CENTRAL SOUTH ISLAND REGION

2024 Upper Ahuriri River Pressure Sensitive Fisheries Management Investigation

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Executive summary

The National Policy on Pressure Sensitive Fisheries Management (NPPSF) addresses fisheries where high angling pressure negatively impacts the angling experience. Pressure Sensitive Fisheries (PSFs) are characterised by diminished fish catchability, altered fish behaviour, and a reduced sense of wilderness due to excessive angling. These issues are often exacerbated by a high proportion of non-resident anglers, who often disproportionately use these fisheries. The influx of non-resident anglers during peak fly-fishing months (January-April) can negatively impact the fishing experience of resident anglers, leading to their displacement from these fisheries. Recent data highlights that the upper Ahuriri River meets the criteria of being classified as a PSF, renowned for its exceptional trout fishing, it may be experiencing excessive pressure, primarily from non-residents. Although some surveys suggest that current levels of angling pressure are manageable, the disproportionate pressure from non-residents, as indicated by a previous survey, combined with limited historical data and recent complaints, suggests a potential underappreciated issue of overcrowding and displacement, particularly affecting resident anglers. Management tools such as Backcountry Fisheries Licences, Voluntary Beat Systems, Designated Waters (DW) Licences, and Controlled Fisheries are employed to protect PSFs for excessive use by redistributing pressure and monitoring angler us and experience. For the upper Ahuriri River, the proposed management pathway includes the potential implementation of a beat system and/or a DW system depending on the findings from both a displacement and beat occupancy survey. The proposed management pathway involves a phased strategy: by firstly conducting an online survey in the 2024/25 season (season 1) to assess angler displacement, potentially introducing new management tools where justifiable based on findings in the subsequent seasons, and continuously evaluating their effectiveness. This PSF management pathway aims to balance angling pressure and maintain the quality of the fishing experience. The project aligns with the Fish & Game New Zealand Strategy 2023-2027, which provides strategic direction that supports pursuing a PSF management investigation on the upper Ahuriri River to attract and retain licence holders.

Background

Management Framework (National Policy on Pressure Sensitive Fisheries Management)

PSFs are defined as fisheries where angling pressure is adversely affecting the angling experience. It is where angling pressure has adverse effects on the fishery itself, such as the catchability, visibility and population dynamics of the fish and adverse effects on the angler's experience independent of the fishing, such as a sense of wilderness and solitude.

General Summary/context of PSF: Some fisheries because of their innate characteristics are sensitive to pressure, are receiving an unsustainable amount of angling pressure and this angling pressure can be largely attributed to non-resident anglers (79% in peak summer) (Stewart 2021). Research shows that there is a clear correlation between angling pressure and probability of angling success. For instance, trout will reduce foraging activity as pressure increases and have been observed to cease feeding the subsequent day after being caught. A likely reason non-resident angler's target PSFs is because certain rivers have an international

reputation because they embody the aspects of New Zealand's trout fishery that are internationally unique, and these attract a disproportionate amount of the total non-resident angling effort as compared to resident angling effort. A frequently noted reason for choosing New Zealand over other angling destinations was that it was not crowded (60% of non-resident whole season licence holders whose primary motivation for the trip was angling noted this). Angler pressure and the encounters of anglers has resulted in the displacement of anglers from these fisheries. Displacement occurs, in this instance, because the angling experience (encompassing both angling success as well as less tangible qualities) is diminished because of angling pressure. Because resident anglers have a lower degree of encounter tolerance than non-resident anglers, they are typically the first to stop fishing when PSFs become oversubscribed. This withdrawal from fishing effectively displaces them from these PSFs. This reduction in resident angling effort in PSFs in turn feeds back into the disproportionate non-resident angling effort. Displacement further occurs where there is a belief, even if not borne out by actual use rates, that the angling experience would be diminished by the perceived angling pressure. This has been labelled perception-displacement. As anglers are displaced through actual crowding this experience is communicated to other anglers, who are then displaced because of the reputation of crowding.

The concept of PSFs highlights the need for targeted management to balance fishing pressure and preserve both the fisheries health and the angling experience. The history of PSFs in New Zealand began when a noticeable increase in angling pressure on certain rivers prompted the implementation of various management tools and monitoring systems to assess and address this pressure. Rivers that showed either changes in fish catchability, visibility, and or population dynamics or a diminished sense of wilderness and solitude for anglers were identified as a PSF. Rivers identified as PSFs were subjected to various management interventions to address these issues. The choice of management tool depended on the specific characteristics of each PSF and the most suitable approach for that situation.

