



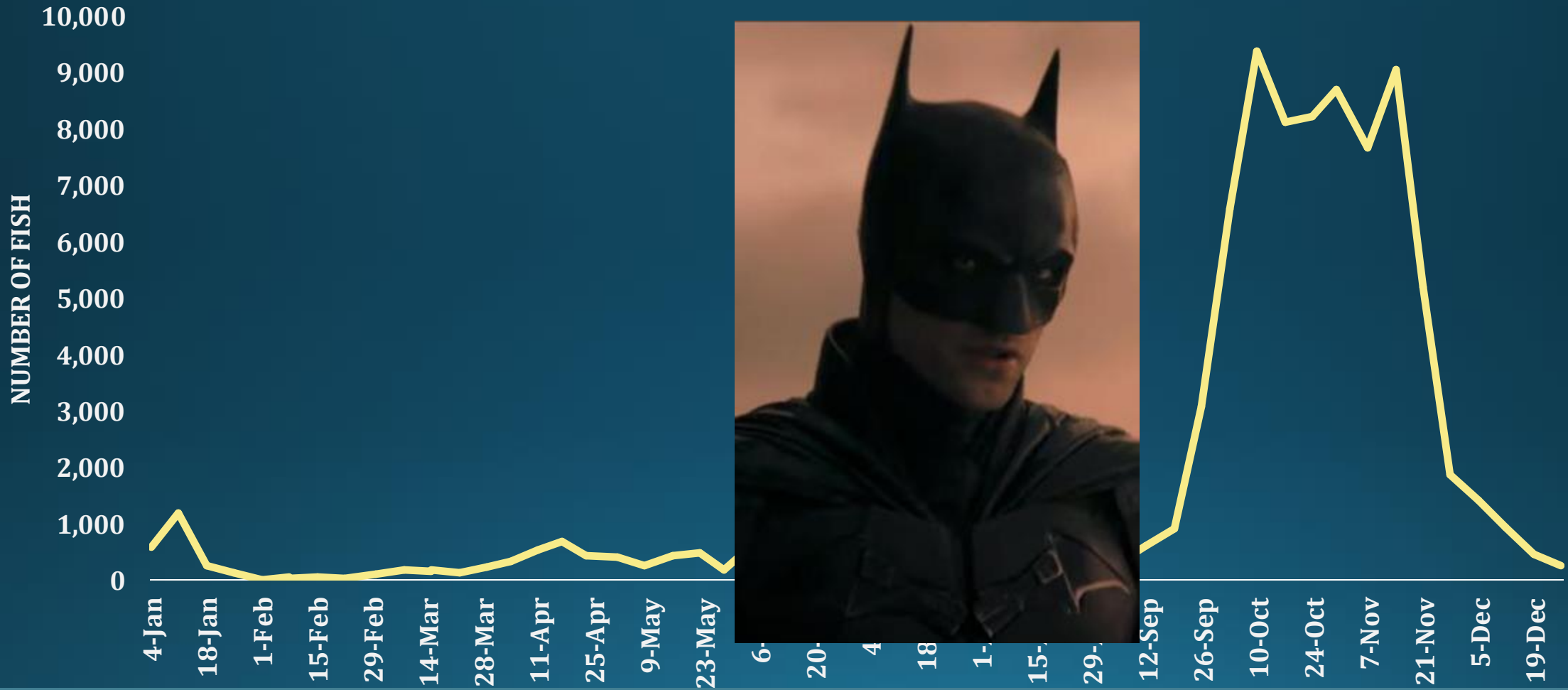
Cowlitz Salmon Hatchery Adult Handling & Distribution

