



CENTRAL SOUTH ISLAND REGION

Management of the Upper Ohau River Spring Season

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1 Executive Summary

The Ohau River once flowed freely between Lake Ohau and Lake Benmore and sustained a regionally important trout fishery. The Ohau River was permanently modified to flow between the Lake Ohau outlet weir and Lake Ruataniwha when the Ohau Canal chain of power stations and associated canals were constructed in the 1970’s and 1980’s.

Negotiations between fisheries managers and the power company of the time ensured flows were restored to the upper river to provide a recreational fishery, however the fishery did not recover to expectations. In 2016 the discovery of high numbers of canal-origin trout spawning in the river and the conclusion that further flow restoration initiatives were too costly sparked a new vision for restoring the fishery.

The new vision, later labelled the “Spring Season”, was to restore the recreational fishery by providing an early-opening fishing season that allowed anglers to target the latter part of the rainbow trout spawning run. The Spring Season was predicted to be sustainable based on the observation that the limited area of spawning habitat was fully utilised by September and that the creation of new spawning habitat would offset any production loss potentially cause by the catch and harvest of trout by anglers.

In 2019 the first full Spring Season was opened and its associated creel survey provided evidence of the reestablishment of a valued upper Ohau River fishery. The opening of the river in September, well ahead of its historic November ‘high-country’ opening and during the latter part of the spawning run provided anglers with a highly satisfying experience that they attributed to catching extremely big rainbow trout of canal-origin on a scenic high-country river.

The 2020 Spring Season creel survey established that angler use increased notably from 2019 and it was observed that the fishery had gained an international profile through social media like YouTube. Anglers harvested very few fish, preferring to catch and release although it is recognised that catch

and release can cause appreciable losses to a fishery additional to harvest. It was assessed that left without further regulation, Spring Season angler use would continue to increase and that it must be limited to maintain and enhance the established values and satisfaction of anglers and the high-country fishery aesthetics and to ensure catch and harvest has low risk of compromising the sustainability of the fishery.

It is recommended that the September-October Spring Season be maintained and the fishery is designated backcountry fishery and a controlled area. It's recommended that angler use is controlled for the period of 1 September to 30 September by balloting a limited number of controlled period licences to fish the river. At this stage, a controlled period is not recommended for October but that can be re-assessed in future.

Annual creel surveys and spawning surveys are recommended to provide long-term monitoring tools that can be used to assess the sustainability of the fishery. The maintenance and ongoing creation of new enhanced spawning sites to provide additional spawning production is recommended to support the fishery.

The proposed management of the upper Ohau River through a backcountry licence with a controlled period and annual spawning and angler use and catch monitoring is considered a precautionary and low-risk approach to maintaining the high-country aesthetics of the fishery and the long-term sustainability of the upper Ohau River and its interconnected fisheries.

2 Background

Prior to the construction of the Ohau chain of power stations and its associated structures and waterways in the 1970's and 1980's, the Ohau River sustained a regionally important trout fishery with a natural flow regime (Teirney 1982). Earnest attempts were made to restore the recreational trout fishery in the newly severed upper section between Lakes Ohau and Ruataniwha post power scheme construction. The power company of the time worked with fishery experts to identify the required flows for trout spawning, rearing and for providing trout fishing conditions. Seasonal residual flows of between $8\text{m}^3/\text{s}$ & $12\text{m}^3/\text{s}$ were restored in 1993. These restored flows mitigated the loss of the natural river fishery once provided when the Ohau River flowed unfettered from Lake Ohau to Lake Benmore. The restored flows were significantly reduced from natural flows yet were predicted to maintain optimal trout fishery habitat.

On numerous occasions between 1993 and 2016, Central South Island Fish & Game (CSI) completed spawning counts and juvenile electric fishing surveys to identify any recovery in the trout fishery. Drift diving was also attempted but despite the source of the river's water being Lake Ohau, poor visibility was a constant and Didymo compounded this. All surveys up until 2016 confirmed a depressed trout fishery. A reduction in high flow events and the presence of silt, periphyton and didymo did not provide an invertebrate food source that sustained a trout population befitting the river (Webb 2019).

In 2016, Meridian Energy (Meridian) as the current managers of the Ohau power scheme and CSI reaffirmed their intent to restore the recreational fishery in the upper Ohau River ahead of the renewal of water rights consents in 2025. CSI committed to repeat historical spawning surveys while Meridian and their consultants would further consider the provision of engineered floods that could potentially improve the habitat of invertebrate food sources. However, the cost, engineering, and consenting requirements of providing engineered floods were considered to outweigh the benefit (Webb 2016).

Spawning surveys undertaken by CSI over the 2016 and 2017 spawning seasons established use of the upper Ohau River for trout spawning was very healthy and rainbows were in numbers well above levels likely to have been present since the Ohau River was permanently diverted into the Ohau Canal in 1979. The very large size of many brown and rainbow trout counted in winter surveys in 2016 and 2017 identified them as canal trout that had most likely migrated from the Ohau B Canal through Lake Ruataniwha and into the upper Ohau River to spawn (Webb 2017).

The 2016 and 2017 surveys also provided evidence that many of the prime spawning areas were used repeatedly by trout throughout the May to October period and that the run was greater than the spawning habitat available. In other words, the river was spawning gravel limited. By September most spawning gravels had been utilised and any subsequent spawning risked destroying established redds and killing the developing eggs and alevins from earlier spawning. In effect, spawning that occurs from September onwards was unlikely to add significant value to the overall annual spawning production. By October, most trout had finished spawning and returned to Lake Ruataniwha or the Ohau B Canal, leaving only the occasional resident fish and a diminishing number of late-spawners through to mid-November. Brown trout mainly spawned from May to August and rainbows from June to October.

It was during the 2016 spawning surveys that the vision of the “Spring Season”, as it was later labelled, was established. CSI staff were stunned by the thought of the challenge large canal trout would provide for anglers in the upper Ohau River with its fast flows, deep pools and large boulders. Staff believed if spawning habitat could be improved to better distribute spawning activity and increase productivity then there would be less need to protect late-spawners from being caught by anglers. It was assessed that an early opening of the fishing season in the upper Ohau River from its historical first Saturday in November to an opening in September or even August could well be sustainable (Webb 2016).

Although spawning surveys observed a healthy spawning run, enhanced by canal-origin trout, the recreational fishery of the river was still considered to underperform as a summer angling destination. In effect, the intent of the flow restoration was still not met and the recreational fishery remained depressed. Considering further modification of engineered floods were deemed impractical, the future of the recreational fisheries restoration appeared to rely on achieving the vision of the Spring Season.

CSI established the first ‘part’ Spring Season in October 2018 on the upper Ohau River followed by the first full Spring Season opening on September 1 in 2019. The new early ‘September’ start of the season was designed to be after all brown trout spawning and two-thirds of rainbow trout spawning had occurred. The maintenance of the Spring Season was dependent on demonstrable spawning enhancement success compensating for potential negative impacts on juvenile trout recruitment from allowing anglers to harvest or temporarily interrupt spawning rainbows in the new Spring Season.

To increase the productivity of spawning in the river, CSI partnered with Meridian to enhance spawning habitat. The first stage of the project, completed in May 2019, was the creation of an enhanced spawning braid. The spawning braid consisted of the construction of two 50m spawning beds filled with gravel and the manipulation of suitable flows. During the winter of 2019, a flood washed most the enhanced gravels out of the braid. The gravels were deposited in a shallow run a short distance downstream where they provided about 500m² of suitable spawning habitat. The introduction of gravels was a qualified success and increased the redds counted during September

spawning surveys in the relevant monitoring section from a range 1-5 redds in previous years to 49 redds in 2019. A significant flood of rare magnitude in December 2019 subsequently washed away nearly all gravel in the enhanced section and downstream, demonstrating that spawning enhancement must be monitored, maintained, and re-established after significant floods. Only one small spawning site was observed to develop downstream that is attributed to the redeposition of enhanced gravels.

Prior to 2018, the upper Ohau River fishing season opened as a 'High-Country' waterway on the first Saturday of November and closed at the end of the regular season on April 30. This season gave anglers underwhelming opportunity to target low populations of resident adult trout, the occasional late or post-spawning rainbow trout in November and early run or pre-spawning brown trout in late April. Additional to these opportunities, anglers targeted winter fishing at the river mouth for trout congregating in Lake Ruataniwha prior to running into the upper Ohau River to spawn.

The timing of the review of angling regulations and the standard Fish & Game season being October to September requires that a two-month Spring Season comprises parts of two adjoining sports fishing seasons. This requires the CSI Council to notify the September month of the Spring Season, one year ahead of the adjoining October part of the same Spring Season.

The first ever Spring Season opened on October 1, 2018. The two following years the 2019 and 2020 Spring Season comprised both adjoining September and October months. The regulations applied were a 2 trout daily bag limit and methods restricted to fly and spin only. To review the success of the Spring Season at restoring recreational fishery values to the river, the 2019 and 2020 Spring Season were monitored with creel surveys to establish angler use, catch and satisfaction.

The 2019 survey and associated observations established that the September-October 2019 Spring Season on the upper Ohau River provided a highly valued and satisfying fishing experience and that validated the efforts of CSI and Meridian to invest in spawning habitat enhancement and to introduce the unique Spring Season. The key to the success of the 2019 spring-season was providing a fishing season for anglers to access trout of extreme size that originate from the canals in a semi-natural river habitat (Adams 2020).

Staff considered the 2019 Spring Season angler use and trout harvest levels to be sustainable but had concerns that angler use and harvest in future spring seasons could increase dramatically and compromise its sustainability. The 2019 Spring Season had little advertising and knowledge of the opportunity grew mainly through word of mouth by those who fished it. It was suggested that social media would make the river well-known in 2020 as anglers started to publicly share their fishing success.

