



CENTRAL SOUTH ISLAND REGION

Upper Ōhau River Spring Season Report - Review of angler surveys undertaken during the Spring Season month of October 2021

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1 Executive Summary

The upper Ōhau River Spring Season opened on October 1, 2021, as a newly designated backcountry fishery. The October-only 2021 Spring Season was unique as it was not preceded by a September Spring Season month and it came at a time of unprecedented knowledge of the fishery. Monitoring of Spring Season angler use, catch, harvest, satisfaction, and values was undertaken as two separate surveys. First, an Opening Day Creel survey was undertaken on the river by a ranger. Second, an online (email) backcountry survey was trialled to survey the activities of registered Central South Island Fish and Game (CSIFG) backcountry endorsement holders for the period of 2-31 October.

Opening Day attracted an estimated 60 anglers, the highest daily angler use for the Spring Season on record. Half the anglers surveyed were new to the fishery. Angler use observations suggest that use of the fishery has increased and that the fishery is still in a phase of development. It was estimated on Opening Day that 60 anglers, almost all who fly fished, caught 95 rainbow trout that averaged 15.5 pounds. Six fish in total or 6% of catch was estimated to be harvested while 94% of catch was released. Approximately 80% of angling party leaders were “satisfied” with their fishing experience while approximately 20% were “dissatisfied” and reasoned that it was due to too many anglers fishing the river. Most angling party leaders rated the opportunity to fish the early opening Spring Season “highly-valued” (84%) or “valued” (11%). One party leader (5%) rated the opportunity as neutral.

The backcountry email survey received 1,339 responses from the 4,298 anglers that registered for CSIFG backcountry licence endorsement. Of the respondents, 141 anglers actively fished the backcountry survey period of 2 to 31 October. The data from active anglers provided a valuable index of angler’s activity and perceptions. For the period 2-31 October active anglers: fished between 1 and 10 days, most commonly one day; caught between 0 and 33 fish, most commonly 0; harvested between 0 and 8 fish, most commonly 0. Overall, 7.5% of the catch of anglers was harvested. Approximately 83% of anglers were “satisfied” with their fishing experience while approximately 17% were “dissatisfied” and generally reasoned that it was due to: too many anglers fishing the river; fish numbers encountered were lower than expected or required for satisfaction; Didymo was a nuisance; and behaviour/etiquette of other anglers adversely affected them. Respondents were asked to rate the value they put on the opportunity provided by the early-opening Spring Season on a traditional high-country fishery. Seventy-two anglers rated the opportunity “highly-valued” (61%), thirty-one anglers rated it “valued” (26%). Sixteen anglers (13%) rated the opportunity as neutral.

Consistent with the principle of low-risk approach to managing the high-country aesthetics of the Spring Season, angler use during October 2021 was identified as a matter of urgency to address. Record high angler use reported for Opening Day of the October 2021 Spring Season and appreciable level of dissatisfaction observed due to angler numbers during the period 2-31 October 2021 were the key angler use issues identified that effected high-country fishery aesthetics. To address this issue, it is recommended that October 2022 be designated as a controlled period for the Ōhau River backcountry fishery and a ballot be held to distribute a limited number of controlled period licences to manage angler numbers to maintain the high-country aesthetics of the fishery.

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3 Introduction

The Ōhau River flowing between the outlet weir/control structure at Lake Ōhau and Lake Ruataniwha is commonly known as the upper Ōhau River. Central South Island Fish & Game (CSIFG) introduced a one-of-a-kind early-opening fishing season at the upper Ōhau River in 2018, subsequently referred to as the “Spring Season”. The Spring Season’s purpose is to return a valued and productive recreational fishery to the upper Ōhau River. Despite efforts of the power companies to provide flows for fishery restoration, the value and productivity of the recreational fishery of the upper Ōhau River has diminished since construction of the Ōhau hydro scheme. The Ōhau River traditionally opened as a high-country river on the first Saturday in November, however, this opening date provided underwhelming access to a limited number of resident trout and the occasional early or later spawning-run fish. The key to the Spring Season’s success is that its early opening provides anglers access to the latter part of the rainbow trout spawning run during September and October.

Review of the 2019 and 2020 Spring Season Creel surveys led to the development of a low-risk and precautionary approach to managing the sustainability of the Spring Season and the high-country aesthetics of the fishery. A long-term monitoring strategy was established whereby a combination of annual monitoring of angler use, catch and angler satisfaction as well as annual spawning surveys and the maintenance of spawning enhancement, was adopted. This strategy enabled both annual monitoring and the long-term review of trends with a process to address any matters of urgency identified.

In response to the increasing and potential popularity of its exceptional trophy fishery, the upper Ōhau was designated a backcountry fishery for the 2021/2022 sports fishing season. This enabled the introduction of a controlled period for the Spring Season’s month of September. The controlled period provides a regulatory framework to limit angler use during the peak use and catch period of the Spring Season. Limiting angler use is considered a low-risk approach to managing the sustainability of the fishery, while maintaining the established Spring Season angling values and satisfaction and the high-country aesthetics of the fishery.

Creel survey information from the 2019 and 2020 Spring Seasons did not identify that the October 2021 month of the Spring Season required a controlled period. It was previously observed that angler use and catch reduced in October from September and was explained by the reduction of trout numbers present in the river (Adams 2021). However, any matter of urgency arising from annual monitoring can be considered through the Angler Notice review process on an annual basis.

The 2021 Spring Season opened on October 1st. There was no September 2021 Spring Season month gazetted, as it was recommended at the time of the Angler Notice review to take a precautionary approach to regulation setting and allow time for the review of the 2019 and 2020 Spring Season Creel Surveys (Adams 2020). The Spring Season for 2021 and its angler use, catch and satisfaction monitoring can be considered a one-off because it has no directly comparable monitoring from previous Spring Seasons. The October 2021 Spring Season is unique because of the unprecedented awareness of the Spring Season in the angling community and the absence of adjoining September fishing opportunity. It is expected that for future Spring Seasons the introduction of the September controlled period will significantly affect angler activity during the Spring-Season month of October.

This report aims to:

- Summarise the results of the Opening Day 2021 creel survey.
- Summarise the results and review the trial of the online (email) survey of backcountry licence endorsement holders.
- Identify any matter of urgency arising, and where appropriate recommend regulation change for the Spring Season month of October only that ensures the sustainability of the fishery; maintains the established Spring Season angling values and satisfaction; and maintains the high-country aesthetics of the fishery.

