

# Applicant Information Form 1a Notified or Non-notified Process



Department of  
Conservation  
*Te Papa Atawhai*

New Zealand Government

## Is this the right application form for me?

This **Applicant Information Form 1a – Notified or Non-notified Process** must be completed for **the following longer term applications** (i.e. not one-off applications):

- Grazing
- Land use: Tenanted and/or using existing DOC facility/structure
- Land use: Use of public conservation land for private commercial facility/structure
- Guiding/Tourism/Recreation: Watercraft activities
- Filming
- Sports events
- Marine reserves application form 11a: Structure in a marine reserve

For other activities use the specific activity application forms that combine applicant and activity information or book a pre-application meeting.

## How do I complete this applicant information form?

- Complete all sections of this **applicant information form**.
- In addition, you must complete the **activity application form/s** that you wish to undertake.
- DOC encourages electronic applications (e.g. typed Word document), rather than handwritten applications. Electronic applications are easier to read and less likely to be returned to you for clarification.
- If you need extra space, attach or include extra documents and label them according to the relevant section. Record all attachments in the table at the back of the application information form section **F Attachments**.

## How do I submit my application?

Email the following to [permissions@doc.govt.nz](mailto:permissions@doc.govt.nz):

- **Completed applicant information form 1a**
- **Completed activity application form**
- Any other relevant attachments.

## If I need help, where do I get more information?

- Check the [DOC webpage for the activity you are applying](https://www.doc.govt.nz/get-involved/apply-for-permits/apply-for-a-permit/)<sup>1</sup> for.

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<sup>1</sup> <https://www.doc.govt.nz/get-involved/apply-for-permits/apply-for-a-permit/>

- Arrange a pre-application meeting (either face to face or over the phone) by contacting the [Department of Conservation Office](#)<sup>2</sup> closest to where the activity is proposed. You can use [DOC maps](#)<sup>3</sup> to identify which District Office you should contact. Or arrange a meeting with any of our [four offices that process concessions](#)<sup>4</sup> – choose the one closest to where the activity is proposed.
- If your application covers multiple districts, contact the office nearest most of the locations you are applying for, or nearest to locations you have a specific question about.

## What happens next?

Once your application forms are received, your application will be assessed by DOC. If your application is complete, DOC will begin processing.

If your application is incomplete it will be returned to you for more information.

## Why does DOC ask for this information?

The questions in this application information form and the activity application form/s are designed to cover the requirements set out in conservation legislation. Your answers allow us to assess:

- Your most up-to-date details so that DOC can contact you about your application.
- Your qualifications, resources, skills and experience to adequately conduct the activity on public conservation land.
- Your creditworthiness will help determine whether DOC should extend credit to you and set up a DOC customer accounts receivable credit account for cost recovery. To make this assessment DOC will supply your information to a credit checking agency.

### Note:

- Personal information will be managed by DOC confidentially. For further information check [DOC's privacy and security statements](#)<sup>5</sup>.
- Information collected by DOC will be supplied to a debt collection agency in the event of non-payment of payable fees.

## What fees will I pay?

You may be required to pay a **processing fee** for this application regardless of whether your application is granted or not. You may request an estimate of the processing fees for your application. If you request an estimate, DOC may require you to pay the reasonable costs of the estimate prior to it being prepared. DOC will not process your application until the estimate has been provided to you. In addition, if you are granted a guiding concession on public conservation land you may be required to pay annual **activity and management fees**. These fees are listed on the [DOC webpage for the activity you are applying](#)<sup>6</sup> for.

DOC will invoice your processing fees after your application has been considered. If your application is large or complex, DOC may undertake billing at intervals periodically during processing until a decision is made. If you withdraw your application DOC will invoice you for the costs incurred up to the point of your withdrawal.

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<sup>2</sup> [www.doc.govt.nz/footer-links/contact-us/office-by-name/](http://www.doc.govt.nz/footer-links/contact-us/office-by-name/)

<sup>3</sup> <http://maps.doc.govt.nz/mapviewer/index.html?viewer=docmaps>

<sup>4</sup> <https://www.doc.govt.nz/get-involved/apply-for-permits/contacts>

<sup>5</sup> <https://www.doc.govt.nz/footer-links/privacy-and-security/>

<sup>6</sup> <https://www.doc.govt.nz/get-involved/apply-for-permits/apply-for-a-permit/>

**Your application will set up a credit account with DOC.** See the checklist at the end of the form for the terms and conditions you need to accept for a DOC credit account.

### **Will my application be publicly notified?**

Your application will be publicly notified if:

- It is a license with a term of more than 10 years.
- It is a lease.
- After having regard to the effects of the activity, DOC considers it appropriate to do so.

Public notification will increase the time and cost of processing of your application.

### **What does DOC require if my application is approved?**

If your application is approved DOC requires:

- **Insurance** to indemnify the Minister of Conservation against any claims or liabilities arising from your actions. The level of insurance cover will depend on the activity.
- A copy of your **safety plan** audited by an external expert (e.g. Health and Safety in Employment (Adventure Activity) Regulations 2011 audit or a DOC listed organisation). See the [Safety Plan](#)<sup>7</sup> information on the DOC website for further information.

**Note:** DOC/Minister can vary the concession if the information on which the concession was granted contained material inaccuracies. DOC may also recover any costs incurred.

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<sup>7</sup> <https://www.doc.govt.nz/get-involved/apply-for-permits/managing-your-concession/safety-plans/>

## A. Applicant details

|                                  |                                                         |                                                                      |
|----------------------------------|---------------------------------------------------------|----------------------------------------------------------------------|
| Legal status of applicant (tick) | <input type="checkbox"/> Individual (Go to ①)           |                                                                      |
|                                  | <input type="checkbox"/> Registered company (Go to ②)   | <input type="checkbox"/> Trust (Go to ②)                             |
|                                  | <input type="checkbox"/> Incorporated society (Go to ②) | <input type="checkbox"/> Other e.g. Educational institutes (Go to ②) |

|   |                                          |  |              |
|---|------------------------------------------|--|--------------|
| ① | Applicant name (individual)              |  |              |
|   | Phone                                    |  | Mobile phone |
|   | Email                                    |  |              |
|   | Physical address                         |  | Postcode     |
|   | Postal address (if different from above) |  | Postcode     |

|   |                                                                                                       |               |                                                            |            |
|---|-------------------------------------------------------------------------------------------------------|---------------|------------------------------------------------------------|------------|
| ② | Applicant name (full name of registered company, trust, incorporated society or other)                |               | Fiordland Wapiti Foundation                                |            |
|   | Trading name (if different from applicant name)                                                       |               |                                                            |            |
|   | NZBN if applicable (to apply go to: <a href="https://www.nzbn.govt.nz">https://www.nzbn.govt.nz</a> ) | 9429042701811 | Company, trust or incorporated society registration number | 654185     |
|   | Registered office of company or incorporated society (if applicable)                                  |               |                                                            |            |
|   | Company phone                                                                                         |               | Company website                                            | Fwf.net.nz |
|   | Contact person and role                                                                               |               | GM                                                         |            |
|   | Phone                                                                                                 |               | Mobile phone                                               |            |
|   | Email                                                                                                 |               |                                                            |            |
|   | Postal address                                                                                        |               | Postcode                                                   |            |
|   | Street address (if different from postal address)                                                     |               | Postcode                                                   |            |



## B. Pre-application meeting

Have you had a pre-application meeting or spoken to someone in DOC?

|     |                                     |
|-----|-------------------------------------|
| No  | <input type="checkbox"/>            |
| Yes | <input checked="" type="checkbox"/> |

- If yes record the:

|                                                             |            |
|-------------------------------------------------------------|------------|
| Date of DOC pre-application meeting                         | 08/04/2024 |
| Name of DOC staff member                                    | Mark Ryan  |
| Name of person who had the pre-application meeting with DOC |            |

## C. Activity applied for

Tick the **activity application form** applicable to the activity you wish to undertake on public conservation land. Complete the applicant information form and the activity application form and email them with any attachments to [permissions@doc.govt.nz](mailto:permissions@doc.govt.nz)

| ACTIVITY APPLICATION FORM*                                                                                                                 | FORM NO. | TICK                                |
|--------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------|
| Grazing                                                                                                                                    | 2a       | <input type="checkbox"/>            |
| Land use: Tenanting and/or using existing DOC facility/structure                                                                           | 3a       | <input checked="" type="checkbox"/> |
| Land use: Use of public conservation land for private/commercial facility/structure                                                        | 3b       | <input type="checkbox"/>            |
| Guiding/Tourism/Recreation: Watercraft activities                                                                                          | 4b       | <input type="checkbox"/>            |
| Filming                                                                                                                                    | 5a       | <input checked="" type="checkbox"/> |
| Sporting Events                                                                                                                            | 6a       | <input type="checkbox"/>            |
| Marine reserves application form: Structure in a marine reserve                                                                            | 11a      | <input type="checkbox"/>            |
| Other activities (not covered in the above forms or in the new activity application forms that combine applicant and activity information) | 7a       | <input checked="" type="checkbox"/> |

**Note:** If the activity is not in this list check the activity on the DOC website to find the correct application form or book a pre-application meeting. Application forms that combine applicant and activity information on the DOC website include:

- [Aircraft activities](https://www.doc.govt.nz/get-involved/apply-for-permits/business-or-activity/aircraft-activities/)<sup>8</sup>
- [Easements](https://www.doc.govt.nz/get-involved/apply-for-permits/business-or-activity/access-easements/)<sup>9</sup>
- [Land based guiding](https://www.doc.govt.nz/get-involved/apply-for-permits/business-or-activity/land-based-guided-activities/)<sup>10</sup>

<sup>8</sup> <https://www.doc.govt.nz/get-involved/apply-for-permits/business-or-activity/aircraft-activities/>

<sup>9</sup> <https://www.doc.govt.nz/get-involved/apply-for-permits/business-or-activity/access-easements/>

<sup>10</sup> <https://www.doc.govt.nz/get-involved/apply-for-permits/business-or-activity/land-based-guided-activities/>

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**D. Are you applying for anything else?**

Are you submitting any other application forms in relation to this application?

|     |                                     |
|-----|-------------------------------------|
| No  | <input type="checkbox"/>            |
| Yes | <input checked="" type="checkbox"/> |

- If yes, state which application forms:

We currently have a WARO concession that needs to be considered along side this application

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**E. Background experience of applicant**

Provide relevant information relating to your ability to carry out the proposed activity (e.g. details of previous concessions, membership of professional organisations, and relevant qualifications).

