## Sports Fish Spawning Surveys 2020-2021

Results of sports fish spawning surveys, June 2020-June 2021 in the
West Coast Fish \& Game Region

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Salmon Spawning in the Aickens Spring Creek, Taramakau River, May 2021.


## Summary


#### Abstract

Fish \& Game undertake spawning surveys as a tool to monitor adult sports fish populations and provide information for management purposes. Quinnat salmon were introduced to the West Coast in the early 1900's and spawning counts have been undertaken intermittently since 1966. This season counts of 'Peak' salmon spawning numbers were undertaken at lakes Mapourika and Paringa, the Taramakau and Hokitika rivers were also counted to monitor recent liberations of salmon. At Lake Mapourika 89 live salmon were observed during the peak count at MacDonalds Creek, below the long-term average of 180 fish. At Lake Paringa 84 live salmon were observed during the peak. count in the Windbag Stream, below the long-term average of 170 fish. Low numbers of live salmon were observed in the Taramakau (19), and Hokitika (8) rivers. Surveys were also undertaken at Lake Kaniere to monitor the result of recent liberations of trout. Very low numbers of trout were observed in both Sunny and Geologist Creeks (Lake Kaniere). Staff recommendations are to; Continue monitoring spawning tributaries MacDonalds Creek and Windbag Stream with enough frequency to ensure the peak. count is measured. Continue to survey catchments where salmon enhancement has occurred. Continue stocking Lake Ianthe with salmon. Establish a rainbow trout put and take fishery in Brownlee's Pond and trial enhancement in the Ngabere dredge ponds.


## Introduction

Fish \& Game West Coast has a statutory responsibility under section 26Q of the Conservation Act 1987 to: manage, maintain, and enhance the West Coast sports fish and game resource in the recreational interests of anglers and hunters. To honour this responsibility, Fish \& Game gathers information on the resource it manages in several ways. This report presents the data collected during sports fish spawning surveys.

Spawning surveys are an effective means for evaluating sports fish populations as they provide an index of the adult population that can be compared between years. This information helps guide management decisions which can influence the adult population ie. changing the fishing regulations to alter harvest rates or enhancing a limited wild population by the release of hatchery reared fish.

Enhancement releases of fish on the West Coast are guided by the West Coast Fish \& Game Council's 'Strategy for sports fishery enhancement' adopted in 2010 and revised in 2013. The strategy states that; with limited resources comes the need to select priorities for enhancements. West Coast Fish \& Game will give priority to those waters and species where.

- a viable population already exists or has existed in the past,
- the fish will benefit a wider number or range of anglers,
- it has been determined that the liberation will have a reasonable probability of success,
- there is a means of monitoring the success or failure of the release,
- it is a special purpose situation e.g. put and take (take a kid fishing).

This report presents the results from this season's Quinnat salmon (Oncorbynchus tshawytscha) spawning surveys in the main spawning tributaries of lakes Mapourika and Paringa along with the Taramakau and Hokitika rivers. Comparison is made with the long-term dataset from these catchments in context of measuring the success of enhancements undertaken (Appendices 1, 2 and 3). Spawning surveys undertaken at Lake Kaniere were used to measure the success of enhancements of Quinnat salmon, brown trout (Salmo trutta) and rainbow trout (Oncorbyncbus mykiss) (Appendix 4). These enhancements were possible due to the availability of hatchery reared fish from North Canterbury Fish \& Game (NCFG). However, in 2020 NCFG ceased all hatchery operations and now fish are sourced from alternative hatcheries (Appendix 5).

## Method

Spawning surveys are generally undertaken on foot, by walking slowly along the stream bank spotting fish with the aid of Polaroid sunglasses. The lower section of Windbag Stream is counted while kayaking. Counts of live salmon, dead salmon and trout are recorded. If a sports fish cannot be positively identified to species, it is recorded as 'unidentified sports fish.' Weather conditions and stream clarity must be sufficient for accurate counting. Generally, surveys are 'spot checks' during the known spawning seasons. 'Peak' counts are different to spot checks as a series of counts are undertaken at more regular intervals during the spawn and the peak count is the highest live count from that year. The observed counts presented in this report do not represent the total number of salmon that spawned for any spawning season.