4 Survey programme

The survey programme consisted of two parts for the month of October 2021. First, an Opening Day Creel survey was undertaken as an intensive approach to monitoring the expected peak-use date, with monitoring of satisfaction and angler encounters to aid detection of issues of overcrowding affecting high-country aesthetics. Second, an online (email) survey of CSIFG backcountry endorsement holders was undertaken as a trial of low-input online monitoring of angler use, catch and angler perceptions of the remaining part of the October 2021 Spring Season month.

4.1 Opening Day Creel Survey

On 1 October 2021, Opening Day of the 2021 Spring Season, a creel survey was undertaken by one staff ranger on the river. The survey method was based on that of the 2019 and 2020 creel surveys. Access points and river viewpoints were visited in a circuit by the ranger to estimate a count of anglers on the river during daylight hours. Whenever an angler could be approached, a field interview was completed involving a licencing and regulation compliance check and the collection of the anglers' contact details. If an angler had completed their day's fishing, a full interview was completed in the field. If an angler was still fishing at the time of the encounter, a follow-up phone interview was undertaken within 48 hours of the angler completing their fishing.

When a party of multiple anglers was encountered a spokesperson was selected as the point of contact for the follow-up phone interview. Catch and harvest data were accurately recorded for each individual angler, however, the information relating to the perceptions and observations obtained is the opinion of the party spokesperson and may not reflect all party members.

Angler information and feedback was collected including time spent fishing, method, catch and harvest, size of fish, angler encounters, satisfaction with the experience and valuation of the opportunity provided by the early-opening Spring Season.

The CSIFG staff ranger was not present on the river during all daylight hours and there is a possibility that anglers who only fished for a short time around dawn and the evening were not encountered. An estimate of the total number of anglers fishing during the survey day was made to account for finding vehicles when no associated anglers were observed, and where angling parties that were interviewed reported they had observed other anglers that were not encountered by the ranger.

4.2 Online backcountry survey

Anglers are required to provide an email address when they apply for their CSIFG backcountry licence endorsement. Some anglers provided invalid email addresses and were not surveyed. The survey aimed to gather information on the activity of those backcountry licenced anglers who fished between October 2 and 31. For those active anglers that did fish during that period, the survey collected

information on their days spent fishing, total catch and harvest; their satisfaction with their fishing experience; and valuation of the opportunity to fish an early-opening Spring Season.

5 Results – Opening Day Creel Survey

5.1 Survey Activity

Over the course of a nine-hour survey day on the river, 8am-5pm, the ranger observed 45 anglers, interviewed 39 anglers, and estimated that a total of 60 anglers fished for that time period on the 1 October Opening Day, 2021 (Table1). The 2021 October opening had higher angler use than the 2019 and 2020 September Openings. The estimate of 60 anglers fishing the 2021 Opening Day is the highest daily angler use on record for the Spring Season.

Table 1. Activity and observation record of staff ranger undertaking Opening Day creel survey 2019-2021.

Survey Date/day	Anglers Observed	Anglers interviewed	Estimate of total anglers	Fishing conditions
Opening Day 2021 - Friday 1/10/2021	45	40	60	Good
Opening Day 2020 - Tuesday 1/09/2020	36	36	38	Poor/OK
Opening Day 2021 - Sunday 1/09/2019	22	20	24	Good

The telephone interview response rate of anglers interviewed in the field by the ranger was 100% (39/39) and two additional anglers were later identified and interviewed taking the total angler survey responses to 41 (Table 2). Nineteen party leaders were identified. Many parties consisted of a single angler but parties were as large as 6 anglers.

Table 2. Record of responses received from interviewed anglers, identified Opening Day anglers and the number of party leaders responding.

Responses from Interviewed anglers	Further responses from Identified anglers	Angler survey responses total	Number of responding party leaders
39	2	41	19

5.2 Previous experience of fishery

Anglers were asked if they had fished the Spring Season previously. Forty responses were received.

There was an even 50:50 split of anglers who had fished the Spring Season in past seasons and those who were fishing the Spring Season for the first time ever. This indicated the fishery is still in the establishment phase as many anglers were still discovering the fishery.

5.3 Methods used

Angling methods were identified for 34 of the respondents. Fly fishing was the most popular method used by 33 anglers (97%) with one angler who spin fished (3%). No angler identified that they both fly and spin fished on the day.

5.4 Catch and harvest

Forty-one survey respondents caught 65 rainbow trout of which 4 were harvested. No catch of brown trout was reported.

Extrapolating the reported catch to equate to the estimate of 60 angler in total that fished Opening Day, 95 rainbow trout including 6 harvested are estimated to have been caught (Table 3). Approximately 6% of catch was harvested (kept). No angler reported keeping more than one fish on opening day.

Table 3. Opening Day catch and harvest records for surveyed anglers and extrapolated estimate of total Opening Day anglers catch and harvest.

	Number of anglers	Rainbow trout caught	Rainbow trout kept
Survey respondents	41	65	4
Extrapolated estimates of total Opening Day angler numbers, catch and harvest	60	95	6

5.5 Fish size

Rainbow trout were reported to weigh between 2.5 and 30 pounds (1.1 – 13.6kg), averaging 15.5 pounds (7.0kg).

5.6 Success of anglers

On Opening Day most anglers caught three or fewer rainbow trout. Thirteen anglers (32%) caught zero rainbow trout, 24 anglers (58%) caught between 1 and 3 rainbow trout. Four anglers (10%) caught between 4 and 10 rainbow trout (Figure 1).

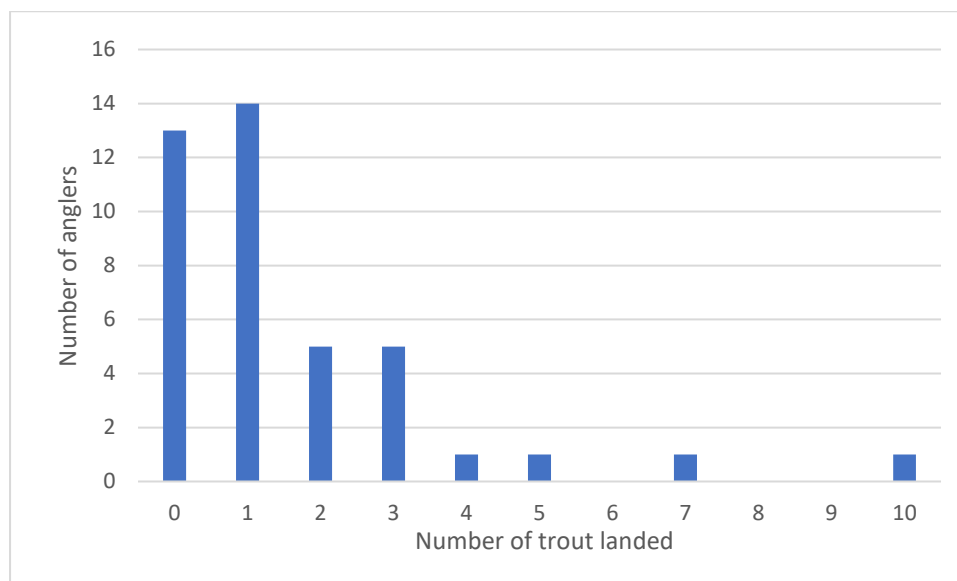


Figure 1. Number of rainbow trout landed by surveyed anglers on October 1st, Spring Season Opening Day 2021.