FWF community agreement with Doc director general.

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## F. Attachments

Attachments should *only* be used if there is:

- Not enough space on the form to finish your answer
- You have additional information that supports your answer
- You wish to make an additional request of DOC regarding the application.

Label each document clearly and complete the table below.

| Section of the application form the attachment relates to | Document title | Document format (e.g. Word, PDF, Excel, jpg etc.) | Description of attachment |
|-----------------------------------------------------------|----------------|---------------------------------------------------|---------------------------|
| <u>Correct example ✓</u><br>D                             | Locations      | PDF                                               | Trust Deed.               |
| <u>Incorrect example ✗</u><br>Table                       | Doc1           | Word                                              | Table                     |
|                                                           |                |                                                   |                           |
|                                                           |                |                                                   |                           |
|                                                           |                |                                                   |                           |
|                                                           |                |                                                   |                           |

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## G. Checklist

| Application checklist                                                                                                                                                                                                                                         | Tick                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| I have completed all sections of this applicant information form relevant to my application and understand that the form will be returned to me if it is incomplete.                                                                                          | <input type="checkbox"/> |
| I certify that the information provided in this applicant information form, and any attached additional forms is, to the best of my knowledge, true and correct.                                                                                              | <input type="checkbox"/> |
| I have completed the <b>activity application form</b> .                                                                                                                                                                                                       | <input type="checkbox"/> |
| I have appropriately labelled all attachments and completed section <b>F Attachments</b> .                                                                                                                                                                    | <input type="checkbox"/> |
| I will email <a href="mailto:permissions@doc.govt.nz">permissions@doc.govt.nz</a> my: <ul style="list-style-type: none"><li>• Completed applicant information form</li><li>• Completed activity application form/s</li><li>• Any other attachments.</li></ul> | <input type="checkbox"/> |

## H. Terms and conditions for a credit account with the Department of Conservation

|                                                                                |                                                                                                                                                 |
|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Have you held an account with the Department of Conservation before?           | Tick                                                                                                                                            |
| No                                                                             | <input checked="" type="checkbox"/>                                                                                                             |
| Yes                                                                            | <input type="checkbox"/>                                                                                                                        |
| If 'yes' under what name                                                       | Please note we will be applying zero billing for this application. We believe we qualify due to the conservation work we undertake in the area. |
| Does your organisation require a purchase order number for invoicing purposes? | <input type="checkbox"/>                                                                                                                        |
| If yes, please provide the number here:                                        |                                                                                                                                                 |

All invoices related to this Permission will be coded to this purchase order number unless otherwise advised. It is the applicant's responsibility to advise the Department if the purchase order needs to change through the lifetime of the Permission.

**In ticking this checklist and placing your name below you are acknowledging that you have read and agreed to the terms and conditions for an account with the Department of Conservation**

| Terms and conditions                                                                                                                                                                                                                                                                       | Tick                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| I/We agree that the Department of Conservation can provide my/our details to the Department's Credit Checking Agency to enable it to conduct a full credit check.                                                                                                                          | <input checked="" type="checkbox"/> |
| I/We agree that any change which affects the trading address, legal entity, structure of management or control of the applicant's company (as detailed in this application) will be notified in writing to the Department of Conservation within 7 days of that change becoming effective. | <input checked="" type="checkbox"/> |
| I/We agree to notify the Department of Conservation of any disputed charges within 14 days of the date of the invoice.                                                                                                                                                                     | <input checked="" type="checkbox"/> |
| I/We agree to fully pay the Department of Conservation for any invoice received on or before the due date.                                                                                                                                                                                 | <input checked="" type="checkbox"/> |
| I/We agree to pay all costs incurred (including interest, legal costs and debt recovery fees) to recover any money owing on this account.                                                                                                                                                  | <input checked="" type="checkbox"/> |
| I/We agree that the credit account provided by the Department of Conservation may be withdrawn by the Department of Conservation, if any terms and conditions (as above) of the credit account are not met.                                                                                | <input checked="" type="checkbox"/> |
| I/We agree that the Department of Conservation can provide my details to the Department's Debt Collection Agency in the event of non-payment of payable fees.                                                                                                                              | <input type="checkbox"/>            |
| Typed applicant name/s                                                                                                                                                                                                                                                                     | Fiordland Wapiti Foundation         |
| Date                                                                                                                                                                                                                                                                                       | 12/04/2026                          |

|                                    |  |      |  |
|------------------------------------|--|------|--|
| For Departmental use               |  |      |  |
| Credit check completed             |  |      |  |
| Comments:                          |  |      |  |
| Signed                             |  | Name |  |
| Approved (Tier 4 manager or above) |  | Name |  |

# Information to Support FWF Wild Animal Recovery Operations Concession Application

**Applicant:** Fiordland Wapiti Foundation (FWF)

**Application Number:** 125891-WARS

**Concession Applied for:** Wild Animal Recovery Operations (WARO) concession

**Location of Proposed Activity:** Wapiti Blocks and Murchison Mountains in Fiordland National Park, west of lake Te Anau. Map reference - X:1170000 Y: 5000000.

**Context:** This document sets out additional information required under section 17S.

**REQUEST FOR:** clearer description of the proposed WARO activity specific to your purposes, including frequency.

The activity will involve the use of aircraft to carry out the following activities:

- (a) The searching for, shooting, or immobilising of deer;
- (b) The recovery of dead deer or any part of such deer (including velvet) for supply to a MPI registered processing facility;
- (c) The recovery of dead deer or any part of such deer (including velvet) for the personal consumption of the Concessionaire or its employees, only where undertaking the activity in paragraph (b);
- (d) The carriage of persons, supplies, equipment, firearms, ammunition, or other things that may be used for the purposes of paragraph (a) or paragraph (b) or paragraph (c);
- (e) The use of aircraft to facilitate the offloading of recovered deer to a refrigerated truck or similar vehicle transport.

In addition to these activities, there is an expectation that FWF would report on the outcomes of the Foundation's WARO activities, including harvest data, complete with track logs which detail timing, number, location of landings, number of passengers in the aircraft and purpose of all aircraft landings (as per General Provision 33. e) of the Fiordland National Park Management Plan (FNPMP) 2007).<sup>1</sup>

In terms of frequency, generally venison processing plants can take deer in multiples of 36. On average it would require around 20-25 trips to complete recovery for the season. On top of this we would undertake on average 10 trips for culling and leaving purposes.

Approximately, 50% of the recovery trips would be in the Glaisnock Wilderness area, with approximately 40 % of culling trips being in the Glaisnock Wilderness area.

The Murchison Mountains buffer zone area would involve around 4 trips per year, this purely depending on the population of deer building up outside the Wapiti area.

The Wapiti area and surrounding area is very remote, and human interaction is extremely minimal. Fiordland national park has extreme weather, and recovery is undertaken when

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<sup>1</sup> [Fiordland National Park Management Plan - June 2007 \(final published version\)](#)

conditions suite. Recovery happens mainly in late winter and early spring where we aim to take most of the deer. Then remaining balance of deer are killed in early to mid-winter.

Weekends are avoided if possible - on average around four weekend days per year.

**REQUEST FOR:** a more complete description identifying the places where the proposed activity will be carried out, including the land status of those places (as identified in the Fiordland National Park Management Plan)

The application includes three distinct areas of Fiordland National Park, as per the map hosted at [fiordland-wapiti-foundation-proposed-war0-areas-including-cull-buffer.pdf](#). These are:

- **Wapiti Area** – an area managed by the FWF under a community agreement made under the Conservation Act 1987 between the Director-General (D-G) of Conservation and FWF (hereinafter ‘community agreement’), which includes the Glaisnock Wilderness Area and parts of the Western Remote visitor setting.
- **Takahē Specially Protected Area (Murchison Mountains)** – an area established to provide protection for the last remaining population of Takahē within Fiordland National Park, and which is mentioned in the community agreement. The area is set apart as a specially protected area under section 12 of the National Parks Act 1980. The part of the Takahē Specially Protected Area that is included in the application is a small part of the wider Specially Protected Area, which sits along the boundary of the Wapiti Area.
- **WARO ‘Restricted’ Area** – an area of Fiordland National Park not under any specific management regime, where WARO represents the main form of wild animal control. The area covered in the application is a small part of this wider area, along the boundary of the Wapiti Area.

