

# Salmon Harvest Survey

## Summary Report

August 2020

### Thank you for your ongoing support

We had another fantastic response to our online salmon harvest survey sent out in May. Since then we have also completed our follow up phone surveys. The information you have provided is critical to our monitoring of the salmon fishery, so thank you for your participation.

This year the survey was expanded to include anglers from Otago and Nelson-Marlborough Regions. This allowed harvest estimates to be made for salmon fisheries right along the east coast as well as giving us some insight into inter-regional salmon fishing activity. The inclusion of information from out-of-region anglers will also improve the overall accuracy of harvest estimates.

As in previous years the harvest estimates are combined with fish counts from the spawning grounds in North Canterbury (NC) and Central South Island (CSI) to give an estimate of total run size. Final reports on the salmon run are currently being prepared and will be available from NC and CSI Fish and Game on request.

Overall, there were about 4,100 anglers who fished for salmon across the surveyed regions, harvesting a total of 1673 salmon. Fin clips were reported for 230 fish (~14%), indicating hatchery origin. Most anglers (70%) fished 1 river for salmon, 22% fished 2 rivers and 8% of anglers fished 3 or more rivers - including a very small number of passionate and mobile anglers who fished up to 6 rivers for salmon!

*To help maintain the salmon fishery, anglers fishing in NC and CSI are encouraged to limit their 2020-21 season harvest to four sea-run salmon and all anglers should use best practice catch and release techniques*



### Do you check your catch for fin clips?

An adipose fin clip (pictured above) is commonly used to mark fish prior to release from hatcheries.

Angler reports of fin clipped fish are important in helping managers to understand the contribution of hatchery fish to the salmon population. Further details that can also be useful include:

- Catch location & date
- Weight & length
- Sex

Tissue samples (usually obtained from frozen heads) may also be collected.

Check in with your local Fish and Game office and find out how you can assist with salmon management efforts!

# Central South Island

**Waitaki** - We estimate there were 85 salmon harvested this season. The majority of the salmon were harvested between State Highway 1 and Stonewall (Duntroon). Angler reports indicate that 8 of the 85 salmon were fin clipped fish of hatchery origin, most likely from the Waitaki Riparian Enhancement Society (WRES). Spawning counts were low but up slightly on last year. This year ~30% of Waitaki Catchment spawning was in braids that have been restored by the joint **CSI Fish & Game and Meridian spawning stream restoration programme**.

**Rangitata** - Catch rates were very low with an estimated 120 salmon harvested. It is estimated 23 were fin clipped, most likely from the McKinnon's Creek hatchery. Around 60% of the harvest was at the mouth and tidal reaches. Spawning surveys in key tributaries showed a slight increase on last year with ~400 spawners. It is generally expected ~40% of the run is harvested by anglers, however this year harvest levels were around just 23%. The relatively low harvest rate is likely due to flooding throughout Nov-Dec and a slightly shortened season due to the COVID-19 lockdown.

**Opihi** – The run was very low this year, and 28 salmon were estimated to be caught in the catchment, all at the mouth. Three of the 28 salmon were fin clipped, likely to be strays from a McKinnon's Hatchery Rangitata release. Spawning numbers were up this year with 60 redds estimated in the catchment, almost half were in the Opuha catchment.

**Orari** - We estimate that total harvest was 15 or less fish and ~80 anglers fished the Orari but only ~10 were successful. Counts on the Ohapi South Branch showed low numbers but a slight increase on the previous 2 years. Five of the salmon harvested were reported to be of hatchery origin

**Ashburton** - We estimate that around 50 anglers fished the Ashburton for salmon this season. The survey only picked up one successful angler, who caught 2 salmon. Spawning surveys on the two main spawning streams found one had a small increase on previous years and the other had no spawning.

Estimated number of anglers reaching a particular season bag for the Waitaki River

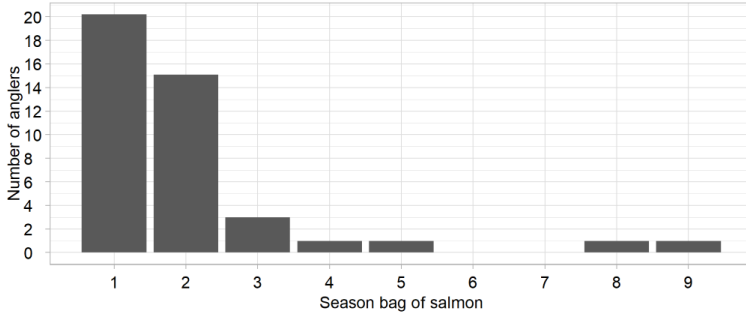


Figure 1. Season bag limit achieved by anglers on the Waitaki. Approximately 40% of harvest was by anglers that kept one or two salmon.

