FISH	GUST BACK.	BREMER BR.	PACKWOOD	CISPUS R.	SCANEWA	RETAIN AT HATCHERY	LOWER RIVER
FALL CHINOOK	Hatchery (HOR)	Ad Clipped Only	1,600 AHN		-			Broodstock	
	Integrated (H/W)	Ad Clipped+CWT						100%	
	Wild (NOR)	Unmarked		AHN				Collect at a 1:2 *	

\* Per NOAA approval collect UM fish at a 1 fish to broodstock, 2 fish to the Tilton River, not to exceed 30% retention to hatchery

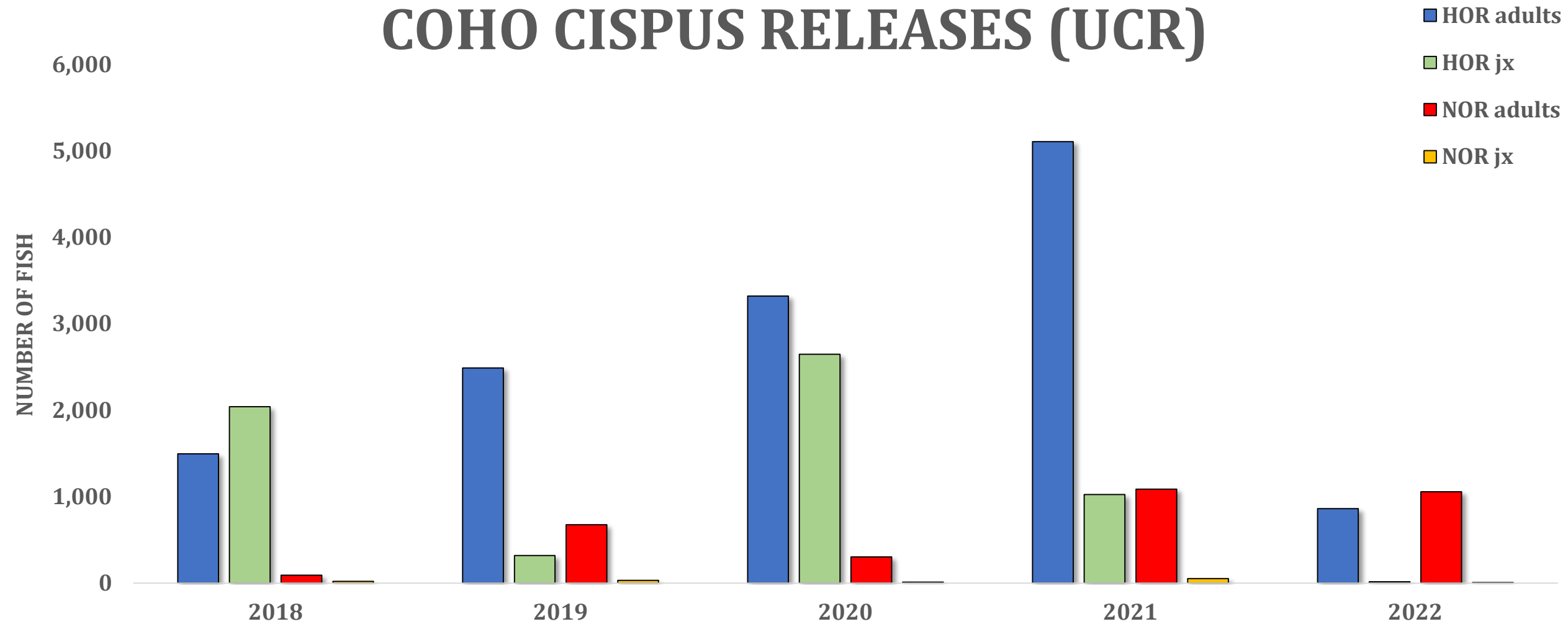
# RELEASE SITES AND DISTRIBUTION



# TILTON AND UPPER COWLITZ RELEASE SITES



# COHO CISPUS RELEASES (UCR)

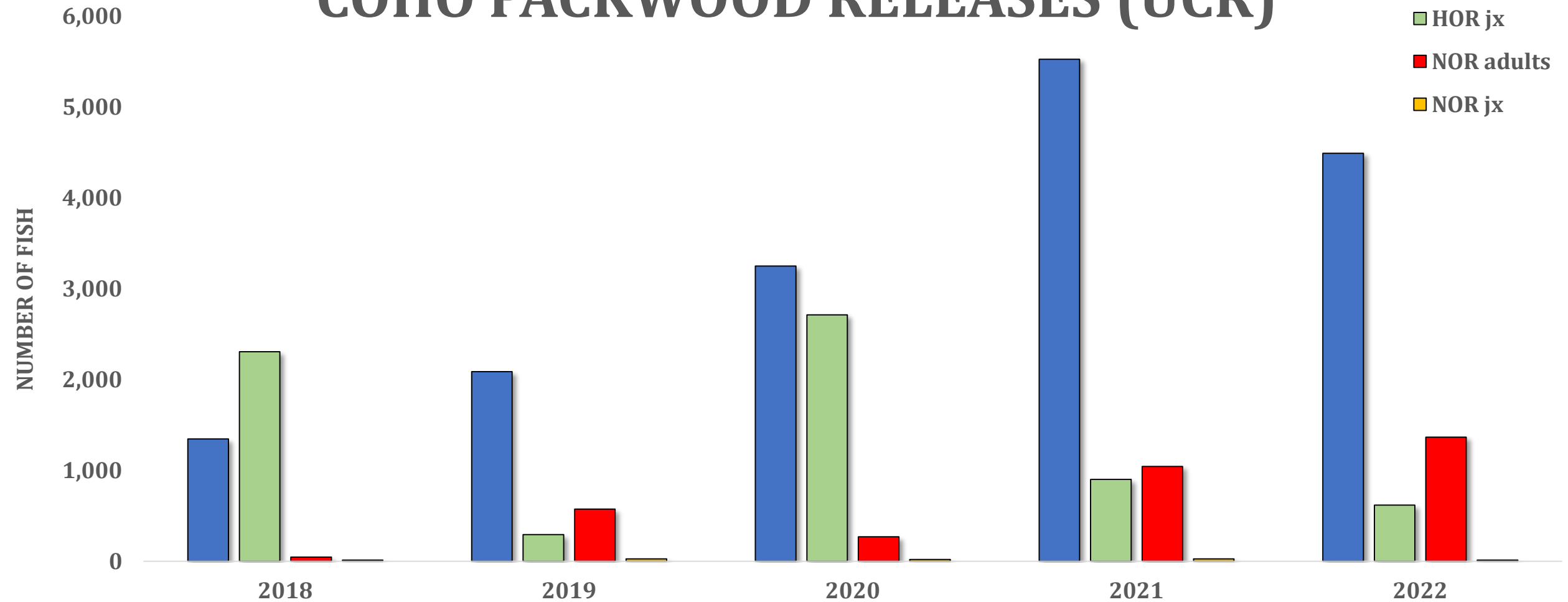


HOR Adults	1,495	2,488	3,321	5,105	861
HOR Jx	2,040	319	2,647	1,025	17
NOR Adults	93	676	304	1,086	1,056
NOR Jx	20	32	11	54	8