The above areas include lands classified as ‘restricted’ and ‘not permitted’ under the ‘Land assessment as approved by decision maker - WARO 2023 INFORMATION ONLY’ (see: [waro-2023-map-index.pdf](#)).

A WARO concession issued by DOC is needed for national WARO in the areas where commercial WARO is ‘restricted’. The areas listed as ‘not permitted’ prohibit fully competitive, commercial WARO. This includes the Wapiti Area and the Takahē Specially Protected Area. This does not preclude consideration of more limited, targeted WARO.

The area covered under the community agreement includes the Glaisnock Wilderness Area, Takahē Specially Protected Area and parts of the Western Remote visitor setting.

**REQUEST FOR:** a description of—

- (i) the potential effects of the proposed activity; and
- (ii) any actions that the applicant proposes to take to avoid, remedy, or mitigate any adverse effects of the proposed activity relative to the places.

Descriptions of the proposed activity are included in the following sections of the relevant statutory documents:

Southland Murihiku Conservation Management Strategy (CMS) 2016:



- Section 3.6 Aircraft (pages 142-143): “[...] aircraft (particularly powered aircraft) activity—including scenic flights and remotely piloted aircraft that do not involve landings—can have adverse effects on public conservation lands and waters, including on its users, impacting on values such as amenity, natural quiet, wildlife and remoteness. Effects most often relate to the presence, behaviour and frequency of the activity, and for powered aircraft their noise characteristics. Aircraft landings can also cause conflicts between people and their activities where some have used aircraft for access and others have not.”

#### Fiordland National Park Management Plan 2007

- Section 5.5.1 Aircraft Access to Fiordland (general) (page 201): “The adverse effects of aircraft access may include noise, visual intrusion, loss of remote experience, social conflicts, and conflicts with Ngāi Tahu cultural values.”

Other adverse effects include:

- Concerns around public safety
- Actual or perceived disturbance to recreational hunters and other users
- Other users finding concentrated dumping of ‘gut bags’
- Possible contamination of waterways from ‘gut bags’ dumped nearby

In addition to the above negative effects which are possible, the proposed activity also has the potential to:

- contribute to the “... concerted action to control wild animals (to achieve the purposes of the Wild Animal Control Act 1977)” (page 160 of the CMS)
- Increase the rate of removal of deer compared to control efforts on land.
- Reduce browse by deer species on flora in the areas targeted.

In terms of actions that FWF proposes to take to avoid, remedy, or mitigate any adverse effects of the proposed activity relative to the places, this could include the following:

- Timing WARO for outside holiday seasons and weekends, where possible, to limit the chances of encountering visitors to the area.
- No WARO during the wapiti bugle period.
- Where possible, fly at heights that minimise the impacts on natural quiet, fauna and flora.
- Land in areas which are relatively open and where impacts on landscapes will be minimal and/or only in areas stipulated in any concession.
- Increase the efficiency of effort by targeting areas where numbers are known to be relatively high.
- Aim to undertake as much of the WARO as possible between 1 October to 30 November, when deer hunting is most effective (as noted on page 212 of the FNPMP)
- Landings near tracks, huts and car parks will be avoided.
- Tūtoko Tōpuni areas will be avoided (as per section 2.2 Responsibilities Under the Ngāi Tahu Claims Settlement Act 1998)

FWF notes that if any values are being adversely impacted, the Department could reduce the number of landings stipulated in a WARO concession and/or amend/terminate the concession.

**REQUEST FOR:** an explanation as to why the proposed WARO activity should be allowed where commercial WARO is prohibited (under the national WARO Land Schedule) and how you will minimise conflict with national WARO within the proposed overlapping 'buffer'.

All of the area covered under the community agreement is part of the area where national WARO is not permitted. This is due to the national WARO process recognising the FWF community agreement. The community agreement includes deer control targets which would be challenging to achieve without commercial WARO or otherwise significant financial support. The commercial WARO would form part of the wider suite of deer control activities that would be employed in the area under the community agreement. Contracting a commercial WARO operator under an FWF permit would ensure appropriate expertise in operation.

Over the last several years the department of conservation has been culling deer in the buffer zone. This shows that the area has been missed in management or under managed by WARO. So, conflict with national WARO has never been the issue.

There are only 4 known WARO concession holders who currently work in Fiordland. The FWF have relationships with them all, and simple communication would happen. This has been the method that has worked for decades.

The Helicopter companies that are currently managing the Wapiti area, historically when the venison markets were strong, they are the main two who historically would do the deer recovery in the buffer zone.

It would be communicated to WARO concession holders that the FWF would manage these buffer zones. This will push them to other areas that need management. Better outcomes for FNP.

I need to emphasize. This is about conservation outcomes. I also need to remind that deer management in the 1.2 million ha of Fiordland National Park has been at a minimal for 20-years. Most New Zealanders likely support deer removal from FNP. Perhaps this question should be asked of New Zealand's public.

Deer that are killed will be recorded, noting that this is a requirement under WARO in FNP.

#### **ADDITIONAL INFORMATION**

While this information was not specifically asked for in the application form, the reasons for FWF's application for a ten-year term is because:

- FWF have been undertaking deer management in Fiordland for 20 years, and having the permit for 10 years would allow FWF to secure the necessary resources, and plan management activities and any associated infrastructure/facilities that might be needed over the medium-longer term.
- The term of the community agreement is 5 years, with a right of renewal subject to full compliance with the terms of the agreement.
- The permit could be cancelled/amended during the 10-year term if conditions change; for example, if FWF had no agreement in place for it to undertake management activities in the Wapiti area and/or Takahē Specially Protected Area or was not meeting the conditions stipulated in the concession.

The Fiordland Wapiti Foundation advise that we are seeking authorisations to undertake the following management activities covered under the existing community agreement titled 'Fiordland Wapiti Foundation Predator Control, Deer Management and Hut Maintenance, Fiordland National Park' dated 6 August 2022, namely:

- o Use helicopter and recreational ground hunting to manage the deer and chamois population in the wapiti area with the purpose of mitigating their environmental impacts and allow the regeneration of browsed indigenous flora.
- o Manage and deliver the annual Wapiti Ballot, which includes the collection of animal management fee for the sole purpose of managing deer impacts and herd structure in the Site.
- o Collect an administration fee in association with the Annual Wapiti Ballot to cover the cost of managing and funding the annual ballot and associated conservation projects.
- o Fund, install and maintain predator control network targeting stoats using double set DOC150/200s or agreed equivalent in writing.
- o Undertake light vegetation cutting to enable the placement of traps and improve travel along traplines. Noting the amount of cutting would be very minimal.
- o Undertake ongoing maintenance of the following backcountry huts to the Department of Conservation Service Standard for 'Standard Huts' for public use. Work required will be largely driven by DOC's hut inspections:
  - Worsley Hut
  - Glaisnock hut
  - Lake Hankinson Hut
  - Lake Thompson Hut
  - Junction Burn hut
  - George Sound Hut
  - Junction Burn hut
- o Other conservation activities as agreed between the Foundation and the Department through an annual work plan, or in writing.
- o Occasional media and promotional activities.
- A note that unless otherwise specified, the activities would take place in the area defined in the existing community agreement.
- Some activities are likely to require a concession, for which it would be helpful to have further information:
  - o **Management and delivery of the annual wapiti ballot.** No specific form is available for this activity, therefore consider providing:
    - Description of activity--Due to demand and safety. Every March and April, 25 hunting blocks are split into four 10-day periods for the Wapiti rut, and hunters enter a lottery to win a block.
    - Approximate dates for the activity each year--Ballot applications are typically accepted from August to October, with the draw held in early November. Please note that these dates are subject to change due to other social or hunting events occurring in New Zealand around the same time.

- Approximate Wapiti ballot hunting dates 20<sup>th</sup> of April to May 31.
- Term of concession (e.g. 10 years)

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o **For photography and filming of FWF's activities in the wapiti area,**

where the primary purpose of the material is for the sole use of the Foundation to promote their management activities.

- Description of activity—Filming is considered to have less impact than normal hunting and tramping and does not significantly differ from standard activities, aside from the presence of filming equipment. Filming would take place during–WARO activity, Predator trap check, Hut restoration, Hunting, General tramping conditions. Filming these activities will promote conservation and support the FWF's efforts to secure funding and public acceptance. If filming increases aircraft activity or overall impacts beyond normal day-to-day levels in the Wapiti area, a one-time filming permit can be applied for.
- Approximate frequency. Four times per year.
- Term of concession (e.g. 10 years)

Others:

1. We propose incorporating the use of drones for deer management purposes and scientific research. We want to ensure that all tools are on the table to ensure we are using the most up to date technology.

1. We propose including deer capture and release for scientific research.

30/04/2025

Helicopter company undertaking the activity.

The Wapiti Foundation will contract helicopter companies with current WARO concessions for deer management activities. This may be one of three companies operating in the Fiordland area.