5.7 Angler encounters

Party leaders reported encountering between 1 and 20 anglers, with median and average encounters of 7 anglers, respectively.

5.8 Satisfaction

Party leaders were asked to rate their overall satisfaction with their day's fishing experience. Respondents could either respond "satisfied" or "dissatisfied". "Dissatisfied" party leaders were asked to provide an explanation as to their reason for being dissatisfied.

Nineteen party leaders provided responses being, 79% satisfied (15 responses) and 21% dissatisfied (4 responses). Dissatisfied anglers generally explained that their dissatisfaction was related to their experience of too many other anglers fishing the river. The responses of these anglers are provided in Appendix 1.

5.9 Valuing the Spring Season

Party leaders were asked to rate the value they put on the opportunity provided by the early-opening Spring Season compared to its traditional high-country opening. Responses were limited to "highly-valued", "valued", or "neutral". Most party leaders rated the opportunity "highly-valued" (84%) or "valued" (11%). One party leader (5%) rated the opportunity as neutral (Figure 2).

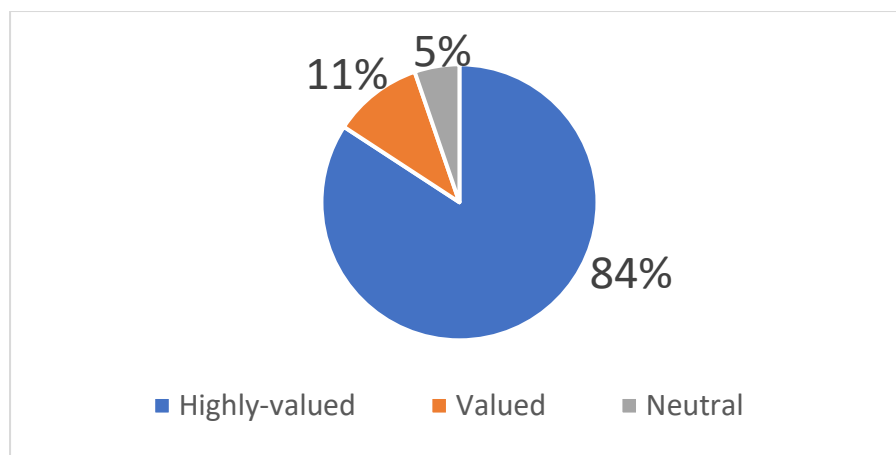


Figure 2. Surveyed angler valuation rating of the opportunity provided by the early-opening Spring Season on a traditional high-country river.

Respondents were asked to provide a justification for their valuation rating. All justifications are provided in Appendix 2. Party leaders that rated the opportunity "high-valued" or "valued" generally commented that it provided a unique opportunity to catch large fish and some recognised that the early opening is required to provide that experience. The single party leader providing the "neutral" response said, "would be happy with (the) season being later".

6 Results – Online backcountry survey 2-31 October

6.1 Email distribution

The database of 4,298 CSIFG endorsed backcountry licence holders was reduced to 4,230 by removing those with identifiably invalid email address. Of the 4,230 email surveys distributed, 147 were undeliverable (bounced-back). Responses were received from 1,339 angler, equating to 31.2% of the population of registered CSIFG endorsed backcountry licence holders (Table 4).

Table 4. Number of registered CSIFG backcountry endorsed licence holders, email surveys distributed, undeliverable, and responses received and their related percentages of email distribution and all registered backcountry anglers.

Anglers registered for CSIFG backcountry licence endorsement	Email surveys distributed	Undeliverable	Responses received	Percent response rate to distribution list	Percent response rate for all registered CSIFG backcountry anglers
4,298	4,230	147	1,339	32.8 %	31.2 %

6.2 Active angler response bias

Anglers that participated in the Opening Day creel survey were identified in the database of online backcountry survey respondents. Approximately 54% of known Opening Day anglers responded to the online survey compared to 32.8% of all anglers. This variance in response rate suggests that active anglers are more likely to respond to the online backcountry survey than the general backcountry endorsed angler population. For this reason, it is assessed there is high likelihood of a survey response bias towards active anglers (those that actually fished in October 2021). Therefore, extrapolation of the data provided by online survey respondents to quantify estimates of fishing activity and catch of backcountry licence holders that did not respond to the survey was not undertaken.

The survey information received by those active anglers that did fish between October 2 and 31 is highly valuable as a qualitative index of the angling activity, catch and perceptions and observation of active anglers.

6.3 Angler activity

One-hundred and forty-one anglers recorded that they actively fished the upper Ōhau River between 2 and 31 October (active anglers). The most common angling effort (days fished) was 1 day for the period (83 anglers or 59%) (Figure 3). A notable number of anglers fished 2 days (27 anglers or 19%) and 3 days (16 anglers or 11%). An additional 15 anglers (11%) fished between 4 and 10 days.