## Survey Results

## Lake Mapourika

Lake Mapourika has five in-flowing streams that have been identified as suitable spawning habitat for Quinnat salmon. Of these, only MacDonalds Creek was monitored during this season. MacDonalds Creek is the largest and most utilised spawning area for Lake Mapourika.

## MacDonalds Creek

The spawning area for MacDonalds Creek starts approximately 100 m upstream of where the Creek enters Lake Mapourika and extends 3 km upstream to where the river forks. This is the limit of the area surveyed, although spawning has been observed on occasion up each branch, none further than 200 m upstream.

Spawning surveys were conducted on three occasions between the April $28^{\text {th }}$ and May $24^{\text {th }}, 2021$, at McDonalds Creek with the peak live count of 89 salmon occurring on May $12^{\text {th }}$. The average peak count considering all years surveyed is 180 (Figure 1).


Figure 1: Peak, live salmon counts for MacDonalds Creek, Lake Mapourika. 1983 - 2021

## Lake Paringa (Windbag Stream)

Lake Paringa has one major spawning area, Windbag Stream, which is the main inflowing tributary of the lake. Windbag Stream has several tributaries that also provide limited spawning areas. These were not surveyed in addition to the main stem of Windbag Stream. The spawning grounds extend from approximately the Rata Creek - Windbag Stream confluence, upstream to where Quad Creek joins the Windbag, a total of 6.5 km . The majority of spawning occurs around and upstream of the old Salmon trap site at Dawn Creek.

Spawning surveys were conducted on three occasions between April $28^{\text {th }}$ and May 24 ${ }^{\text {th }}$, 2021, with the peak live count of 84 salmon occurring on May $12^{\text {th }}$. The average 'peak' live count considering all years surveyed is 172 (Figure 2).


Figure 2: Peake live salmon counts for the Windbag Stream, Lake Paringa. 1966 - 2021.

## Taramakau River Catchment Salmon Spawning

Black Creek (tributary of Taipo River) and Clear Creek (Aickens) have been surveyed occasionally from 1996 to 2021 during the salmon spawning season. Both creeks have received salmon smolt releases in this period, Clear Creek in 2010, and Black Creek in 2011. Other small creeks that have been checked in recent years for spawning salmon are Humphries, Debenham, Aickens Spring Creek and the Little Orangipuku. The Little Orangipuku had an enhancement release of smolt during December 2014.

## Black Creek

Spawning surveys were conducted on two occasions, May $3^{\text {rd }}$, and May $25^{\text {th }}$, 2021, at Black Creek but no salmon were observed. Historic counts of live spawning salmon in Black Creek range from 25 fish in 2007 to 0 in 2012.

## Clear Creek

Spawning surveys were conducted on two occasions, May $3^{\text {rd }}$ and May 20 $0^{\text {th }}, 2021$, at Clear Creek with the peak count of two salmon occurring on May $20^{\text {th }}$. Historic counts of live spawning salmon in Clear Creek range from 64 fish in 1999 to 0 fish in 2002.

## Additional salmon spawning surveys in the Taramakau Catchment

Humphries Creek, Debenham Creek and Aickens Spring Creek were surveyed between May $20^{\text {th }}$ and May 24 ${ }^{\text {th }}$, 2021. There were seven live salmon in Humphries Creek, three in Debenham, seven in the Aickens Spring Creek.

## Hokitika River Catchment Salmon Spawning

Three known Hokitika River salmon spawning tributaries; Minnow, Doctors and Diedrichs Creeks have been surveyed occasionally from 2003 to 2021 during the salmon spawning season. Doctors Creek has received releases of salmon smolt recently: in 2013, 2014, 2016, 2017, 2018 and 2019.

## Doctors Creek

One spawning survey was conducted at Doctors Creek on May 14 ${ }^{\text {th }}$, 2021. There were seven live salmon and four brown trout.

## Minnow Creek

One spawning survey was conducted at Minnow Creek on May $24^{\text {th }}, 2021$. No sports fish were observed.

## Diedrichs Creek

One spawning survey was conducted at Diedrichs Creek on May $24^{\text {th }}, 2021$. One live salmon was observed.