# COHO PACKWOOD RELEASES (UCR)

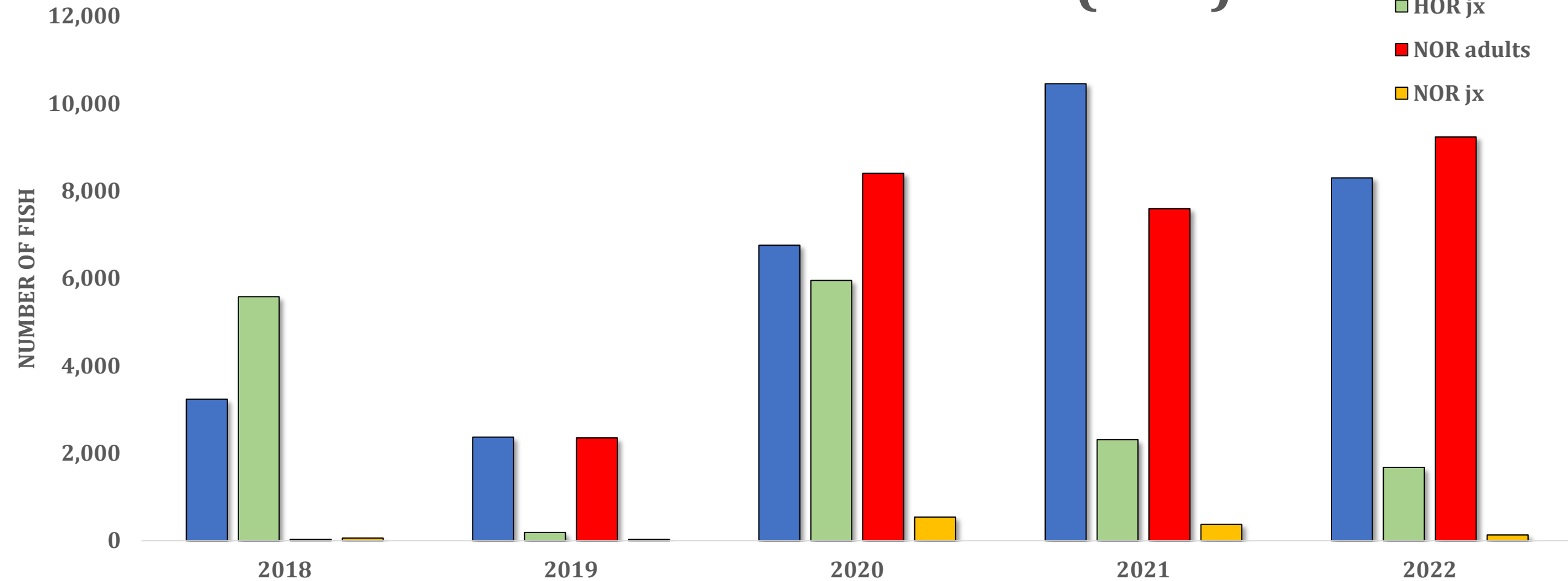
- HOR adults
- HOR jx
- NOR adults
- NOR jx



HOR Adults	1,347	2,088	3,251	5,527	4,493
HOR Jx	2,308	293	2,713	902	619
NOR Adults	46	574	270	1,043	1,367
NOR Jx	12	27	19	26	14

# COHO SCANEWA RELEASES (UCR)

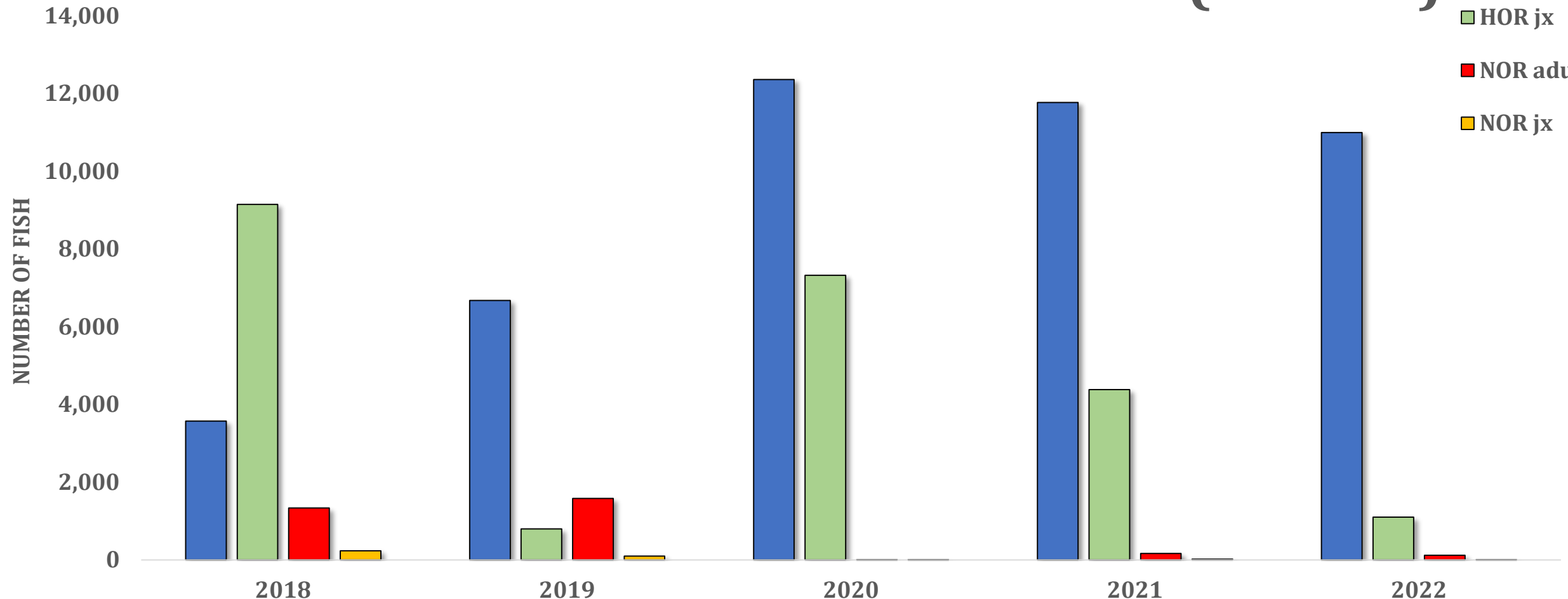
- HOR adults
- HOR jx
- NOR adults
- NOR jx



	2018	2019	2020	2021	2022
HOR Adults	3,238	2,372	6,761	10,457	8,302
HOR Jx	5,583	191	5,953	2,314	1,681
NOR Adults	29	2,355	8,406	7,597	9,238
NOR Jx	62	27	542	376	131