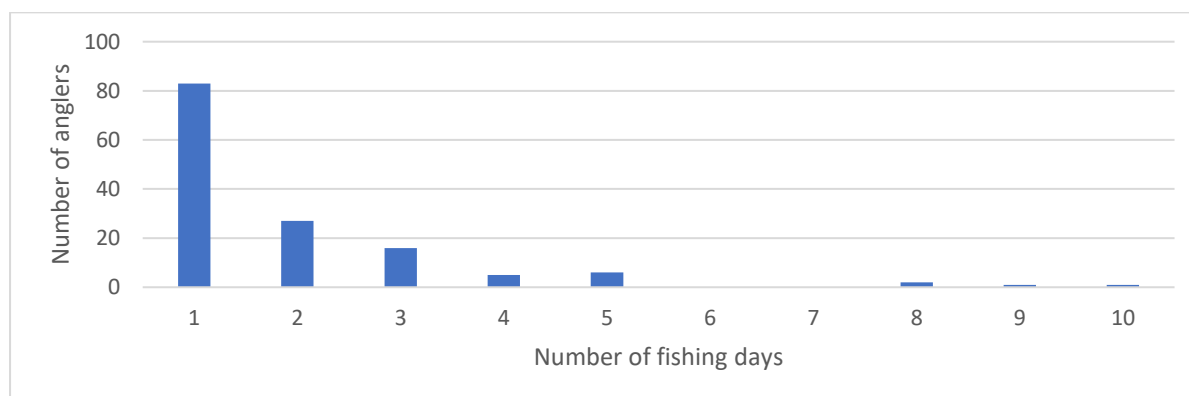


Figure 3. Number of fishing days undertaken by 141 active anglers who responded to the email survey and who fished the upper Ōhau River between 2 and 31 October 2021.

6.4 Catch

In total, the 141 active anglers reported catching (successfully landing) 238 trout for the period 2 to 31 October. Seventy anglers or approximately half (49.6%) of anglers caught no fish during the period

of 2 to 31 October (Figure 4). A notable number of anglers caught 1 fish (33 anglers or 23% of anglers) and 2 fish (14 anglers or 10% of anglers). Catch of between 3 and 15 fish was relatively uncommon (23 anglers or 16% of angler combined). The highest number of fish caught by an angler for the period was 33, more than double the next highest total catch of any surveyed angler.

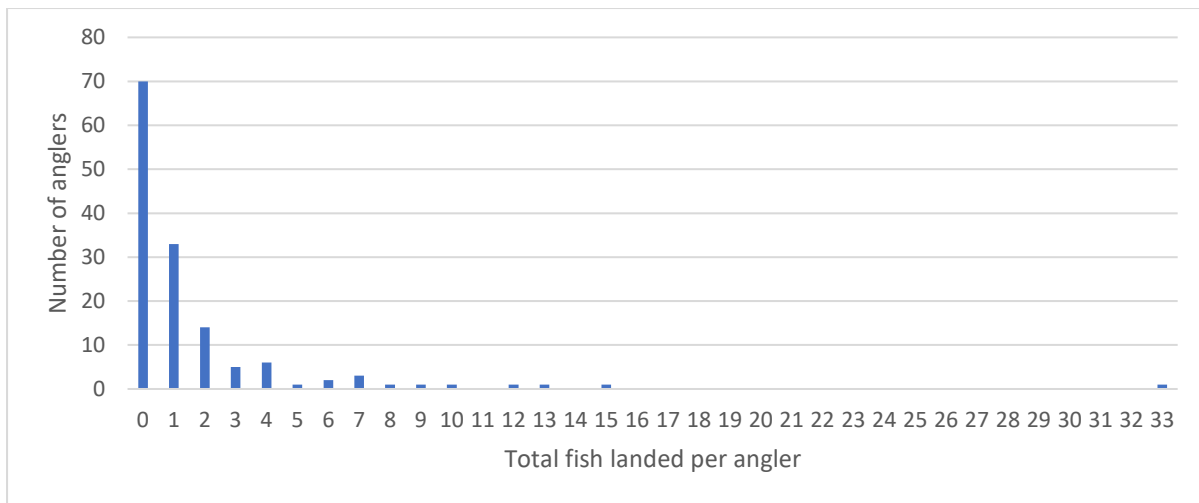


Figure 4. Total fish landed per angler by the 141 active anglers who responded to the email survey and who fished the upper Ōhau River between 2 and 31 October 2021.

6.5 Harvest

In total, the 141 active anglers reported harvesting 18 trout for the period 2 to 31 October. Most anglers reported harvesting zero trout (132 anglers or 94% of anglers) (Figure 5). Between 1 and 3 trout were harvested for the period in total by a small number of anglers (8 anglers or 6% of anglers). Uniquely, the one angler who reported harvesting 8 fish for the period is the only known record of an angler keeping their entitled daily bag limit of 2-trout during the Spring Season. Overall, harvest equated to approximately 7.5% of total reported catch.

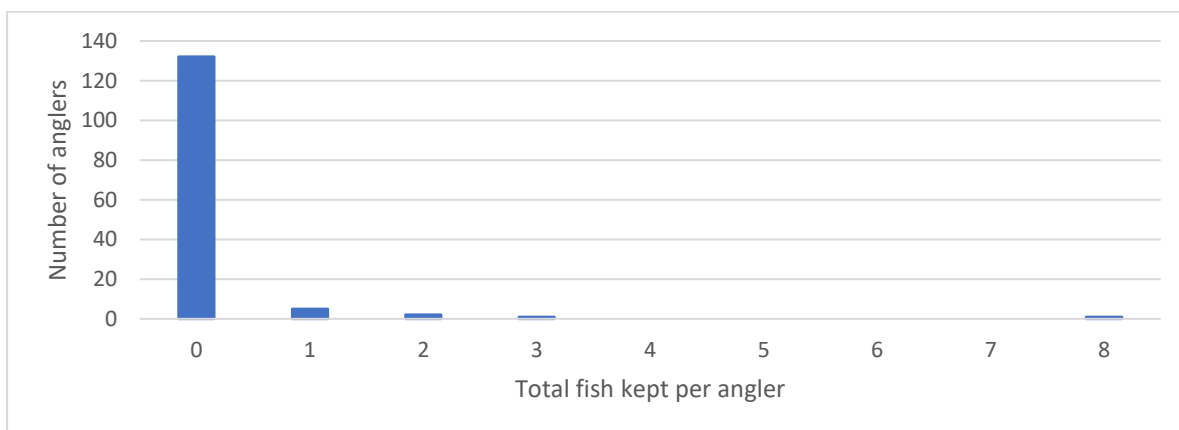


Figure 5. Total fish harvested (kept) per angler by 141 active anglers who responded to the email survey and who fished the upper Ōhau River between 2 and 31 October 2021.

6.6 Satisfaction

Active anglers were asked to rate their satisfaction with their overall Ōhau River backcountry fishery experience during October 2021 (excluding Opening Day). Respondents could either respond “satisfied” or “dissatisfied”.

Eighty-three percent (117) of respondents were “satisfied” and seventeen percent (24) were “dissatisfied”.

“Dissatisfied” respondents were asked to briefly explain the reasons for dissatisfaction with their Ōhau River experience in October 2021?”.