## Lake Kaniere

## Geologist Creek

In the 2020 spawning survey period five surveys were carried out between June $22^{\text {nd }}$ and October $16^{\text {th }}, 2020$. The peak spawning count from the surveys was six brown trout observed on July $24^{\text {th }}, 2020$. No rainbow or salmon were observed on any counts.
Lake Kaniere, and Geologist Creek specifically, have received several releases of rainbow trout, salmon, and brown trout between 2009 and 2019 attempting to resurrect the previously valued rainbow trout fishery.
Larger Browns have been released from late 2015 and should now be present in spawning streams during early winter.

## Sunny Bight Creek

In the 2020 spawning survey period five surveys were carried out between June $23^{\text {rd }}$ and October $16^{\text {th }}, 2020$. The peak spawning count from the surveys was 3 live and one dead brown trout observed on July $25^{\text {th }}, 2020$. No rainbow or salmon were observed on any counts.

Several releases of juvenile and mature sports fish have occurred in or in the vicinity of Sunny Bight Creek in recent years (Appendix 5).

## Discussion

Long term monitoring of 'peak' salmon spawning at MacDonald's Creek allows comparison of salmon returns over 39 continuous years. This season the count was well down on last year's return and the long-term average. Long term monitoring of 'peak' salmon spawning at the Windbag Stream allows comparison of salmon returns over 55 years although there are two "gaps" in the dataset. Similar to MacDonalds Creek, the count was well down on last year's return and the long-term average.

Angler reports indicate it was a late run, with respectable numbers of fish being caught immediately prior to the lakes closing in March then good fishing was had in the rivers during April. Catch reports showed salmon to be similar to last season with fish in the seven to eight pound range common and quite a few double-digit fish being caught.

The Hokitika River experienced an improved run relative to recent years, with reports of salmon being caught in numbers not seen for several years. This was then supported by Doctors Creek having its highest salmon count since 2017. The Taramakau run was reported as average, with a few salmon caught but not in high numbers. The traditional survey sites on the Taramakau were again observed having very few salmon spawning in them but the newer monitoring sites had between three and seven salmon.

Lake Ianthe was again a discussion point with anglers this season, with good numbers of Lake Ianthe salmon caught. This release should continue, with it creating additional angling opportunities while keeping the rudd population at depressed levels via salmon predating on them, confirmed by recent captures.

Monitoring of spawning streams surrounding Lake Kaniere during the mid to late winter period has provided a good indication that recent enhancement efforts have been unsuccessful. With very few fish observed spawning and the lake being too large to stock to a level of reasonable likelihood of fishing success attention should be turned to smaller put and take fisheries. Furthermore, the stocking of readily catchable rainbow trout may aid in retaining the current increase in resident licence holders especially if they inexperienced anglers. With already confirmed stocking success in Brownlee's Pond in Westport, this should be a priority. Following that, with the Grey District also lacking opportunities to catch a rainbow trout and currently receiving no fishery enhancements, further efforts should be made to establish a put and take fishery such as in the Ngahere dredge ponds.

## Staff Recommendations

Staff recommendations are to:

- Continue monitoring spawning tributaries MacDonalds Creek and Windbag Stream with enough frequency to ensure the peak count is measured.
- Continue to survey catchments where salmon enhancement has occurred.
- Continue stocking Lake Ianthe with salmon.
- Establish a rainbow trout put and take fishery in Brownlee's Pond and trial enhancement in the Ngahere dredge ponds.


## References

Fish \& Game West Coast internal policy. Strategy for sports fishery enbancement through liberations in the West Coast Fish \& Game region.