April 21, 2022

Cowlitz Annual Program
Review and Science
Conference

Jamie Murphy,
Natural Resources Biologist

2021 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



2021 Adult Returns



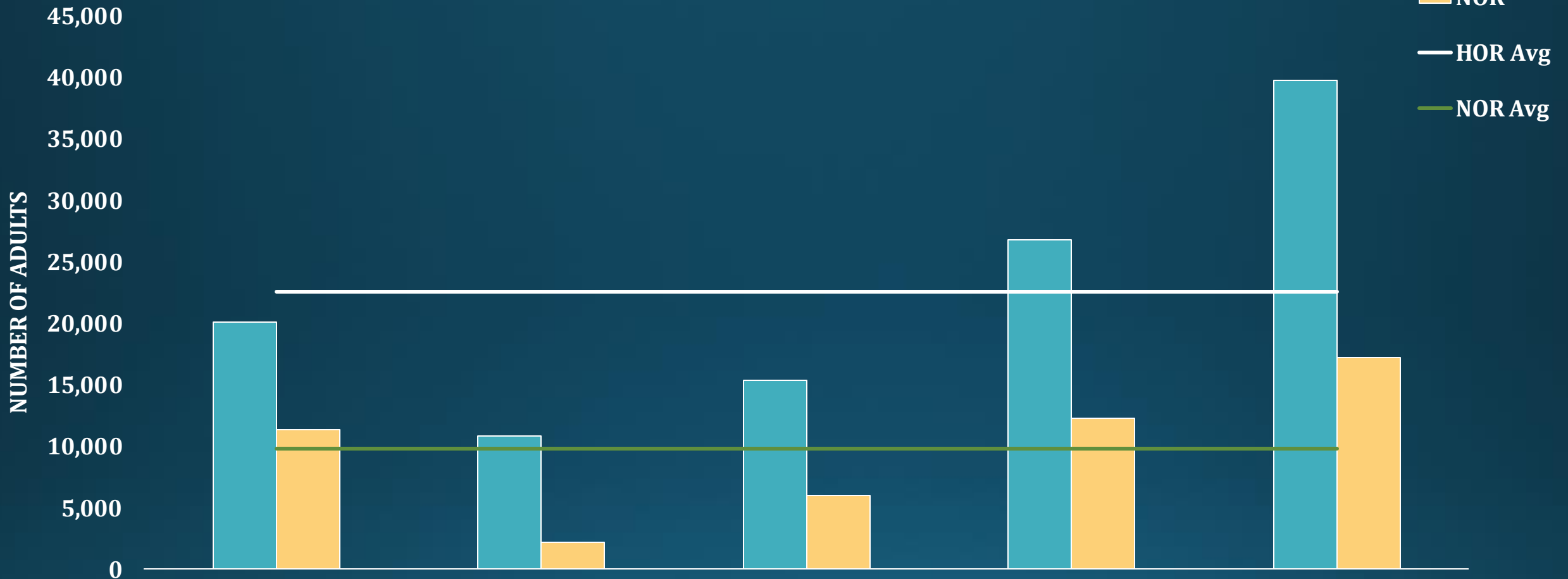
COHO ADULT RETURNS

HOR

NOR

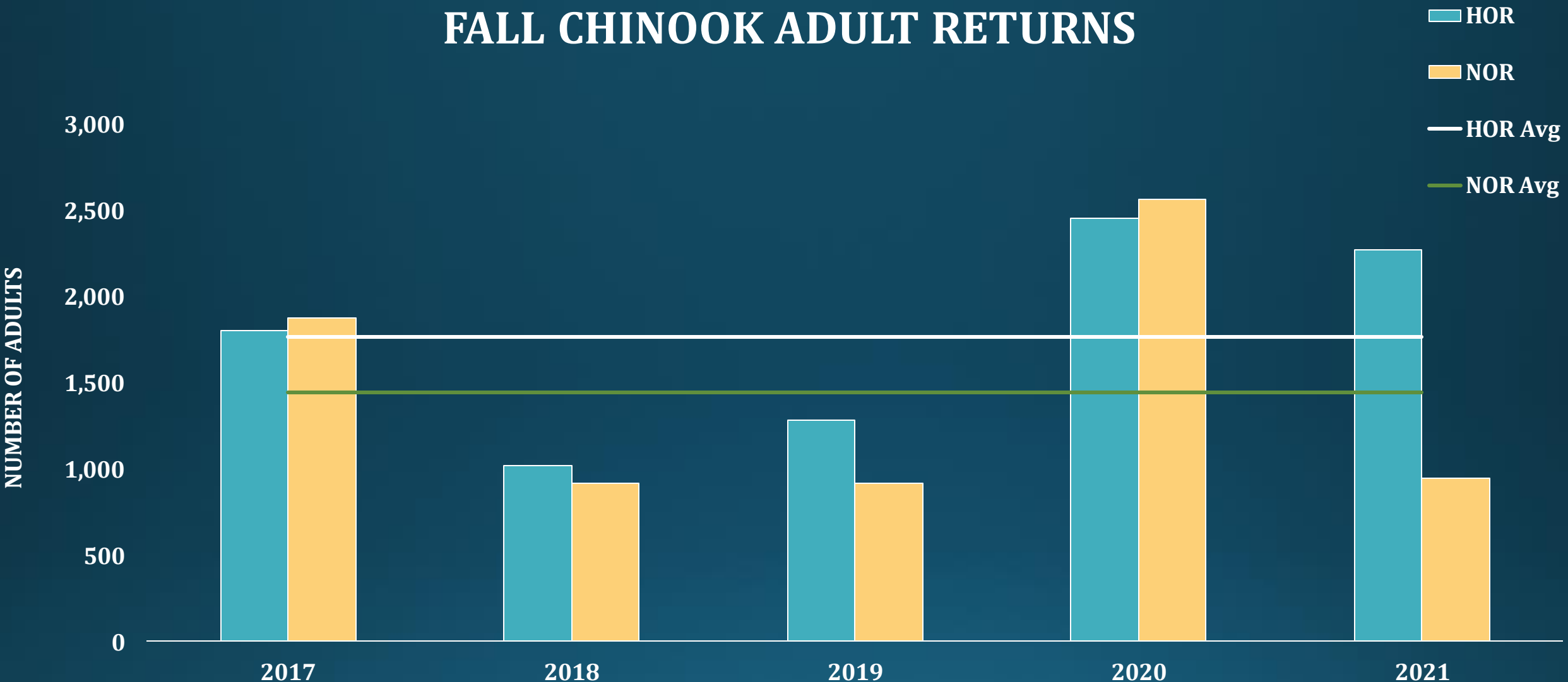
HOR Avg

NOR Avg



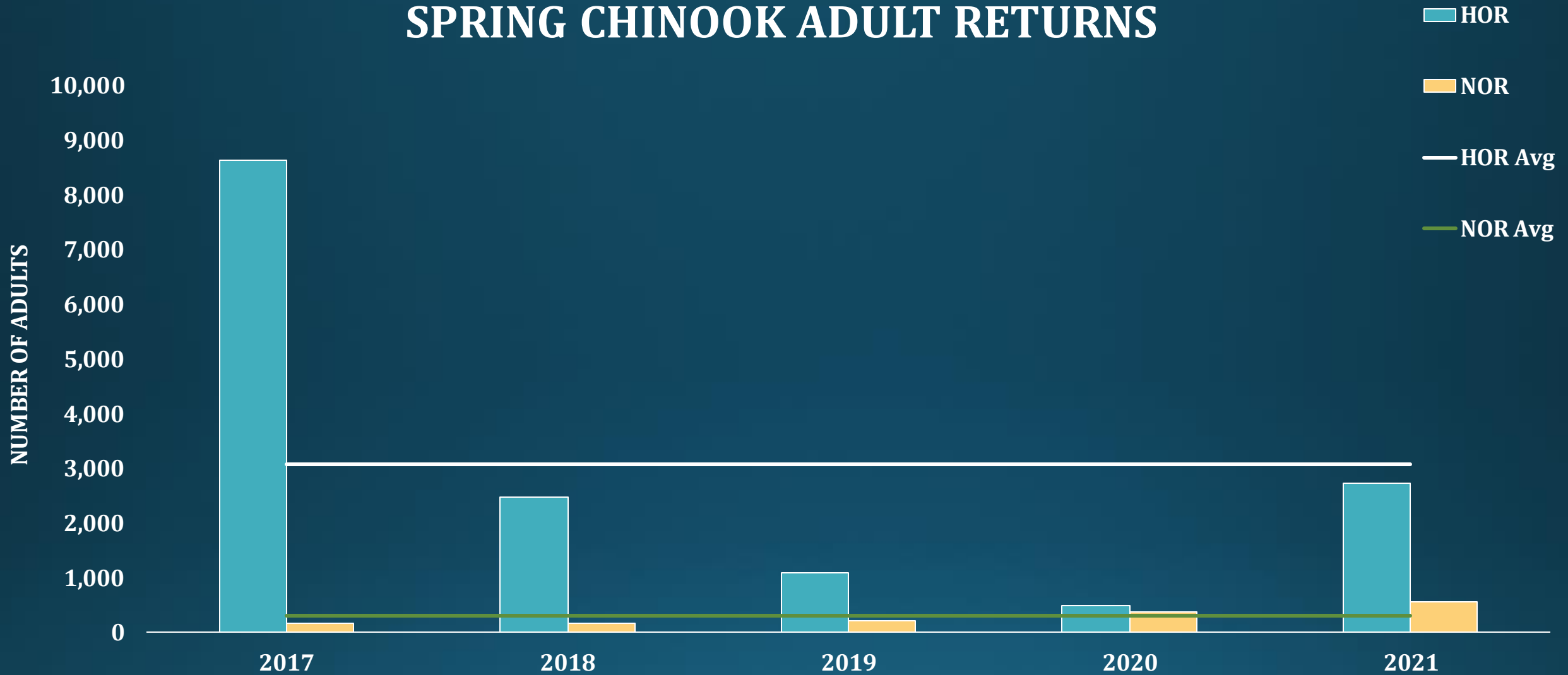
	2017	2018	2019	2020	2021
HOR	20,038	10,816	15,360	26,828	39,797
NOR	11,361	2,144	5,978	12,219	17,163