In general, four similar themes of dissatisfaction were identified: they encountered too many other anglers; fish numbers encountered were lower than expected or required for satisfaction; Didymo was a nuisance; and behaviour/etiquette of other angler affected them.

A full list of explanations for dissatisfaction is provided in Appendix 3.

6.7 Valuing the Spring Season

Active anglers were asked to rate the value they put on the opportunity provided by the early-opening Spring Season compared to the traditional high-country fishery. Responses were limited to “highly-valued”, “valued”, or “neutral”. Seventy-two anglers (61%) rated the opportunity “highly-valued”, thirty-one anglers (26%) rated it “valued”, and sixteen anglers (13%) rated the opportunity as neutral (Figure 6).

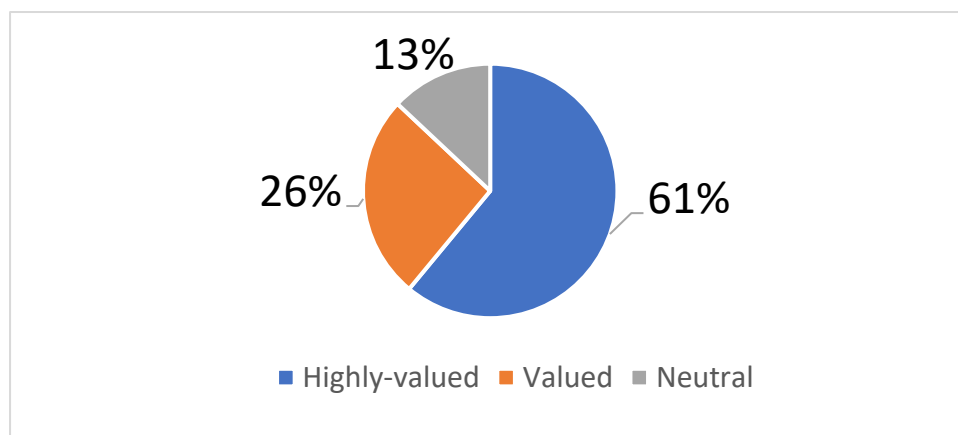


Figure 6. Valuation of active anglers who responded to the email survey to the opportunity provided by the early-opening Spring Season on a traditional high-country river.

Respondents were asked to provide a justification for their valuation rating. All justifications are provided verbatim in Appendix 4. Anglers who rated the opportunity “high-valued” or “valued” generally commented that it provided a unique trophy fishery in an attractive setting and appreciated getting on a high-country river before high-country opening. The responses from anglers who rated the opportunity as “neutral” varied greatly covering the spectrum of positive to negative explanations. It should be noted some anglers showed concern for the sustainability of fishing for the spawning run.

7 Discussion

7.1 The development of the Spring Season fishery

The fishing community’s awareness of the Spring Season within the region, nationally, and internationally has grown immensely from the first iteration of the Spring Season in October 2018, to its latest in October 2021.

It is the opinion of CSIFG staff, that the Spring Season only became widely known after the publicity of the success and experiences of anglers that occurred during the 2020 Spring Season. An example of this publicity is the YouTube based Pure Fly NZ TV series. One episode of the 2021 series featured the opening days of the 2020 Spring Season. This episode was published eight days before the opening of the 2021 Spring Season. Uniquely, the episode appeared to be the first online video to explicitly name the river and describe information regarding its management by CSIFG.

The heightened awareness of the Spring Season was evident in the Opening Day 2021 Creel survey. Not only did the 2021 Opening Day attract the highest daily angler use on record for the Spring Season, half of the anglers that fished it had not fished the Spring Season previously. The high angler use observed on Opening Day 2021 may simply be a symptom of angler awareness of the Spring Season and angler use may reduce as anglers come to have experienced the fishery and make educated decisions whether to return or not. With the implementation of the controlled-period ballot for the month of September, it is likely that ballot winners who fish in September will not find fishing in October as attractive.

It is evident that the Spring Season fishery is still developing its user groups, especially in respect of non-resident anglers who have not had access under Covid-related border restrictions since the Spring Season of 2019. It remains an unknown if the angler use of the October month of the Spring Season fishery will continue to grow for resident anglers if controls are not put in place as they are for September. It is almost certain that non-resident angler use of the Spring Season will increase when border restrictions are relaxed.

7.2 October 2021 – confirmation of Spring Seasons characteristics

Many of the fishery attributes of the Spring Season that were identified by the 2019 and 2020 Spring Season monitoring were again observed in 2021. These include:

- The Spring Season is an exceptional one-of-a-kind trophy fishery.
- The early-opening Spring Season supports a highly valued recreation fishery at the upper Ōhau River.
- Spring Season Opening Day angler use has consistently increased each season.
- The Spring Season attracts many new anglers each opening.
- Approximately 80% or more of anglers are satisfied with their fishing experience.
- Fly fishing is the most common method used.
- Most anglers choose to release their catch.
- A relatively small number of anglers harvest a relatively small number of fish.
- A minority of anglers are concerned for the sustainability of the fishery regarding providing an open season based on a spawning run.
- Without a controlled fishery in place there are appreciable levels of concern that the angler numbers are diminishing the angling experience and therefore the fisheries high-country aesthetics.

7.3 Managing dissatisfaction

Anglers presented an appreciable level of dissatisfaction (approx. 20%) with their upper Ōhau fishing experience. This section of the report looks at ways CSIFG may manage such issues. There were four main themes of dissatisfaction presented during the October 2021 Spring Season, being:

- 1.1. They encountered too many other anglers.
- 1.2. Fish numbers encountered were lower than expected or required for satisfaction.

1.3. Didymo was a nuisance.

1.4. Behaviour/etiquette of other anglers affected them.

Issue 1.1 - CSIFG have the ability to actively manage angler numbers. After the 2020 Spring Season, options were reviewed and a controlled period was implemented for the September Month of the Spring Season at the May 2021 meeting of the CSIFG Council. A controlled period enables a ballot of a limited and specified number of controlled period licences. This method is seen as the ultimate tool to maintain the high-country fishery aesthetics by reducing the effects of crowding and the need to share water. The introduction of a controlled period for October may be justified considering the uncertainty of future angler use, the observed increasing trend in Opening Day angler use and the observed dissatisfaction with angler numbers in October 2021.

Issue 1.2 – Live fish counts have established that fish numbers in the river reduce during October and fishing opportunities are expected to be much lower in October than September. It is likely many returning and new anglers to the fishery had based their expectation of fish numbers on what had been experienced or witnessed in previous September months of the Spring Seasons and what has been presented through various media produced during September. The heightened level of angling around Opening Day and shortly after in 2021 may have also caused many anglers to fish water not likely to hold fish in their efforts to fish unoccupied water. Staff recognise that active management may be required to reflect that the diminishing fish numbers observed throughout October corresponds to diminishing fishing opportunities and associated angler satisfaction.