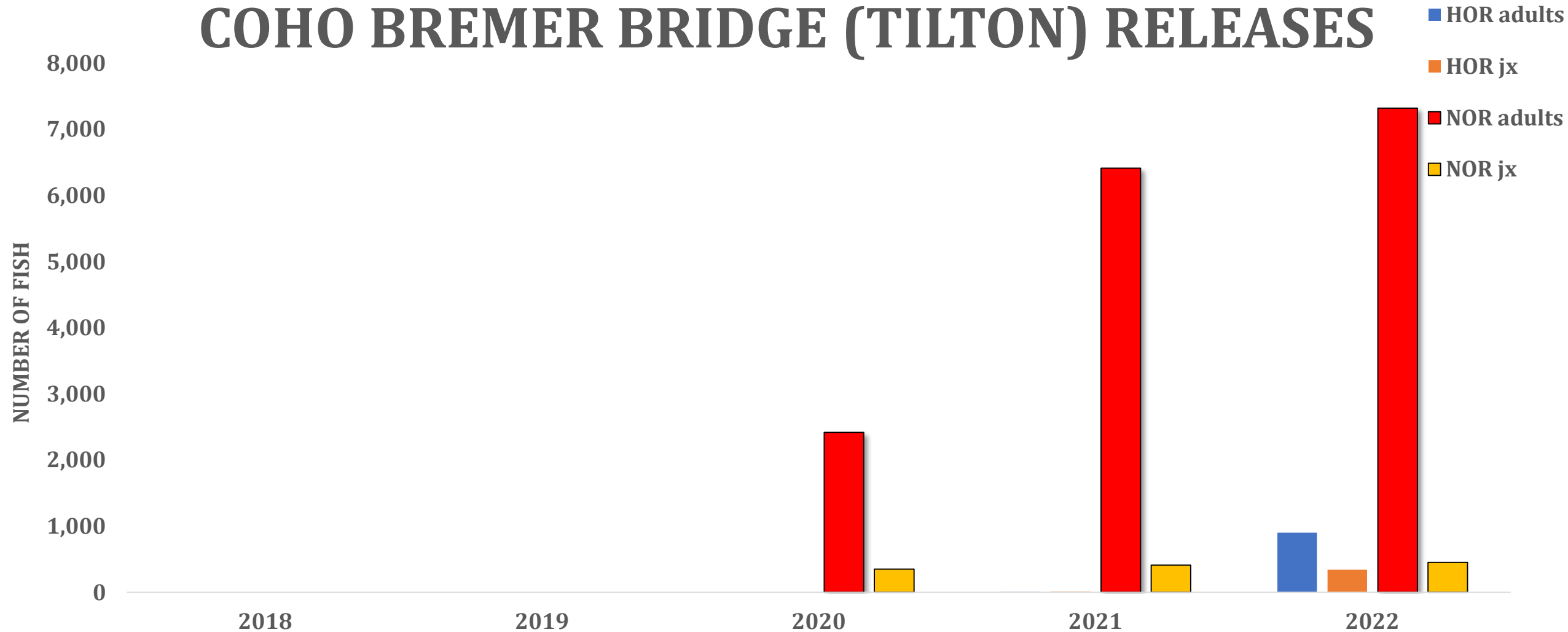
# COHO GUST BACKSTROM RELEASES (TILTON)

- HOR adults
- HOR jx
- NOR adults
- NOR jx



HOR Adults	3,570	6,676	12,358	11,769	10,993
HOR Jacks	9,148	798	7,324	4,379	1,099
NOR Adults	1,335	1,582	2	165	119
NOR Jacks	233	95	1	19	4

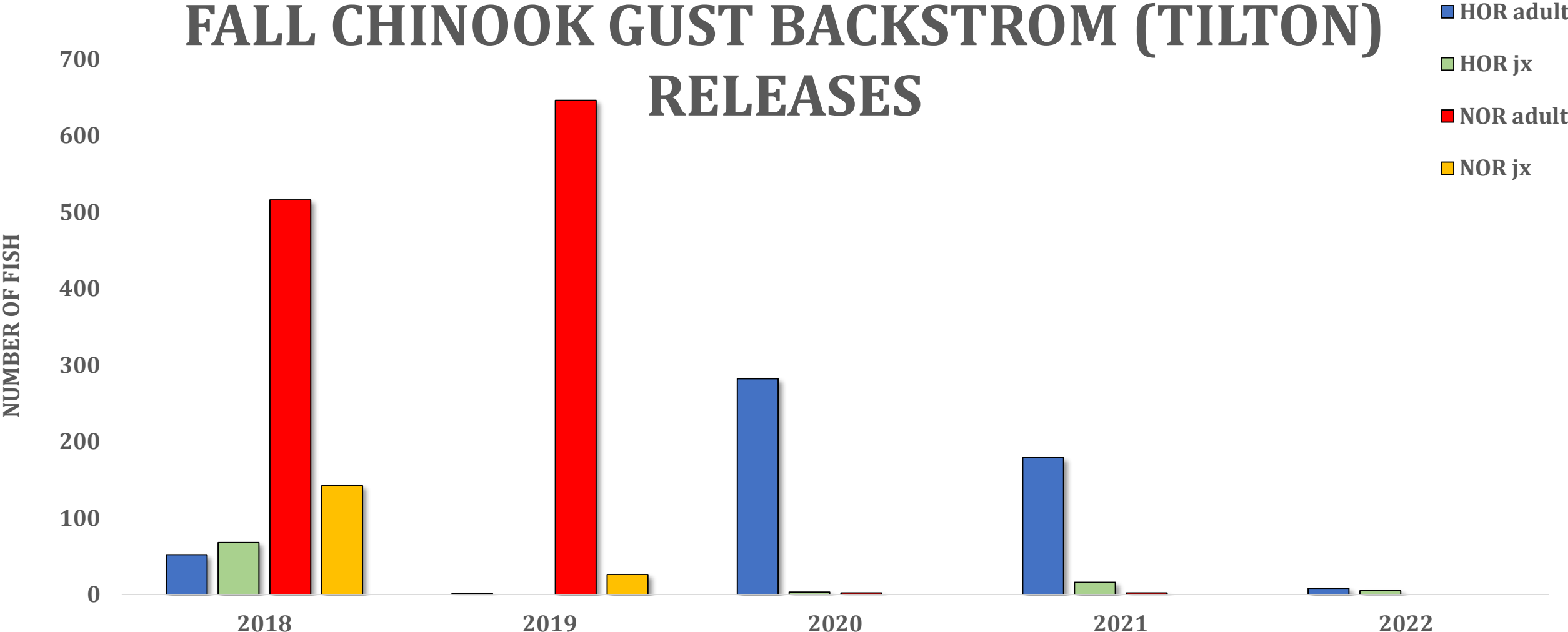
# COHO BREMER BRIDGE (TILTON) RELEASES



	2018	2019	2020	2021	2022
HOR Adults	0	0	4	6	902
HOR Jx	0	0	0	11	342
NOR Adults	0	0	2,419	6,412	7,321
NOR Jx	0	0	353	412	453