Thanks

Roy Sloan



Department of Conservation  
*Te Papa Atawhai*

## COMMUNITY AGREEMENT

(pursuant to section 53(2)(i) Conservation Act 1987)

**AGREEMENT NAME: Fiordland Wapiti Foundation Predator Control, Deer Management and Hut Maintenance, Fiordland National Park**

This agreement is made this 06~~xx~~ day of August 2022 of MONTH YEAR

### PARTIES:

1. Fiordland Wapiti Foundation Incorporated ('the Foundation')
2. Director-General of Conservation ('the Director-General')

### PREAMBLE

- A. The Department of Conservation Te Papa Atawhai ('the Department') is responsible for managing and promoting conservation of the natural and historic heritage of New Zealand on behalf of, and for the benefit of, present and future New Zealanders. It also has a responsibility under Section 4 of the Conservation Act 1987 to interpret and administer the conservation legislation to give effect to the principles of the Treaty of Waitangi to the extent that it applies to this conservation activity.
- B. To perform its functions, the Department seeks to collaborate and work with others recognising that New Zealanders want to connect with and contribute their expertise to restore and protect their unique natural environment, historic and cultural heritage.
- C. The Fiordland Wapiti Foundation has been funding and undertaking animal control activities in the Wapiti Area of Fiordland National Park since 2005. Specifically funding and undertaking deer impact and herd management, predator control targeting stoats and rats, and infrastructure upgrades in the Glaisnock Wilderness Area and some parts of the Western Remote visitor setting (Wapiti Area) of Fiordland National Park.
- D. The parties have entered this Agreement in a spirit of collaboration to make a difference for conservation. Under section 53(2)(i) of the Conservation Act 1987, the Director-General has the power to enter into agreements with community groups to carry out conservation activities on public conservation land.

Group/Organisation's  
initials

Director-General's  
initials

- E. The parties wish to record the terms and conditions of their collaborative working relationship in this Agreement and its Schedules. The Foundation will carry out the activity subject to the terms, conditions and Schedules of this Agreement.

## Schedule 1

### SPECIFICS OF AGREEMENT

#### Section A

**Intent:** To plan, fund and undertake predator and wild animal control in the Wapiti Area and adjacent identified buffers of Fiordland National Park through the coordination of recreational hunters, contractors and volunteers.

To fund and manage the maintenance of six backcountry huts in the Wapiti Area.

The primary aims are to:

- Achieve a level of deer control within the Wapiti Area that allows for the regeneration of browsed indigenous flora.
- Remove 120 deer per annum from the Murchison Mountains
- Administer and coordinate the Annual Wapiti Ballot
- Suppress stoat levels to support the long-term survival of native fauna.
- Ensure backcountry huts are maintained to the required DOC standard for public use.

#### Section B

##### The Site:

Name and Location: Glaisnock Wilderness Area, Murchison Mountains Special Protected Area and parts of the Western Remote visitor setting ('Wapiti Area')

Land status: National Park

Area: Southern South Island

Legal description: Fiordland National Park

Map reference: Appendix 1

#### Section C (Refer clause 2 Schedule 2)

##### Agreement term:

5 years

Commencing on: 1st July 2022

Expires on: 30 June 2027

Right of renewal subject to full compliance with the terms of this Agreement: YES

Final expiry date: 30 June 2032

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## Section D

### Special Conditions (including specific exclusions):

Special Conditions for this Agreement are contained in Schedule 3 (including any specific health and safety matters).

The parties have agreed to work together as follows:

### Section E (Refer clause 1 Schedule 2)

#### Activity:

#### E.1 The agreed scope of work to be carried out by the Foundation is:

- Use helicopter and recreational ground hunting to manage the deer population in the Site with the purpose of mitigating their environmental impacts and allow the regeneration of browsed indigenous flora.
- Use helicopters to remove a minimum of 120 deer per annum from the Murchison Mountains
- Manage and deliver the annual Wapiti Ballot, which includes the collection of animal management fee for the sole purpose of managing deer impacts and herd structure in the Site.
- Collection of an administration fee in association with the Annual Wapiti Ballot to cover the cost of managing and funding the annual ballot and associated conservation projects.
- Fund, install and maintain predator control network targeting stoats using double set DOC150/200s or agreed equivalent in writing. Traps to be marked with pink triangles with GPS locations recorded and traplines with blue triangles.
- Light vegetation cutting to enable the placement of traps and improve travel along traplines. The amount of cutting should be very minimal.
- Changes to trapping technology may result in the current approved traps becoming obsolete or requiring modification, the Foundation and DOC will work together to develop a plan for phasing in/modifying traps.
- The ongoing maintenance of the following backcountry huts to the Department of Conservation Service Standard for 'Standard Huts' (Appendix 3) for public use. Work required will be largely driven by DOC's hut inspections:
  - Worsley Hut
  - Glaisnock hut
  - Lake Hankinson Hut
  - Lake Thompson Hut
  - George Sound Hut
  - Caswell Sound Hut

#### E.2 The Foundation's obligations:

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### E.2.1 Ungulate Management

- Provide the DOC Te Anau District Office, prior to 1 July of the commencing financial year, with an annual (1 July – 30 June) Wapiti Area Deer Management Plan for approval by DOC as part of the Annual Work Plan. If DOC deems these targets ineffective it reserves the right to specify management targets in order to achieve this. The animal control plan must include:
  - Deer harvest targets
  - Methods of management including timing, frequency and demographic targets
  - Deer monitoring activities
  - Recreational hunting
- Set annual harvest targets for deer numbers in the Wapiti Area to meet the goal of allowing for the maintenance and regeneration of indigenous browsed flora. If DOC deems these targets ineffective it reserves the right to specify management targets in order to achieve this.
- Control a minimum of 120 deer per annum (1 July – 30 June) from the Murchison Mountains Special Area (see map Appendix 1).
- Control all chamois encountered at the site during aerial control activities.
- Use authorised concessionaires when engaging aircraft operators and advise the Director-General of any changes in operator use.
- Ensure recreational hunters used to carry out ground control within the Wapiti Area hold a current firearms license and correct hunting permits.
- Record all GPS waypoints of all deer and chamois shot, sighted or captured while conducting the Activity. In conjunction with GPS waypoints, sex and age class data of individuals or groups of deer will be recorded. This data shall be retained for the whole term of agreement.
- In addition to the above, supply photo evidence of all animals shot in the Murchison Mountains
- Supply the Director-General with electronic files of GPS flight track logs and waypoints of deer and chamois controlled within 5 working days of the activity occurring.

### E2.2 Predator Control

- Service all traps following current best practice standards at a minimum 8 times per annum (Appendix 2).
- Maintain traps to ensure they are functioning properly. This will involve cleaning traps of dead animal material, removing vegetation/debris from entrance, setting off unsprung traps and testing all traps yearly for correct spring off weight to ensure they are well maintained (Appendix 2).
- Notify DOC within 24 hours if any non-target species are caught in traps (e.g. kea).
- Possum Control in the Nitz Creek Project Site.

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- In the event a contractor is employed to carry out predator control work under this Agreement, the Foundation will review and accept the contractor's health and safety plan prior to the contractor undertaking any work.
- In the event a contractor is employed to carry out predator control work under this Agreement, the Foundation will track and evaluate if the work being done by the contractor is achieving planning outputs and outcomes.
- Ensure the placement of temporary signs relating to predator control work are located in areas where members of the public may encounter equipment and/or hunters.

#### E2.3 Hut and campsite maintenance

- Co-ordinate the hut management works programme, ensuring significant time, efforts and expertise of people are contributing to the undertaking of each work project. Ensure all work is completed to relevant standards and legislation.
- Ensure backcountry huts are maintained and repaired, as required, for public use. This will involve painting and maintaining each hut so they are weatherproof and in a reasonable state of repair.
- Ensure high use campsites are kept rubbish free and disturbance to the sites minimal
- Secure funding for the associated costs of hut and campsite management, including materials, rubbish disposal costs and transportation.
- Provide maintenance reports (including before and after photographic evidence) to the Director-General of the work completed on each hut management trip.
- Consult with DOC regarding any new projects that are proposed by the Foundation that aren't currently described within this Agreement.

#### E2.4 Health and Safety

- Ensure effective monitoring of volunteers to support the health and safety management of all individuals involved in trips.
- Report any incidents incurring serious injury to DOC within 24 hours and within 3 days for near miss incidents, unsafe practices and less serious incidents.
- Advise DOC of any adverse natural events (e.g. tree fall, slips) that the Foundation becomes aware of at the Site that might endanger members of the public or infrastructure.
- Ensure the team lead connects with DOC Te Anau District avalanche team prior to all trips outside of the summer season to gain guidance on avalanche conditions and ensure all field work participants have appropriate avalanche awareness. The summer season is roughly defined as December – May. The DOC Te Anau District avalanche team operate from May/June till end of November and will contact the Foundation when they begin and finish for the season.

#### E2.5 Media

- Seek prior approval from DOC before:
  - Making any statement publicising a project under this Agreement;

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- Making any statement regarding its relationship with DOC, including showing images relating to DOC; and/or
- Using DOC logos and/or brand.
- Annual approval can be sought via the submission of specific media and promotional proposals as part of the annual plan submission process.