With a proactive and conservation-minded approach It was recommended to forgo the September part of the 2021 Spring Season until the 2020 Spring Season Creel Survey could be reviewed (this report). The 2019 Spring Season survey recommended a repeat of the creel survey in 2020 and if angler use showed an increase that options to manage angler use such as introducing controlled fishery management should be identified.

This report summarises the results of the 2020 Spring Season Creel Survey and where applicable comparisons are made with the 2019 survey results to assess if increases in angler use, catch and harvest were evident. Spawning monitoring is summarised to consider the existing influence of the Spring Season and spawning enhancement on the sustainability of the spawning run. Recommendations for the long-term management of the Spring Season are made with the intent to ensure its sustainability can be maintained.

3 Method

In 2020 creel surveys of the upper Ohau fishery were completed during September and October Spring Season by CSIFGC staff (staff). The survey method was based on that of the previous 2019 Spring Season survey but was not entirely as survey dates were not biased towards good fishing conditions as in 2019. Angling information was collected to assess angler usage, angler interactions, angler perceptions, trout catch and trout harvest.

The survey dates were stratified to capture the anticipated angler use variation throughout September and October, and targeted opening day, a spread of weekend days and mid-week days. Survey dates were effectively randomised within their stratification as no environmental factors played any part in individual date selection, whereas, for the 2019 survey there was an inherent bias towards days with weather and water conditions that were considered good for fishing. In 2019 staff wanted to maximise the capture of catch and harvest data rather than travel to and from the CSIFGC office Temuka to gain little information on angling activity during 'un-fishable' weather. In 2020 staff aimed to provide a realistic measure of angling activity that was reflective of all fishing conditions. The survey was designed to provide a useful index of angler activity for each season. Total season figures can be scaled-up to estimate 2020 total Spring Season use with its unbiased capture of fishing conditions, however, the 2019 season with fishing biased conditions survey dates, was not likely to provide a reliable assessment of overall angling activity.

In 2020, on up to 8 occasions on each survey day all access and river viewpoints were visited in a circuit 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 licence 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.

Angler information and feedback was collected including: time spent fishing, method, catch, whether catch was harvested or released, size of fish, angler encounters, satisfaction with the experience and general comments regarding the upper Ohau fishery Spring Season. Anglers catch information was collected if the angler had fished the previous day or could provide a concise record for other non-scheduled survey dates.

CSI staff were not present on the river during all daylight hours and there is a possibility that anglers who only fished for a short time around dusk and dawn were not encountered. Estimates of the total number of likely anglers fishing during the survey day were made to account occasional vehicles were found but no anglers were observed, or occasionally angling parties that were interviewed reported they had observed other anglers that were not encountered by staff.

When a party of multiple anglers was encountered a spokesperson was selected as the point of contact for the follow up interview. The catch and harvest data were accurately recorded for each individual angler. In a small number of cases, it is likely the information relating to the perceptions and commentary obtained only reflected the opinion of the party spokesperson rather than a consensus of party members.

4 Results

4.1 Comparisons between 2019 and 2020 Spring Seasons

Ten survey days were completed over the 2020 Spring Season, five each in September and October (Table 1). Field surveys averaged 7.3 hours of active time on the river and spanned the timeframes of

a start time as early as 0800 hours and a finish time as late as 1745 hours. This compares to nine survey days total in the 2019 Spring season, Five in September and four in October. In 2019, an average of 5.7 hours was spent actively surveying each day on the river, which reflects that fewer anglers were present to interview in 2019. In total 148 field interviews were completed in 2020 compared to 69 in 2019.

4.1.1 Angler Use

The changing use or popularity of the fishery can be assessed by comparing the estimates of total daily angler counts between the survey years (Table 1). The survey dates between years were not matched date-for-date but were stratified in 2020 to capture angler use on opening day, and a selection of weekend days and mid-week days. Although 2019 survey dates were biased towards fair-weather fishing conditions, those conditions were identified and therefore, meaningful comparisons can be made between survey years. Dates considered comparable are presented side-by-side.

Table 1. Survey schedule, estimated total angler count and general fishing conditions from the 2019 and 2020 Spring Season upper Ohau River Creel Surveys. Comparable survey dates are presented alongside each other.

2019 Spring Season				2020 Spring Season			
Date	Day (relevance)	Estimate of total anglers	General fishing condition	Date	Day (relevance)	Estimate of total anglers	General fishing conditions
1/09/2019	Sunday (Opening day)	24	good	1/09/2020	Tuesday (Opening day)	38	Poor/OK
				5/09/2020	Saturday (1st weekend-day)	35	good
5/09/2019	Thursday	4	good				
10/09/2019	Tuesday	7	good	16/09/2020	Wednesday	8	Poor
21/09/2019	Saturday	10	good	20/09/2020	Sunday	40	good
27/09/2019	Friday	11	good	24/09/2020	Thursday	9	OK
6/10/2019	Sunday	6	good	3/10/2020	Saturday	19	Poor
8/10/2019	Tuesday	5	good	7/10/2020	Wednesday	11	good
19/10/2019	Saturday	9	good	18/10/2020	Sunday	6	good
31/10/2019	Thursday	3	OK	22/10/2020	Thursday	2	good
				24/10/2020	Saturday (Labour Weekend)	11	good

Angler use of the upper Ohau River fishery increased notably in 2020 compared to 2019 for many comparable survey dates. On average 2020 survey date strata: opening day, weekdays and weekends angler use had nearly doubled (194%) from 2019 angler counts. This increase in anglers can only be attributed to resident anglers as Covid-19 border restrictions were in place during the season and non-resident use was minimal. Just one non-resident licence holder was surveyed in 2020 compared to 7 in 2019.

2020 opening day angler use was up by 14 anglers (158%) to 38 anglers from 24 in 2019 (Table 1). opening day 2019 attributed the highest daily estimated angler count for the 2019 Spring Season. The relatively high use of the 2020 opening date occurred despite the date falling on a weekday (Tuesday) and the fishing conditions being considered “Poor/OK” as opposed to a “good” conditions

on a weekend opening day (Sunday) in 2019. The opening day weather for 2020 was a snowstorm that cleared around midday and it was noted that many of the anglers were committed to the opening day, regardless of weather, and were staying in Twizel. It is assumed that the forecast would have put off day-trippers not willing to risk snow closure of the state highways.

The first Saturday of the Season in 2020 (5/09/2020) attracted high angler use, 38 anglers, but had no comparable date from the 2019 survey. The third Sunday of September (20/09/2020) attracted the highest estimated daily angler use on record, 40 anglers, and provides the starkest increase in use between comparable 2020 and 2019 survey dates. The 40-angler count on 20/09/2020 is a 400% increase from the comparable weekend date in September on 21/09/2019, where 10 anglers were estimated.

The latest date where relatively high use was observed was 19 anglers on the Saturday of the first weekend in October (3/10/2020) in "Poor" conditions. This date is comparable with the first Sunday in October 2019 (6/10/2019) where only 6 anglers were estimated in "good" conditions, demonstrating a notable increase in use in the 2020 season.

Several comparable dates showed minor variations of between 1 to 6 anglers, including mid-week dates in both September and October and both mid-week and weekend dates in October. For two comparable dates the 2019 angler count was higher.

Angling parties commonly varied in size from 1 to 3 anglers in 2020 and the largest party interviewed, 4 anglers, was encountered on two separate survey dates.

4.1.2 Catch

Anglers provided 142 complete daily catch and effort records from 148 field interviews spanning 10 survey days during the 2020 Spring Season. A full summary table of survey date angler use, interview counts and catch and harvest estimates is provided in Appendix 1 for 2020 and Appendix 2 for 2019.

Individual daily angler catches ranged from 0 to 9 trout in both 2020 and 2019. The overall average catch rate of 0.3 trout caught per hour equating to 3.3 hours fishing to land each fish in 2020 was slightly lower than 0.4 trout caught per hour or 2.5 hours fishing to catch each fish in 2019. A single factor analysis of variance (ANOVA) was applied to compare total season catchrate data for both years and provided evidence (p-value 0.11) that the mean catch rates are not significantly different between years.

On opening day, 1 September 2020, total estimated angler catch was 86 trout landed by 38 anglers or 2.3 fish each on average, which compares to 52 trout landed by 24 anglers or 2.2 fish each on opening day 2019.

The remaining 9 survey days total estimated daily catch ranged from 0 fish caught to 48 in 2020 and 0 to 24 fish on 8 survey days in 2019.

Estimated total catch for all anglers on all ten survey days combined was 229 trout in 2020, a notable increase compared to 148 on all nine survey days in 2019.

4.1.3 Harvest

Harvest (fish kept) was lower in 2020 than 2019 despite angler use being greater in 2020. The combined estimated harvest was 9 trout for 10 surveys days in 2020. This compares to 14 trout harvested for 9 survey dates in 2019. The most common harvest for survey days was zero for both years and the highest recorded daily harvest for all anglers on survey days was 4 fish in 2020 and 8 in 2019.

For both years all harvest occurred during September and no angler reported harvesting their bag limit of 2 trout per day in either year.

The average daily harvest rate varied from 0% to 4.9% and averaged 1.7% for the 2020 season. In comparison in 2019 daily harvest rate ranged from 0% to 33% and averaged 7.3% for the season.

The alternative to ‘catch and harvest’ is ‘catch and release’, accordingly, 98.3% of the observed 2020 catch was caught and released compared to 92.7% in 2019.

4.2 2020 Spring Season angler use, catch and harvest summary

2020 survey date angler visits, catch and harvest were extrapolated to provide total Spring Season estimates. This process was not deemed appropriate for 2019 data as those dates were biased towards fair weather and good angling conditions.

For the Spring Season of 2020, spanning 1 September to 31 October, it is estimated that 803 daily angling visits occurred resulting in the successful catch and landing of 821 trout and the harvesting of 27 of those landed.

Sixty-five percent (525) daily angler visits occurred in September, 72% (588) of trout were caught in September and all recorded harvest (27) occurred in September.