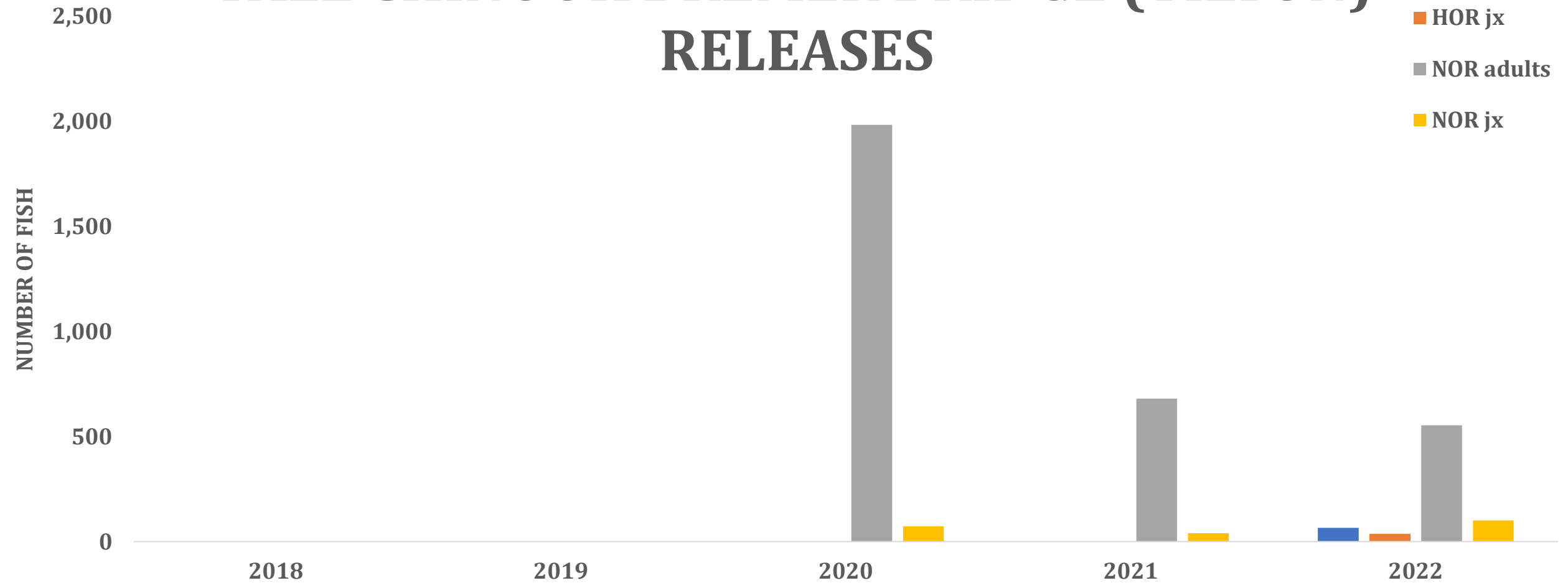
# FALL CHINOOK GUST BACKSTROM (TILTON) RELEASES



HOR Adults	52	1	282	179	8
HOR Jx	68	0	3	16	5
NOR Adults	516	646	2	2	0
NOR Jx	142	26	0	0	0

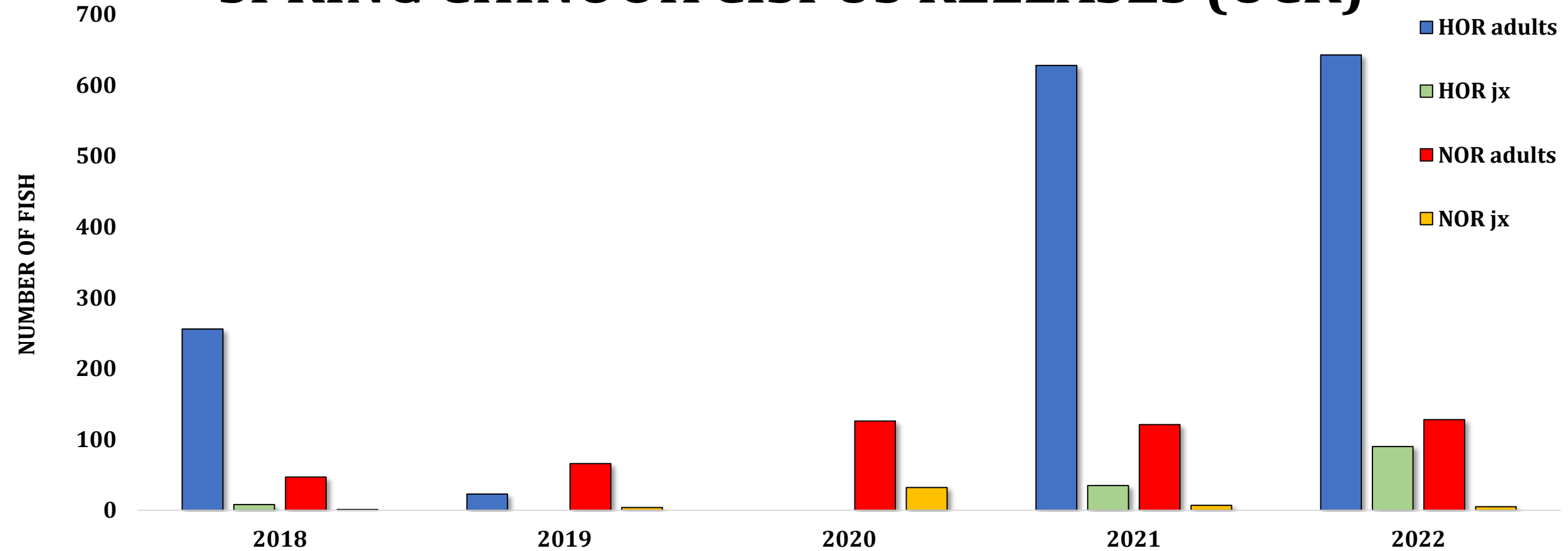
# FALL CHINOOK BREMER BRIDGE (TILTON) RELEASES

- HOR adults
- HOR jx
- NOR adults
- NOR jx



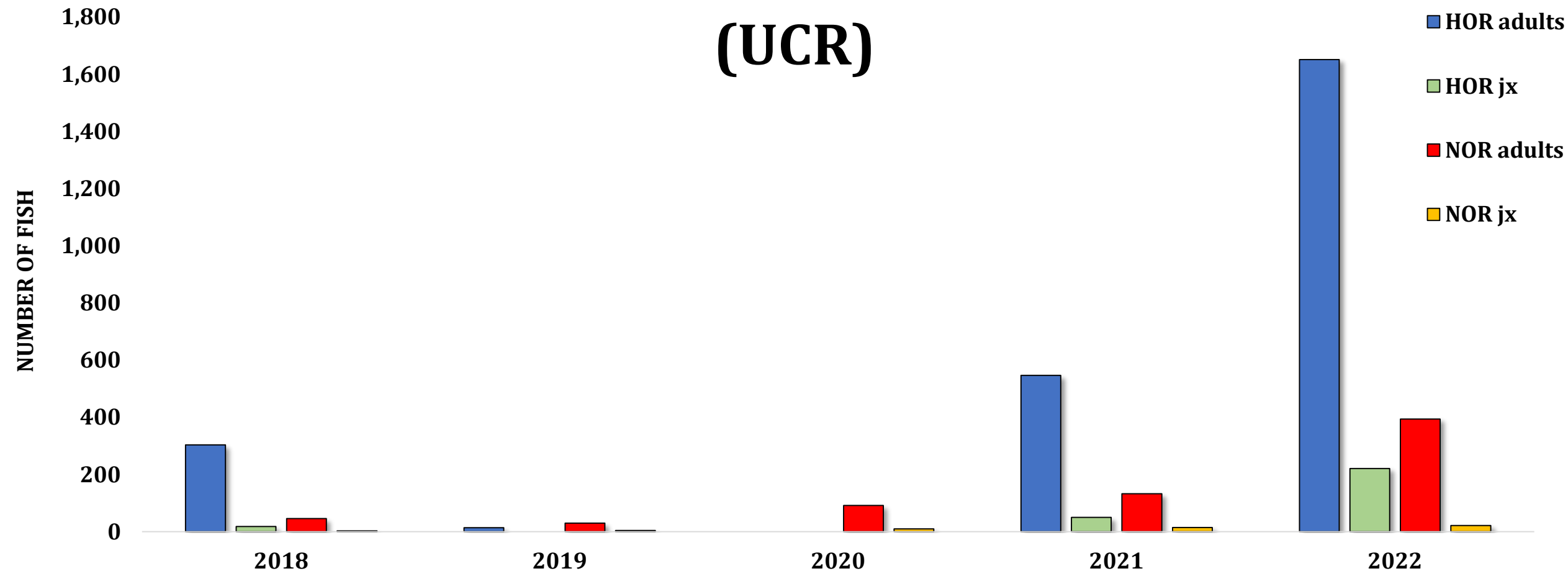
HOR Adults	0	0	0	1	66
HOR Jx	0	0	0	0	36
HOR Adults	0	0	1983	680	554
HOR Jx	0	0	73	40	101