FALL CHINOOK ADULT RETURNS



	2017	2018	2019	2020	2021
HOR	1,805	1,018	1,282	2,452	2,273
NOR	1,877	914	920	2,562	949

SPRING CHINOOK ADULT RETURNS



	2017	2018	2019	2020	2021
HOR	8,635	2,464	1,071	473	2,710
NOR	149	154	196	370	549

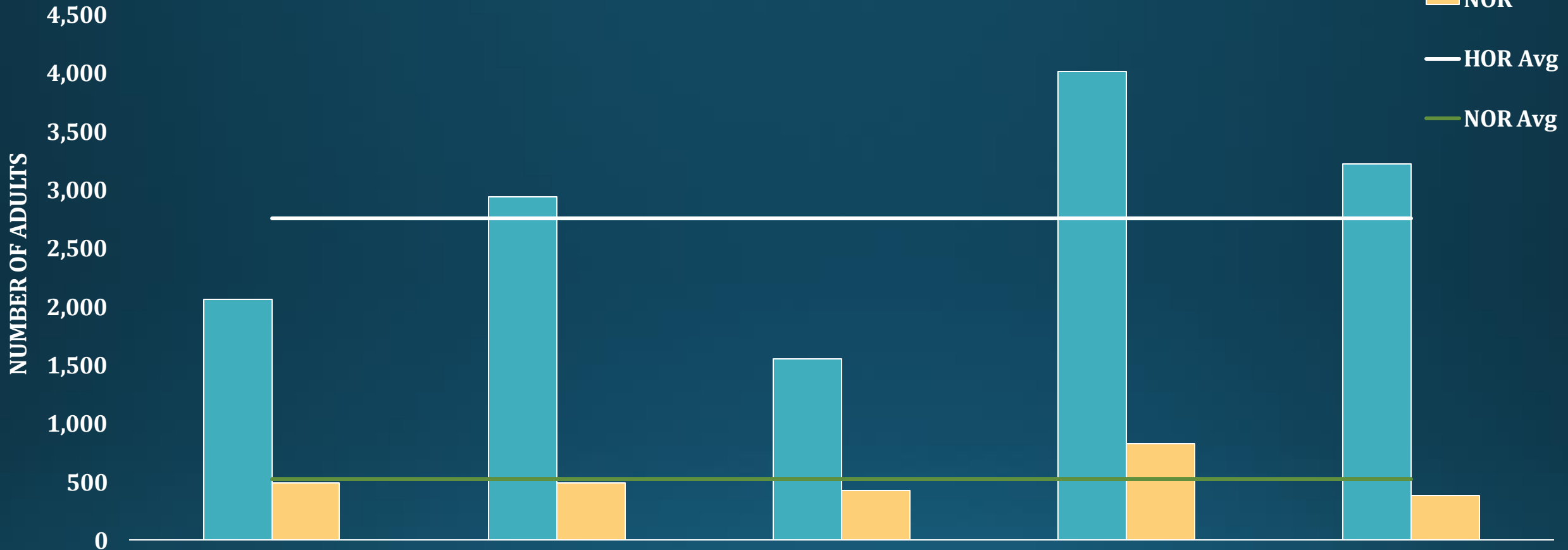
WINTER-RUN STEELHEAD ADULT RETURNS

HOR

NOR

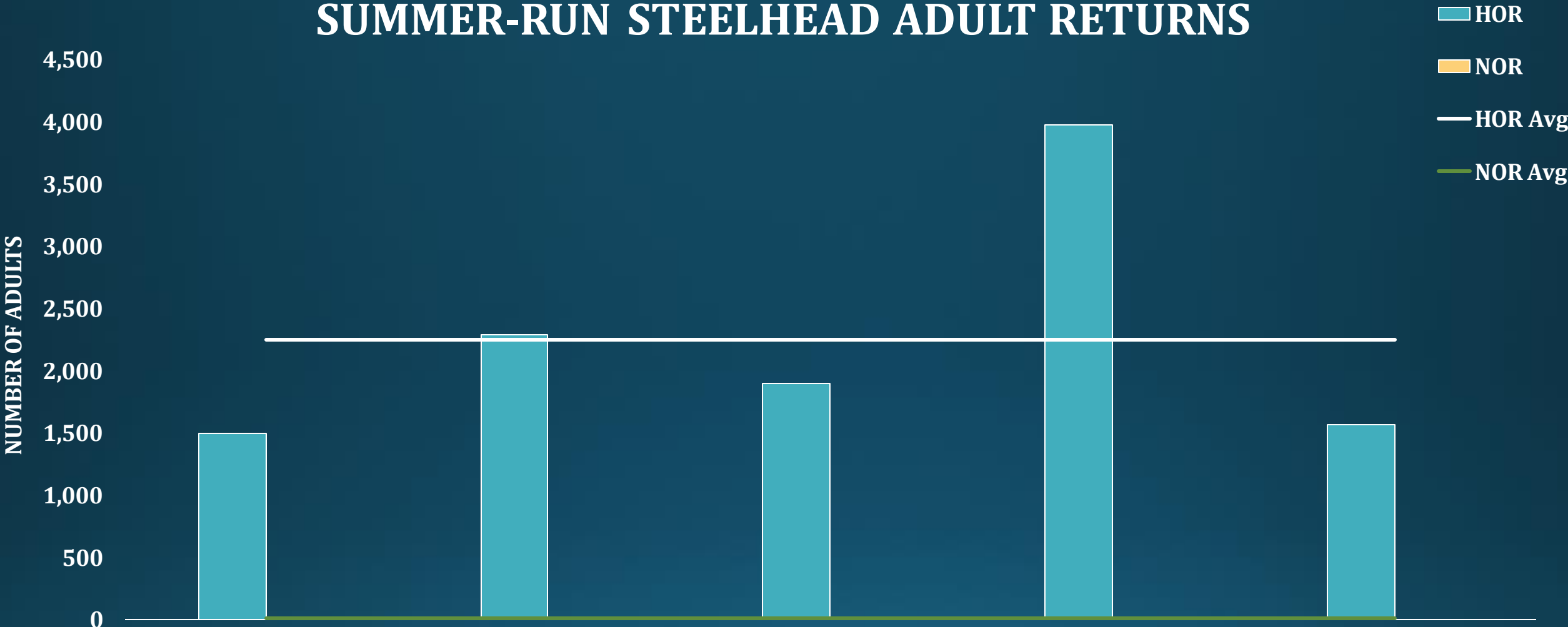
HOR Avg

NOR Avg



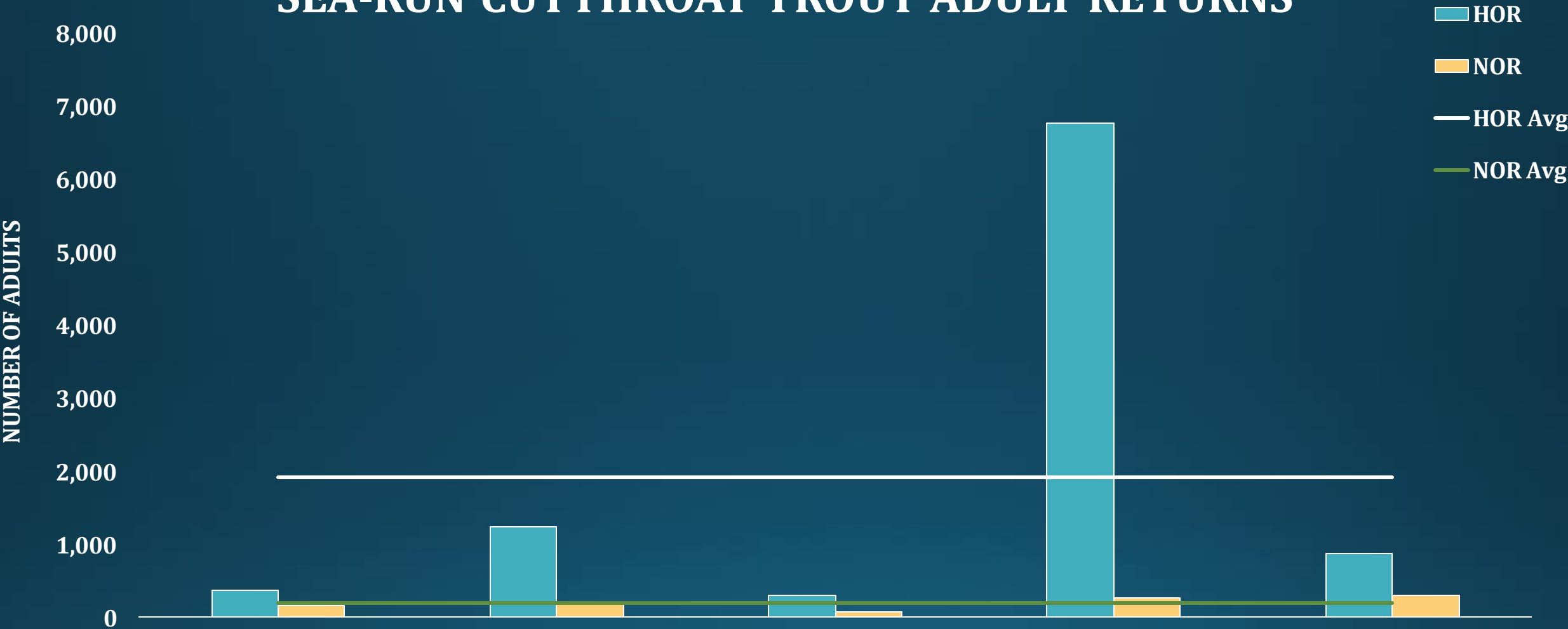
	2017	2018	2019	2020	2021
HOR	2,056	2,940	1,552	4,010	3,217
NOR	483	484	428	822	379

SUMMER-RUN STEELHEAD ADULT RETURNS



	2017	2018	2019	2020	2021
HOR	1,497	2,288	1,900	3,980	1,565
NOR	2	8	6	3	1

SEA-RUN CUTTHROAT TROUT ADULT RETURNS



	2017	2018	2019	2020	2021
HOR	379	1,244	304	6,772	873
NOR	162	201	71	261	298



ADULT HANDLING PROTOCOL

3/8/2021		COVLITZ COMPLEX ADULT HANDLING - CSH		DISPOSITION OF ADULTS THAT ARRIVE AT COVLITZ SALMON HATCHERY					
BY 2021	ORIGIN	MARKS IN FISH	SUST BACK	REMER BR	ACKWOOD	CISPUS R	CANEW	RETAIN AT	LOWER RIVER
SPRING CHINOOK	Hatchery (HOR)	Ad Clipped Only			25% AHN	25% AHN	50% AHN	All	
	Hatchery (HOR)	Ad Clip+CWT							
	Wild (NOR)	Unmarked						All *	
	CANEWA NOT AVAILABLE or AFTER JUNE 16TH TO THE END OF SUMMER WHEN LAKE TEMPS DROP BELOW 18 DEGREES								
	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	SUST BACK	REMER BR	ACKWOOD	CISPUS R	CANEW	RETAIN AT	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									
BY 2021	ORIGIN	MARKS IN FISH	SUST BACK	REMER BR	ACKWOOD	CISPUS R	CANEW	RETAIN AT	LOWER RIVER
LATE CONO	Hatchery (HOR)	Ad Clipped Only	12,000					Broodstock	
	Integrated (H/W) *	Ad Clipped+CWT			25%	25%	50% *		
	Integrated (H/W) (Flow/Sp)	Ad Clipped+CWT			50%	50%			
	Wild (NOR)	Unmarked +CWT					All/AHN *	Broodsto	
	Wild (NOR)	Unmarked		ALL					
	* If conditions do not permit planting adults at Scanewa then plant approximately 50% to Cispus & 50% to Packwood.								
BY 2021	ORIGIN	MARKS IN FISH	SUST BACK	REMER BR	ACKWOOD	CISPUS R	CANEW	RETAIN AT	LOWER RIVER
ANADROMO US 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 *		
All hatchery fish mass marked. * Caudal clip recycled fish. * See NOTES tab. - Cispus preferred when Scanewa not available.									
BY 2021	ORIGIN	MARKS IN FISH	SUST BACK	REMER BR	ACKWOOD	CISPUS R	CANEW	RETAIN AT	LOWER RIVER
WINTER STEELHEAD	Hatchery (HOR)	Ad Clipped Only						All	
	Hatchery (HOR)	Ad+PIT Tag						All	
	Integrated (H/W)	AD+CWT				AHN			
	Integrated (H/W)	AD+CWT+PIT				AHN		All	
	Integrated (H/W)	AD+RV (UCR)				AHN		All	
	Integrated (H/W)	AD+LV (Tilton)	50%AHN	50%AHN				All	
	Integrated (H/W)	AD+LV+PIT							
	Wild (NOR)	UM+Dorsal CWT	50%	50%					
	Wild (NOR)	Unmarked +CWT					All/AHN	Integrated	
	Wild (NOR)	Unmarked +CWT+PIT					All/AHN	Integrated	
	Wild (NOR)	Unmarked	50%/AHN *	50%/AHN *				Integrated	
* See NOTES tab. - Caudal clipped fish re-returning after live spawning will be distributed to their respective origins. Note: Take scales and measurement on UM, AD+RV, and UM+CWT each day if sending the fish upstream.									
BY 2021	ORIGIN	MARKS IN FISH	TILTON		ACKWOOD	CISPUS R	CANEW	RETAIN AT	LOWER RIVER
SUMMER STEELHEAD	Hatchery Origin	Ad Clipped						AHN *	3,300 *
	Wild (NOR)	Unmarked							All