#### E2.6 Annual Wapiti Ballot

- The Foundation is authorised to run and manage the Annual Wapiti Ballot on behalf of DOC.
- Any changes to the Annual Wapiti Ballot must first be submitted to the Operations Manager, Te Anau District by 1<sup>st</sup> July in the year preceding the changes. A decision will be provided by the DOC within 20 working days.
- The Annual Wapiti Ballot includes:
  1. Managing the application process for hunters and ballot membership.
  2. Drawing the ballot at random without bias using an automated system and notifying successful individuals and parties.
  3. Allocating vacancies as a result of cancellations in the same sequence as in the bugle ballot to applicants who entered and failed to obtain a block in the original ballot.
  4. Dividing the bugle into four ten-day periods.
  5. Limiting the maximum number of hunters permitted on a block at any one time to six.
  6. Advising the public of the Wapiti Area closure periods. Closure dates are from the 31<sup>st</sup> December until the start of the Wapiti Ballot.
  7. Encourage all hunters involved in the Annual Wapiti Ballot to abide by a code of conduct that includes, but is not limited to:
    - a. All rubbish must be carried out of the Park.
    - b. Bird data return must be filled the FWF app.
    - c. Correctly filled out kill returns.
    - d. Correct identification data of kills must be returned including head measurements and photo.
    - e. All kills must be loaded to the FWF app.
    - f. All sightings of live animals must be loaded to the FWF app.
  8. Advise that failure to follow the codes of conduct will result in the loss of Ballot membership as determined by the Foundation committee.
  9. Ability to recommended refusal of hunters/parties' inclusion to a current or future ballot. Refusal must be based on not meeting conditions of permit and ballot codes of conduct. Recommendations must be submitted to the Operations Manager for approval.
  10. Brief hunting parties before each period prior to hunters entering a block. Attendance to the briefing is compulsory for all members of a party and is when hunting permits are to be issued.

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11. Request for DOC staff support and materials for the ballot will be made no less than 20 working days in advance.

### E.3 The Director-General's obligations:

- Undertake a programme to monitor vegetation and deer impacts, and report on the outcomes of the Foundation's pest control activities. In particular, to determine whether indigenous flora in the Wapiti Area are being impeded or enhanced by the Foundation's management activity.
- Provide administrative support (e.g. data analysis and map production) if requested, at the discretion of the Director-General.
- Provide operational support (e.g. chainsaw operator) if requested, at the discretion of the Director-General.
- Provide technical support and staff expertise on matters such as complying with best practice guidelines, managing helicopter loading operations, and the use of equipment such as roofing ladders for huts.
- Undertake annual who river surveys of all rivers that the Foundation are carrying out predator control near.
- Advise the Foundation of any adverse natural events at Site during the term of this Agreement or any planned DOC activity relating to the Site.
- Carry out ongoing inspection regime of the huts and feed all identified work into the Foundation's hut management works programme.
- Supplying paint for huts, sourced through the 'Protecting our Place' campaign partnership agreement with Dulux.
- Carry out annual vegetation clearance and toilet waste disposal for these huts, in conjunction with the Foundation.
- Schedule an annual review with the Foundation to discuss and evaluate the progress of work being done and the implementation of the activities in this Agreement.
- Provide a conservation plan prior to any work being completed on actively managed historic huts, ie Caswell Sound Hut

E.4 Foundation will consult with and get written approval from the Director-General regarding any new projects it proposes to undertake which are not currently described in this Agreement.

## Section F

### Consultation with iwi, hapū and whānau:

F.1 The Foundation is mindful that iwi, hapū and whānau have a role as kaitiaki of natural and cultural resources on public conservation land and waters and will be guided by the Director-General as to when consultation might be appropriate.

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F.2(a) The Director-General will advise the Foundation where there are specific provisions under a Treaty of Waitangi Partnership or Accord or where there are Treaty settlement obligations under a Deed of Settlement or Deed of Recognition with implications for the Activity.

F.2(b) The Director-General will consult with the relevant post Treaty settlement governance entity where applicable.

F.2(c) The Director-General will provide advice and support to the Foundation to consult with iwi, hapū and whānau as appropriate.

## **Section G (Refer clause 5 Schedule 2)**

### **Operating procedures, guidelines, standards:**

G.1 The Foundation must either follow the Director-General's Standard Operating Procedures, guidelines or standards communicated to it by the Director-General or may follow its own operating procedures that have been accepted by the Director-General, namely: *[List if applicable]*

G.2 (a) The Director-General will provide to, and discuss with, the Foundation the relevant sections of the Director-General's Standard Operating Procedures (SOPs), guidelines and standards that apply to the conduct of the Activity, including any new and updated SOPs, guidelines and standards during the term of this Agreement.

G.2 (b) The following operating procedures, guidelines or standards apply to the Activity being undertaken by the Foundation on the Site.

- Best practice for trapping (Appendix 2)
- Leave No Trace ([www.leaveonotrace.org.nz](http://www.leaveonotrace.org.nz)), of particular note is that toilet waste and animal waste will not be buried within 50 metres of any water source.
- Ministry for Primary Industries Check, Clean, Dry cleaning methods to prevent the spread of Didymo ([www.biosecurity.govt.nz/didymo](http://www.biosecurity.govt.nz/didymo))
- Department of Conservation Service Standard for 'Standard Huts' (Appendix 3)
- Chainsaw Use SOP

## **Section H (Refer clause 6 Schedule 2)**

### **Health and Safety:**

H.1 The Director-General and the Foundation are committed to working together to ensure, so far as reasonably practicable, that safety hazards and risks related to the Activity are identified, assessed and managed.

H.2(a) The Foundation has agreed to comply with the Director-General's safety requirements to provide, as far as reasonably practicable, a safe working environment for its members and other participants while carrying out the Activity.

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H.2(b) The Foundation must notify the Director-General of any adverse natural events, hazards or activities on the Site or the surrounding area of which it becomes aware during the term of this Agreement which may affect the Foundation's activities or public safety on the site.

H.3(a) The Director-General will identify and specify in the Special Conditions in Schedule 3 any:

- (i) place within the Site that may be outside the scope of this Agreement;
- (ii) equipment or tools that cannot be used unless otherwise agreed in writing by the Director-General.

H.3(b) The Director-General will advise the Foundation of any adverse natural event or hazards on the Site that the Director-General becomes aware of, or any planned activity relating to the Site that may affect/impact on the Foundation's activities or safety on the Site.

## **Section I (Refer clause 7 Schedule 2)**

### **Insurance:**

I.1 (a) Where the Foundation can be covered by the insurance cover under the Director-General's General Liability Policy for third-party personal injury and property damage it agrees to accept that cover and abide by the conditions outlined in this Agreement.

I.2 The Director-General agrees to insure the Foundation under the General Liability Policy held by the Director-General to carry out the Activity on the Site, subject to conditions as outlined in this Agreement.

## **Section J**

### **Monitoring and reporting:**

J.1 (a) The Director-General and the Foundation will meet at a minimum once per annum to review progress against conservation outcomes and discuss current and future hut maintenance work. A nominated DOC representative will also attend the Foundation's governance meetings.

J1 (b) The Foundation are to give quarterly updates on activities to the appointed representatives within the Agreement. Variations to the frequency of these updates can occur through written agreement between the parties. Updates should come in the form of scheduled meetings.

J.2(a) In each year during the term of the Agreement, the Foundation will keep a record of the number of volunteers and workday equivalents (8 hours including travel) involved in undertaking the Activity and will share the data collected with the Director-General.

J.2(b) The Foundation will also provide the following information requested by the Director-General:

- Accurate trapping records to be kept and entered into 'Trap NZ'
- Deer sightings and harvest data including track logs

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J.3 The Director-General will use the information supplied under this provision by the Foundation in a report to Government on voluntary contributions to conservation.

## Section K

### Communications:

K.1 The Director-General and the Foundation have appointed the following persons to communicate on their behalf on all matters relating to this Agreement:

For the Foundation:

Name: [REDACTED]

Position: President

[REDACTED]

For the Director-General:

Name: Tony Preston

Position: Principal Ranger, Biodiversity

[REDACTED]

For the Director-General (Hut Maintenance):

Name: Grant Tremain

Position: Principal Ranger, Recreation/Historic, Fiordland District

[REDACTED]

If the appointed representative for either party changes, the affected party will notify the other party of the change as soon as practicable.

#### GROUP/ORGANISATION

SIGNED for and on behalf of

The Fiordland Wapiti Foundation Incorporated:

By [REDACTED] (President)

#### DIRECTOR-GENERAL OF CONSERVATION

SIGNED by John Lucas

Operations Manager (Te Anau District)

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| Group/Organisation's<br>initials | [REDACTED] | Director-General's<br>initials |  |
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pursuant to an Instrument of Delegation dated  
**INSERT DATE** from the Director-General of  
Conservation:



*[Signature]*

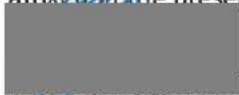
Address: DOC Te Anau, Lakefront Drive, Te  
Anau 9640

Phone number: +64 027 295 7395

Email: jlucas@doc.govt.nz

OR

The seal of *[insert name of Incorporated Society]* was  
affixed in the presence of:



Authorised Signatory

**Note:**

- A copy of the Instrument of Delegation may be inspected at the Director-General's office at 18-32 Manners Street, Wellington 6011.