# SPRING CHINOOK CISPUS RELEASES (UCR)



HOR Adults	256	23	0	628	643
HOR Jx	8	0	0	35	90
HOR Adults	47	66	126	121	128
HOR Jx	1	4	32	7	5

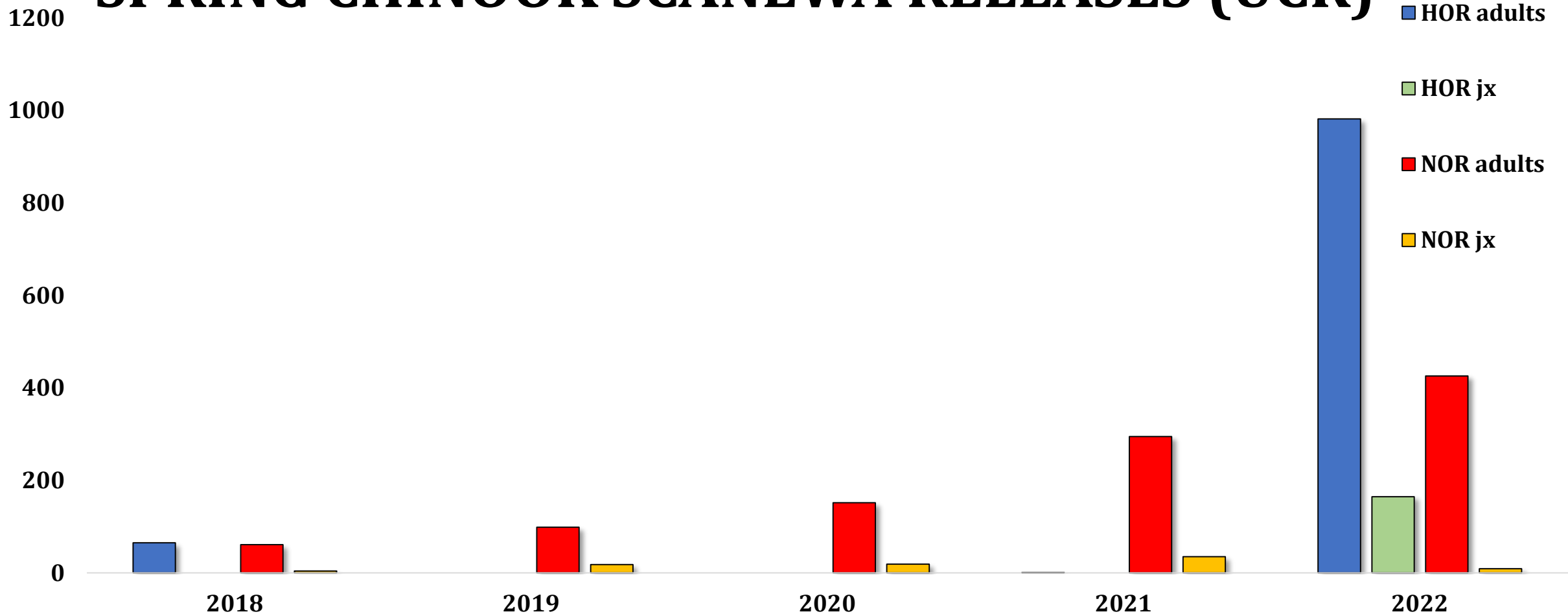
# SPRING CHINOOK PACKWOOD RELEASES (UCR)



HOR Adults	304	14	0	547	1,651
HOR Jx	18	0	0	50	221
HOR Adults	46	30	92	133	394
HOR Jx	3	4	10	15	22