Issue 1.3 – Didymo is known to be a nuisance and it will remain so under the existing controlled flow regime of the river. There is no cost-effective way for didymo to be managed at the upper Ōhau River. It should be accepted that a small number of anglers may be deterred from fishing the river because of didymo.

Issue 1.4 – There was a level of angler-angler interaction detected by the survey that was considered to cause dissatisfaction. These encounters appear to mostly be related to the sharing of preferred water. Staff consider there are two approaches to this issue. First, limiting angler numbers through management of the controlled fishery will reduce the likelihood of needing to share water. Second, through developing advocacy tools for specific Ōhau River fishing etiquette that encourages best-practice angler behaviour, fish handling and water sharing. Advocacy of specific Ōhau River etiquette is to be developed and supplied to 2022 September ballot winners.

7.4 Online backcountry survey trial review

The online backcountry survey trial proved to be a valuable exercise. The responses received were assessed to be biased towards active anglers and therefore deemed unsuitable for extrapolation to the total angling population's angler use and catch. The survey does provide a valuable index of the catch, satisfaction, and perceptions of active anglers.

Arguably, during the current early phases of the Spring Season establishment and development, a repeat of this exact methodology would not be considered to provide adequate estimates of total angler use, catch and harvest. More appropriately, creel surveys, like that undertaken on Opening Day 2021 and those stratified throughout the 2020 Spring Season are considered suitable.

Two improvements to the online survey could provide higher-quality indexes of active angler activity. First, two survey periods during October rather than one. The first survey could cover the peak-use period of October being the one-week to 10-day period following an October opening. Second, survey reminder emails could be sent to non-respondents to encourage the responses of those who did not respond immediately to the initial survey email.

An improved online survey of backcountry licence holders may have a role in the monitoring of future aspects of Spring Seasons beyond the development phase of the fishery.

7.5 Identification of matters of urgency

Staff have not identified any matters of urgency arising from assessing the reported catch or harvest during October 2021.

Consistent with the principle of low-risk approach to managing the high-country aesthetics of the Spring Season, angler use during October 2021 is identified as matter of urgency to address at the next Angler Notice review. Record high angler use reported for Opening Day of the October 2021 Spring Season and appreciable level of dissatisfaction observed due to angler numbers during the period 2-31 October 2021 were the key angler use issues identified to effect high-country fishery aesthetics in October 2021.

The introduction of a controlled period for October 2022 is recommended by staff as a low-risk approach to sustainably managing the high-country fishery aesthetics of the upper Ōhau River fishery. The introduction and administration of an October controlled period would be consistent with that already in place for the September month of the Spring Season as reported in Adams 2021. That includes distributing a limited number of controlled-period licences through a ballot. The main difference between the months would be that a lesser number of controlled-period licences are proposed to be issued for the month of October to reflect the reduced opportunities provided by naturally diminishing fish numbers. The proposed ballot schedule for distributing controlled-period licences for October 2022 is presented in Appendix 5. A controlled-fishery angler use, catch and satisfaction monitoring survey in October 2022 will meet annual monitoring commitments.

8 References

Adams, R. (2021). Management of the Upper Ohau Spring Season. Prepared for the Central South Island Fish & Game Council.

Adams, R. (2020) Upper Ohau River 'Spring-Season' 2019 Creel Survey. Prepared for the Central South Island Fish & Game Council.

9 Appendices

Appendix 1. Opening Day 2021 Spring Season creel survey - explanations provided by party leaders for angler rating of being “dissatisfied” with their overall upper Ōhau River fishing experience.

Overall upper Ōhau River experience rating (satisfied or dissatisfied)	Briefly explain the reasons for your dissatisfaction with your Ohau River fishing experience
Dissatisfied	First day on the river and too many anglers already there. Drove up TR side, got out and fished one pool but not enjoying it.
Dissatisfied	Compared to last year when I was very satisfied the number of anglers were too high
Dissatisfied	Too many people and not enough fish
Dissatisfied	Too many other anglers

Appendix 2. Opening Day 2021 Spring Season creel survey – value rating of “highly-valued”, “valued”, and “neutral” provide by party leaders and associated explanations regarding the valuation of the opportunity to fish the early-opening Spring Season on a traditional high-country fishery.

Value rating of opportunity to fish early-opening Spring Season on traditional high-country fishery?	Explanation for value rating
Highly Valued	Great experience not available elsewhere
Highly Valued	High Value as there is a unique chance to catch a huge trout from the canal system that has migrated up the river
Highly Valued	Most other rainbow fisheries are closed so it’s a great opportunity
Highly Valued	Unique opportunity not offered elsewhere
Highly Valued	More fish at this time
Highly Valued	On condition that it is fly fishing only
Highly Valued	Could not fish anywhere else
Highly Valued	Excellent opportunity, unique
Highly Valued	A bit special being a bit different
Highly Valued	Don't get opportunity to fish high-country waters often
Highly Valued	Very Special opportunity. Very Clever how Fish & Game have done it.
Highly Valued	Big fish. Was expecting a lot more anglers so happy with his day
Highly Valued	Massive Rainbows, unique opportunity
Highly Valued	Wouldn't be any fish there in November
Highly Valued	Opportunity to catch a trophy-sized trout on fly
Valued	fishing is better, great fishing
Valued	Although not happy with anglers the opportunity to fish the river was appreciated.
Neutral	Would be happy with season being later, should be about catching one fish not a competition.

Appendix 3. Online Backcountry survey, period 2-31 October 2021 – explanations (verbatim) provided by anglers of the reasons the rated being “dissatisfied” with their overall upper Ōhau River fishing experience.