A full summary table of extrapolated total stratum, month and Spring Season estimates of angler use and trout catch and harvest is presented in Appendix 3.

4.2.1 Size and assemblage of the catch

Anglers provided 88 full records of the estimated size (weight) of all fish caught in pounds on individual dates, including survey dates and any other dates where a full record could be provided. The complete size-of-catch records were summarised to provide an unbiased record of the size and species assemblage of the catch (Table 2).

Table 2. The number, species compositions and summarised size statistics of trout caught by anglers who provided complete size-of-catch records during 2020 Spring Season.

Species	Number caught	Species proportion	Average weight (lb)	Min of size (lb)	Max of size (lb)	% Catch less than 2 lb	% Catch between 2 and 9.9lb	% Catch 10 lb or larger+
Brown	11	4.2%	3.2	0.25	15	1.5	2.3	0.4
Rainbow	255	95.8%	13.0	0.25	34	9.0	20.3	66.5
Total	266	100	12.6	0.25	34	10.5	22.6	66.9

Rainbow trout dominated the Spring Season catch (95.8%) and were notably bigger than brown trout. Most brown trout were of a size common to New Zealand fisheries, 0.25 to 4 pounds, although on opening day one large brown of 15 pounds was caught. Rainbow trout were much bigger and at sizes expected from canal-origin fish, averaging over 13 pounds with a maximum reported size of 34 pounds and 66.5%, 10-pounds or larger. Due to the high occurrence of catch and release it is probable that some of the reported catches were caught more than once during the Spring Season.

4.2.2 Angling methods

Angling methods used were 52% fly fishing, 41% spin fishing and 7% fishing with both methods on the same day.

4.2.3 Angler encounters

To assess the potential of angler conflict arising from over-crowding of anglers during the season, angling parties were asked how many anglers outside their party they encountered and how it impacted on their fishing experience. For 2020 the occurrence of angler encounters causing negative impacts were low and in general anglers tolerated encounters at the levels observed.

On opening day, September 1, 2020, 16 angling parties reported encountering between 4 and 25 other anglers. Parties reported that their angler encounters had either a “positive” (4 parties encountering 4-5 anglers), “neutral” (11 parties encountering 4-25 anglers) or “negative” (1 Party encountered 15 anglers) impact on their fishing experience.

For the remaining 9 survey days of the season, 55 angling parties reported encountering between 0 and 10 anglers on their day fishing. Parties reported that their angler encounters had either a “positive” (18 parties encountering 0-10 anglers) or “neutral” (36 parties encountering 0-10 anglers) or “negative” (1 Party encountered 5 anglers) impact on their fishing experience.

The two isolated “negative” impacts reported by parties had the following explanations. On opening day, the party encountered 15 anglers and explained “Had the most negative angler encounter in my life, but also some positive. Everyman for themselves vibe.” On 5/09/2020 a party encountered 5 anglers and explained “Had set out to fish reach and found angler already there on opposite bank. Plenty of options elsewhere so moving wasn't an issue.”

To summarise the reasoning behind their classification of impact, “positive” impacts were reported where angling parties encountered no other, or when they encountered up to 10 anglers and enjoyed or benefitted from the interaction with them either through a fishing camaraderie or sharing fishing tips and experiences.

Angling parties that reported “neutral” impact, encountered 0 to 25 other anglers, managed to avoid other anglers, or negotiated enough water for each party to fish satisfactorily.

4.2.4 Overall fishing experience

All interviewed anglers or angling party spokespersons were given the opportunity to rate their overall satisfaction with their day fishing on the upper Ohau River. Some anglers were interviewed multiple times during the season and were given the opportunity to comment on each occasion. Seventy-seven satisfaction ratings were recorded. Forty-six anglers/party spokespersons rated their day “very satisfied” (60%), 24 were “satisfied” (31%) and 5 rated “neutral” (6%). Just 2 (3%) rated their experience as “dissatisfied”.

In summary the “Very satisfied” and “Satisfied” ratings were based on the high quality of the fishing experience, the numerous large fish encountered, the catch of the angler’s biggest fish ever and the scenic surrounding. The “neutral” ratings were generally based on the catch rate not meeting expectations and the nuisance levels of didymo.

Of the two dissatisfied satisfaction ratings, one party on opening day explained the reasoning as “Poor weather wet and cold”. Another party fishing on 24/09/2020 explained “Hoping there would be more fish present”.

A full list of overall fishing experience ratings and associated explanation is provided in Appendix 4 of this report.

4.2.5 Angler perceptions of the future management of the Spring Season

All interviewed anglers or angling party spokespersons were given the opportunity to comment generally on the future management of the Spring Season. Some anglers were interviewed multiple times during the survey and were given the opportunity to comment on each occasion. Respondents knowledge of CSI Fish & Game and Meridians management of the fishery varied from in-depth to negligible.

In summary, most anglers were positive and endorsed the future maintenance of a Spring Season. Many anglers showed concern about fishing pressure or potential fishing pressure and commented on the need to actively manage angler use and to ensure spawning enhancement continues. Many anglers considered enforced catch and release (0 bag limit) and fly only regulations as appropriate for the fishery. Some anglers preferred an October opening with very few wanting a return to a November opening. Two anglers suggested investigating opening opportunities to target brown trout.

A full list of responses is available in Appendix 5 of this report.

4.3 General Staff field observations

4.3.1 Angler distribution

Anglers tended to fish short sections of the river or individual pools and target congregations of fish. Knowledge of the common fish congregation areas grew quickly and it was common to have multiple parties fishing one favoured pool. Anglers were more commonly encountered fishing the upper part of the river above the ford.

Anglers often fished targeted pools and if others were encountered fishing their favoured pool, or the fish were not biting, rather than walking upstream or down to the next pool they would drive to their next preferred pool. This style of fishing is fostered by the difficult wading and riparian access of the river and assisted by the near full-length 4x4 road access to the river. One downside to this style of fishing is that fishing activity can be concentrated intensively on individual pools.

4.3.2 Angler behaviour

Angler behaviour often resembled that of a busy high-country fishery like the Tekapo River where anglers often fished from opposing banks rather than that of, say the Hakataramea River, where a reasonably large stretch of water without other anglers is expected. It was a common occurrence for anglers to join an occupied pool without the courtesy of asking to share that water.

It is believed that some form of water-sharing etiquette advocacy or regulation that limits angler use could improve angler's experience and satisfaction.

4.3.3 Angler displacement

The displacement of anglers from the fishery was not measured but is a relevant consideration when assessing the impacts of angler encounters on the use of the fishery. Angler displacement occurs when a decision is made not to fish a waterway because it is observed to be too busy or perceived to be too busy. On one occasion staff observed displacement at the upper Ohau, whereby an angler was interviewed on the access road while traveling to their fishing water of choice. Upon surveying them later by phone, they reported that their favoured water was occupied and as a result they fished the canals instead.

4.3.4 Catchability

Comments by some anglers who returned to fish throughout the season were that the fish became wary and harder to catch as the season progressed due to fishing pressure. It is assumed that the short periods of resting pools from angling activity either during poor weather or by regulation would lead to better catch rates thereafter.

4.3.5 Angler handling of trout

A spawning survey was undertaken to count rainbow trout redds count on September 22, 2020. During spawning surveys on any river, it is common to encounter dead trout. On surveys at the upper Ohau River prior to the Spring Season and prior to 2020, it was common to encounter 2-3 dead trout. The discovery of 9 dead trout total on the spawning survey undertaken on September 22, 2020 suggests that catch of trout may be contributing to fish deaths during the Spring Season and highlights that both catch and harvest and catch and release can contribute to the removal of trout from the fishery.

For most anglers, the fishery is a trophy fishing destination fished without any intent to harvest trout. This is evidenced by the high proportion of fish that are caught and released. The outcome of this behaviour is that individual trout may be caught and handled more than once, increasing the risk of cumulative stress and negative outcomes from handling. Advocacy of best practice catch and release should be a staple part of the publicity of the Spring Season fishery by CSI.

4.3.6 Angling community awareness of the Spring Season

From relative obscurity during the 2019 Spring Season, knowledge of the fishery grew immensely during the 2020 Spring Season. Seventy percent of angler who were surveyed during the 2020 Spring Season had not fished during the 2019 Spring Season.

In terms of Fish & Game media, the opportunity was advertised pre-season in the local Twizel Update Newsletter and during the season, Fish & Game reported briefly on the success of the fishery in angler newsletters.

Mainstream TV media made its appearance in 2020 with 'Pure Fly' show filming on opening day for potential future screening. Fishing the 2020 Spring Season river aired on New Zealand television in 2020 on the show 'Catch Of The Day' after the Spring Season had finished. The episode featured a potential length world record rainbow trout catch.

Throughout the season, social media like Facebook and YouTube featured many posts from the river by a select few anglers. Some of these posts garnered significant attention. For example, a prolific 'YouTuber' known as "Trout Hunting NZ" posted a series of 6 videos from the river. The videos all feature the capture of numerous extremely large rainbow trout and the combined 'views' of these 6 videos were over 1.5 Million as of January 2020. The most viewed video of the series titled "Fly Fishing For the BIGGEST TROUT in the World!" received over 1.2 million views by January 2020. It is noted that these videos, like other social media on the river, do not explicitly name the river. Another relevant consideration of the YouTube viewership is that it is mainly international and that the river, although not expressly named, now has a significant international profile.

4.3.7 Guiding

The use of the river for guiding was seldom observed and only one guided group was encountered on a survey day in 2020. However, the use of the river by several guides for their own recreation was observed. It is likely that in future Spring Seasons, domestic market guiding will increase on the river and when Covid-19 border restriction are lifted, guided non-resident anglers will make up a notable proportion of angling parties using the river.