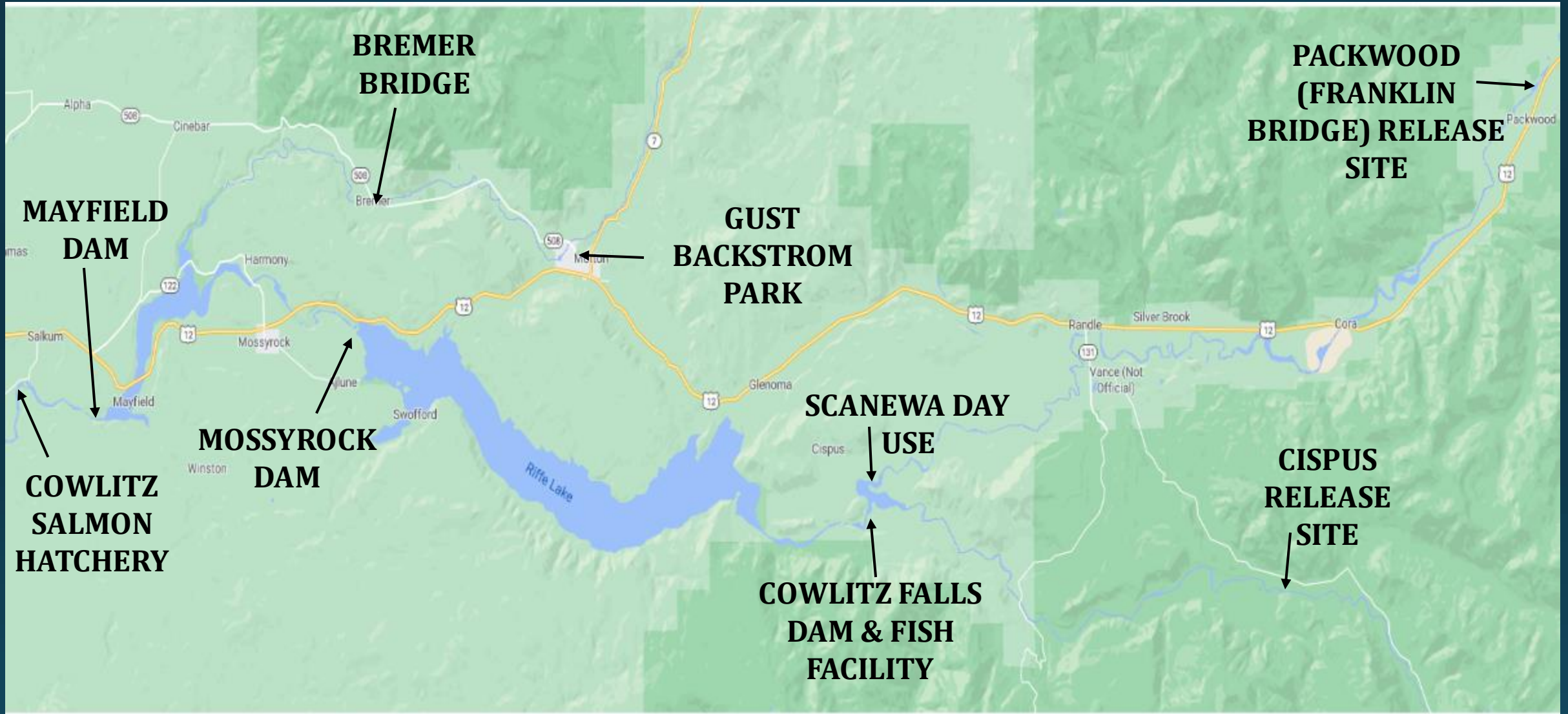
ADULT HANDLING PROTOCOL

BY 2021	ORIGIN	MARKS IN FISH	GUST BACK.	BREMER BR.	PACK-WOOD	CISPUS R.	SCANEWA	RETAIN AT HATCHERY	LOWER RIVER
LATE COHO	Hatchery (HOR)	Ad Clipped Only	12,000					Broodstock	
	Integrated (H/W)	Ad Clipped+CWT			25%	25%	50% ¹		
	Integrated (H/W) (flow/spill)	Ad Clipped+CWT			50%	50%			
	Wild (NOR)	Unmarked +CWT					All/AHN ¹	Broodstock	
	Wild (NOR)	Unmarked +CWT		ALL					
If conditions do not permit planting adults at Scanewa then plant approximately 50% to Cispus & 50% to Packwood.									
BY 2021	ORIGIN	MARKS IN FISH	GUST BACK.	BREMER BR.	PACK-WOOD	CISPUS R.	SCANEWA	RETAIN AT HATCHERY	LOWER RIVER
WINTER STEEL-HEAD	Hatchery (HOR)	Ad Clipped Only						All	
	Hatchery (HOR)	Ad+PIT Tag						All	
	Integrated (H/W)	AD+CWT			50% AHN	50% AHN			
	Integrated (H/W)	AD+CWT+PIT			50% AHN	50% AHN		All	
	Integrated (H/W)	AD+RV (UCR)						All	
	Integrated (H/W)	AD+LV (Tilton)	50% AHN	50% AHN					
	Integrated (H/W)	AD+LV+PIT	50% AHN	50% AHN				All	
	Wild (NOR)	UM+Dorsal CWT	50% AHN	50% AHN					
	Wild (NOR)	Unmarked +CWT					All/AHN		
	Wild (NOR)	Unmarked +CWT+PIT					All/AHN		
	Wild (NOR)	Unmarked	50% AHN	50% AHN					

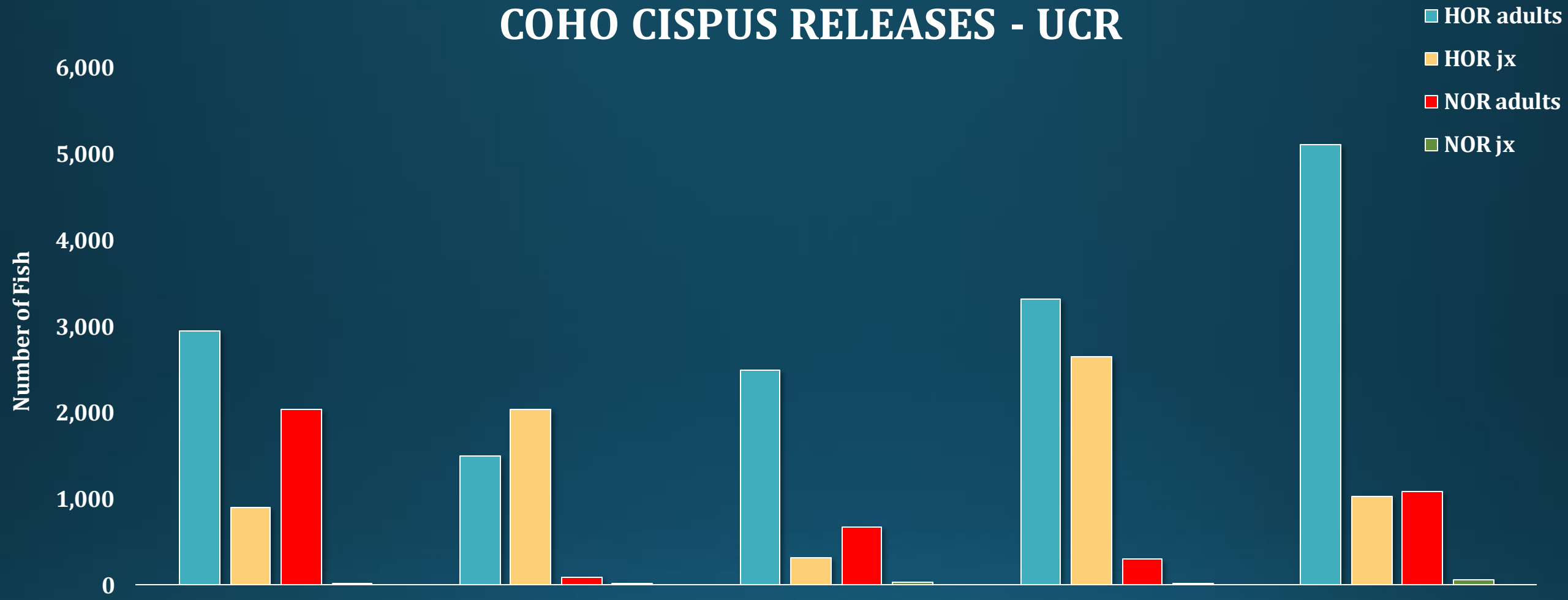
RELEASE SITES AND DISTRIBUTION



TILTON & UPPER COWLITZ RELEASE SITES



COHO CISPUS RELEASES - UCR

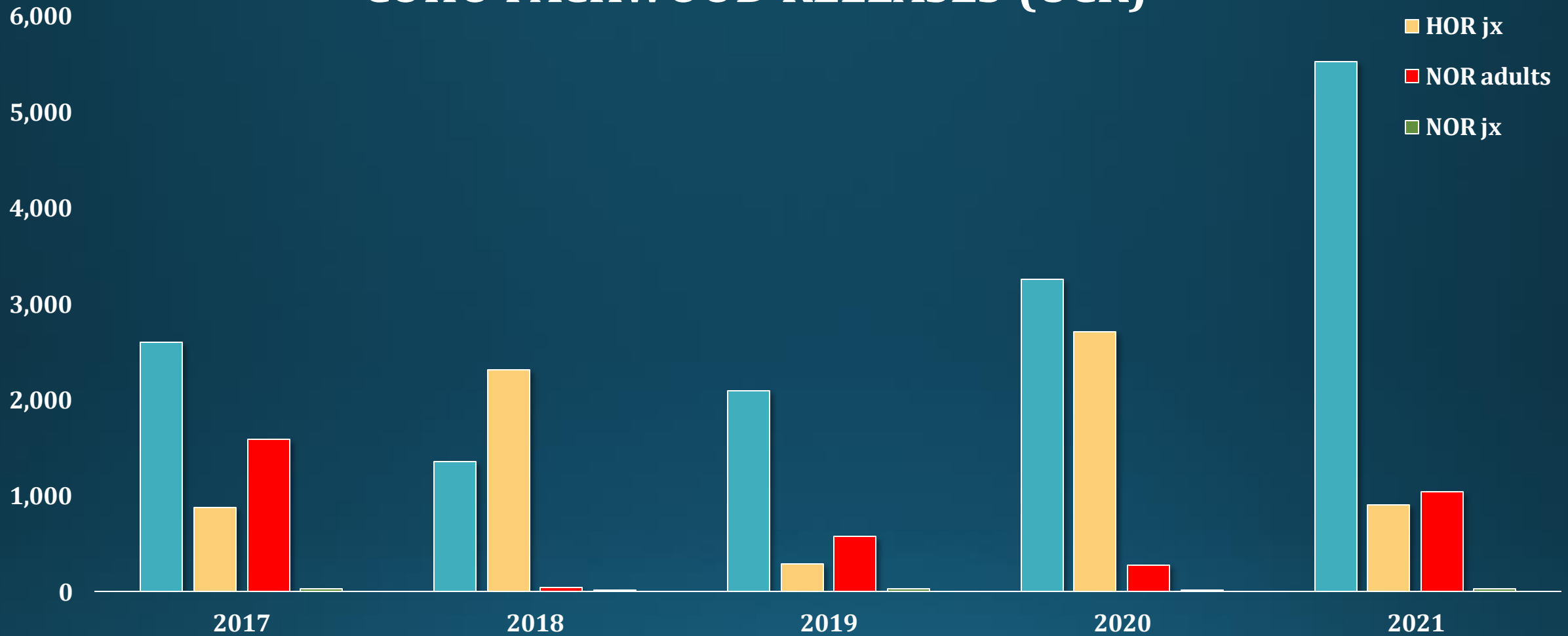


	2017	2018	2019	2020	2021
HOR Adults	2,946	1,495	2,488	3,321	5,105
HOR Jx	896	2,040	319	2,647	1,025
NOR Adults	2,041	93	676	304	1,086
NOR Jx	19	20	32	11	54