Objectives for solutions for Pressure Sensitive Fisheries.

A. To spatially redistribute angling pressure from fisheries subject to unsustainable angling pressure towards fisheries that can sustain increased angling pressure.
B. To temporally redistribute angling pressure from fisheries subject to periods of peak unsustainable angling pressure towards periods where angling pressure is lower.

National Policy under review

The current NPPSF that was approved as a National Policy in 2022 is the framework that guides how PSFs are managed. However, the NPPSF is currently under review requested by the Minister for Hunting and Fishing, which may change the framework and thresholds around how PSFs are managed. Therefore, it is important to note that the current management and guidance is based on the 2022 NPPSF and may be superseded by an updated policy as early as the 2025/26 sports fishing season. If so, CSIFGs approach to PSFs management will be adjusted accordingly.

PSF tools

1. **Backcountry Fisheries Licence**

- **Description: The backcountry licence was replaced by the Designated Waters licence in 2023/24.** Anglers required a backcountry licence endorsement to fish specified rivers. This free endorsement, available for all whole season licence holders, helped Fish & Game survey angler experiences and manage PSFs. It did not directly manage pressure but provided valuable data to inform consideration of implementing other PSF management tools.
- **Justification:** Perceived or noticeable high or increasing angling pressure or appreciable angler conflict on river.
- **Intent/goals:** Tracks pressure and angler conflict/interactions on remote or difficult-to-survey fisheries to inform management strategies.

2. **Voluntary Beat Systems**

- **Description:** Beats are designated river sections marked for fishing. Anglers signal their intent to fish a beat by parking at designated spots. Each beat features its own signpost with a specified car park. When you park at your chosen beat, you can fish within its boundaries. The presence of a vehicle at a beat sign indicates to other angler's which beats are occupied. While the system is voluntary and cooperative, it can be circumvented by overnight parking and is limited to well-accessible fisheries.
- **Justification:** Anglers are being displaced from PSFs due to overcrowding and/or angler conflict and there is support for management intervention.
- **Intent/goals:** Reduces angling pressure and conflict/interactions and improves the fishing experience by coordination angler access and fishing reaches.

3. **Designated Waters Licence**

- **Description:** Required to fish in "Designated Waters" (DW). For residents, it involves a $5 fee in addition to a whole season licence. Non-residents must buy a $40 day licence, limited to five days per region. This replaces the backcountry licence system but includes a mechanism to redistribute angling pressure while maintaining a capacity to monitor the experience of licence holders.
- **Justification:** The angling experience is being negatively affected by excessive angling pressure (non-resident bias, fish catchability) and (2) other management mechanisms alone (voluntary beats) are not a suitable for the fishery in question.
- **Intent/goals:** It aims to manage and redistribute angling pressure in PSFs whilst increasing the opportunity for resident anglers to fish these PSFs.

4. **Controlled Fisheries**

- **Description:** Controlled Period Licences are issued to whole season licence holders by Fish & Game regions subject to either a booking or ballot (lottery) system. River beats at controlled fisheries must be booked online up to five days in advance. Only one party can book a beat per day, with specific requirements for the number of anglers and licences. A ballot system (lottery) is also used to allocate a limited number of controlled-period fishing licences (upper Ōhau River). Participants enter the ballot for a chance to receive one of these licences. Those who are successful in the draw are granted a controlled period licence, which permits fishing on only two specified days within the season (upper Ōhau River).
- **Justification:** The angling experience is being negatively affected by excessive angling pressure and other management tools alone are not suitable for the fishery in

question. For instance, it prevents anglers from traveling long distances to remote rivers to find another angler already fishing (Greenstone River), and controls angler use on rivers that would have an uncontrollable amount of pressure with a traditional open season or with other PSFs management tools alone due to their popularity and ease of access (upper Ōhau River).

- **Intent/goals:** Controls angler use at levels deemed to provide for a high-quality fishing experience.