5 Spawning monitoring

September redd counts are presented referenced to the introduction or influence of Spring Season fishing activity and the creation of enhanced spawning habitat, to provide insight into the potential influence of those factors on the annual redd count (Table 3). The most consistent spawning monitoring at the upper Ohau since 2016 has been post-peak spawning redd counts of rainbow trout. Although brown trout have been monitored through spawning surveys, their presence in the Spring Season's catch is insignificant. Post-peak rainbow trout spawning surveys have occurred in mid-to-late September. The survey timing aims to identify relatively fresh redds laid down during the peak period of rainbow spawning activity which usually occurs from mid-August to mid-September. The surveys also identify live trout.

Table 3. 2016-2020 September post-peak spawning counts (redds) at the upper Ohau River, The count of redds in Section B with enhancement, the proportion of redds counted in Section B, survey method, and the influence of spawning enhancement and Spring Season fishing. *subsequent to enhanced site gravels being washed-out in major flood.

Date	Total redds	Count of redds in Section B with enhancement	Proportion total redds in Section B with enhancement	Survey Method	Spawning enhancement	Spring Season influenced
15/09/2016	133	1	1%	walking	no	no
19/09/2017	81	3	4%	Helicopter	no	no
18/09/2018	131	5	4%	walking	no	no
25/09/2019	124	49	40%	Walking/boat	yes	yes
22/09/2020	153	15*	10%	walking	yes	yes

Ground-based surveys are undertaken by walking the river and these surveys are assessed to be accurate for redd identification but are inaccurate for live fish counts. Meridian funded helicopter counts were undertaken in place of ground-based surveys in 2017 and these are the most accurate methods for counting live fish but provide a notable underestimate of redd counts. The use of boat-based survey was trailed on two monitoring sections in September 2019 and is assessed as likely providing an underestimate of redds due to difficulties in surveying both edges of the river simultaneously and was not recommended for use in future.

The introduction of gravels in Section B appears to have dramatically affected the distribution of spawning areas throughout the river in 2019 by increasing the redds count in Section B from around 4% pre-enhancement to 40% post enhancement. Even after the major flood washing away most of the enhanced gravels prior to the 2020 spawning season the enhancement still made a significant positive contribution to increasing redds count in the enhanced reach, trebling redds counts of pre-enhancement and better distributing spawning effort across the river's length. One new site was established in the section downstream of section B and was attributed to the redistribution of enhanced gravels in the 2019 flood. The new spawning site supported 6 redds in September 2020.

The highest September total redd count of 153 was in 2020, the point at which the Spring Season had its highest influence, and there is evidence to suggest redd counts that year were higher and more widely distributed across the river's length because of enhancement of gravels in section B. It is assessed that post-peak redd counts have been positively affected by spawning enhancement and that there has been no detectable effect of the Spring Season fishing activity on the production of redds in late August and September.

However, it is recognised that the duration of surveys and the introduction of the Spring Season and spawning enhancement may not provide an ideal time frame for assessment of the long-term effects of enhancement and fishing activity on post-peak spawning redd production. A long-term approach to assessing spawning surveys is advisable to provide review of trends in spawning.

Due to the paucity of spawning habitat availability throughout the upper Ohau River, spawning areas are used successively through the spawning period, consequently, it would be best to annually monitor both redd counts and live fish. A redd count alone may provide a reliable index of annual spawning habitat utilisation but does not necessarily provide a reliable index of the number of trout spawning.

It is assessed that a single annual “peak” rainbow live trout count could occur around the September opening date of the Spring Season and represent a “snap-shot” of the peak of the spawning numbers and the number of trout available to anglers early in the season. It is also assessed that ‘post-peak’ redd count should occur but in a different format to current full-river walking surveys. Spawning activity is concentrated predominantly on a small number of sites containing significant concentrations of redds, therefore, it is proposed that these sites only be monitored annually. This monitoring of sites of significant spawning can be achieved by one staff member as opposed to four. Should new sites of significance establish after floods, they will be identified during the annual helicopter flight and can be added to the redd count survey.

The existing spawning enhancement and 2017 helicopter spawning surveys were funded by Meridian as a collaborative contribution to realising the achievement of restoring of the upper Ohau River sports fishery. There is confidence that enhancement and spawning surveys is a reliable mechanism for maintenance of the Spring Season. It is recommended that through the reconstituting of the power scheme, scheduled for 2025, CSIFGC propose that spawning enhancement and aerial spawning surveys are formalised as part of the Agreement for restoration of the upper Oahu River sports fishery.

6 Long-term management of the Spring Season

The 2019 and 2020 Spring Season creel surveys have established that angler’s highly value the opportunity to access trout of extreme size that originate from the canals in a semi-natural high-country river. The surveys have also established that the Spring Season offers a highly satisfying experience. This validates the efforts of CSIFGC and Meridian that enabled the Spring Season. CSIFGC have undertaken intensive spawning surveys and creel surveys as well as working with Meridian to create additional spawning habitat. Without the Spring Season, the upper Ohau River would retain its spawning values but continue to offer a depressed fishing experience. The Spring Season re-establishes a highly valued recreational fishery that was lost when the Ohau River was harnessed for hydroelectricity, confirming the value of restored flows provided by Meridian and future commitments to contribute to spawning habitat enhancement.

The 2020 Creel survey provided a more realistic view of the future of the fishery than the 2019 survey, and greater fishing community awareness of the fishery resulted in an approximate doubling of angling use. Catch was also much higher in 2020 than 2019 but levels of harvest reduced in 2020. The choice to catch and release rather than catch and harvest clearly dominated the behaviour of anglers in 2020 and the estimated total harvest for the season does not raise concern. However, it must be recognised that catch and release has the potential to harm and kill released trout and that fish deaths caused by catch and release could match or exceed fish deaths due to harvest.

The ultimate question of the long-term sustainability of the Spring Season cannot be answered by reviewing the Creel surveys of 2019 and 2020 alone. Although current angler catch and harvest could be considered sustainable, there is a possibility that with significant and unmanaged increases of angler use and catch, that the removal of trout during the Spring Season may not be adequately replaced by the creation of additional spawning habitat.

The Spring Season's sustainability is best assessed by reviewing long-term monitoring of catch and spawning. Assessing long-term trends of annual monitoring rather than annual variations provide the best basis for assessment. The effects of the Spring Season and spawning enhancement need to have had a chance to influence multiple generations of trout before it can be adequately assessed.

Knowledge of the Spring Season increased substantially amongst the angling community over 2020 and will continue to increase further through word of mouth and various media. During 2020 the Spring Season became established as a destination fishery, which was evident by its targeted use by anglers travelling from the northern parts of the South Island and as far afield as Whangarei in Northland. Considering the relentless popularity of its neighbouring canal fishery it is foreseeable that without intervention, angler use of the upper Ohau River will continue to increase. The international appeal of the fishery as a one-of-a-kind trophy-trout destination is now established via YouTube. It is likely that when the border restrictions are lifted that angler use of the river by non-resident anglers, both guide and unguided, will be substantial. Where else in the world can an angler sight-fish for rainbow trout averaging 13-pounds just a few hours' drive from an international airport?

The vision for establishing the Spring Season was to restore a valued recreational fishery that despite flow restoration, never recovered to expectations after its permanent modification for hydroelectricity development. That vision included the creation of a one-of-a-kind fishing opportunity where canal-size trophy rainbow trout could be caught in a scenic and challenging high-country river with traditional fishing methods. The vision has been realised but CSIFGC now face the challenge of maintaining the vision subject to the increasing popularity of the fishery. The vision did not include re-creating a canal fishing aesthetic whereby anglers fished shoulder to shoulder at hot spots like the "Magic Carpet" on the Tekapo Canal, but that may well be the case if anglers are allowed unfettered access. It is the opinion of staff that the vision of the fishery be maintained whilst still providing opportunity for the many licence holders to enjoy the fishery. The key will be ensuring its popularity does not detract from its high-country river fishing values.

With a substantial increase in use likely in future Spring Seasons, it is prudent that CSIFGC proactively maintain and enhance the established values and satisfaction this fishery currently provides and manages the risks that are associated with potential overcrowding of the fishery. It is now time to set the long-term path ahead for the Spring Season and the 2019 and 2020 creel surveys have informed that process.

It is recommended that CSI should regulate to control and limit angler use and catch whilst maintaining a September opening of the Spring Season. Ensuring the river does not become over-crowded through the peak use period will maintain and enhance the aesthetic high-country river fishery values by managing angler interaction. Ensuring the river does not become over-crowded will also limit overall catch, and in doing so limit harvest and losses of fish through catch and release to levels with low risk of causing detrimental effects to the fishery.

The following paragraphs review regulation options that limit angler use and catch and can be implemented in the 2021 and 2022 Spring Seasons. The options supported by the creel and

spawning surveys information undertaken on this fishery where possible. The long-term implementation of regulation options and their adaptability to change is considered.

6.1 Bag limit

The 2020 Spring Season was subject to a bag limit of 2 trout and anglers caught and released 98.3% of all catch. Harvest was relatively low, an estimated 27 fish for the whole two-month Spring Season. No surveyed angler harvested their entitled 2 trout daily bag limit in 2020 suggesting that a reduction to a 1 fish bag limit would likely make an insignificant contribution to a harvest saving.

The current daily bag limit of 2 trout (and 2 salmon) is viewed as sustainable, subject to appropriate angler use levels. CSIFGC staff recommend the maintenance of a 2 trout daily bag limit to enable the occasional harvest of selected table fish, trophy trout, or trout that are unfit for release. A 0-bag limit (catch and release) is not recommended as it encourages the release of unfit fish that should be taken and utilised.

The current daily bag limit of 2 trout rather than 1, is recommended to enable any trout unfit for release, to be taken while still permitting the angler to continue to fish until a second trout is taken and bag limit reached. A bag limit of 1 trout would require any angler who takes a trout unfit for release to cease fishing the river for the remainder of that day. A one-fish daily bag limit may have an incidental side effect of encouraging some anglers to return a fish that is unfit for release so that they can continue to fish without reaching their bag limit.