How do you rate your satisfaction with your overall Ohau River backcountry fishery experience during October 2021 (excluding Opening Day)	Briefly explain the reasons for your dissatisfaction with your Ōhau River fishing experience in October 2021 (Verbatim)
Dissatisfied	Dididimo was so thick.
Dissatisfied	Didmo in high leveks
Dissatisfied	Too much didymo
Dissatisfied	Didymo
Dissatisfied	Volume of anglers on waterway too great, and unsustainable. Witnessed high level of harvesting of fish rather than ethical catch and release of breeding stock.
Dissatisfied	The river was extremely busy, we went the day after opening. We could only fish one hole because anglers where parked and camping at most of the holes. Looking forward to next year's ballet system
Dissatisfied	More people fishing than expected.
Dissatisfied	Too many anglers on river and I feel there is far too much pressure on the fish to be sustainable long term
Dissatisfied	Way to many anglers fishing on the river. An organised beat system or something would be helpful.
Dissatisfied	To many people
Dissatisfied	To many fishermen
Dissatisfied	To many people know about these big rainbows spawning in the upper reachers. The 4 fish I caught ,2 had flies stuck in there back fins. I just feel with all the pressure it's getting from anglers seeing videos on YouTube etc the fishery isn't going to last. A ballot system needs to be used I reckon. How this is policed I don't know. But the way the river is getting fished the first couple weeks of opening isn't good for anyone.
Dissatisfied	A few anglers jumping ahead of us which is bullshit
Dissatisfied	Alot more popular due to social media
Dissatisfied	The "You Tube Anglers at the top of the pool would not move on as we fished up the river (NB: suspected Opening Day issue)
Dissatisfied	Overcrowding. People with bad fishing etiquette
Dissatisfied	Fished 5 or 6 pools on the 8th October - in great spotting conditions - no fish sighted
Dissatisfied	low fish numbers
Dissatisfied	The fish had dropped out couldn't get there till late October Saw three
Dissatisfied	I did not have any chance to fish in the first 2 weeks in Oct. I knew it was too late to fish in the third week but I just wanted to try. I saw only one fish and it did not take any of my flies.
Dissatisfied	By the number of people fishing, and the number of fish seen caught. There seems to be low numbers of fish there, or they are very hard to catch. A very expensive licence for no fish after using four different baits and lures.

Dissatisfied	No bites at all on this one occasion. Great day out but no fish
Dissatisfied	Access
Dissatisfied	Noted persons fishing in September hid when i drove down track to see when they were doing

Appendix 4. Online Backcountry survey, period 2-31 October 2021 – value rating of “highly-valued”, “valued”, and “neutral” provide by party leaders and associated explanations (verbatim) regarding the valuation of the opportunity to fish the early-opening Spring Season on a traditional high-country fishery.

How do you value the opportunity to fish an early-opening "Spring Season" on a traditional high-country fishery?	Briefly explain the reason for your value rating (verbatim)
Highly Value	Large trout sight fished in river- nothing beats it
Highly Value	excellent opportunity for accessible fishery
Highly Value	I love river fishing so to be able to fish this early is a real treat
Highly Value	Creates more opportunities leading up yo October 1
Highly Value	Only place in the world like it
Highly Value	Love fishing high country rivers, so I'm grateful for any opportunity to get in earlier.
Highly Value	It's a great experience beautiful fishery when it's not over crowded and the fish need to be protected. The pods get smashed by anglers 24/7 all weekend I was there
Highly Value	It's great to be able to fish water that hasn't been absolutely flogged. Also I think people who do apply for the back country licenses, respect, properly handle and release fish.
Highly Value	It is an amazing opportunity to fish a unique fishery in a fantastic location
Highly Value	Fabulous piece of water
Highly Value	Great fishing
Highly Value	The aesthetics of the experience
Highly Value	An 1 August opening would help anglers target these impressive spawning trout
Highly Value	opportunity to catch and release large fish
Highly Value	I would love to get out as early as I can in a season
Highly Value	This fishery is an incredible opportunity to catch trophy fish. You don't go here for solitude; you go for an opportunity to catch a very large fish. Knowing that, I had an incredible day. Beautiful weather, big fish, and a great experience. A unique experience worldwide. It is an experience that I highly value.
Highly Value	Would be nice to fish before it gets hammered on opening day
Highly Value	Good Fish but sadly not good enough to land
Highly Value	A chance to catch trophy trout in an amazing place.
Highly Value	Nice surroundings, natural-ish river, big fish
Highly Value	Its good to have an opportunity to fish for trophy trout while reasonable numbers of fish still remain in the river
Highly Value	It is a one of a kind fishing experience.
Highly Value	Fish are in excellent condition and there are less fishermen on the water
Highly Value	Don,t do a lot of river fishing other than ohau river
Highly Value	Chance to catch and release large fish on fly rods

Highly Value	Awesome experience
Highly Value	Im a mad kwen catch and release fisherman
Highly Value	It was great day and a bonus of a couple of fish...
Highly Value	It's world class, big fish with easy access
Highly Value	It was the first time I had the opportunity to fish the Ohau River. It was not a purposeful trip due to the early opening but was great to be able to fish the river as it was open.
Highly Value	Great place to fish, amazing scenery. I only fished the area for a couple of hours. More walking and looking than fishing.
Highly Value	Great Fishery
Highly Value	Without an early opening there is no fishery and this river is effectively redundant to fish and game licence holders. This is a unique opportunity to sight fish for these trout. I suggest reduce the take to zero.
Highly Value	Excellent fly fishing
Highly Value	the opportunity to chase big ex spawning fish is not readily available
Highly Value	Very nice experience to enjoy fishing in fresh water
Highly Value	Best chance of catching a super large trophy fish in a river. Note did catch a 24lb jack on opening day. Survey didn't seem to ask for this information
Highly Value	Great opportunity to see big fish
Highly Value	World class fishery
Highly Value	Opportunity to fish for large canal fish in a backcountry setting
Highly Value	Good to see good numbers of healthy fish in there natural habitat.
Highly Value	It offers large trout in a river setting rather than a canal setting
Highly Value	Very cool to be able to get into fishing a back country river so early on
Highly Value	Any time would make the travel from Chch worth it.
Highly Value	Awesome chance to have a crack at fish of a lifetime.
Highly Value	Higher river flow and generally more active fish
Highly Value	Was good too see heaps of spawning fish get too see the numbers wasn't worried about catching them myself just love to see them doing there thing
Highly Value	Not about Oct but Sep is a great chance to have some lifetime experiences to catch giant trouts. A 23lb. rainbow I caught in Sep 2020 is still the biggest of my catch.
Highly Value	First time fishing
Highly Value	The fish are still running at that time of year so more opportunity all over the river rather than just a few holes
Highly Value	great experience
Highly Value	Highly value this as it responds to a niche opportunity to fish for 'trophy' trout, even if they are artificially large salmon farm freaks
Highly Value	Its a stunning river. And while there are many nice rivers in the south island, the likelihood of catching a huge trout is higher than elsewhere because of the rivers connection to the hydro canals. I fished the Ohau 4/5 days after opening. I found two large (25lb +) dead fish in one pool. I can only assume they were mishandled on opening: too long out for photos etc. As part of the ballot process some educational information should be provided.
Highly Value	great for the spawning fish...
Highly Value	Really enjoyed the experience