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| Group/Organisation's<br>initials |  | Director-General's<br>initials | <i>[Signature]</i> |
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## Schedule 2

### STANDARD TERMS AND CONDITIONS

**Clauses 1 to 5 outline the expectations for carrying out the Agreed Activity**

**1 Agreed Activity**

- 1.1 The Foundation is authorised to carry out the Activity (described in **Section E of Schedule 1**) in accordance with this Agreement, subject to any consents that may be required to undertake the Activity.
- 1.2 The Foundation will:
- (a) exercise reasonable skill, care and diligence in carrying out the Activity;
  - (b) take responsibility for the actions and omissions of its workers (including volunteers and contractors) and others who carry out the Activity under its direction and control;
  - (c) not commence the Activity until the Agreement has been signed by both Parties and the Safety Plan has been reviewed and accepted by the Director-General in accordance with clause 6.4 of this Schedule.
- 1.3 Where this Agreement requires the Director-General to exercise discretion or give any approval or provides for any other actions by the Director-General in relation to the Activity, the Director-General will act reasonably and within a reasonable timeframe.

**2 Term of Agreement**

- 2.1 This Agreement commences and expires on the dates set out in **Section C of Schedule 1**.
- 2.2 If **Section C of Schedule 1** provides for a right of renewal and if the Foundation has, in the opinion of the Director-General, complied with all the terms and conditions of this Agreement, the Director-General will offer the Foundation a renewal of this Agreement on the same terms or on any amended terms agreed between the parties (but excluding the right of renewal) for a further period agreed between the parties. The Director-General will provide three (3) months' written notice to the Foundation of his/her offer.
- 2.3 The Foundation may accept the offer of renewal by written confirmation to the Director-General prior to the expiry of the term, in which case, the Agreement will be renewed and will then expire on or before the Final Expiry Date set out in **Section C of Schedule 1**.

**3 Director-General Approvals**

- 3.1 The Foundation must not transfer this Agreement to another party or allow another party to carry out the Activity without the prior written consent of the Director-General. The Director-

Group/Organisation's  
initials

Director-General's  
initials



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General may choose to decline his/her consent under this clause or to grant consent subject to conditions.

- 3.2 Any changes to the Activity or to the boundaries of the Site or any intent to erect, alter or bring on to the Site any structure not authorised by this Agreement or alter the Site in any way will require a written Variation to the Agreement entered by both Parties and be subject to any consents that may be required to undertake the Activity.
- 3.3 In giving approval under clause 3.2 of this Schedule, the Director-General may impose any reasonable terms and conditions that the Director-General considers appropriate; and may also decline the grant of such approval after consideration of the relevant conservation values, environmental effects and safety issues.

#### 4 Protection of Conservation Values

- 4.1 The Foundation must take every care to avoid damaging indigenous flora and fauna or the habitat of indigenous fauna when carrying out the Activity.
- 4.2 The Foundation must take every care not to transfer unwanted organisms such as weed seeds or pathogens or pests such as argentine ants and plague skinks (as listed under the Biosecurity Act 1993) in carrying out the Activity.
- 4.3 The Foundation must ensure it does not cut down vegetation; nor damage any natural feature or historic resource on the land; or light any fire on the Site without the prior written approval of the Director-General or except where permitted by this Agreement.

#### 5 Compliance

- 5.1 In conducting the Activity the Foundation must comply where relevant with all statutes, regulations, by-laws or other enactments, or any Conservation Management Strategy or Plan affecting or relating to the Site and facilities or affecting or relating to the Activity as well as the procedures, guidelines and standards set out in **Section G of Schedule 1** and all other reasonable notices and directions of the Director-General. The Director-General may in his/her discretion appoint a person to monitor and review compliance of these requirements.
- 5.2 A breach or contravention by the Foundation of any provision referred to in clause 5.1 is deemed to be a breach of this Agreement.
- 5.3 If there is a breach or default of any provision in clause 5.1 of this Schedule by the Foundation, the Director-General will to give notice to the Foundation of the breach or default and provide a reasonable opportunity for the Foundation to remedy the breach or default.
- 5.4 The Director-General may elect to remedy any default at any time after giving notice, if practicable, to the Foundation in terms of clause 5.3 of this Schedule. All reasonable costs and expenses incurred by the Director-General in remedying or attempting to remedy such default must be paid by the Foundation to the Director-General, if demanded.

**Clauses 6 and 7 cover management of health and safety and insurance requirements**

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6 Health and Safety

- 6.1 The Foundation must exercise the rights granted by this Agreement in a safe and reliable manner to provide and maintain, as far as is reasonably practicable, a safe working environment for its members (including any employees, volunteers and contractors) while carrying out the Activity.
- 6.2 The Foundation must appoint a person or persons to take responsibility for health and safety with whom the Director-General will communicate and deal on all health and safety matters relating to the Activity.
- 6.3 The Foundation must:
- (a) ensure that its members (including any volunteers and contractors), agents, and invitees are competent to carry out the work and will receive appropriate supervision when carrying out the Activity.
  - (b) ensure that all contracts between the Foundation and any contractor contains, at a minimum, the same requirements as clauses 5.1 and 6.4 of this Schedule.
  - (c) unless otherwise agreed, take its share of responsibility for the safety of members and the public while carrying out any activity on site.
- 6.4 The Foundation must:
- (a) prepare and provide to the Director-General a Safety Plan which meets the Department's requirements relating to the Activity.
  - (b) not commence the Activity until the Safety Plan has been reviewed and accepted by the Director-General.
  - (c) schedule an annual review of its Safety Plan, and if any amendments are made ensure these are reviewed and accepted by the Director-General. This review is in addition to any review required by the Director-General under clause 6.6 of this Schedule.
- 6.5 The Director-General will:
- (a) check and provide advice to help the Foundation complete or improve its Safety Plan.
  - (b) support the Foundation to be able to identify and manage risks associated with the Activity.
- 6.6 If, in the opinion of the Director-General, or on notification by the Foundation to the Director-General of a safety incident or risk on the Site, circumstances warrant a review of the Safety Plan, the Foundation must review the Safety Plan and, the Director-General must, where appropriate, review and accept it. The Foundation must carry out the Activity in accordance with any amendment(s) to, or replacement of, the accepted Safety Plan.
- 6.7 The Foundation must:
- (a) take all practicable steps to protect the safety of all persons present on the Site, including eliminating any dangers to the public caused by the Foundation's activities and erecting signs warning the public of any dangers that remain and of which the Foundation is aware.

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- (b) record and report to the Director-General any notifiable event as defined by the Health and Safety at Work Act 2015, such as a death or an injury which requires immediate hospitalisation or collapse of a structure that exposes people to serious risk, within 24 hours of its occurrence and within 3 days for less serious incidents.
- (c) be satisfied that any facility or equipment provided by the Director-General to enable the Activity to be carried out meet the safety requirements of the Foundation and if not, advise the Director-General accordingly.
- (d) not bring on to the Site or any land administered by the Department any dangerous or hazardous material or equipment which is not required for purposes of the Activity; and if such material or equipment is required as part of the Activity, the Foundation must take all practicable steps to ensure that the material or equipment is treated with due and proper care.

## 7 Insurance

7.1 The Director-General's General Liability Insurance Policy covers the Foundation for third-party personal injury and property damage associated with all or part of the Activity it carries out on the Site if:

- (a) The Foundation has a Safety Plan in place for the Activity accepted by the Director-General in accordance with clause 6.4 of this Schedule and the Foundation, its contractors, clients and invitees, comply with the Director-General's Standard Operating Procedures and guidelines and standards listed in **Section G of Schedule 1** and the Safety Plan accepted by the Director-General when carrying out the Activity.

OR

- (b) The Foundation, its contractors, clients and invitees follow their own operating procedures and Safety Plan accepted by the Director-General.

7.2 Where the Foundation has its own insurance cover:

- (a) The Foundation will indemnify the Director-General against all claims, action, losses and expenses of any nature by any person arising from the Foundation's conduct of the Activity.
- (b) The Foundation has no responsibility or liability for costs, loss or damage arising from any act or omission or lack of performance by the Director-General or any contractor or supplier or employee or agent of the Director-General.
- (c) The two parties must review the insurance cover as part of the annual monitoring and reporting provided for in **Section J of Schedule 1**, and if necessary, the Director-General may require the Foundation to alter the amount and/or type of insurance or to take out additional insurance.

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Clauses 8 to 10 outline the process for suspension and termination of the Agreement, and the resolution of dispute

8 Suspension of Agreement

8.1 The Director-General may suspend this Agreement in whole or in part where:

- (a) in the Director-General's opinion, there is a temporary risk to public safety or to any natural or historic resource, howsoever arising; or
- (b) there has been a serious breach of the terms of this Agreement.

8.2 Any suspension imposed under clause 8.1 of this Schedule may be lifted when, in the opinion of the Director-General:

- (a) risks to public safety or natural and historic resources caused by natural events or activities have been remedied or mitigated
- (b) risks to public safety or natural and historic resources caused by the activities of the Foundation have been eliminated, remedied or mitigated by the Foundation
- (c) the Foundation has rectified, remedied or mitigated any serious breach of the terms of this Agreement to the Director-General's satisfaction.

9 Termination of Agreement

9.1 The Foundation may surrender this Agreement, either in whole or in part, with 14 days' written notice to the Director-General subject to any conditions the Director-General considers reasonable and appropriate.

9.2 The Director-General may terminate this Agreement either in whole or in part by 14 days' written notice to the Foundation or such sooner period as appears necessary and reasonable to the Director-General where:

- (a) the Foundation breaches any terms of this Agreement that, in the Director-General's opinion, is capable of being rectified; and the Director-General has notified the Foundation of the breach; and the Foundation does not rectify the breach within 14 days of receiving notification, or such other time as specified by the Director-General.