## Appendices

Appendix 1: Sports fish spawning surveys in Lake Mapourika tributaries. In years with more than one survey completed only the date with the highest live count is tabled.

| Date | Tributary | Salmon | $\begin{gathered} \text { Dead } \\ \text { Salmon } \end{gathered}$ | Brown Trout |
| :---: | :---: | :---: | :---: | :---: |
| 30 May 1991 | Mummy Creek | 0 | 0 | 0 |
| 24 June 1992 | Mummy Creek | 4 | 0 | 4 |
| 29 April 1993 | Mummy Creek | 2 | 0 | 0 |
| 15 May 1996 | Mummy Creek | 23 | 11 | 0 |
| 13 May 1998 | Mummy Creek | 1 | 0 | 2 |
| 27 May 1997 | Mummy Creek | 2 | 0 | 0 |
| 13 May 1999 | Mummy Creek | 14 | 0 | 0 |
| 07 May 2003 | Mummy Creek | 2 | 0 | 0 |
| 10 May 2011 | Mummy Creek | 6 | 0 | 0 |
| 11 May 2012 | Mummy Creek | 21 | 0 | 0 |
| 14 May 2013 | Mummy Creek | 21 | 1 | 0 |
| 13 May 2014 | Mummy Creek | 12 | 1 | 0 |
| 18 May 2015 | Mummy Creek | 22 | 0 | 0 |
| 19 May 2016 | Mummy Creek | 32 | 0 | 0 |
| 10 May 2018 | Mummy Creek | 7 | 0 | 0 |
| 07 May 2019 | Mummy Creek | 5 | 0 | 0 |
| 15 May 2020 | Mummy Creek | 19 | 1 | 1 |
| 13 May 1991 | Redjacks Creek | 0 | 0 | 0 |
| 28 May 1992 | Redjacks Creek | 38 | 13 | 0 |
| 13 May 1993 | Redjacks Creek | 20 | 0 | 0 |
| 25 May 1994 | Redjacks Creek | 5 | 0 | 2 |
| 04 May 1995 | Redjacks Creek | 13 | 0 | 0 |
| 11 May 1996 | Redjacks Creek | 23 | 0 | 0 |
| 17 May 1997 | Redjacks Creek | 12 | 3 | 0 |
| 14 May 2002 | Redjacks Creek | 4 | 2 | 0 |
| 06 May 2003 | Redjacks Creek | 5 | 0 | 0 |
| 18 May 2003 | Redjacks Creek | 15 | 4 | 0 |
| 18 May 2005 | Redjacks Creek | 15 | 4 | 0 |
| 18 May 2006 | Redjacks Creek | 9 | 0 | 0 |
| 10 May 2011 | Redjacks Creek | 3 | 0 | 1 |
| 11 May 2012 | Redjacks Creek | 5 | 2 | 1 |
| 14 May 2013 | Redjacks Creek | 0 | 0 | 0 |
| 13 May 2014 | Redjacks Creek | 4 | 0 | 0 |
| 15 May 2015 | Redjacks Creek | 2 | 2 | 2 |
| 09 June 2016 | Redjacks Creek | 2 | 2 | 0 |
| 10 May 2018 | Redjacks Creek | 4 | 0 | 0 |
| 07 May 2019 | Redjacks Creek | 0 | 0 | 0 |
| 05 May 2020 | Redjacks Creek | 1 | 0 | 0 |

Appendix 2: Sports fish spawning surveys in Taramakau River tributaries. In years with more than one survey completed, only the date with the highest live count is tabled.