COHO PACKWOOD RELEASES (UCR)

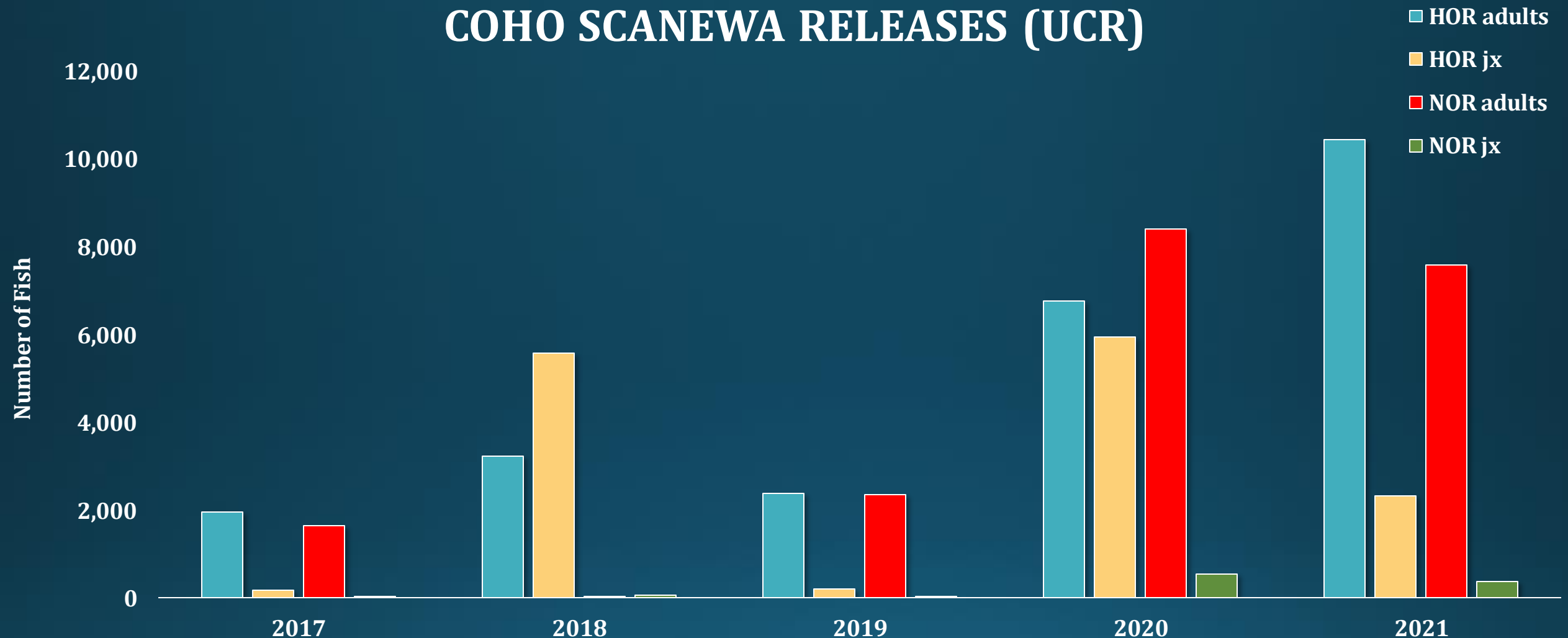
- HOR adults
- HOR jx
- NOR adults
- NOR jx

Number of Fish



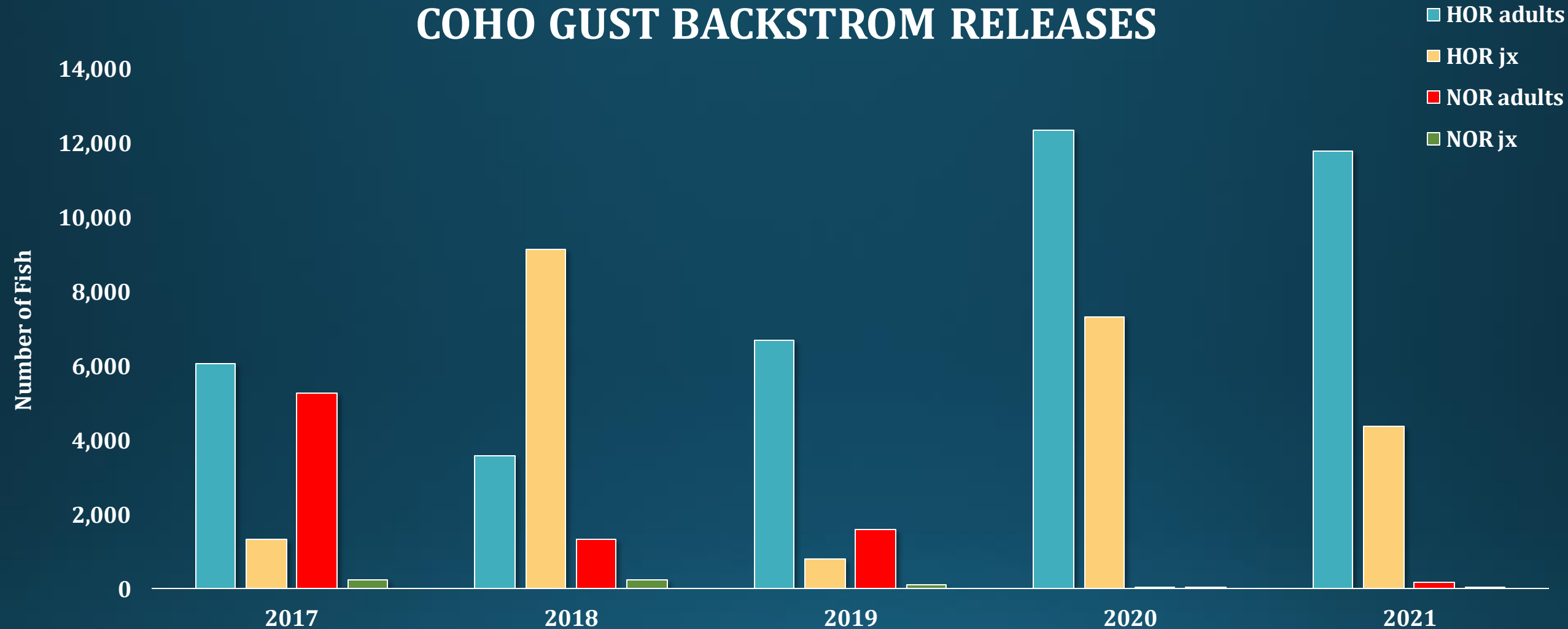
	2017	2018	2019	2020	2021
HOR Adults	2,600	1,347	2,088	3,251	5,527
HOR Jx	881	2,308	293	2,713	902
NOR Adults	1,591	46	574	270	1,043
NOR Jx	25	12	27	19	26

COHO SCANEWA RELEASES (UCR)



	2017	2018	2019	2020	2021
HOR Adults	1,949	3,238	2,372	6,761	10,457
HOR Jx	166	5,583	191	5,953	2,314
NOR Adults	1,647	29	2,355	8,406	7,597
NOR Jx	16	62	27	542	376

COHO GUST BACKSTROM RELEASES



HOR Adults	6,059	3,570	6,676	12,358	11,769
HOR Jx	1,323	9,148	798	7,324	4,379
NOR Adults	5,272	1,335	1,582	2	165
NOR Jx	240	233	95	1	19

COHO BREMER BRIDGE RELEASES (TIL)