OR

- (b) where the Foundation breaches any terms of this Agreement and in the opinion of the Director-General the breach is not capable of being rectified.

OR

- (c) where the Foundation ceases to conduct the Activity, or conducts it in a manner unacceptable to the Director-General.

OR

- (d) where the Foundation is convicted of an offence under legislation affecting or relating to the Site or Activity.

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- 9.3 The Director-General may terminate this Agreement immediately without notice where:
- (a) any of the events leading to a suspension of the Agreement under clause 8 of this Schedule cannot be remedied to the satisfaction of the Director-General; or
  - (b) there is, in the opinion of the Director-General, a permanent risk to public safety or to the natural and historic resources of the Site.

- 9.4 Notwithstanding any termination of this Agreement, any party who commits a breach of the Agreement remains liable for it.

## 10 Dispute Resolution

- 10.1 The parties will endeavour to settle any dispute arising from this Agreement by full and frank discussion and negotiation or, if necessary, any other informal dispute resolution technique without prejudice to any other rights and entitlements they may have.
- 10.2 Subject to clause 9 of this Schedule, if the parties are unable to resolve the dispute by negotiation or other informal means within twenty-one (21) days of written notice by one party to the other of the dispute (or such further period as the parties agree in writing) either party may refer the dispute to mediation. Each party will cover its own costs associated with any meditation process entered under this clause.
- 10.3 Subject to clause 9 of this Schedule, where there is a dispute, each party will otherwise continue to perform its obligations under this Agreement.

## Clauses 11 to 13 relate to administrative and legislative matters

### 11 Relationship of Parties

- 11.1 The parties agree to work together and, subject to the terms of this Agreement, to co-operate with each other in the carrying out of the Activity on the Site.
- 11.2 Nothing expressed or implied in this Agreement is to be construed as:
- (a) Constituting the parties as partners (in terms of the Partnership Act 1908), joint venture or agency.
  - (b) Conferring on the Foundation any right of exclusive occupation or use of the Site.
  - (c) Granting any ownership or interest in the Site to the Foundation.
  - (d) Affecting the rights of the Director-General and the public to have access across the Site.

### 12 Power, Rights and Authorities

All powers, rights and authorities of the Director-General under this Agreement and any notice required to be given by the Director-General may be exercised and given by the Director-General or any officer, employee or agent of the Director-General.

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13. The Law

- 13.1 This Agreement is to be governed by and interpreted in accordance with the laws of New Zealand.

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## Schedule 3

### SPECIAL CONDITIONS

#### 1. Annual Work Plan

- 1.1 At the annual meeting of the Foundation and the Director-General, an Annual Work Plan will be agreed upon, which will direct the work being undertaken in the following 12 months. The annual meeting will occur prior to the beginning of the operational year the plan sits within (1<sup>st</sup> July – 30<sup>th</sup> June). The Annual Work Plan will cover the scope of the work proposed for deer management, predator control and hut maintenance for the year, work and funding responsibilities, and start/completion timeframes.
- 1.2 Any additional work beyond the agreed Annual Work Plan is to be approved by the Director-General.

#### 2. Assets

- 2.1 The Foundation is responsible for all costs associated with the deployment of assets relating to the Activity and ensuring the assets are maintained in good repair, for the duration of the Agreement.
- 1.2 In the event of the Activity's cessation, the Foundation will, in discussion with the Director-General, transfer ownership of all assets deployed by the Foundation on the Site, to the Director-General or remove all assets from the Site.

#### 3. Huts

- 3.1 The Foundation agrees that nothing expressed or implied in this Agreement shall be construed as conferring on the Foundation any right of exclusive occupation or use of the huts
- 3.2 Ensure any major works that may impact the historical fabric of the huts, shall only be completed with prior written agreement from the Director-General.

#### 4. Biosecurity

- 3.1 The Foundation will take every care not to transfer unwanted organisms to the Site. Particular care will be taken to avoid the spread of didymo by undertaking a check, clean and dry of equipment between waterways to minimise the spread of didymo.

#### 5. Avalanche Procedures

In addition to Schedule 2 Clause 6 The Foundation will adhere to the following:

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- 5.1 Ensure the team lead connects with DOC Te Anau District avalanche team prior to all trips outside of the summer season to gain guidance on avalanche conditions and ensure all field work participants have appropriate avalanche awareness. The summer season is roughly defined as December – May. The DOC Te Anau District avalanche team operate from May/June till end of November and will contact the Foundation when they begin and finish for the season.
- 5.2 To assess avalanche risk and set in place procedures when undertaking activities on Site the Foundation should use the MSC Back Country Avalanche Advisory Fiordland Region <https://www.avalanche.net.nz/region/12> and select the highest hazard posted out of the 3 evaluation bands.
- The trap lines are only affected by valley floor avalanches, hence taking the hazard rating from the higher elevations. Avalanche from above 1200m can run to valley floor.
- 5.3 No stopping in avalanche paths under Castle Mount.
- 5.4 For activities in these specific sites:
- Castle River: Trap 20 down valley to Worsley can be checked all year round unless there is a High Avalanche posted on the MSC Back Country Avalanche Advisory Fiordland Region.
  - Up Valley from trap 20. Can check between December and May. Winter checks go in Low posting with Nil rain in forecast and check with the Department's avalanche team for current conditions.
  - Worsley Valley: Check entire valley all year around unless Considerable or higher avalanche hazard posted. No stopping in Avalanche run out under peak 1602m. (1.5km directly west of Lake Brownlee).
  - Nitz Creek: Trap 10 and down valley, check all year round unless Considerable or higher hazard posted.
  - Trap 11 and up valley Check Between December and May. Winter checks go in Low Posting with nil rain in forecast and check with DOC avalanche team. (Keep moving through avalanche run outs).
  - Glaisnock River: Lower valley LG line can check all year round.
  - Upper Valley Check in Considerable or lower hazard with nil rain in forecast.
  - Lugar Burn: Check all year round.

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- 5.5 For all other activities undertaken in "avalanche terrain" please liaise with the DOC Te Anau District office's avalanche advisor for all trips.

#### 6. Compliance

In addition to Schedule 2 clause 5.1 the Foundation must:

- 6.1 Comply where relevant with the Southland Murihiku Conservation Management Strategy and the Fiordland National Park Management Plan when conducting the Activity. Huts

#### 7. Termination of Agreement

In addition to Schedule 2 Clause 9 both parties agree:

- 7.1 If either party wish to cease any of the conservation activities outlined in this Agreement, a review can be held and a cancellation plan developed, agreed and implemented.

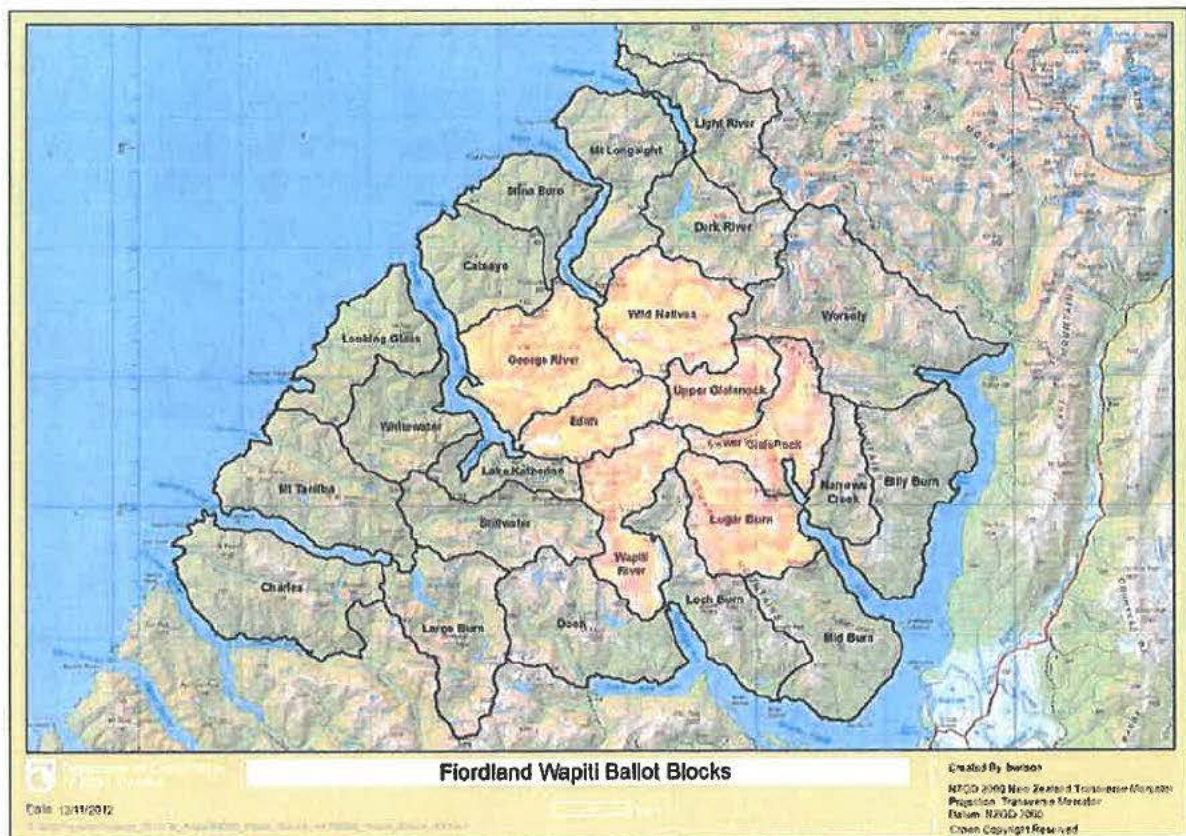
#### 8. Review

- 8.1 If over time the Director-General considers that the programme is not meeting the objectives of the Fiordland National Park Management Plan 2007 (section 4.5), or any subsequent future plan, then this Agreement will be reassessed and if appropriate, the Director-General may terminate this agreement by notice in writing to the Foundation

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## Appendix 1



Map 1: FWF Ballot Blocks with blocks identified.