| Date | Tributary | Salmon | Dead salmon | Brown trout |
| :---: | :---: | :---: | :---: | :---: |
| 18 May 1998 | Black Creek | 6 | 4 | 0 |
| 20 May 1999 | Black Creek | 16 | 1 | 4 |
| 10 May 2000 | Black Creek | 5 | 0 | 0 |
| 07 May 2002 | Black Creek | 8 | 0 | 0 |
| 08 May 2003 | Black Creek | 5 | 0 | 0 |
| 19 May 2005 | Black Creek | 23 | 0 | 0 |
| 19 May 2006 | Black Creek | 10 | 0 | 4 |
| 22 May 2007 | Black Creek | 25 | 0 | 9 |
| 13 May 2008 | Black Creek | 9 | 0 | 4 |
| 21 May 2009 | Black Creek | 12 | 1 | 9 |
| 17 May 2010 | Black Creek | 9 | 0 | 18 |
| 10 May 2011 | Black Creek | 12 | 0 | 5 |
| 05 May 2012 | Black Creek | 3 | 1 | 4 |
| 06 May 2013 | Black Creek | 11 | 0 | 9 |
| 12 May 2014 | Black Creek | 16 | 0 | 0 |
| 08 May 2015 | Black Creek | 11 | 0 | 3 |
| 31 May 2016 | Black Creek | 17 | 0 | 11 |
| 26 May 2017 | Black Creek | 11 | 2 | 4 |
| 28 May 2018 | Black Creek | 7 | 0 | 5 |
| 01 May 2019 | Black Creek | 5 | 0 | 6 |
| 18 May 2020 | Black Creek | 0 | 0 | 6 |
| 25 May 2021 | Black Creek | 0 | 0 | 15 |
| 07 May 1996 | Clear Creek | 9 | 0 | 0 |
| 18 May 1998 | Clear Creek | 7 | 3 | 0 |
| 18 May 1999 | Clear Creek | 64 | 9 | 0 |
| 10 May 2000 | Clear Creek | 6 | 0 | 0 |
| 07 May 2002 | Clear Creek | 0 | 0 | 0 |
| 30 May 2005 | Clear Creek | 18 | 7 | 3 |
| 22 May 2007 | Clear Creek | 23 | 2 | 0 |
| 25 May 2009 | Clear Creek | 9 | 1 | 0 |
| 10 May 2011 | Clear Creek | 3 | 0 | 0 |
| 12 May 2012 | Clear Creek | 6 | 0 | 0 |
| 23 May 2013 | Clear Creek | 9 | 3 | 0 |
| 12 May 2014 | Clear Creek | 10 | 0 | 0 |
| 27 May 2014 | Clear Creek | 8 | 0 | 2 |
| 08 May 2015 | Clear Creek | 6 | 0 | 1 |
| 09 May 2016 | Clear Creek | 7 | 0 | 1 |
| 26 May 2017 | Clear Creek | 22 | 0 | 0 |
| 28 May 2018 | Clear Creek | 6 | 0 | 0 |
| 17 May 2019 | Clear Creek | 5 | 0 | 2 |
| 18 May 2020 | Clear Creek | 2 | 0 | 0 |
| 20 May 2021 | Clear Creek | 2 | 0 | 0 |
| 02 May 1999 | Debenham Creek | 0 | 0 | 0 |
| 28 April 2005 | Debenham Creek | 0 | 0 | 0 |
| 04 June 2014 | Debenham Creek | 1 | 0 | 0 |
| 22 May 2015 | Debenham Creek | 0 | 0 | 0 |
| 03 June 2016 | Debenham Creek | 4 | 0 | 0 |
| 15 June 2017 | Debenham Creek | 0 | 0 | 0 |
| 17 May 2019 | Debenham Creek | 0 | 0 | 2 |
| 15 May 2020 | Debenham Creek | 1 | 0 | 3 |
| 25 May 2021 | Debenham Creek | 3 | 0 | 2 |
| 22 May 2015 | Humphries Creek | , | 0 | 1 |
| 03 June 2016 | Humphries Creek | 1 | 1 | 0 |
| 15 June 2017 | Humphries Creek | 2 | 0 | 3 |
| 28 May 2018 | Humphries Creek | 0 | 0 | 3 |
| 17 May 2019 | Humphries Creek | 0 | 0 | 1 |
| 15 May 2020 | Humphries Creek | 11 | 0 | 0 |


| 20 May 2021 | Humphries Creek | 7 | 0 | 3 |
| :--- | :--- | :--- | :--- | :--- |
| 17 May 2019 | Aickens Spring Creek | 2 | 0 | 2 |
| 15 May 2020 | Aickens Spring Creek | 8 | 0 | 1 |
| 20 May 2021 | Aickens Spring Creek | 7 | 0 | 4 |
| 15 June 2017 | Little Orangipuku | 0 | 0 | 9 |
| 16 May 2019 | Little Orangipuku | 0 | 0 | 0 |
| 15 May 2020 | Little Orangipuku | 0 | 0 | 0 |

Appendix 3: Sports fish spawning surveys in Hokitika River tributaries. In years with more than one survey completed, only the date with the highest live count is tabled.