Estimated number of anglers reaching a particular season bag for the Rangitata River

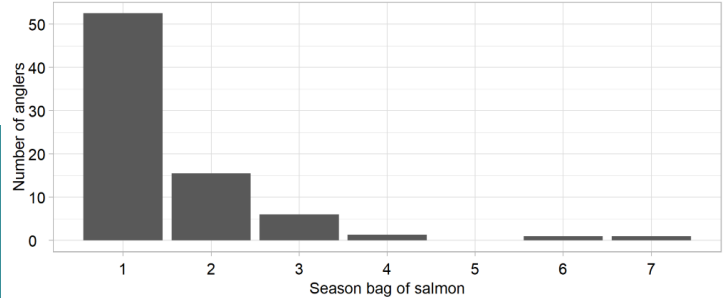


Figure 2. Season bag limit achieved by anglers on the Rangitata. Approximately two thirds of the harvest was by anglers that kept one or two salmon.

# Otago

The survey estimated 212 anglers fished for salmon in the Lower Clutha River (below Roxburgh), including the Pomahaka River. The majority of these (90%) were Otago licence holders, although anglers from CSI and NC Regions also participated in the fishery. A total harvest of 43 salmon was estimated which included reports of 4 fin clipped salmon. These fish were most likely marked returns from the last hatchery release supplied to the river by Contact Energy in 2016.

While harvest was disappointingly low, it is consistent with estimates from recent seasons. 19% of anglers were successful in catching at least 1 salmon, with just 1 angler harvesting more than 2 salmon.

Anglers also reported fishing for salmon at the following locations: Dunedin Harbour (40 anglers / 56 salmon harvested), Waters of the Leith (15 anglers / 4 salmon harvested), Shag River (1 angler), Taieri River (78 anglers / 6 salmon harvested), Tokomariro (3 anglers / 5 salmon harvested) and Waikouaiti Rivers (1 angler).

# North Canterbury

Based on our angler harvest surveys an estimate of the total salmon catch in each river was: Rakaia 380, Waimakariri 559, Hurunui 233 and Waiau 89. This compares with Rakaia 729, Waimakariri 492, Hurunui 184 and Waiau 72 in the 2018/19 angling season. Our headwater spawning surveys showed a peak salmon spawning count for the Rakaia River of 547 and 306 for the Waimakariri River. This compares with 442 salmon in the Rakaia and 207 in the Waimakariri in 2019.

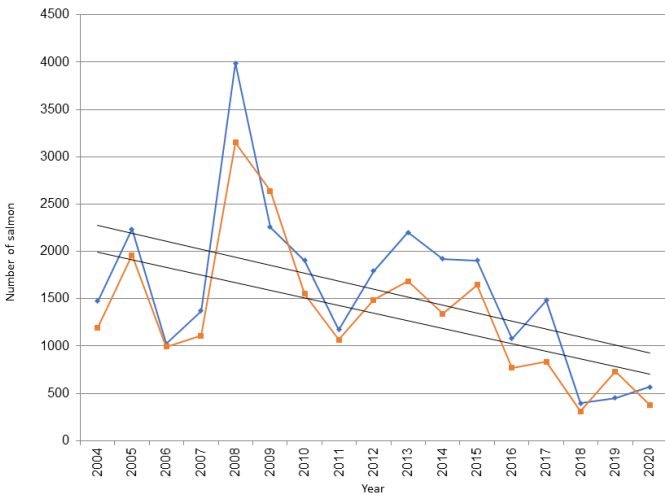


Figure 3. Angler catch for the Rakaia (blue) and Waimakariri (orange) Rivers 2004-2020, showing a decreasing trend.

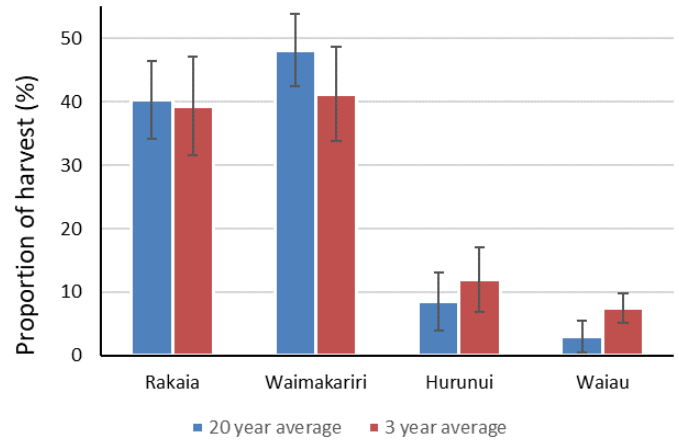


Figure 4. Average harvest distribution across NC salmon rivers in the last 20 years (blue) vs 3 years (red). In recent years the Waiau and Hurunui Rivers appear to support a growing portion of the regions total salmon harvest. Error bars on harvest estimates are  $\pm 1$  standard deviation.

# Nelson/Marlborough

It is estimated 79 anglers fished the Clarence River, harvesting an estimated 21 salmon, and 140 anglers fished the Wairau with 23 salmon harvested. There were 4 fin clipped salmon reported in the Wairau. These results are likely to be an underestimate due to the trialing of the survey for the first time in Nelson/Marlborough.



For more information please contact:

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**In total, 39** different salmon rivers / fisheries were fished by anglers targeting salmon

**>50 %** of all salmon anglers fished the Waimakariri or Rakaia Rivers

Helen Trotter

Otago

Vaughn Lynn

Nelson/Marlborough