Central South Island regional context

Central South Island Fish & Game (CSIFG) have a Controlled Fishery tool in use at the upper Ōhau River (former Back Country fishery) but have not previously used a beat system or DW tool. In 2023 there was a survey conducted by NZ Fish & Game consulting CSIFG licence holders about their thoughts on introducing a DW Licence to manage PSFs. From this survey, most respondents stated they either 'strongly agree' or 'agree' with target restrictions on sensitive fisheries to manage high levels of angling pressure. Most the respondents also stated they either 'strongly agree' or 'agree' with a small ($5) fee for an annual DW Licence per Fish & Game region for resident anglers. Conversely, respondents mostly either 'strongly disagreed' or 'disagreed' that the fee between $35-50 is a fair price for non-resident DW Day Licences. Lastly, there was a mix response in respondents strongly 'agreeing'/ 'agreeing' and 'strongly disagreeing'/ 'agreeing' that three to six DW Day Licences for non-resident anglers per Fish and Game region is an appropriate number of licences to provide: a) an opportunity to access fisheries? B) a mechanism to redistribute angling effort? In summary, while these surveys do not directly assess anglers' opinions on the upper Ahuriri being designated as a PSF, they support the notion that majority of CSI anglers would likely back management interventions if the upper Ahuriri were justified as a PSF. Additionally, the findings support the introduction of a fee for a DW Licence for resident anglers.

Upper Ahuriri River Case study

The upper Ahuriri River, being the section of river above its Longslip Creek Confluence, situated in high-country and headwater landscapes, offers a unique fishing experience that attracts local regions anglers, anglers from throughout New Zealand and international anglers. Its distinct characteristics make it a sought-after destination for those seeking a semi-remote fishing experience with minimal angler encounters. This making it a destination fishery for non-resident fly anglers seeking a backcountry experience. The NPPSF states that common characteristics of PSFs include clear water, excellent sight fishing, high average size of fish, high scenic value, and often in a wilderness or backcountry setting. The upper Ahuriri River has all these characteristics which further justify its reputation as a sought-after destination fishery.

Is there a problem or perceived angling pressure problem to manage on the upper Ahuriri?

A survey conducted in the 2016/17 sports fishing season by CSIFG indicated low levels of dissatisfaction and negative angler interactions. This suggesting that angling experience and the fishery itself was not significantly affected by angler usage throughout the 2016/17 season. A part-season Pressure Sensitive Fishery Survey (PSFS) methodology trial for the upper Ahuriri conducted during December and early January 2023/2024 further indicated low levels of dissatisfaction, and no evidence of a non-resident bias.

Furthermore, a PSFS conducted in the 2023/24 sports fishing season showed that no surveyed anglers perceived the upper Ahuriri to be overcrowded with anglers. A regional PSFS was conducted in several other Fish & Game regions, including Otago and Southland in the 2023/24 season. The survey results from the Otago Region DW licence holders discovered the upper Ahuriri River was the fourth most common river avoided by anglers at certain times of the year due to overcrowding indicating an appreciable level of temporal displacement. Whereas less than 2% of Southland anglers stated they avoid the upper Ahuriri River due to overcrowding, suggesting that proximity of hometown to the Ahuriri may effect the levels of displacement. However, these surveys are targeted at anglers that fish Southland and Otago PSFs, which may mean that some anglers surveyed have never fished the upper Ahuriri before. Consequently, making it difficult to quantify the number of anglers that will not fish the upper Ahuriri due to overcrowding from the overall number of anglers surveyed.

Anecdotally, over the period 2015-2020 CSIFG received about 1-2 complaints per season from anglers concerned about angling pressure or negative angler interactions at the upper Ahuriri. Recently, CSIFG have also received 6 complaints via email in the past two years (2023/2024) regarding their dissatisfaction of how the upper Ahuriri is managed due to the perceived high or increasing pressure from anglers. Some of these complaints were perceived complaints, where they had received feedback from people addressing their concern about angling pressure. Members of the New Zealand Professional Fly-Fishing Guides Association (NZPFGA) stated that they wanted a DW program for the upper Ahuriri as they believe it meets the criteria. Additionally, two separate experienced guides have emailed a complaint addressing their concern and urgent management needed on the upper Ahuriri. The first guide has been a fishing guide for 32 years and has stated over the years he has witnessed a dramatic increase in angler usage on the upper Ahuriri. He believes the river should be broken up into suitable beats to help protect angling pressure and angling experience. The second guide has been a fishing guide for 24 years and has fished the Ahuriri River for over 40 years. He believes that over the last 20 years angler pressure has skyrocketed and due to the upper Ahuriri being a fragile resource, it is vulnerable to angling pressure. He states that a DW System is the best approach in trying to protect the fishery. Furthermore, some anglers stated they had been temporarily displaced or absolutely displaced from the fishery due to angler pressure. One angler stated due to non-resident Australian anglers “ignoring fishing etiquette” is one of the main reasons they will not fish the upper Ahuriri River.