| Date | Tributary | Salmon | Dead salmon | Brown trout |
| :--- | :--- | :---: | :---: | :---: |
| 25 May 2007 | Minnow Creek | 4 | 0 | 15 |
| 14 June 2011 | Minnow Creek | 9 | 17 | 2 |
| 21 June 2012 | Minnow Creek | 1 | 0 | 1 |
| 24 May 2013 | Minnow Creek | 0 | 0 | 0 |
| 4 June 2014 | Minnow Creek | 18 | 0 | 0 |
| 20 May 2015 | Minnow Creek | 0 | 1 | 0 |
| 01 June 2016 | Minnow Creek | 4 | 0 | 0 |
| 25 May 2017 | Minnow Creek | 6 | 0 | 0 |
| 25 May 2018 | Minnow Creek | 2 | 0 | 0 |
| 07 June 2019 | Minnow Creek | 2 | 0 | 0 |
| 19 May 2020 | Minnow Creek | 0 | 0 | 0 |
| 24 May 2020 | Minnow Creek | 0 | 0 | 0 |
| 12 May 2003 | Doctors Creek | 0 | 0 | 0 |
| 25 May 2005 | Doctors Creek | 9 | 0 | 1 |
| 28 May 2007 | Doctors Creek | 5 | 0 | 5 |
| 14 June 2011 | Doctors Creek | 4 | 1 | 2 |
| 22 June 2012 | Doctors Creek | 3 | 1 | 3 |
| 13 May 2013 | Doctors Creek | 6 | 0 | 1 |
| 12 May 2014 | Doctors Creek | 15 | 0 | 2 |
| 20 May 2015 | Doctors Creek | 6 | 0 | 3 |
| 30 May 2016 | Doctors Creek | 0 | 0 | 5 |
| 09 June 2017 | Doctors Creek | 21 | 0 | 0 |
| 29 May 2018 | Doctors Creek | 5 | 0 | 0 |
| 02 May 2019 | Doctors Creek | 4 | 0 | 2 |
| 20 May 2020 | Doctors Creek | 1 | 0 | 0 |
| 14 May 2021 | Doctors Creek | 7 | 0 | 0 |
| 25 May 2005 | Diedrichs Creek | 2 | 0 | 0 |
| 25 May 2007 | Diedrichs Creek | 0 | 0 | 0 |
| 28 June 2011 | Diedrichs Creek | 3 | 0 | 0 |
| 21 June 2012 | Diedrichs Creek | 1 | 0 | 0 |
| 24 May 2013 | Diedrichs Creek | 5 | 0 | 0 |
| 12 May 2014 | Diedrichs Creek | 3 | 0 | 0 |
| 19 May 2015 | Diedrichs Creek | 0 | 0 | 0 |
| 02 June 2016 | Diedrichs Creek | 0 | 0 | 0 |
| 05 June 2019 | Diedrichs Creek | 2 | 0 | 0 |
| 05 June 2020 | Diedrichs Creek | 0 | 0 | 0 |
| 24 May 2021 | Diedrichs Creek | 1 | 0 | 0 |

Appendix 4: Sports fish spawning surveys in Lake Kaniere tributaries. In years with more than one survey completed, only the date with the highest live count is tabled.

| Date | Tributary | Salmon | Rainbow trout | Brown trout |
| :--- | :--- | :---: | :---: | :---: |
| 5 August 2011 | Geologist Creek | 0 | - | 38 |
| 19 October 2011 | Geologist Creek | 0 | 31 | - |
| 19 July 2012 | Geologist Creek | 0 | - | 48 |
| 6 September 2012 | Geologist Creek | 0 | 19 | - |
| 29 July 2013 | Geologist Creek | 0 | - | 2 |
| 22 October 2013 | Geologist Creek | 0 | 7 | - |
| 14 August 2014 | Geologist Creek | 0 | - | 1 |
| 18 September 2014 | Geologist Creek | 0 | 13 | - |
| 16 November 2015 | Geologist Creek | 0 | - |  |
| 21 July 2016 | Geologist Creek | 0 | - | 3 |
| 4 October 2016 | Geologist Creek | 0 | 2 | - |
| 19 July 2018 | Geologist Creek | 0 | - | 23 |
| 2 September 2019 | Geologist Creek | 0 | - | 2 |
| 24 July 2020 | Geologist Creek | 0 | - | 6 |
| 21 July 2011 | Sunnybight Creek | 0 | - | 3 |
| 23 October 2013 | Sunnybight Creek | 0 | 2 | - |
| 14 October 2014 | Sunnybight Creek | 0 | 9 | - |
| 14 October 2015 | Sunnybight Creek | 0 | 4 | - |
| 21 July 2016 | Sunnybight Creek | 0 | - | 3 |
| 8 September 2016 | Sunnybight Creek | 0 | 3 | - |
| 13 July 2017 | Sunnybight Creek | 0 | - | 3 |
| 19 July 2018 | Sunnybight Creek | 0 | - | 19 |
| 23 July 2019 | Sunnybight Creek | 0 | - | 2 |
| 25 July 2020 | Sunnybight Creek | 0 | 0 | 3 |