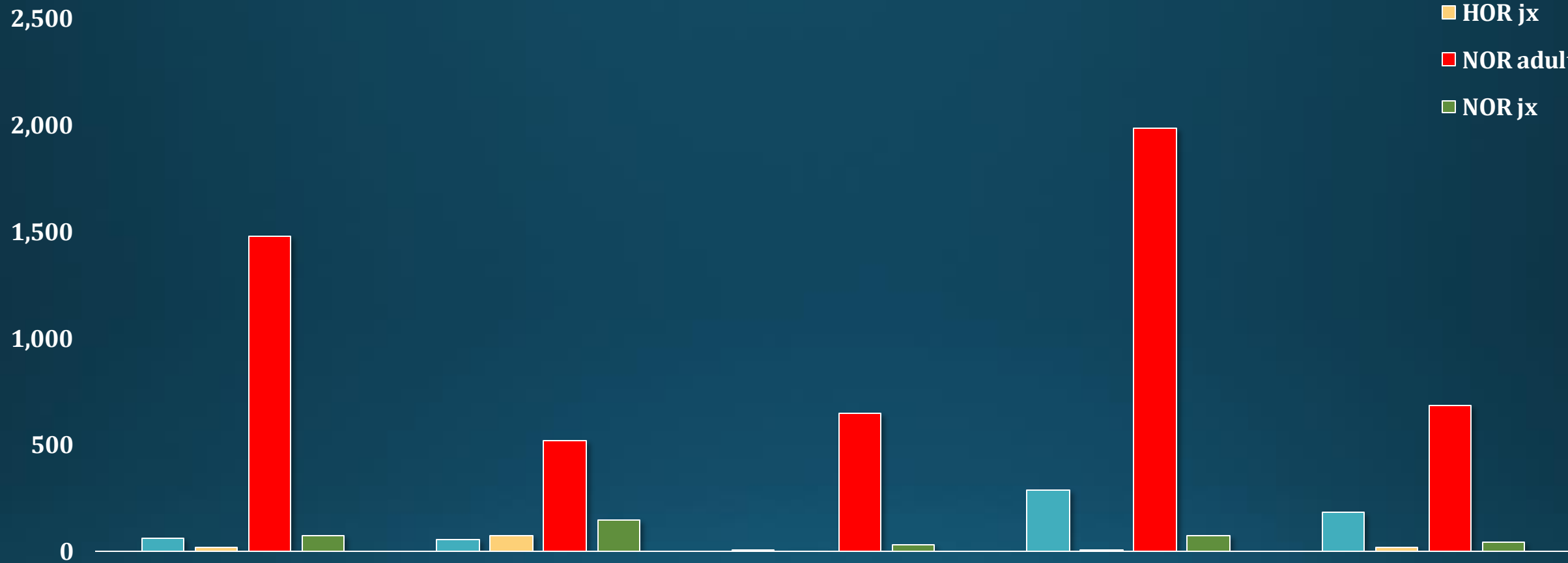


HOR Adults				4	6
HOR Jx				0	11
NOR Adults				2,419	6,412
NOR Jx				353	412

FALL CHINOOK TILTON RELEASES

Number of Fish

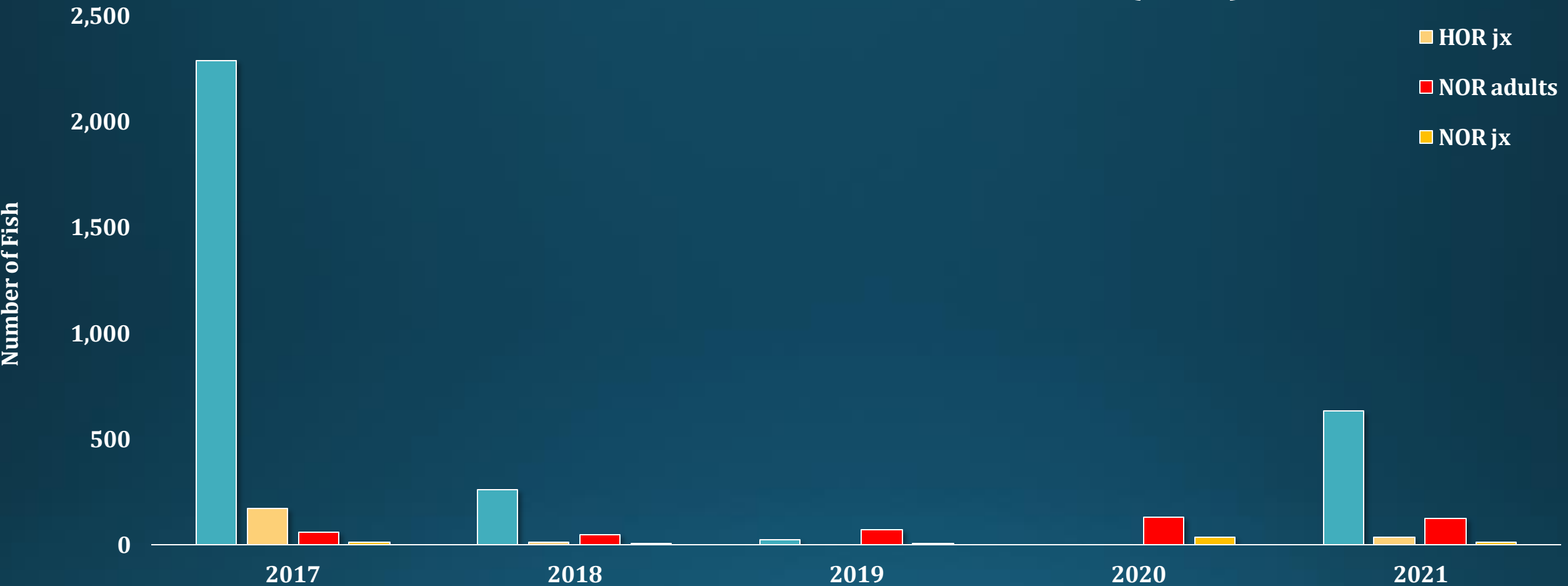
- HOR adults
- HOR jx
- NOR adults
- NOR jx



	2017	2018	2019	2020	2021
HOR Adults	59	52	1	282	181
HOR Jx	16	68	0	3	16
NOR Adults	1,479	516	646	1,985	682
NOR Jx	68	142	26	73	40

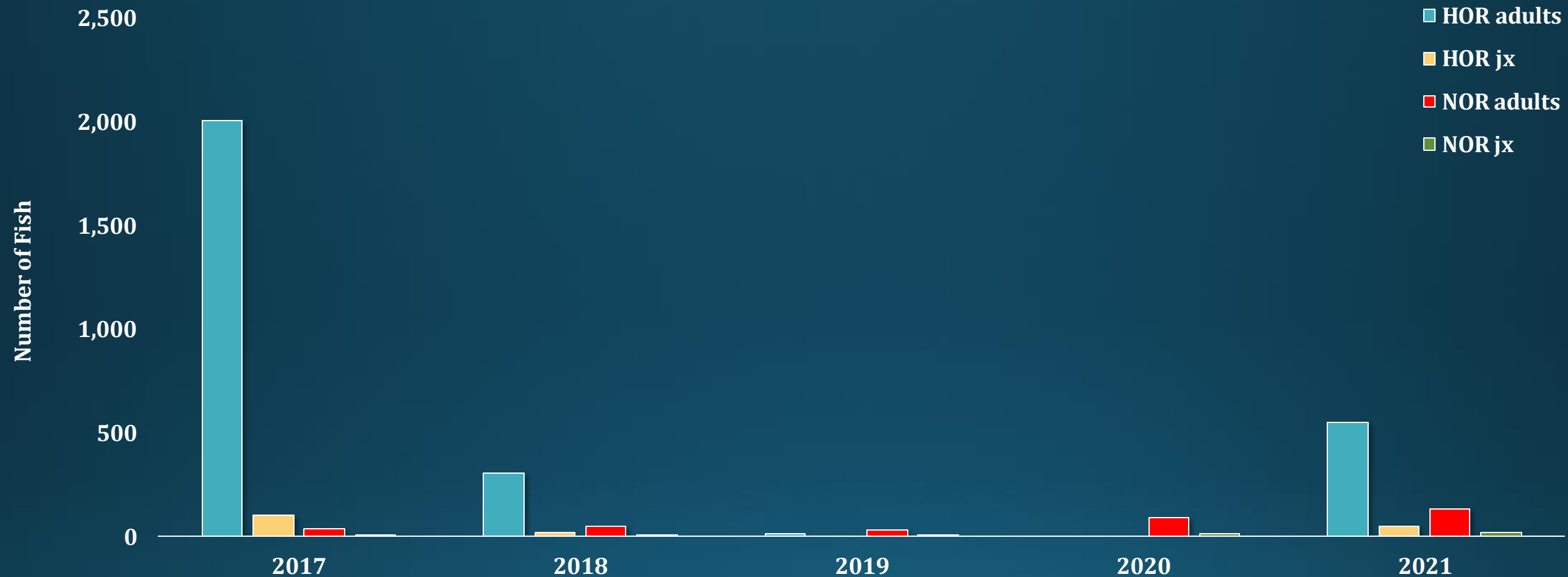
SPRING CHINOOK CISPUS RELEASES (UCR)

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



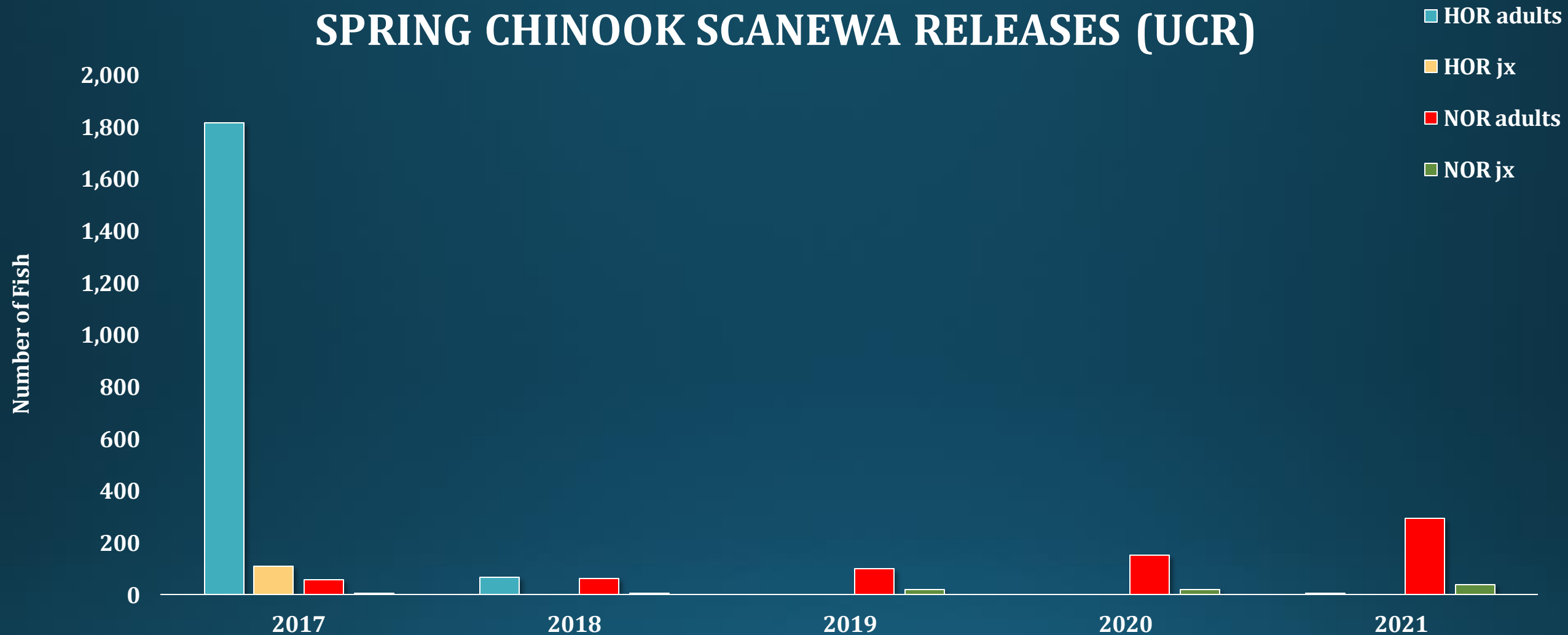
HOR Adults	2,286	256	23	0	628
HOR Jx	170	8	0	0	35
HOR Adults	59	47	66	126	121
HOR Jx	11	1	4	32	7