Based on limited survey/study results of the upper Ahuriri, it suggests that there is not a significant problem or perceived problem to manage. However, there are a few things that need to be considered when evaluating some of these surveys:

1. In the 2016/2017 survey, 63% of anglers were non-residents. This high proportion of non-resident anglers may suggest that local anglers are being displaced from the fishery, particularly during peak dry fly-fishing months like February and March (Stewart 2021). This timing aligns with the period when non-resident anglers visit New Zealand to make the most of their limited time and the optimal sight fishing opportunities available during these peak months. Non-residents, used to crowded home rivers, might not perceive crowding issues the same way locals do. They might also respond to survey questions strategically to avoid management restrictions or costs. There were 23 interviews conducted in December, 5 in January, 34 in February, 15 in March, and 1 in April. The uneven distribution of interviews across these months could introduce bias, as the peak period for non-resident use is January-

April (Stewart 2021). Therefore, the higher number of interviews conducted in December may have skewed the results, potentially leading to an underestimation of the impact of non-resident anglers during these peak months.

2. Some anglers may have already been displaced from the upper Ahuriri before the 2016/2017 survey, potentially biasing results toward anglers who tolerate increased pressure and crowding.

3. The part-season PSFS methodology trial for the upper Ahuriri conducted during December and early January 2023/2024 do not reflect the overall peak season usage in February/March or post season usage in April.

4. PSFS in Otago and Southland target anglers familiar with those regions, possibly including those who have never fished the upper Ahuriri. This makes it challenging to gauge the impact of overcrowding on the upper Ahuriri based on the overall surveyed population. Otago anglers might report avoiding the upper Ahuriri more often than Southland anglers due to the greater travel distance and time constraints required from Southland anglers. Time constraints were a key reason cited by Southland anglers for avoiding DW in the 2023/24 season (Southland Fish & Game, unpublished).

<u>What is the justification for further PSF investigation, trial of PSF tool or status quo approach for the upper Ahuriri River?</u>

The Fish & Game New Zealand Strategy 2023-27 aims to attract and retain licence holders. In the context of PSFs, this can be achieved by understanding license holder needs, which allows us to implement management tools that enhance the overall angling experience. Therefore, the objectives of the Fish & Game New Zealand Strategy 2023-2027, along with and the available surveys and data relevant to the upper Ahuriri River, provides further justification for pursuing a PSF management investigation.

Based on the available surveys and data relevant to the upper Ahuriri River. There is sufficient justification to pursue further a PSF management investigations. The most relevant study assessing the satisfaction of anglers on the upper Ahuriri was conducted 7-8 years ago in the 2016/17 season. 63% of anglers were non-residents, which exceeds the 50% management threshold stated in the NFFSP. Therefore, based on this data alone, there is justification to pursue resident angler displacement research and management intervention options. Resident anglers generally exhibit a lower degree of encounter tolerance compared to non-resident anglers (Fish and Game New Zealand 2022). As PSF become oversubscribed, resident anglers are typically the first group to stop fishing them (be displaced). Therefore, to prevent the problem of a disproportionate number of non-residents fishing PSFs as listed in the NPPSF, further management is needed to justify implementation of management tools. Recent data, including a 2023/24 trial PSFS, shows that while no current overcrowding is reported, the small sample size and suboptimal data gathering limit the reliability of these findings. Additionally, comparative surveys from other regions (Otago and Southland) suggest that crowding issues may be more pronounced than currently recognised. Given the time that has passed since the 2016/17 study, updated research is necessary to accurately reflect the current status of the upper Ahuriri trout fishery. Additionally, the recent cluster in complaints over the past two years from both everyday anglers and experienced fishing

guides, combined with the support for targeted restrictions within the CSI region highlighted in the 2023 DW proposal consultation, further justifies the need for a PSFs investigation.

The Fish & Game Strategy 2023-2027 prioritises to attract and retain licence holders. In the context of PSFs, this can be achieved by understanding licence holder needs. PSFs management tools can be implemented to enhance the overall angling experience with accompanying communications that make the introduction of the tool simple and effective. Therefore, an objective of the Fish & Game New Zealand Strategy 2023-2027, provides strategic direction that supports pursuing a PSF management investigation on the upper Ahuriri River to attract and retain licence holders.

When Fish & Game regions are deciding to classify a waterbody as a DW there needs to be clear rationale and supporting evidence that (1) the angling experience is being negatively affected by excessive angling pressure and (2) other management mechanisms (voluntary beats, booking/ballot systems etc.) are not a suitable for the fishery in question. Therefore, there needs to be an extensive PSF investigation to assess a range of factors.