Appendix 5. Sports fish liberations from 2009 to 2021 in catchments relating to 2015-2021 sports fish spawning counts.

| Date | Catchment | Location | Number | size | Species | Est. age May 2021 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8/11/2009 | Hokitika | Harcourts Creek | 2000 | 15 g | Rainbow Trout |  |
| 8/11/2009 | Hokitika | Diedrichs Creek | 1000 | 15 g | Rainbow Trout |  |
| 8/09/2011 | Hokitika | Doctors Creek | 16,300 | 2.8 g | Quinnat Salmon |  |
| 16/12/2013 | Hokitika | Doctors Creek | 7,500 | 5 g | Quinnat Salmon |  |
| 10/12/2014 | Hokitika | Doctors Creek | 4,200 | 6 g | Quinnat Salmon |  |
| 14/04/2016 | Hokitika | Doctors Creek | 3,250 | 38 g | Quinnat Salmon | 5+ |
| 07/06/2017 | Hokitika | Doctors Creek | 5,500 | 35 g | Quinnat Salmon | 4+ |
| 26/04/2018 | Hokitika | Doctors Creek | 5,000 | 45 g | Quinnat Salmon | $3+$ |
| 16/05/2019 | Hokitika | Doctors Creek | 4,000 | 45 g | Quinnat Salmon | 2+ |
| 15/12/2009 | L. Kaniere | Geologists Creek | 2500 | 25 g | Rainbow Trout |  |
| 10/01/2010 | L. Kaniere | Geologists Creek | 8000 | 7 g | Quinnat Salmon |  |
| 31/01/2011 | L. Kaniere | Geologists Creek | 4000 | 17 g | Rainbow Trout |  |
| 18/01/2012 | L. Kaniere | Geologists Creek | 950 | 108 g | Rainbow Trout |  |
| 10/12/2012 | L. Kaniere | Geologists Creek | 5,000 | 14 g | Rainbow Trout |  |
| 28/02/2012 | L. Kaniere | Geologists Creek | 900 | 115 g | Rainbow Trout |  |
| 20/03/2012 | L. Kaniere | Hans Bay | 5,000 | 80 g | Quinnat Salmon |  |
| 18/10/2012 | L. Kaniere | Sunny Bight | 50 | 600 g | Rainbow Trout |  |
| 18/10/2012 | L. Kaniere | Sunny Bight | 50 | 500 g | Quinnat Salmon |  |
| 29/11/2013 | L. Kaniere | Sunny Bight | 5,000 | 15 g | Rainbow Trout |  |
| 17/12/2013 | L. Kaniere | Sunny Bight | 90 | 1 kg | Rainbow Trout |  |
| 8/10/2014 | L. Kaniere | Sunny Bight | 60 | $1-2 \mathrm{~kg}$ | Rainbow Trout |  |
| 29/10/2014 | L. Kaniere | Sunny Creek | 5,000 | 6 g | Brown Trout |  |
| 15/05/2015 | L. Kaniere | Sunny Creek | 7,000 | 7 g | Rainbow Trout |  |
| 28/10/2015 | L. Kaniere | Sunny Creek/Hans Bay | 2,000 | 150 g | Brown Trout |  |
| 1/11/2016 | Lake Kaniere | Sunny Creek/Hans Bay | 7,000 | 80-100g | Brown Trout |  |
| 1/11/2016 | Lake Kaniere | Sunny Creek/Hans Bay | 1,250 | $80-100 \mathrm{~g}$ | Rainbow Trout |  |
| 01/03/2018 | Lake Kaniere | Sunny Creek/Hans Bay | 3'000 | 80g | Brown Trout |  |
| 10/04/2019 | Lake Kaniere | Sunny Bight | 3,000 | 80 g | Brown Trout |  |
| 01/02/2011 | L. Mapourika | Jetty Bay | 5000 | 70 g | Quinnat Salmon |  |
| 20/03/2012 | L. Mapourika | Jetty Bay | 2,500 | 80 g | Quinnat Salmon |  |
| 10/12/2012 | L. Mapourika | Otto's Corner | 11,500 | 5 g | Quinnat Salmon |  |
| 16/12/2013 | L. Mapourika | Otto's Corner | 7,500 | 5 g | Quinnat Salmon |  |
| 10/12/2014 | L. Mapourika | Otto's Corner | 5,900 | 6 g | Quinnat Salmon |  |
| 14/04/2016 | L. Mapourika | Otto's Corner | 3,250 | 38 g | Quinnat Salmon | $5+$ |
| 1/02/2011 | Lake Paringa | Boat ramp | 5000 | 70 g | Quinnat Salmon |  |
| 20/01/2016 | Lake Paringa | Windbag | 2000 | 22 g | Quinnat Salmon | 5+ |
| 13/10/2016 | Lake Paringa | Boat Ramp | 1,940 | 250 g | Quinnat Salmon | $5+$ |
| 19/11/2009 | Taramakau | Greenstone Pond | 1000 | 15 g | Rainbow Trout |  |
| 10/01/2010 | Taramakau | Clear Creek | 2000 | $7 \mathrm{~g}$ | Quinnat Salmon |  |
| 18/11/2009 | Taramakau | Taipo River SH 73 | $2000$ | $15 \mathrm{~g}$ | Rainbow Trout |  |
| 16/09/2011 | Taramakau | Taipo - Black Creek | 13,000 | 3.4 g | Quinnat Salmon |  |
| 10/12/2014 | Taramakau | Little Orangipuku | 4,200 | 6 g | Quinnat Salmon |  |