SPRING CHINOOK PACKWOOD RELEASES (UCR)



HOR Adults	2,007	304	14	0	547
HOR Jx	101	18	0	0	50
HOR Adults	36	46	30	92	133
HOR Jx	2	3	4	10	15

SPRING CHINOOK SCANewa RELEASES (UCR)

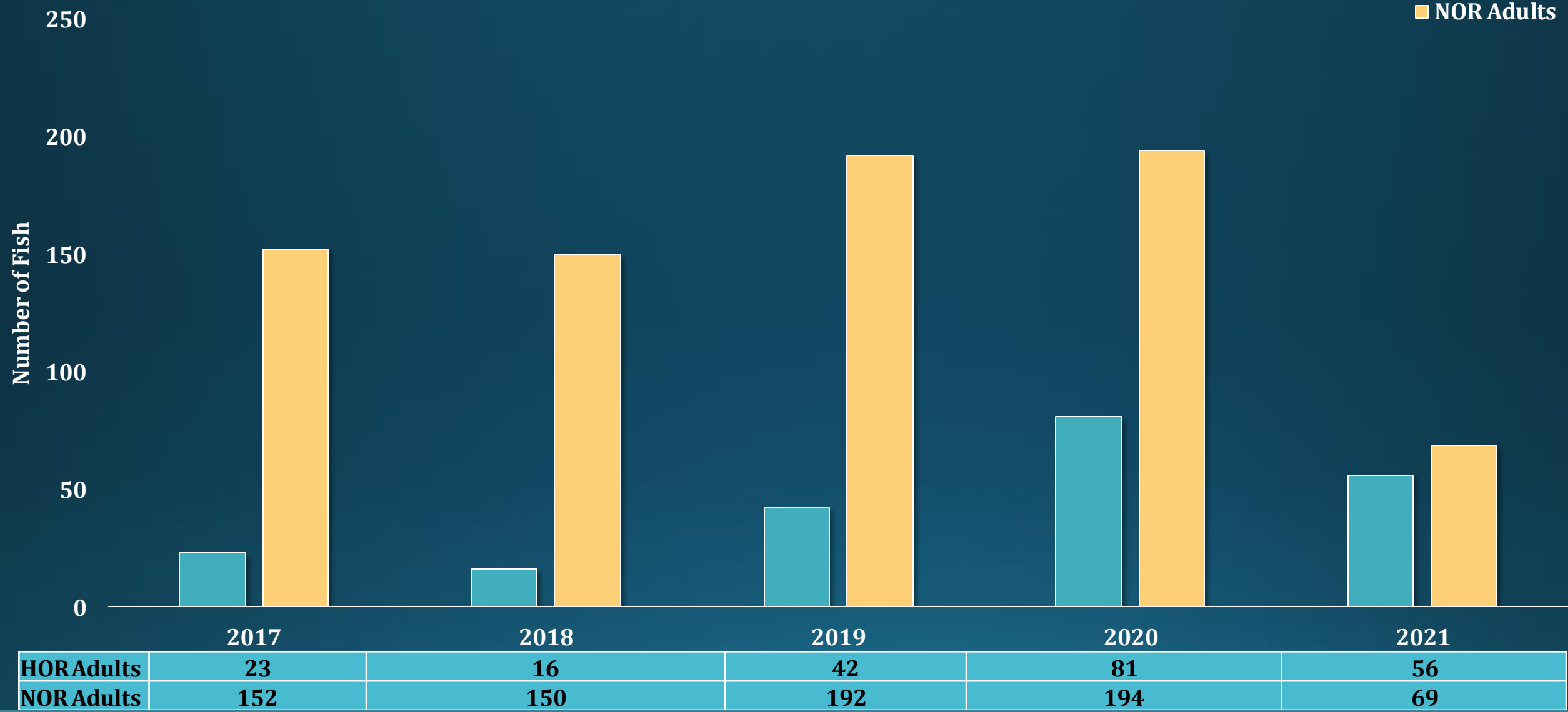


	2017	2018	2019	2020	2021
HOR Adults	1,818	65	0	0	1
HOR Jx	110	0	0	0	0
NOR Adults	54	61	99	152	295
NOR Jx	1	4	18	19	35

WINTER-RUN STEELHEAD TILTON RELEASES

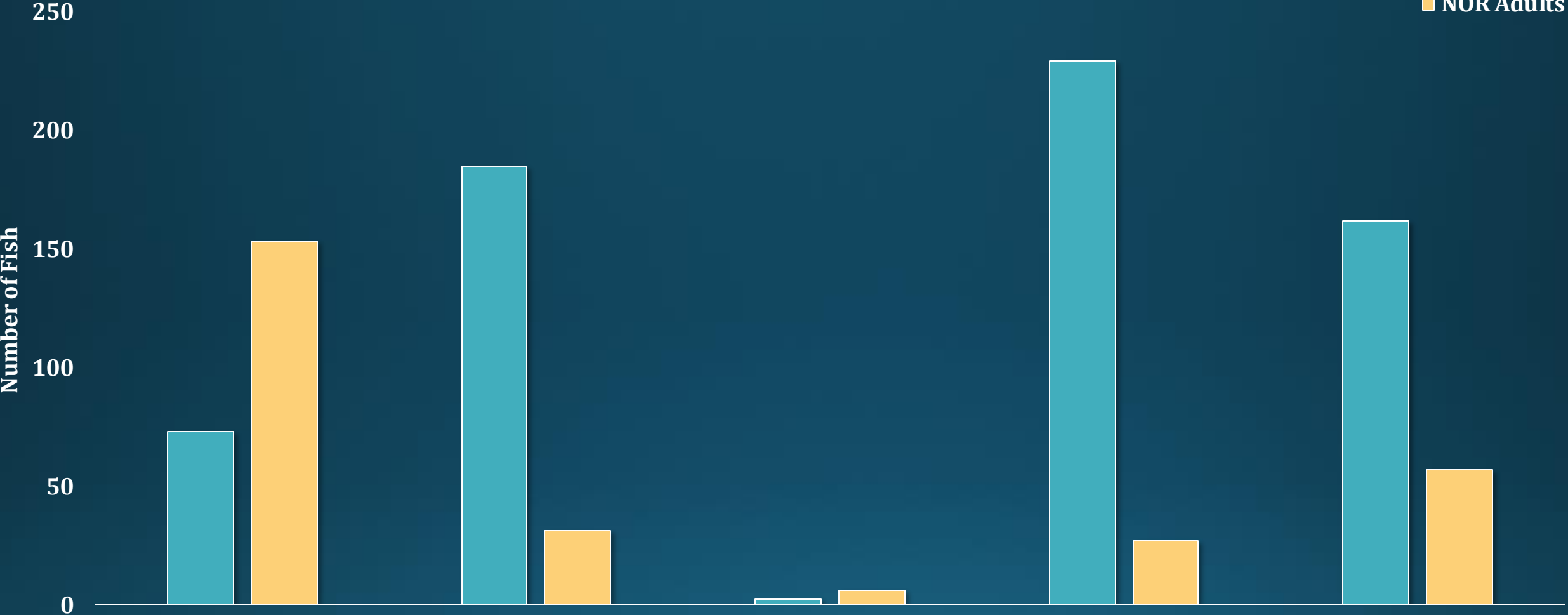
HOR Adults

NOR Adults



WINTER-RUN STEELHEAD CISPUS RELEASES (UCR)

HOR Adults
NOR Adults

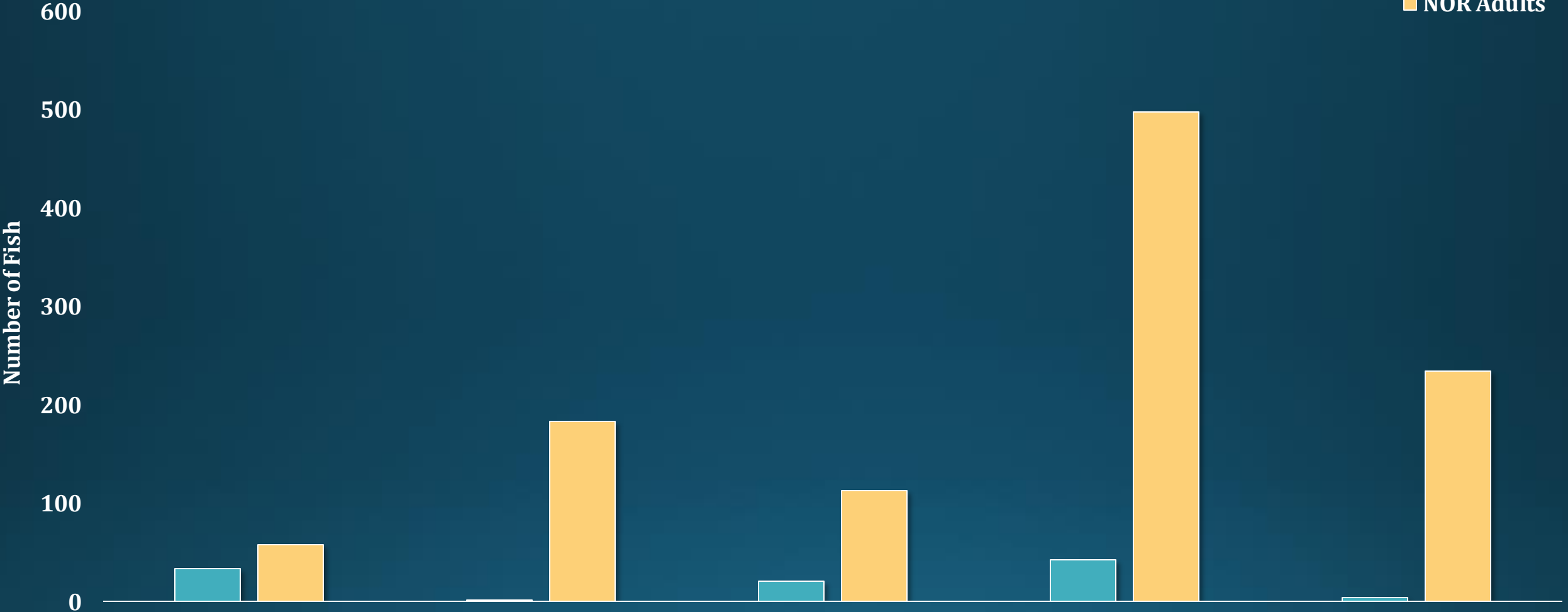


	2017	2018	2019	2020	2021
HOR Adults	73	185	2	229	162
NOR Adults	153	31	6	27	57

WINTER-RUN STEELHEAD SCANEWA (UCR)