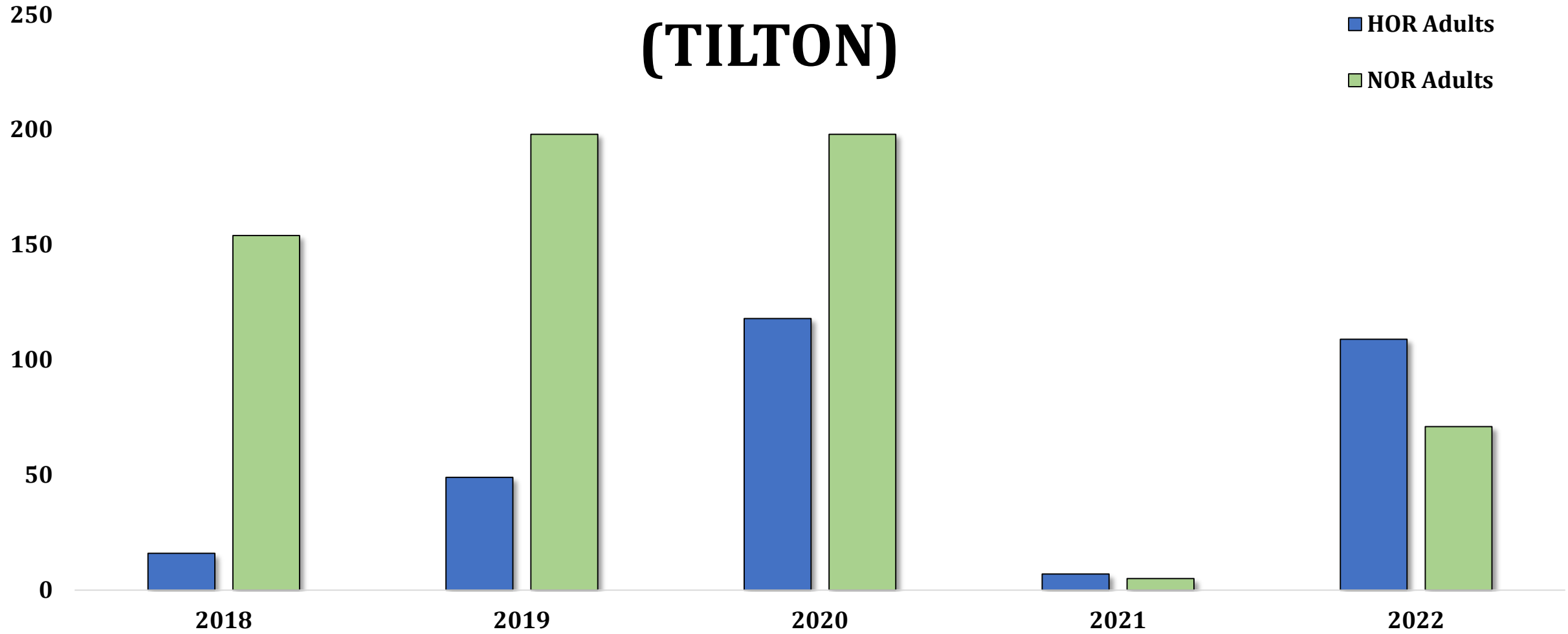


# SPRING CHINOOK SCANEWA RELEASES (UCR)



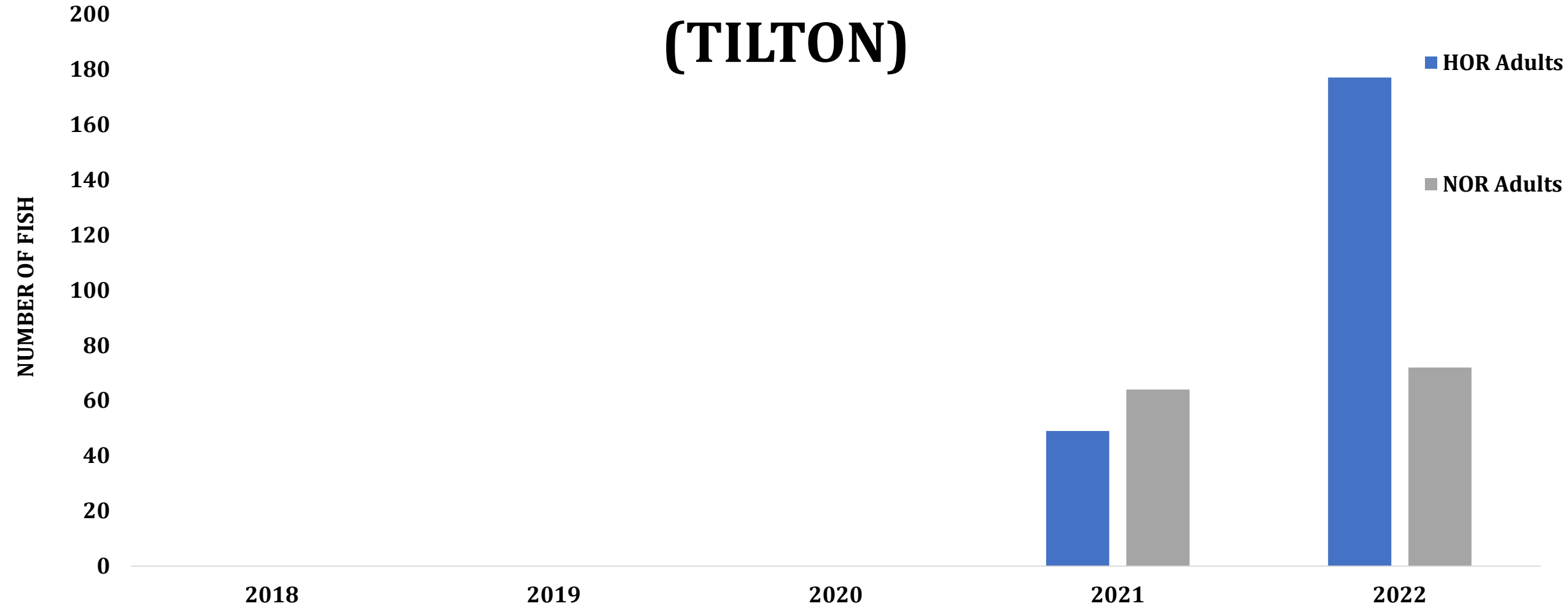
	2018	2019	2020	2021	2022
HOR Adults	65	0	0	1	982
HOR Jx	0	0	0	0	165
NOR Adults	61	99	152	295	426
NOR Jx	1	4	18	19	35

# WINTER-RUN STEELHEAD GUST BACKSTROM (TILTON)



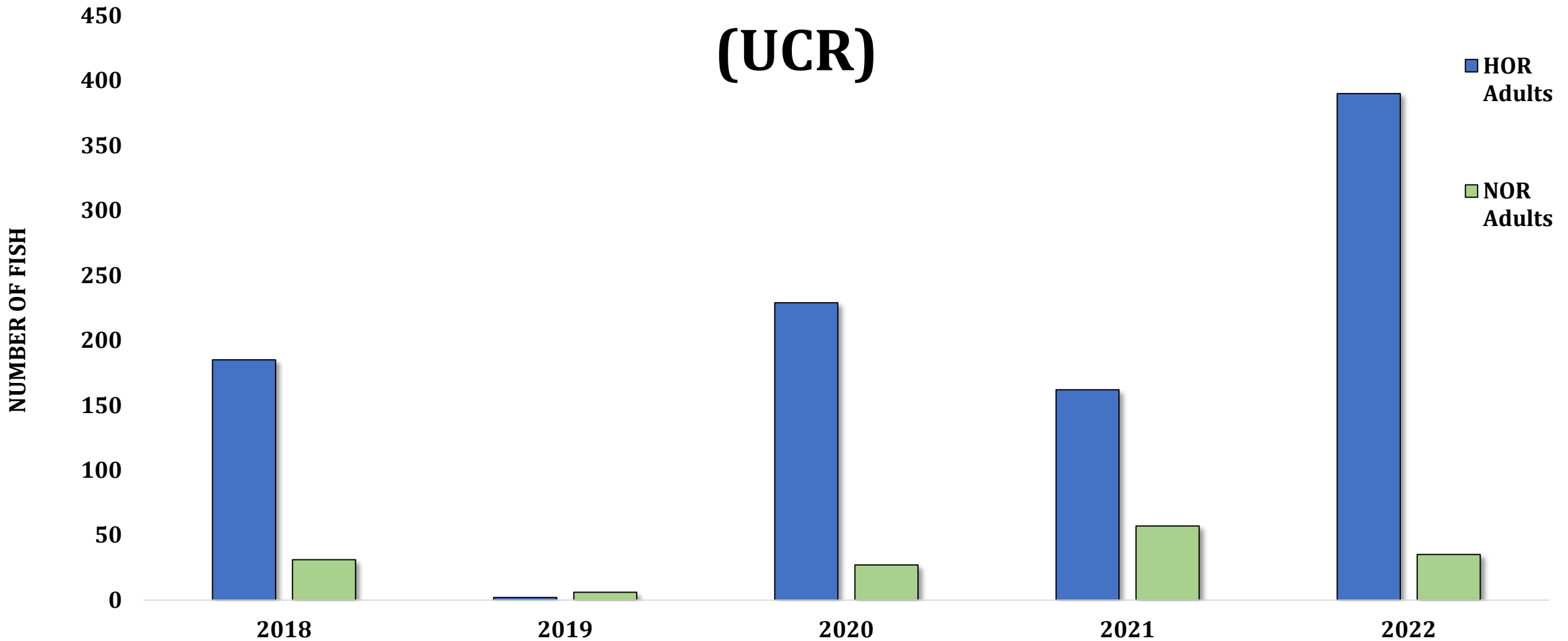
HOR Adults	16	49	118	7	109
NOR Adults	154	198	198	5	71