| $14 / 04 / 2016$ | Taramakau | Otira Aickens | 3250 | 38 g | Quinnat Salmon | $5+$ |
| :--- | :--- | :--- | :---: | :---: | :--- | :--- |
| $27 / 04 / 2017$ | Taramakau | Otira Aickens | 5,000 | 50 g | Quinnat Salmon | $4+$ |
| $01 / 04 / 2018$ | Taramakau | Otira Aickens | 5,000 | 45 g | Quinnat Salmon | $3+$ |
| $17 / 04 / 2019$ | Taramakau | Spring Creek Aickens | 4,000 | 45 g | Quinnat Salmon | $2+$ |
| $20 / 03 / 2012$ | L.Ianthe | Boat Ramp | 2,500 | 80 g | Quinnat Salmon |  |
| $10 / 12 / 2012$ | L.Ianthe | Boat Ramp | 11,500 | 5 g | Quinnat Salmon |  |
| $10 / 12 / 2014$ | L.Ianthe | Boat Ramp | 4,200 | 6 g | Quinnat Salmon |  |
| $14 / 04 / 2016$ | L.Ianthe | Boat Ramp | 1,250 | 38 g | Quinnat Salmon | $5+$ |
| $07 / 06 / 2017$ | L.Ianthe | Boat Ramp | 5,500 | 35 g | Quinnat Salmon | $4+$ |
| $31 / 05 / 2018$ | L.Ianthe | Boat Ramp | 5,160 | 45 g | Quinnat Salmon | $3+$ |
| $15 / 05 / 2019$ | L.Ianthe | Boat Ramp | 4,000 | 45 g | Quinnat Salmon | $2+$ |
| $28 / 05 / 2020$ | L.Ianthe | Boat Ramp | 1000 | 170 g | Quinnat Salmon | $1+$ |
| $29 / 05 / 2020$ | L.Ianthe | Boat Ramp | 1000 | 100 g | Quinnat Salmon | $1+$ |
| $12 / 04 / 2021$ | L.Ianthe | Boat Ramp | 1000 | 100 g | Quinnat Salmon | $0+$ |