HOR Adults

NOR Adults

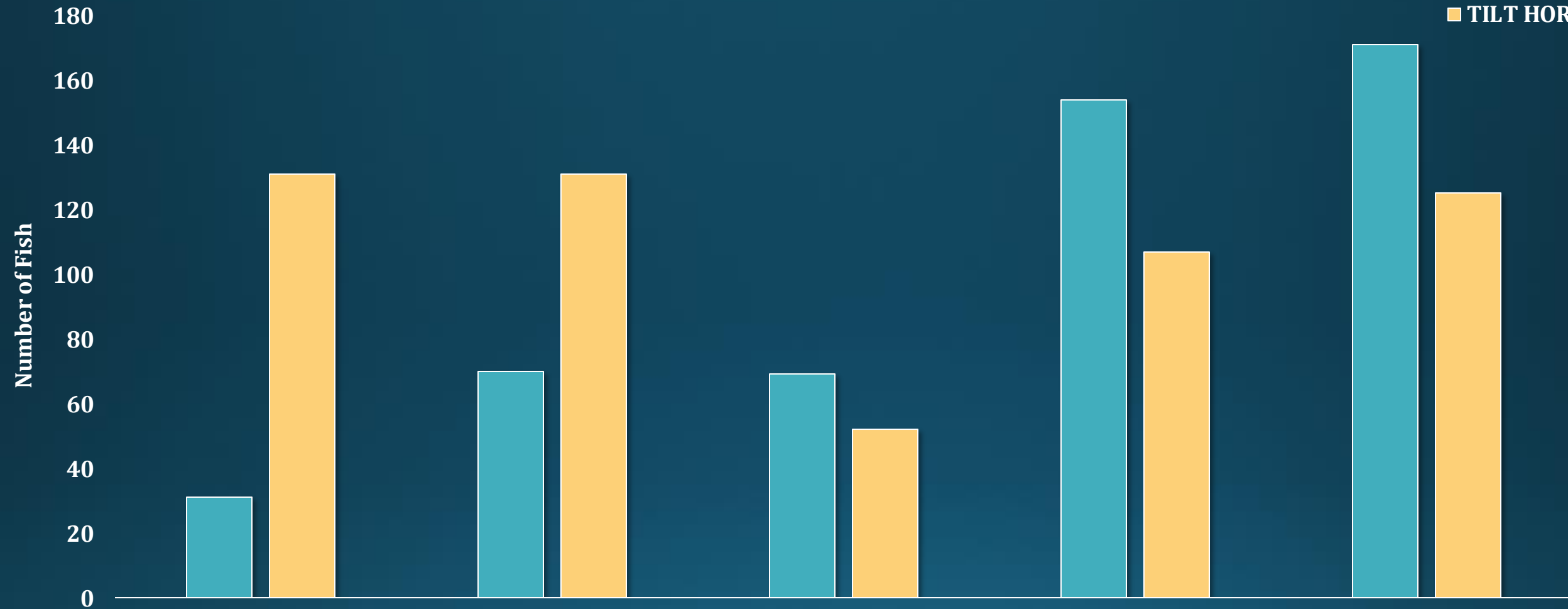


HOR Adults	33	1	20	42	4
NOR Adults	57	183	112	498	234

SEA-RUN CUTTHROAT RELEASES

UCR NOR

TILT HOR



2017

2018

2019

2020

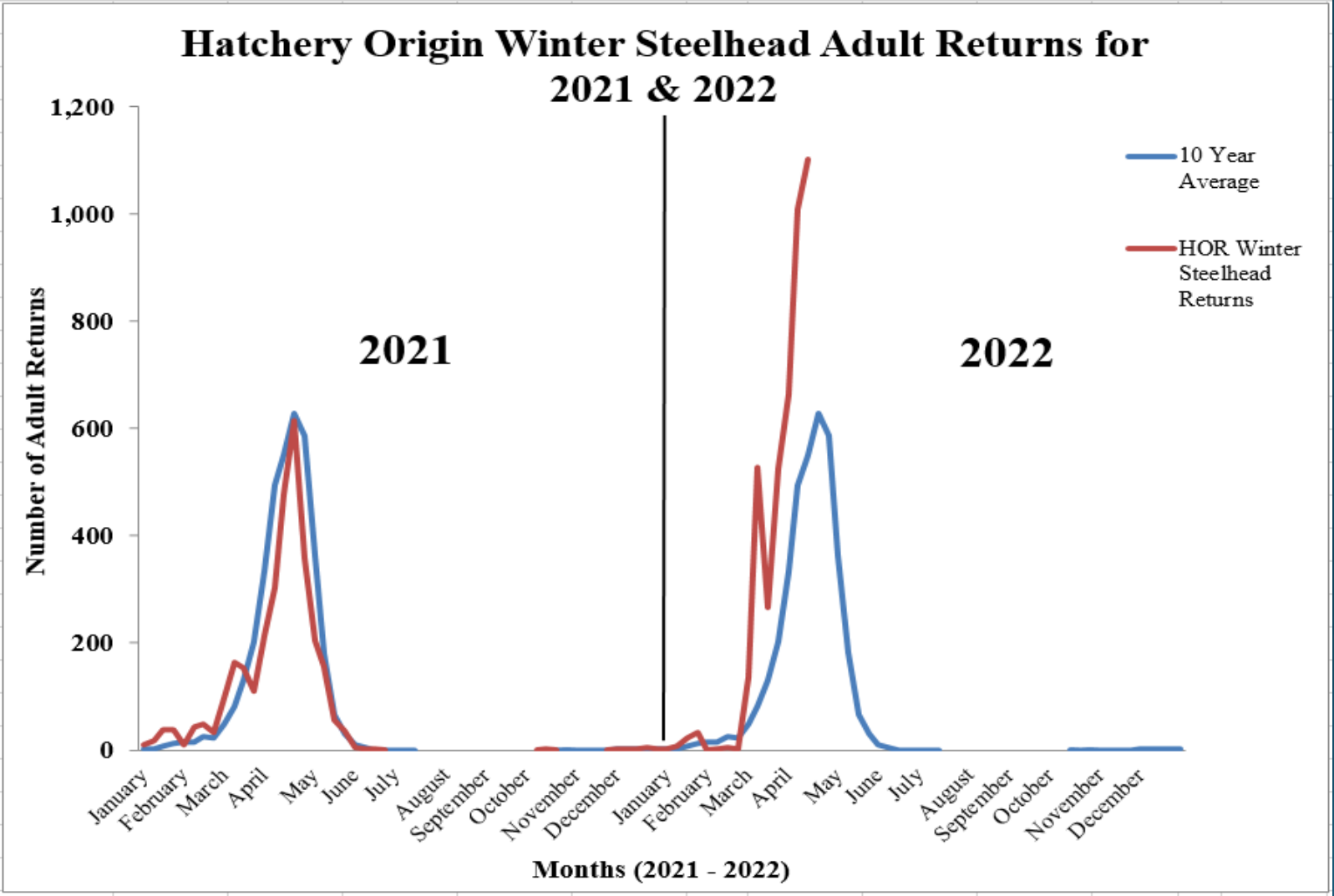
2021

UCR NOR	31	70	69	154	171
TILT NOR	131	131	52	107	125

WEEKLY REPORTS AT 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		Hatchery		Hatchery	Hatchery
	Returns	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural
Season to date	56,960	39,797	17,163	11,775	6,577	10,457	7,597	5,527	1,043	5,105	1,086	0	0	1,211	852	5,706	16
15-Apr	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	32,440	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		Hatchery		Hatchery	Hatchery
	Returns	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural
Season to date	41	36	5	0	0	0	5	0	0	0	0	0	0	36	0	0	0
15-Apr	24	21	3	0	0	0	3	0	0	0	0	0	0	21	0	0	0
Weekly 5-Year Average	79	77	2														
Season 5-Yr. Average to Date	101	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		Hatchery		Hatchery	Hatchery
	Returns	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural
Season to date	3,222	2,273	949	180	683	0	0	0	0	0	0	0	0	2,079	267	10	3
15-Apr	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	3,307	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		Hatchery		Hatchery	Hatchery
	Returns	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural
Season to date	4,707	4,312	395	160	107	0	212	135	0	286	31	0	0	458	39	3,269	4
15-Apr	1,185	1,101	84	44	14	0	59	70	0	55	0	0	0	35	11	895	2
Weekly 5-Year Average	574	492	82														
Season 5-Yr. Average to Date	1,661	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		Hatchery		Hatchery	Hatchery
	Returns	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural
Season to date	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
15-Apr	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
Weekly 5-Year Average	1	1	0														
Season 5-Yr. Average to Date	1	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		Hatchery		Hatchery	Hatchery
	Returns	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural	Hatchery	Natural
Season to date	3	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0
15-Apr	1	0	1	0	1	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	11	2	9														

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QUESTIONS?