Highly Value	Offers unique high flow water and a chance to get on a river earlier than normal
Highly Value	Anglers need opportunity's if possible as salmon fisheries collapse & lowland streams degrade.
Highly Value	It's a privilege to be able to fish our waters
Highly Value	unique fishery
Highly Value	very rare to drive to a river and sight fish for so many large fish
Highly Value	Such a breatfull river to fish and fish this river from a young boy be twizel days
Highly Value	great to go on the water
Highly Value	Great fishery amazing opportunity, should be fly only to make it for more educated/expirienced anglers and a zero take limit
Highly Value	Because i typically spend the winter months at the pub instead of out fishing as it can get quite miserable down mackenzie district, so getting back out early is a big plus as this time of year usually has the nicer calmer days and its easier to throw out your light line.
Highly Value	Large trout in beautiful river setting
Highly Value	lots of big trout seen in river ,great place to fish
Highly Value	Great experience, great fish in a new fishery.
Highly Value	Availability of big fish
Highly Value	I fished it last year In September and It was absolutely brilliant with the snow and surroundings only a short drive from Twizel. Really great opportunity to catch and release monster trout while fly fishing. Great opportunity to teach good fish handling and release techniques.
Highly Value	Having an opportunity to Catch large trout from a river that have been sighted.
Highly Value	Just love fishing anywhere
Highly Value	A privilege to fish for large fish. In a spectacular environment.
Value	Unique fishery to possibly catch trophy fish absolutely incredible. And having this river open while all other high country fisheries closed provides more sporting opportunities than conventional canal fishing
Value	Fishing on the fly
Value	Beginning fisherwoman - enjoyed the experience with a friend who took me.
Value	Any time you catch a fish is satisfying
Value	Beautiful river
Value	High quality fishery
Value	It provides the privilege to fish an area with low impact.
Value	Just fish numbers
Value	Was on holiday down south so was nice to give the river a quick flick
Value	Some rivers it could be advantage to fish earlier. Although too much pressure could have bad results on late spawners.
Value	Good fishing but 0 fish
Value	Once a year opportunity to fly fish to very large rainbows
Value	Spreads out the pressure on the river.
Value	No fish caught by me had one or two on but great time away with family members who caught fish. Great weather and experience.
Value	Just good to get out of the canals earlier
Value	Awesome well kept river, good for camping

Value	Not sure. But always appreciate the opportunity
Value	Its nice to have an open river option to complement some lake fishing. But also I think its a valuable spawning area which allows the mature fish somewhere quiet to successfully breed. Therefore should not be available to fish early season
Value	Its a wonderful place to fish
Value	Always a good experience but could be better with less people. I couldn't find anywhere to fish on the second day.
Value	It's nice to get out there!
Value	Always a good day fishing
Value	Good that it is open early season. Concerned with the over harvesting and tormentation of fish on their reeds
Value	Any later there would be no fish
Value	Fine day, few people
Value	Would be good, but maybe the ballot season should be for october to give more fish peace for spawning.
Value	Any chance to fish the Ohau is good
Value	Great to be able to fish early.
Value	Lovely clear waters
Value	No other rivers open. And please open the Hakataramea on 1 October, and high-country fisheries on 1 November
Value	saw several good sized trout with few anglers
Neutral	Best time to fish the river
Neutral	Great fishery but personally wouldnt really mind if it opened later as i dont really like to hammer the spawning fish!
Neutral	Fished for a sort time ,during the trip back home
Neutral	Plenty of other places to fish if it's not open early.
Neutral	i just love fishing regardless whether i catch or not
Neutral	I was only able to fish a couple half days so wasnt great for me.
Neutral	Happy to fish anywhere really
Neutral	The wankers who would not move up the river. Stayed there like stones
Neutral	cannot police it should be part of high county opening there is many other places to fish before hand
Neutral	I don't fish there much
Neutral	Would rather spawning fish left alone to breed
Neutral	If we need a later season to help keep stock up then fine
Neutral	Understand this will be a ballot system. Being from the north island and fished this river regularly would need early notice eg flights accomodation etc to sort . How many anglers in ballot? Can this river sustain that pressure as its getting very popular? Will this affect fishing for people who miss out on early ballot .Things need to be considered
Neutral	Uncomfortable attacking spawning fish
Neutral	because i can not get down to the Ohau river until October i does not effect me if the is a "Spring Season" but if i could i think it would be great to try the world class trophy fishing
Neutral	Not really of appeal as somewhat artificial fishery due to Canal fish. Also overcrowded

Appendix 5. Ballot schedules for distributing controlled-period licences during the 2022 Spring Season. The Schedule for September 2022 is approved by Council. The schedule for October 2022 is proposed.

Table 5-1. Ballot schedule for distributing controlled-period licences approved for September 2022.

Ballot	Fishing Dates	Allocation name	Ballot entries close	Max anglers	Days	Angler Days
1	3 - 4 September	Opening Weekend	1-Aug	30	2	60
1	6 - 7 September	mid-week 1	1-Aug	12	2	24
1	9 - 11 September	long weekend 1	1-Aug	20	3	60
2	13 - 14 September	mid-week 2	24-Aug	12	2	24
2	16 - 18 September	long weekend 2	24-Aug	20	3	60
2	20 - 21 September	mid-week 3	24-Aug	12	2	24
2	23 - 25 September	long weekend 4	24-Aug	20	3	60
2	27 - 28 September	mid-week 4	24-Aug	12	2	24
Max September angler days						336
Non-fishing dates						11

Table 5-2. Proposed ballot schedule for distributing controlled-period licences for October 2022.

Ballot	Fishing Dates	Allocation name	Ballot entries close	Max anglers	Days	Angler Days
3	1 - 2 October	weekend 5	5-Sep	20	2	40
3	4 - 5 October	mid-week 5	5-Sep	12	2	24
3	7-9 October	long weekend 6	5-Sep	12	3	36
3	11-12 October	mid-week 6	5-Sep	12	2	24
3	14-16 October	long weekend 7	5-Sep	12	3	36
3	18-19 October	mid-week 7	5-Sep	12	2	24
3	22-24 October	Labour weekend	5-Sep	12	3	36
3	26-27 October	mid-week 8	5-Sep	12	2	24
3	28-30 October	long weekend 8	5-Sep	12	3	36
Max October angler days						280
Non-fishing dates						9