6.2 Authorised methods

The current provision of fly and spin methods only, is considered sustainable and staff endorse maintaining these methods only. The majority of licence holders are able to fly or spin fish, so the methods provide high levels of opportunity.

The provision of fly-only regulations, as suggested by multiple anglers, would significantly limit angler use (41% spin-only anglers in 2020), but is considered an unreasonably limit on opportunity. Controlling angler numbers by other means would be preferable to excluding all anglers who do not fly fish.

6.3 Season length

The Spring Season's success is due to opening in September as it allows anglers to access the latter part of the rainbow trout spawning run with no evidence of effects on annual recruitment productivity. Angling opportunity is greater in September than October as more trout are present and this is reflected in the angler use and catch statistics on the 2020 creel and spawning surveys.

CSIFGC Staff recommend maintaining a September opening of the Spring season to provide the greatest period of angling opportunity (fish present). It is recognised the fishery is under the most use during September so it is assessed that anglers' numbers should be limited during September to limit fishing pressure and catch and to reduce angler interactions. Compared to September, October angler catch and harvest was reduced. For example, only 28% of Spring Season catch occurred in October. Therefore, it is not deemed necessary to control angler use in the month of October, at this stage.

6.4 Part-river closure

Part river closures are relevant for rivers in which spawning closures apply to parts of the waterway. Because the spawning gravels are likely fully utilised by the September opening and are found throughout the length of the river, there is no justifiable use of a part-river spawning closure within

the Spring Season. CSIFGC Staff endorse maintaining the open season for the river in its entire length for the Spring Season.

6.5 Voluntary beat system

A voluntary beat system, such as that used on Southland's Oreti River, can be used to limit angler use and interactions. It is based on a limited number of vehicle access points that provide walking access upstream or down to stretches of water commonly fished over the course of an outing. This system is not a good fit for the upper Ohau River with its full-length road and pool-based angling activity and is deemed as unsuitable for the upper Ohau River.

6.6 Backcountry fishery designation

To fish a waterway designated as a backcountry fishery, whole season licence holders must obtain a backcountry licence additionally, free of charge, from the Fish & Game website. All backcountry licence holders are therefore registered and are legally required, if requested, to provide a record of their fishing during all or part of the sports fishing season.

Backcountry designation will displace anglers from a fishery who do not wish to purchase a whole season licence and therefore may cause a reduction in the use of the fishery incidentally. During 2020 approximately 8% of anglers surveyed fished the upper Ohau River on short term licences.

CSIFGC staff endorse the designation of the upper Ohau River as a back country fishery for two reasons, 1. to designate the upper Ohau as a controlled area it must also be designated as a backcountry fishery, and 2. to provide a register of backcountry licence holders and a requirement to participate in surveys that can be done via email or phone.

Over the past two Spring Seasons staff have undertaken time-intensive field-based surveys of the Spring Season. If the upper Ohau River was designated as a back country fishery, that would provide an opportunity to survey licenced back country anglers via registered email or phone and could benefit CSIFGC by reducing staff time and/or vehicles costs.

6.7 Controlled area designation

The designation of the upper Ohau River as a controlled area is endorsed by CSIFGC staff is an excellent tool that can limit angler use and mitigate angler interactions to maintain and enhance the one-of-a-kind angling values of the upper Ohau River fishery.

The designation of the upper Ohau River as a controlled area with a controlled period gives CSIFGC an adaptable and enforceable way to manage angler use during that controlled period. During the controlled period any CSI backcountry licence holder can apply for a controlled period licence. Only those anglers who receive a controlled period Licence can fish the upper Ohau River during the controlled period. CSIFGC will have the discretion to limit the number of controlled period licences issued and the number of dates that they are valid within the controlled period. The number of these licences can be changed annually to manage angler use during the controlled period. It is assessed that controlled period licences will be highly sought after and that a ballot to randomly select the 'winners' of the controlled period licences is a fair process to issue licences.

Controlled areas are currently in place in other Fish & Game Regions. Southland's Ettrick Burn has a controlled period to manage access to the Takahe management Area while controlled areas and a ballot to distribute controlled period licences has been introduced on the Worsley and Clinton rivers in the 2020/21 season to limit angler use for the entire season. Otago's Greenstone River is a controlled area and a booking system is used to limit angler use during the peak-use period of February and March.

6.8 Proposed controlled period angler use management

6.8.1 Allocating limited angler use

It is proposed that for the month of September a ballot is held to fairly distribute controlled period licences for allocated time periods to fish the upper Ohau River. A summary of the proposed ballot and its schedule are presented in Appendix 6. There are three allocation periods proposed and two rest days, Monday and Thursday, designed to spell the river of angling pressure between allocations and improve the subsequent days catch rates. The intent of the allocations are as follows:

Allocation 1 – “Opening Weekend” – provides a licence for the first weekend of September. This allocation permits a relatively high level of angler use (maximum 30 anglers/day) that reflects an ‘opening event’ with a social atmosphere and provides a significant opportunity where anglers have a high chance of success (refer to table 4). Anglers should expect to encounter other anglers during this allocation.

Allocation 2 – “3-day weekends” – provides a licence for Friday through Sunday on a weekend other than opening weekend. This allocation provides a moderate-high level of angling use (maximum 20 anglers/day) that could be expected on a busy weekend peak-season at a nearby popular high-country river fishery like the Tekapo River. Anglers can expect to encounter other anglers but there should be sufficient water and fish available to satisfy the maximum number of anglers. Being three days in duration, it allows some flexibility around poor-weather and time to explore the river.

Allocation 3 – “mid-week” – provides a licence for Tuesday and Wednesday. This allocation permits a relatively low number of anglers (maximum 12 anglers/day) a mid-week experience of high-country fishing with low probability of angler encounters. This allocation represents the remote and isolated aesthetic values commonly associated with less popular but highly valued high-country river fisheries.

6.8.2 Example of controlled period angler use limitation and reductions

The proposed balloting of controlled period licences for the three allocations is designed to reduce angler use from peak-levels observed during September of the 2020 Spring Season. The proposed allocations applied to the September 2022 Spring Season would allow 19 of the 31 days in the month to be fished, providing for a maximum of 336 daily angler visits (Table 4). This equates to about a 36% reduction in estimated use from 525 daily angler visits estimated in September 2020.

Table 4. proposed controlled period licencing maximum use limits for 2022 and comparisons between estimated use from the September 2020.

2020 Spring Season angler use			2022 proposed maximum angler use limits			
Strata (month, weekend day or weekday)	Days in strata	Estimated total anglers (daily angler visits)	Allocations (controlled licence issue periods)	Total days in allocations	Proposed daily angler limit	Estimated total anglers (daily angler visits)
Opening Day	1	38	Opening Weekend	2	30	60
September weekend	8	300	3-day weekends	9	20	180
September weekday	22	187	2 days mid-week	8	12	96
September Total	31	525	September Total	19		336

It is likely that the maximum number of anglers per allocation will not actually fish every day allocated due to common occurrences like illness, poor weather and travel delays. Therefore, it is

predicted for the 2022 example, that daily angler visits will be below 300 total and nearer to a 45% reduction in use from that observed in September 2020.

6.9 Sustainability and monitoring of the Spring Season

The Spring Season on the upper Ohau River fishery is already an intensively monitored open season and CSI are well placed to ensure the long-term sustainability of the Spring Season should Council introduce controlled area management. It is proposed to continue annual spawning surveys and Spring Season angler surveys and use these data sets as the basis for assessing long term trends of the rainbow trout spawning run. If monitoring shows a decreasing trend in the fishery then further limiting of angler use through the issuing of controlled period licences is an adaptable and reactive way to maintain a highly valued fishery and a sustainable spawning run.

The upper Ohau River spawning run originates from two significant fisheries, Lake Ruataniwha and the Ohau B Canal. With the Spring Season catch being a component of these interconnected fisheries there is great importance in maintaining annual monitoring of their spawning runs to ensure the sustainability of the interconnected fisheries can be assessed.

CSIFGC is committed to working with Meridian to maintain the existing enhanced spawning habitat and further develop enhanced sites. This enhancement creates additional redds in the upper Ohau River where spawning gravels are limited and increases productivity by reducing superimposition throughout the river. The enhancement aims to mitigate the relatively small number of fish that are removed from the fishery during the Spring Season.

The introduction of a backcountry fishery and controlled area and period, annual monitoring contributing to long-term data sets and the enhancement of spawning habitat should be considered as a low-risk approach to managing the sustainability of the upper Ohau River and its interconnected fisheries.

7 Summary of upper Ohau River Spring Season Management Principles

The information presented in this report can be summarised as a list of management principles that guide the long-term maintenance and management of the Spring Season. These principles broadly fit into three categories: The “founding Principles” - those which have established the Spring Season as a viable fishery; “Ongoing Fishery management” – those that seek to ensure the Season is maintained and retains its values and vision, and “Assessing long-term sustainability” – those principles that ensure the fishery is monitored and its sustainability is assessable.