# WINTER-RUN STEELHEAD BREMER BRIDGE (TILTON)



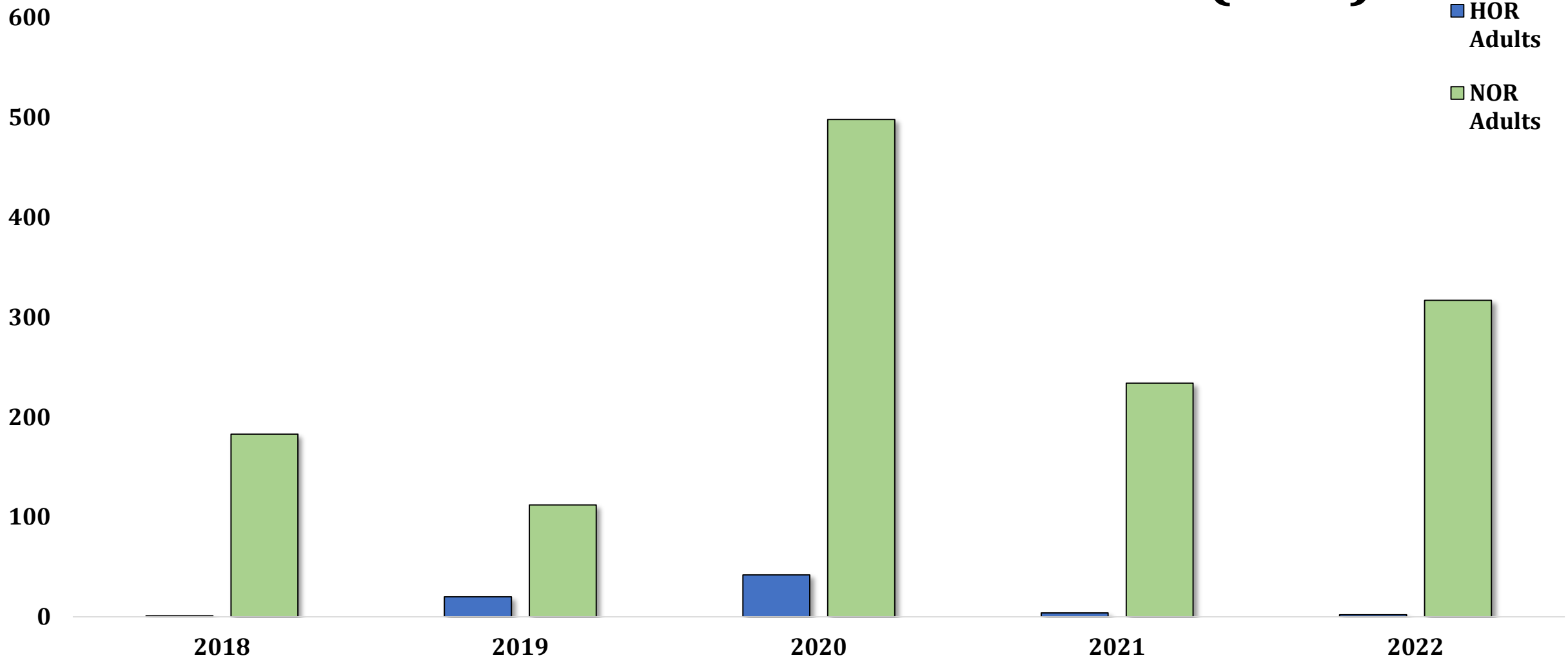
	2018	2019	2020	2021	2022
HOR Adults	0	0	0	49	177
NOR Adults	0	0	0	64	72

# WINTER-RUN STEELHEAD CISPUS RELEASES (UCR)



HOR Adults	185	2	229	162	390
NOR Adults	31	6	27	57	35

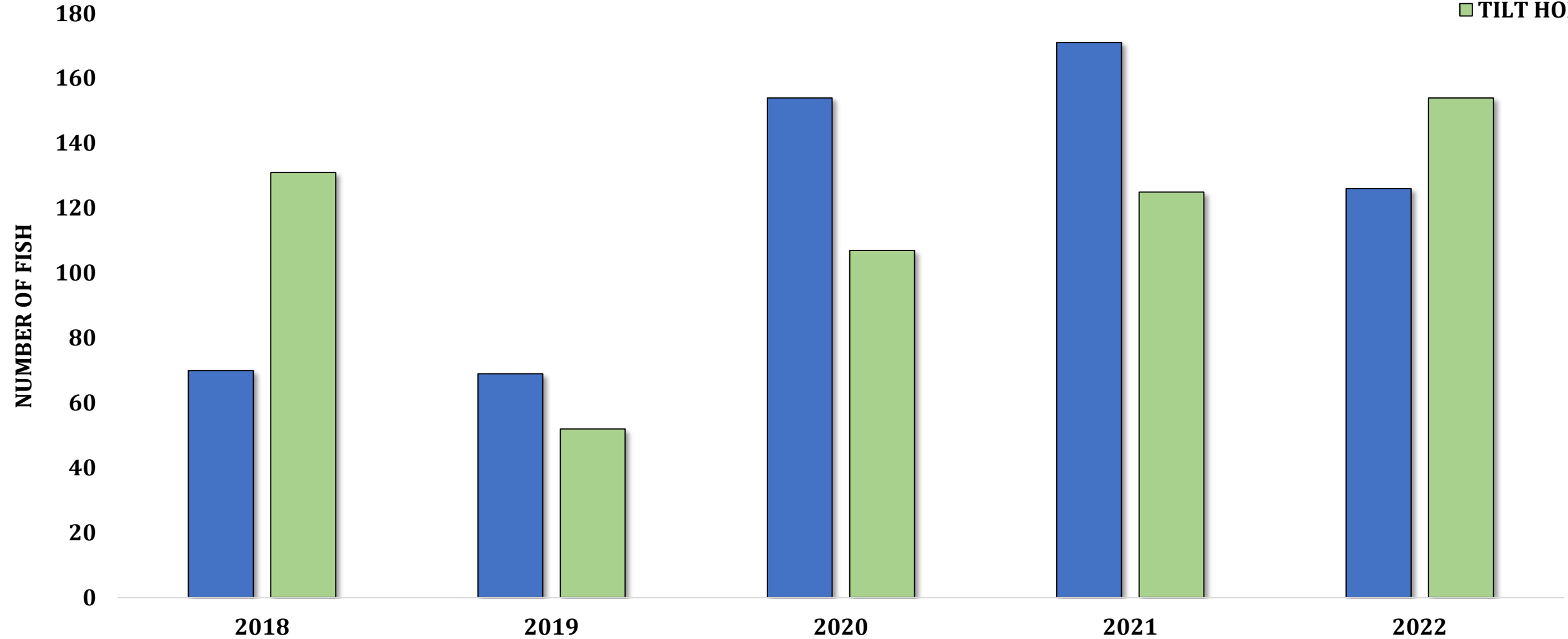
# WINTER-RUN STEELHEAD SCANEWA (UCR)



HOR Adults	1	20	42	4	2
NOR Adults	183	112	498	234	317

# SEA-RUN CUTTHROAT RELEASES

■ UCR NOR  
■ TILT HOR



	2018	2019	2020	2021	2022
UCR NOR	70	69	154	171	126
TILT NOR	131	52	107	125	154



# WEEKLY REPORTS AT [MyTPU.org/CowlitzFishReport](http://MyTPU.org/CowlitzFishReport)

## 2021-2022 Collection Totals

NOTE: The "Total Returns" are the total number of adults that were collected at the Cowlitz Salmon Hatchery Adult Separator.