Proposed PSF management pathway for the upper Ahuriri River

The proposed management pathway (Figure 1) for the upper Ahuriri River includes conducting an online survey in the 2024/25 season (season 1) to evaluate the extent of angler displacement and the potential impact of PSFs management tools. If the survey indicates significant angler displacement and support for PSF tool implementation, such as a beat system, management changes will be implemented for the next season. Conversely, if the displacement is minimal, the current management will continue, with a review scheduled in three years.

Should the beat system be implemented in the 2025/26 season (season 2), an angler use survey will be undertaken. High beat occupancy (high angler use) or non-resident bias (> 50% of anglers) may justify further implementation of PSF tools, such as DW or Controlled Fishery in the following season. If issues are not observed, the current state will be maintained, with a re-evaluation in three years.

If further management is introduced in the 2026/27 season (season 3), its effectiveness will be assessed through surveys. If successful, the measures will continue with ongoing monitoring and complaint tracking. If not effective, the management strategy will be revised accordingly.

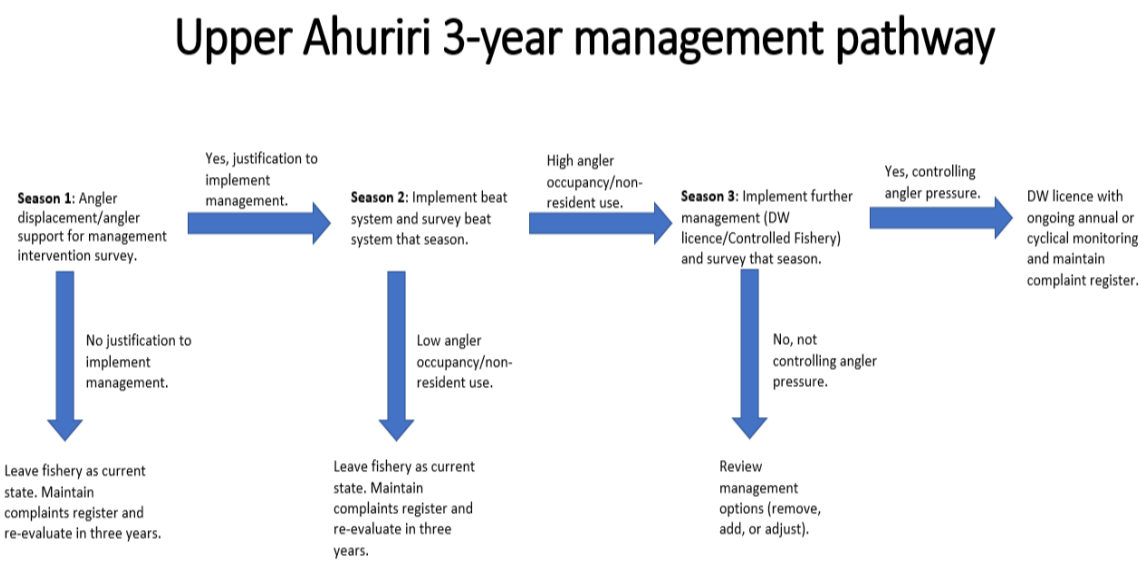

Figure 1: Proposed pressure sensitive fishery management pathway for the upper Ahuriri River.

Options and recommendation

Management options

Option 1: Implement a three-year management pathway (refer to figure 1), commencing in the 2024/25 Operational Work plan with a "angler displacement / angler support for management intervention survey.

Option 2: Take no further action (status quo), continue maintaining the complaint register and re-evaluate in three-years.

Option 3: Establish a threshold of 10 written complaints within a year (12 months) that triggers implementation of the 3-year management pathway at the next opportunity in the Operational Work Plan.

Recommendation

IMPLEMENT A THREE-YEAR MANAGEMENT PATHWAY FOR THE UPPER AHURIRI RIVER, COMMENCING IN THE 2024/25 OPERATIONAL WORK PLAN WITH A "ANGLER DISPLACEMENT / ANGLER SUPPORT FOR MANAGEMENT INTERVENTION SURVEY."

References

1 Cohen Stewart, *Angler use of the upper Ōreti trout fishery during the 2018/19 and 2020/21 fishing season,* Southland Fish and Game Council, 2021.

2 Fish & Game New Zealand, National Policy on Pressure Sensitive Fisheries Management, 2022.