Founding principles

- 1. Flow restoration has not provided a summertime fishery befitting the values of the river before modification for hydroelectric generation.**
- 2. The Spring Season restores the recreational fishery of the upper Ohau River by allowing angler access to the latter part of the spawning run.**
- 3. The Spring Season provides high-country fishery aesthetics with access to extremely large trout of canal-origin making it a one-of-a-kind fishery.**
- 4. All brown trout and two-thirds of rainbow trout spawning is completed by September.**
- 5. Spawning from September onwards destructively contributes to annual spawning production as the spawning gravels are fully utilised from previous spawning.**

6. **Relatively low levels of harvest and fish lost from catch and release is offset by increasing spawning production through spawning enhancement.**

Ongoing Fishery management

7. **Maintain a Spring Season incorporating September and October with a first Saturday in September opening date.**
8. **Maintain a daily bag limit of 2 trout to enable the occasional harvest of table or trophy fish and the taking of any fish unfit for release.**
9. **Maintain the restriction of permitted methods to fly and spin only to provide opportunity for a significant proportion of licence holders to use the fishery.**
10. **To enable the designation of a controlled area and to provide additional survey tools designate the river a backcountry fishery.**
11. **Limit angler use and catch during the month of September by designating the river a controlled area with a controlled period.**
12. **Limit angler use of the area in September through a ballot that fairly distributes a limited number of controlled period licences.**
13. **Manage angling pressure of the area in September by providing two rest-days a week whereby no allocations are offered and no fishing occurs.**
14. **For opening weekend, limit angler use to a level that provides for a social 'event' but does not encourage overcrowding and negative interactions between anglers or angling parties.**
15. **After opening weekend, limit angler use so that it maintains a traditional "high-country" fishery aesthetic common to CSI Region high-country waters.**
16. **Do not control or limit angler use during October but consider its need and the further limiting of angler use when reviewing monitoring.**

Assessing long-term sustainability

17. **Monitor catch, harvest, and angler satisfaction through annual creel surveys during September and October.**
18. **Monitor spawning through annual surveys and seek Meridian assistance to establish aerial (helicopter) peak live rainbow trout surveys.**
19. **Continue to maintain the existing enhanced spawning habitat and enhance additional areas of spawning habitat in collaboration with Meridian Energy.**
20. **Take a long-term approach to assessing the sustainability of the fishery by monitoring trends in catch and spawning on a triennial basis.**

8 Recommendations for the Management of the upper Ohau River Spring Season

Before reviewing the 2021/2022 Angler Notice recommendations and general recommendations and their associated notes and explanations, please refer to Table 5 that outlines the relevant sports fishing seasons, the Spring Season overlap of the adjoining sports fishing seasons and the contiguity of the Spring Season and regular season.

Table 5. Outline of the sports fishing season, the Spring Season overlap of the adjoining sports fishing seasons and the contiguousness of the Spring Season and regular season.

2020/21 sports fishing season				2021/22 sports fishing season				2022/23 sports fishing season					
Sept 2020 Spring Season	Oct	Nov - April 20/21 regular season	Winter closure	Sept 2021 Spring Season	Oct	Nov - April 21/22 regular season	Winter closure	Sept 2022 Spring Season	Oct	Nov - April 22/23 regular season	Winter closure	Sept 2023 Spring Season	Oct

Key

- Previous Angler Notice reviews
- Current 2021/22 Angler Notice Review for CSI Council consideration - May 2021
- Recommended 2021/22 season conditions roll-over for 2022/23 season unless monitoring raises matter of urgency to review.
- Recommended Spring Season duration
- Recommended Controlled period

8.1 Recommendations for the Angler Notice review of the 2021/2022 sports fishing season

1. Notify a 1 October 2021 to 30 April 2022 open season.

Note: This provides an 'October 1 Opening' for the 2021 Spring Season and adjoins the regular November to April season. In May 2020, CSI Council took a precautionary approach by the closing the 2021 September Opening until the results of the 2020 Spring Season creel survey were available to address consideration of potential angler use increases. No issues with the sustainability of a 1 October 2021 opening are raised in this report.

2. Notify a 3 September to 30 September 2022 open season.

Note: This provides a 'first Saturday of September Opening Day' for the 2022 Spring Season.

3. Designate the upper Ohau River as a backcountry fishery.

Note: This requires all licenced anglers to obtain a backcountry licence from the Fish & Game website at no cost before fishing the upper Ohau River in any open season. The backcountry designations is a prerequisite to introducing a controlled area and period. backcountry licences are limited to whole season licence holders only and are required to be eligible to apply for a controlled period licence. It is anticipated in future that the term 'backcountry fishery' will change to 'pressure sensitive fishery' which will still afford the same management options but be more fitting of a fishery near to population centre.

4. Designate the upper Ohau River as a controlled area with a controlled period from 1 September to 30 September.

Note: During the controlled period, a whole season licence holder holding a CSI Region Backcountry Licence must apply to CSIFGC and receive a controlled period licence to fish the upper Ohau River on specified dates between 1 September to 30 September.

Explanation: Recommendations 1-4 are consistent with the summarised management principles and represents a proactive and low-risk approach to managing potential over-use by limiting angler use and catch of spawning-run rainbow trout in September whilst maintaining a highly valued 'one-of-a-kind' Spring Season fishery at a time when large numbers of trout are present. It is the intent of Staff to maintain a 'high-country' aesthetic to the fishery by limiting angler use to levels that could be expected when fishing typical popular high-country waterways (e.g., Tekapo River). When angler use and fish numbers are lower in October then a controlled period is not currently considered necessary to manage angler use, but its implementation can be assessed through annual monitoring of future Spring Seasons.

8.2 General Recommendations

5. **Manage the distribution of Controlled period licences for September 2022 as presented in “Appendix 6. Proposed 2022 ballot outline and schedule.”**
6. **Review the ballot outline and schedule after its use in the 2022 September Controlled Period by May 2023.**
7. **Unless a matter of urgency arises, review the long-term sustainability of the Spring Season on a triennial basis in conjunction with the existing triennial review process of CSI regulations.**

Note: this provides a review of the next three successive full Spring Seasons, spawning monitoring and spawning enhancement, and thereafter every three years (triennial). The next appropriate triennial regulation review will be for the 2025/26 season in May 2025, after the 2024 Spring Season. Any issue identified during annual monitoring and summary reporting could be considered a matter of urgency and addressed on an annual basis.

8. **Unless a matter of urgency arises, maintain regulations imposed on the 2021/22 season until the next triennial review of the fishery.**

Note: This recommendation allows the regulations to be maintained without annual recommendations to the Anglers Notice. A matter of urgency could be any issue of immediate concern identified in annual monitoring. If an issue of concern arose, for example, a significant increase in October angler use, then an Angler Notice review can occur on an annual basis. The benefit of this is to allow a long-term approach to assessing the effects of regulations and enhancement on the fishery and reduces the time and resource burden of annual reviewing.

9. **Annually survey angler catch, harvest and satisfaction during September and October.**

Note: the frequency of surveying will be subject to triennial review.

10. **Annually survey rainbow trout ‘post-peak’ redd counts.**

Note: the frequency of surveying will be subject to triennial review.

11. **Seek agreement to a single annual ‘peak’ rainbow run aerial live fish count in negotiation with Meridian and formalise this through consenting of the power scheme.**

12. **Continue to monitor and maintain the existing enhanced spawning habitat and enhance additional areas of spawning habitat in collaboration with Meridian Energy and formalise this through consenting of the power scheme.**

13. **Trial the use of online angler survey of backcountry licence holders for the proposed October-only 2021 Spring Season.**

Note: opening day survey and others throughout the season will be field based but end of month/season email survey of registered backcountry licence holders will be trialled.

9 References

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Thanks to my fellow staff members for their long days surveying on the river and the time-consuming phone surveys that followed. These intensive surveys provided a great opportunity to interact and communicate with licence holders and this was explicitly acknowledged by several anglers.

11 Appendices

Appendix 1 – 2020 survey result summary data

Table 1-1: A summary table of 10 survey dates data from the 2020 Spring Season creel survey of the upper Ohau River including recorded and estimated angler use, angler catch and harvest. “Trout” means combined brown and rainbow trout. Rounding errors are displayed for estimates of total trout catch and harvest.

Survey date	Estimated total anglers	Number of Interviewed anglers	Number of anglers providing full catch and effort records	Minimum trout landed per angler	Maximum trout landed per angler	Average number of trout landed per angler	Average catch rate (trout/hour)	Sum of recorded trout landed	Estimated total angler’s total trout landed	Average number of trout harvested per angler	Sum of recorded trout harvest	Percentage of catch harvested	Estimated total angler’s total trout harvested
1/09/2020	38	36	36	0	9	2.3	0.4	81	86	0.11	4	4.9	4
5/09/2020	35	23	23	0	7	1.2	0.2	28	43	0.09	2	7.1	3
16/09/2020	8	6	6	0	2	0.8	0.4	5	7	0.00	0	0.0	0
20/09/2020	40	32	29	0	8	1.2	0.2	35	48	0.03	1	2.9	1
24/09/2020	9	9	9	0	3	0.7	0.1	6	6	0.00	0	0.0	0
3/10/2020	19	16	16	0	4	0.6	0.3	10	12	0	0	0.0	0
7/10/2020	11	9	9	0	4	1.1	0.4	10	12	0	0	0.0	0
18/10/2020	6	6	4	0	0	0.0	0.0	0	0	0	0	n/a	0
22/10/2020	2	2	2	1	1	1.0	0.6	2	2	0	0	0.0	0
24/10/2020	11	9	8	0	3	1.3	0.3	10	14	0	0	0.0	0
Survey dates totals	179	148	142	0	9	1.0	0.3	187	229	0.05	7	1.7	9

Appendix 2 – 2019 survey result summary data

Appendix 2-1: A summary table of 9 survey dates data from the 2019 Spring Season creel survey of the upper Ohau River including recorded and estimated angler use, angler catch and harvest. “Trout” means combined brown and rainbow trout.