Coho																		
Run Timing: August 2021-February 2022			Upstream Transportation								Lower Cowlitz		Broodstock		Surplus		Mortality	
Week Ending	Total			Tilton River		Lake Scanewa		Cowlitz @ Packwood		Cispus River		Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	
	Returns	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural							
<b>Season to date</b>	<b>56,960</b>	<b>39,797</b>	<b>17,163</b>	<b>11,775</b>	<b>6,577</b>	<b>10,457</b>	<b>7,597</b>	<b>5,527</b>	<b>1,043</b>	<b>5,105</b>	<b>1,086</b>	<b>0</b>	<b>0</b>	<b>1,211</b>	<b>852</b>	<b>5,706</b>	<b>16</b>	<b>8</b>
15-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weekly 5-Year Average	0	0	0															
Season 5-Yr. Average to Date	<b>32,440</b>	22,608	9,832															

Spring Chinook																		
Run Timing: March 2022-October 2022			Upstream Transportation								Lower Cowlitz		Broodstock		Surplus		Mortality	
Week Ending	Total			Tilton River		Lake Scanewa		Cowlitz @ Packwood		Cispus River		Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	
	Returns	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural							
<b>Season to date</b>	<b>41</b>	<b>36</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>0</b>
15-Apr	24	21	3	0	0	0	3	0	0	0	0	0	0	0	21	0	0	0
Weekly 5-Year Average	79	77	2															
Season 5-Yr. Average to Date	<b>101</b>	98	3															

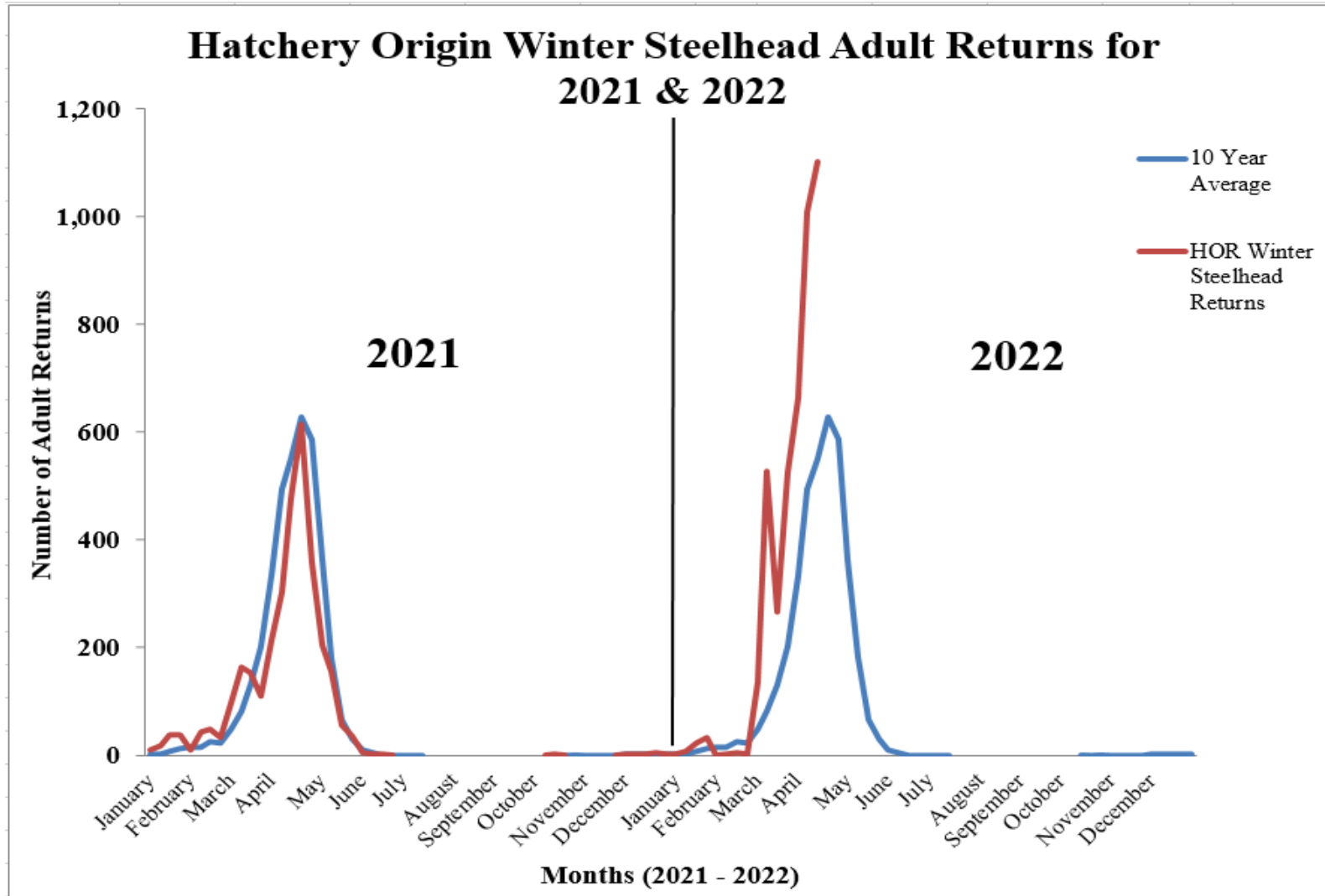
Fall Chinook																		
Run Timing: August 2021-December 2021			Upstream Transportation								Lower Cowlitz		Broodstock		Surplus		Mortality	
Week Ending	Total			Tilton River		Lake Scanewa		Cowlitz @ Packwood		Cispus River		Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	
	Returns	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural							
<b>Season to date</b>	<b>3,222</b>	<b>2,273</b>	<b>949</b>	<b>180</b>	<b>683</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,079</b>	<b>267</b>	<b>10</b>	<b>3</b>	<b>0</b>
15-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Weekly 5-Year Average	0	0	0															
Season 5-Yr. Average to Date	<b>3,307</b>	1,860	1,447															

Winter-Run Steelhead																		
Run Timing: November 2021-July 2022			Upstream Transportation								Lower Cowlitz		Broodstock		Surplus		Mortality	
Week Ending	Total			Tilton River		Lake Scanewa		Cowlitz @ Packwood		Cispus River		Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	
	Returns	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural							
<b>Season to date</b>	<b>4,707</b>	<b>4,312</b>	<b>395</b>	<b>160</b>	<b>107</b>	<b>0</b>	<b>212</b>	<b>135</b>	<b>0</b>	<b>286</b>	<b>31</b>	<b>0</b>	<b>0</b>	<b>458</b>	<b>39</b>	<b>3,269</b>	<b>4</b>	<b>1</b>
15-Apr	1,185	1,101	84	44	14	0	59	70	0	55	0	0	0	35	11	895	2	0
Weekly 5-Year Average	574	492	82															
Season 5-Yr. Average to Date	<b>1,661</b>	1,311	350															

Summer-Run Steelhead																		
Run Timing: May 2022-December 2022			Upstream Transportation								Lower Cowlitz		Broodstock		Surplus		Mortality	
Week Ending	Total			Tilton River		Lake Scanewa		Cowlitz @ Packwood		Cispus River		Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	
	Returns	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural							
<b>Season to date</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>
15-Apr	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0
Weekly 5-Year Average	1	1	0															
Season 5-Yr. Average to Date	<b>1</b>	1	0															

Cutthroat Trout																		
Run Timing: January 2022-December 2022			Upstream Transportation								Lower Cowlitz		Broodstock		Surplus		Mortality	
Week Ending	Total			Tilton River		Lake Scanewa		Cowlitz @ Packwood		Cispus River		Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	
	Returns	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural							
<b>Season to date</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
15-Apr	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Weekly 5-Year Average	2	2	0															
Season 5-Yr. Average to Date	<b>11</b>	2	9															

# WEEKLY REPORTS AT [MyTPU.org/CowlitzFishReport](http://MyTPU.org/CowlitzFishReport)



# QUESTIONS?