Survey date	Estimated total anglers	Number of Interviewed anglers	Number of anglers providing full catch and effort records	Minimum trout landed per angler	Maximum trout landed per angler	Average number of trout landed per angler	Average catch rate (trout/hour)	Sum of recorded trout landed	Estimated total angler's total trout landed	Average number of trout harvested per angler	Sum of recorded trout harvest	Percentage of catch harvested	Estimated total angler's total trout harvested
1/09/2019	24	22	22	0	9	2.2	0.5	48	52	0.36	8	16.7	9
5/19/2019	4	4	4	0	1	0.8	1.1	3	3	0.25	1	33.3	1
10/09/2019	7	5	2	2	3	2.5	0.3	5	18	0.00	0	0.0	0
21/09/2019	10	8	5	0	9	2.2	0.2	13	24	0.40	2	15.4	4
27/09/2019	11	10	10	0	6	1.9	0.3	19	21	0.00	0	0.0	0
6/10/2019	6	6	6	0	5	1.3	0.4	8	8	0.00	0	0.0	0
8/10/2019	5	5	5	0	0	0.0	0.0	0	0	0.00	0	0.0	0
19/10/2019	9	8	8	0	3	0.5	0.1	4	5	0.00	0	0.0	0
31/10/2019	3	1	1	6	6	6.0	1.0	6	18	0.00	0	0.0	0
Survey dates totals	79	69	63	0	9	1.7	0.4	106	148	0.17	11	7.3	14

Appendix 3 – Extrapolated 2020 Spring Season survey data

Table 3-1: Extrapolated total monthly and Spring Season estimates of angler use (daily estimated angler visits), trout caught (landed) and harvested from the 2020 upper Ohau River Spring Season.

Strata (month, weekend day or mid-week day)	Days in strata	Estimated total anglers (daily angler visits)	Estimated strata average daily trout landed	Estimated strata average daily trout harvested	Strata trout landed total	Strata trout harvested Total
Opening Day/weekend	1	38	86	4	86	4
September weekend	8	300	45	3	364	23
September weekday	22	187	6	0	139	0
September Total		525			588	27
October Weekend	7	88	6	0	42	0
Labour Day Holiday Weekend	3	33	14	0	42	0
October Weekday	21	158	7	0	149	0
October Totals		278			233	0
Spring Season Totals		803			821	27

Appendix 4 – 2020 Spring Season angler satisfaction rating and explanations

Table 4-1: Satisfaction rating and related explanation for an angling party's overall daily experience fishing the upper Ohau River during survey dates for the 2020 Spring Season.

1/09/2020	Very Satisfied	Insane! Fish huge -Just Epic.
1/09/2020	Very Satisfied	Very Good Fishery - Amazing!
1/09/2020	Very Satisfied	Massive fish but not in a canal, cool spot.
1/09/2020	Satisfied	Incredible opportunity - too much going on for opening day though. I'll be back.
1/09/2020	Dissatisfied	Poor weather wet and cold
1/09/2020	Satisfied	didn't catch anything
1/09/2020	Neutral	Didymo a big problem, worse than last year.
1/09/2020	Satisfied	Cold! Always good to fish here and always potential to catch a big trout.
1/09/2020	Very Satisfied	Simply great fishing - beautiful place too. Still Challenging which makes it rewarding.
1/09/2020	Neutral	Catch rate not up to expectations and didymo an issue. Opportunity seemed limited.
1/09/2020	Very Satisfied	Been fishing for 50+ years and never caught a trophy rainbow - today I caught 2! Thanks Fish & Game.
1/09/2020	Very Satisfied	Not every day you can catch a 20 pounder!
1/09/2020	Satisfied	Calibre of fish - meeting expectations
1/09/2020	Satisfied	Cool fishing in the snow - good experience
1/09/2020	Very Satisfied	Incredible! Nowhere else in the world you can catch trophy after trophy
1/09/2020	Very Satisfied	First time ever catching trophy on fly for both of us.
1/09/2020	Very Satisfied	For me two back-to-back personal biggest fish. 1st trophy on fly - same for my mate. Scenery Epic - where else in the world could you do this.
1/09/2020	Very Satisfied	Couldn't have gone better really - expecting to see another angler and that was fine
5/09/2020	Very Satisfied	Very happy to catch magnificent fish. It was a very warm and still morning - great for fishing
5/09/2020	Satisfied	Went fishing and successful. Enjoyed the opportunity to fish a river at this time of year.
5/09/2020	Satisfied	In a party always fun although not much caught
5/09/2020	Very Satisfied	Not every day you can catch fish that big
5/09/2020	Very Satisfied	Everyday fishing is great
5/09/2020	Very Satisfied	Best fishing ever done. New to fishing but number of fish seen was great - first spot had 10 big fish visible.
5/09/2020	Very Satisfied	Saw heaps of fish jumping
5/09/2020	Very Satisfied	Seeing big fish in river
5/09/2020	Very Satisfied	Nice to be out
5/09/2020	Very Satisfied	Hasn't felt like a teenager for a long time
16/09/2020	Very Satisfied	we like the scenery but big fish is the main attraction
16/09/2020	Very Satisfied	Seeing large fish and catching them, just casting to fish that large is great.
16/09/2020	Satisfied	Unique angling experience to fish in a "natural" river where there are seriously big fish - delight to experience as an angler.
20/09/2020	Satisfied	Caught fish -good result
20/09/2020	Satisfied	Good Day
20/09/2020	Very Satisfied	Double figure catches and lots of fish
20/09/2020	Very Satisfied	Great day catching 15lb fish! Weather perfect
20/09/2020	Satisfied	Good fishing, Its special catching big fish on fly

20/09/2020	Very Satisfied	Achieved aim of family outing (catching a big fish)
20/09/2020	Neutral	Just learning the river
20/09/2020	Very Satisfied	Whole lot of big fish - the day was spot-on
20/09/2020	Very Satisfied	Plenty of fish and water with easy access
20/09/2020	Very Satisfied	Weather perfect and got fish.
20/09/2020	Satisfied	Good but tough. Pressured fish
20/09/2020	Very Satisfied	Kids reluctant to leave!
20/09/2020	Satisfied	two weeks ago, would have caught more - pressured fish harder to catch
20/09/2020	Neutral	Saw big fish and other small fish - hoping for a wee bit more than that
20/09/2020	Very Satisfied	Just beautiful. Big fish and great scenery.
24/09/2020	Very Satisfied	Hard long day fishing but how many other rivers in the world can you do this
24/09/2020	Very Satisfied	Out on the river fishing
24/09/2020	Satisfied	Saw a few fish and good to be fishing
24/09/2020	Very Satisfied	Great to experience and share in other people's success on the river. felt as though I had fish in the bag.
24/09/2020	Very Satisfied	Given conditions and fish getting harder to catch, it was a good day.
24/09/2020	Dissatisfied	Hoping there would be more fish present
3/10/2020	satisfied	some nice holes to fish
3/10/2020	Very Satisfied	Exciting to see big fish even though none caught
3/10/2020	Satisfied	bit windy
3/10/2020	Satisfied	Different to rivers back home
3/10/2020	Very Satisfied	Never caught fish before in all my canal fishing that were as big as the ones caught today
3/10/2020	Very Satisfied	Good Fun
7/10/2020	Very Satisfied	Caught 4 trout in 2 hours, crazy to catch 15lb trout can't do that anywhere else in world.
7/10/2020	Satisfied	Scenery great, nice river but no fish caught
7/10/2020	Satisfied	most of us caught fish. Day is nice and so is the scenery
7/10/2020	Very Satisfied	Landing 25lb fish
18/10/2020	Very Satisfied	Perfect Day and not working
18/10/2020	Satisfied	Nice Day
18/10/2020	Neutral	Didymo a nuisance
22/10/2020	Very Satisfied	Can't get better than 5kg fish on a 6wt
22/10/2020	Very Satisfied	Different to what he's used to, enjoyed the challenge
24/10/2020	Very Satisfied	Enormous trout
24/10/2020	Very Satisfied	Nice little spot, absolutely great
24/10/2020	Very Satisfied	Loved it. Felt untouched and Isolated.
24/10/2020	Satisfied	Quite a few fish around

Appendix 5 – 2020 Angler comments of Spring Season management

Table 5 -1: Responses to the survey question: “CSI Fish & Game is interested to hear if you have any comments regarding the future management of the Spring Season.” Comments displayed in brackets are made by CSIFGC staff to help with the interpretation and context of an anglers or angling parties' comments.

1/09/2020	Keen to see it open. Perhaps fly only and definitely not bait. If spin allowed - must be single hooks.
1/09/2020	Needs to be Catch and release only or slot limits to stop the harvest of trophies. I do not like trophies being harvested in spawning season at the expense of the canal for the rest of the year.
1/09/2020	Zero bag limit. Never allow bait fishing. Signage on angler's code and etiquette - won't be long until it looks like the Rakaia in salmon season!
1/09/2020	It's good, great if it opened earlier - all winter.
1/09/2020	Great how it is, it gives spawning its chance.
1/09/2020	enhance more spawning gravel in new areas. Great experience - wouldn't change anything about it.
1/09/2020	As long as the conservation is good it makes sense to provide the opportunity to catch trophies. The river environment and large fish is a better experience than fishing canals - more dynamic.
1/09/2020	If use does increase, we'd understand if further controls were put in place to maintain the Spring Season experience. Do not support harvest here, prefer Catch and Release but understand that sometimes a fish should be kept (if gills injured by angler etc)
1/09/2020	First time fished it so hard to have opinion yet. Sounds like a good initiative - I'd like to see it maintained but not sure how you'll manage angler numbers.
1/09/2020	Monitor to make sure not too much pressure - just mange it well. Wouldn't like to see it spoiled.
1/09/2020	Keep it open with a 1 September opening day. I started fishing this river in 1966.
1/09/2020	Increased management to prepare for increase in angler numbers in future to maintain an enjoyable fishing experience. Today's angler numbers were about right for pools and fish available.
1/09/2020	I like it, last year was great! I'm not sure an October-only Spring Season will meet my expectations - might go elsewhere. I wouldn't fish here if I knew it was harming the fishery.
1/09/2020	Love to see it open again in September - opening day is a special occasion I will book leave for. I wonder how it will go under increasing pressure - perhaps a (controlled fishery) ballot would guarantee a good experience
1/09/2020	Not really - just make it work somehow, it's pretty fun.
1/09/2020	Make it fly-only to give the fish a better sporting chance
1/09/2020	Keep Open in September until you get a really good gauge on how busy it will get - that's not going to happen this season without foreign angler here. If it is too busy look at simple people management tools like pool-pegging or resident only rules. You should consider opening May for browns if sustainable.
5/09/2020	Need to manage people and fish. Well worth looking after. Most anglers catch and release. People travel globe to catch fish here. Happy to have angler management if impacting the fishery.
5/09/2020	First few days were crazy otherwise encounters were fine. Anglers helpful and gave a few tips. Only one crazy angler on opening day
5/09/2020	1. This year maybe only 1/2number of fish. 2, This year fish bigger 10 fish 12lb or greater even though less. 3. RT run maybe late - main run not yet.
5/09/2020	1. At present not many anglers. 2, If anglers increase then control needed - would support control. 3 would support Fly only.

5/09/2020	Keep it closed for September. Have seen more (increasing numbers) fish in upper Ohau over past 5 years.
5/09/2020	Some toxic behaviour earlier in the week
5/09/2020	would be great to keep the number of anglers to what there was today
5/09/2020	Great idea
5/09/2020	1. Very Strongly support 1 September opening. 2. needs more protection from overseas anglers. 3 Unique opportunity we love it. 4 Fly only maybe. Have flown down from Whangarei specifically. Enjoyed the contact with F&G - never get checked up there
16/09/2020	Current rules bloody great, don't mind seeing a few others if fishery is as good as it is. Would like to see management if there were way more anglers (40-50/day) but barely saw another angler for the week (midweek). Almost guaranteed fish bigger than Jurassic (Lake) or steelhead – it's going to get crazy!
16/09/2020	Introduce C&R only. Season should be 1 September and C&R for September or longer. Good to see rangers out and about.
16/09/2020	I think it would be a boon to NZ anglers to fish from 1 September, we have other choices but this is unique. Zero bag limit should be investigated. Unique fishery in world terms.
20/09/2020	Management through ballot or beat system to reduce pressure would be a good thing
20/09/2020	October Opening. Fly Fishing Only and managing angler numbers good idea.
20/09/2020	Hate to see it overtaken by foreign anglers and guides. It's a boutique opportunity for NZ residents and too many guides and clients could compromise that. I saw half a dozen dead fish, may be a result of catch and release.
20/09/2020	Worried it might end up too busy like the magic carpet. Will need control on angler numbers. Worried when it gets well known it will get over fished.
20/09/2020	All for a ballot to control angler numbers. Already seeing that increased angler use from last season is making the fish spooky and not holding in all the same spots
20/09/2020	Its provided success where canal trips have been unsuccessful. Opportunity could be quite limited in October
20/09/2020	Introduce Catch and Release because they are spawning
20/09/2020	Introduce either C&R or 1 fish bag limit
20/09/2020	same as last time -fly only and single hook
20/09/2020	Fish have wised-up by this part of the season
20/09/2020	(Guide) October opening would have less anglers and plenty of fish. Opening in September should spread out angler pressure. Special fishery so good to see steps taken to preserve open season.
20/09/2020	Enjoyed being here in September. An October opening could be a good thing to allow more spawning. Fish harder to catch from pressure now compared to start of the season.
20/09/2020	Generally, I think it's a good thing but it's had too much publicity through YouTube and F&G Magazine. It was pretty busy today - seems too busy. Good to have spawning run fishery like Taupo. Pretty cool to have big fish in a river.
20/09/2020	Support anything that protects the spawning fish whilst maintaining a Spring Season
24/09/2020	Great idea to have 1st October Opening so that fish have a chance to spawn. If fishing pressure increases some controls to maintain fishing experience. Not too many people.
24/09/2020	Three days fishing then spell for four days. Ballot for 4 rods and section of river. You guys have got a tough job sorting something out.
24/09/2020	Needs to be managed or it will turn into a circus. Great experience and maintain that for the future. Catch and release?
24/09/2020	Push season back to October? Is spawning saturated? If so, I suppose fishing September doesn't matter.

24/09/2020	I think September opening is good. October fish have dropped. A beat system or manage angler numbers to manage fishing pressure. Provide opportunity for brown trout when they are in the river.
3/10/2020	Keen to have it open for a big fish, especially with Tekapo closing (upper canal closure June-August).
3/10/2020	Make Fly only and catch & release
3/10/2020	Should not have a Spring Season - not sustainable
3/10/2020	Should be Catch & Release, take a photo and put fish back.
3/10/2020	no comments but favour it
7/10/2020	Better if gets closed for September, fly fishing only. If not managed close the fishery.
7/10/2020	Improve access road.
7/10/2020	Like the Spring Season. Make bag limit 1 fish or catch & Release. Get rid of Facebook. More Spawning areas. Single Hooks. No ballot - first in first served.
7/10/2020	October opening to give them time to spawn. Maybe even leave until November.
18/10/2020	Camping-out and claiming spots is not in the spirit of sports fishing
18/10/2020	Keep an eye on fish numbers and manage it
18/10/2020	As a local it is just awesome to have a river fishing option in Twizel in September and October - otherwise its (waiting until) November and its busy (Twizel area rivers in general).
22/10/2020	Keep it open for October -not worried about September
22/10/2020	Should be closed until stocks are higher, October (opening) would be good.
24/10/2020	I Like the opening of September and October but think it should be catch and release
24/10/2020	I don't think its flooded with anglers. If no impact keep it open for spring season
24/10/2020	Early opening is nice.
24/10/2020	Close for Spring season to let fish spawn

Appendix 6 – Proposed 2022 ballot outline and schedule

Figure 6-1: Upper Ohau River Spring Season Ballot

The upper Ohau River is balloted for the month of September to limit angler use of the fishery to maintain high-country angling values and limit angling pressure.

Anglers holding a valid whole season licence and a valid CSI backcountry licence for the upper Ohau River are eligible for the ballots.

Two ballots will be held, the first for the Opening Weekend through to the second Sunday of the season, and the second for all allocations remaining in September.

Within each ballot, party leaders must identify allocations they wish to ballot for in order of preference.

There are three types of allocations:

1. Opening Weekend - first Saturday & Sunday of September. Controlled Period Licences will be issued for up to a maximum of 30 anglers,
2. mid-week, Tuesday – Wednesday (2 days). Controlled Period Licences will be issued for up to a maximum of 12 anglers,
3. long weekend, Friday-Sunday (3 days). Controlled Period Licences will be issued for up to a maximum of 20 anglers.

A party leader and up to three companion anglers can be included on a ballot entry but each angler can only appear on one ballot entry, regardless of whether they are a party leader or companion angler.

If an angler enters any ballot more than once, all their entries will be void for that ballot.

The ballot will be drawn at least two-weeks before its earliest allocation start date.

Anglers will be advised by email if they are successful with their ballot entry and issued with a Controlled Period Licence.

If ballot entries are not sufficient to fill an allocation, at CSIFGC discretion, licences may be issued to fill those allocations.

2022 Ballot schedule

Ballot	Fishing dates	Allocation	Ballot entries open	Ballot entries close	Approximate notification
1	3 - 4 September	Opening Weekend	15-Jul	1-Aug	2-Aug
1	6 - 7 September	mid-week 1	15-Jul	1-Aug	2-Aug
1	9 - 11 September	long weekend 1	15-Jul	1-Aug	2-Aug
2	13 - 14 September	mid-week 2	10-Aug	24-Aug	25-Aug
2	16 - 18 September	long weekend 2	10-Aug	24-Aug	25-Aug
2	20 - 21 September	mid-week 3	10-Aug	24-Aug	25-Aug
2	23 - 25 September	long weekend 3	10-Aug	24-Aug	25-Aug
2	27 - 28 September	mid-week 4	10-Aug	24-Aug	25-Aug

Appendix 7 – 2020 field survey sheets

Figure 7-1: **Upper Ohau Creel survey - field interview sheet**

Surveyor: _____

Date: _____ Time: _____

Angling Party Name(s): _____

Licence #'s _____

Licence type(s): _____

Method(s): _____

Reach party encountered: Below Ford Above Ford

Spokesperson(s) _____ Phone#: _____

Best contact time: _____

.....

Fished upper Ohau 2019 Spring Season?: yes # _____ no # _____

Fished upper Ohau
yesterday?: _____

If yes, for each angler:

*All fish caught sizes and
species?* _____

*All fish caught sizes and
species?* _____

*All fish caught sizes and
species?* _____

Figure 7-2: Upper Ohau Survey Day Summary

Date:.....

Surveyor:.....

Survey Start & finish time (time on river)

.....

Actual hours on river.....

Anglers observed:.....

Parties observed:.....

Anglers interviewed:.....

Estimated total anglers fishing:.....

General daily fishing conditions:

.....Poor / OK / Good.....

Comments:

Figure 7-3: **Follow-up phone survey - Upper Ohau Spring Season Creel survey
2020**

Angling date: Survey ID
(admin).....

Angler(s) full name(s):
...../...../.....
.....
...../...../.....
.....

Party Spokesperson:.....

Licence # & type(s)
...../...../.....
.....
...../...../.....
.....

Guided: **Yes** **No** (circle) Guide name

Zone encountered: (circle) **Below Ford** **Above Ford**

Hours fished today
...../...../...../...../...../.....

Method(s):
...../...../...../...../...../.....
...

How many fish did you **Keep** and what species and size?

RT:...../...../.....
.....
...../...../.....
.....

BT:...../...../.....
...../...../.....
.....

How many fish in total did each angler **Catch and Release** and what species and size?

RT:...../.....
.....
...../.....
.....
...../.....
.....

BT:...../...../.....
.....
...../...../.....
.....

How many anglers not in your party did you or your party encounter on the river?

0 1 2 3 4 5 6 7 8 9 10 Other
number: _____

How did angler encounters impact on your overall angling experience?

Negative Positive Neutral (circle)

Briefly explain why you chose your rating above?

.....
.....
.....
.....
.....

How would rate your overall satisfaction with your Upper Ohau fishing experience today?

Very satisfied Satisfied Neutral Dissatisfied Very dissatisfied
(circle)

Briefly explain why?

.....
.....
.....