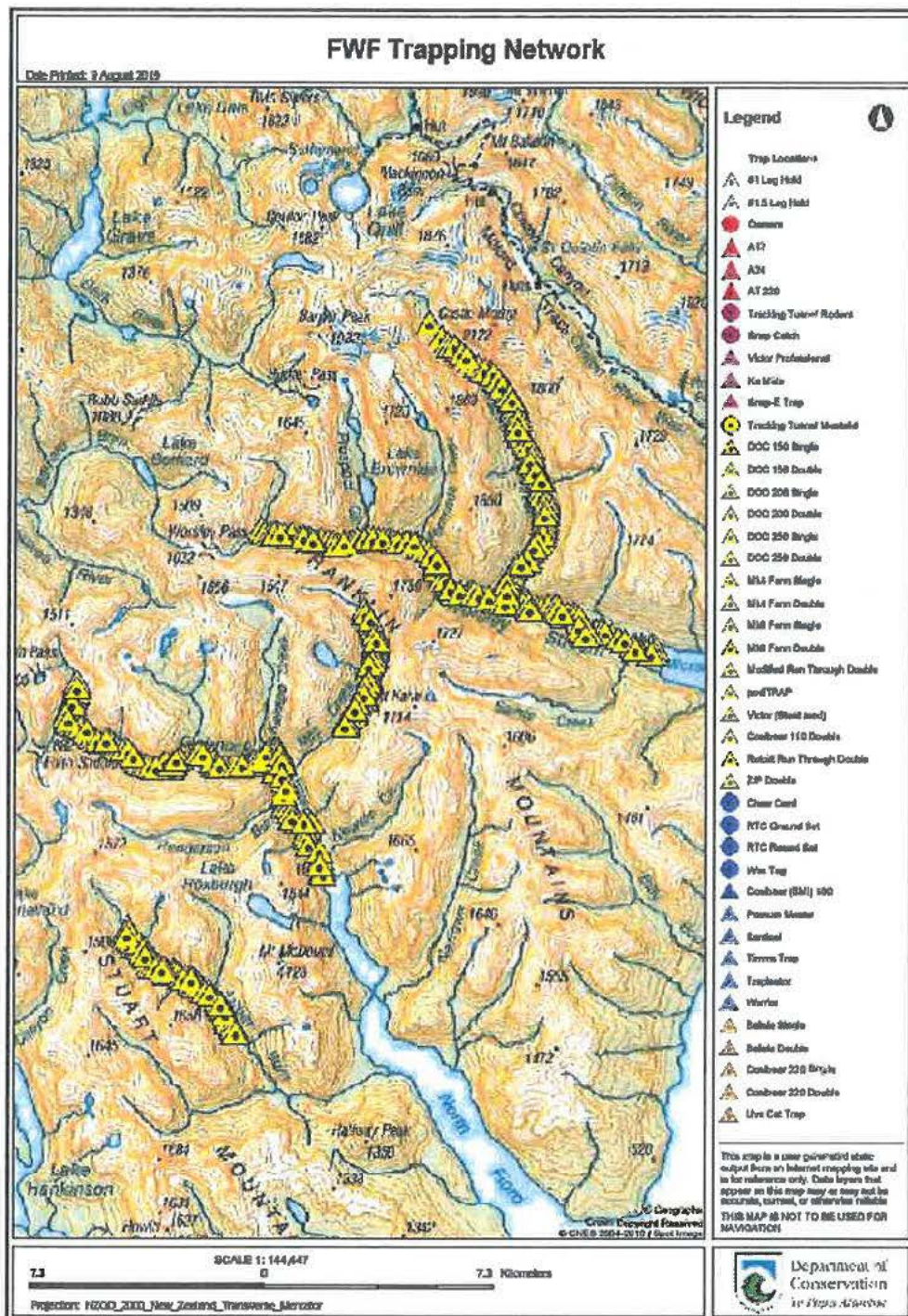
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Map 3: Fiordland Wapiti Foundation trapping network of 460 double set DOC150s in the Wapiti Area targeting stoats as of October 2019.

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## Appendix 2

### Best practice for trapping

#### Trap Check:

- ☐ A minimum of two trap checks undertaken per year
- ☐ Additional checks should be carried out monthly during the bird breeding season (September to April) if possible
- ☐ Trap must be secured to reduce the risk of interference

#### Other requirements:

- ☐ All lines/transects and traps to be individually numbered and marked on GPS.
- ☐ Use blue triangle plastic markers to define trap lines or transects, use pink markers to identify trap locations. Triangle markers should be repositioned next to new trap site and GPS coordinates marked if traps need to be repositioned due to flooding, tree fall or other occurrences.
- ☐ If any non-target native species are caught remains must be delivered to the local DOC office within 3 days of returning from the field or provide photo evidence in the case of decomposition. If a photo is not possible an accurate description of remains is to be provided.
- ☐ Dispose of all trapped mice, rats, stoats and possums away from tracks and waterways and at least 2m from predator control stations.
- ☐ To dispose of old eggs, break them at least 5m from predator control station.
- ☐ Care taken to clean dead animal material, vegetation/debris from the trap trigger mechanism and area under the plate to ensure effective spring-off.

Additional information for traps and monitoring can be found here

<https://www.doc.govt.nz/nature/pests-and-threats/predator-free-2050/toolkit-predator-free-2050/trapping-and-poisoning/>

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## Appendix 3

### Hut Service Standards

#### 4. Standard Huts (BCA)

The following standards shall apply to Standard huts.

##### 4.1 Hut Condition/Site Location

###### 4.1.1 State of repair

The hut shall be weatherproof and in a reasonable state of repair. In particular:

- The hut and its building elements (including walls, floor and roof) shall have a low probability of rupturing, becoming unstable or collapsing in the period between inspections.
- The hut and its building elements shall not show signs of significant deterioration that would threaten its structural stability in the period between inspections.
- The hut's walls, floor, roof, windows and doors shall be in a condition that will ensure adequate resistance to penetration by, and the accumulation of, moisture from the outside in the period between inspections.
- The hut shall be in a condition that prevents surface water from entering the hut in the period between inspections.
- There shall be no impediment (such as jammed doors or windows) to making a quick exit from the hut in the case of fire or similar emergency.
- The hut shall be in a condition that would prevent infestations of pests and vermin (such as fleas, bed bugs, rats and mice) inside the building.

###### 4.1.2 Natural Hazards

The hut and toilet should be sited in a location where there is a low probability of it sustaining serious damage or being destroyed due to natural hazards (eg slips, rock fall, wind, tree fall, avalanche, flooding). A geological and avalanche hazard desk-top and hazard rating assessment, and regular inspections of the hut by staff, shall be used to determine what a "low probability" means for the hut.<sup>1</sup>

##### 4.2 Hut Condition/Site Location

###### 4.2.1 Maximum Size

- For new huts, and extensions and upgrades of existing huts, maximum size shall be a sleeping capacity of 20 people

<sup>1</sup> The current hazard and danger ratings are defined in "Geological Hazard Rating System for DOC Backcountry Huts, Feb 2000; prepared for DOC by GT Hancox", and "Avalanche Danger Rating System for DOC Backcountry Huts, Mar 2002, by Don Bogie". Note that a different avalanche hazard rating system is proposed and, if adopted, shall be used instead of the current system.

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- If an existing hut with a capacity for more than 20 people is destroyed and is to be replaced, it may be replaced to the same size as the original, at the discretion of the Regional General Manager.

#### 4.2.2 *Design/Colour*

Design (for new huts) and colour (for all huts) shall be appropriate for the surrounding environment. For some huts, an “appropriate” colour may be a bright colour that can be clearly seen from a distance in marginal conditions for safety reasons. For other huts, where visibility is not a safety issue, an appropriate colour may be one that blends in with its surroundings.

#### 4.2.3 *Crowding*

During the peak season, if the hut capacity is exceeded by 10% or more, over 10% of the season, management shall take action to prevent this happening the next season.

#### 4.2.4 *Verandah/Deck*

- Verandahs and decks may be provided to reduce impacts on the environment surrounding the hut, to improve appreciation of views from the hut or where space is required for gear, such as boots and wet weather clothes.
- At new huts, a porch (covered deck) should be built on the entrance wall.

#### 4.2.5 *Living Area per Person*

- For all huts, there should be a living area inside the hut of 1.8 to 2 m<sup>2</sup> per person. “Living area” is the usable floor area of the hut interior, excluding sleeping platforms and bunks and separate bunkrooms.
- For new huts, or extensions to existing huts, refer to the base floor plans in the Hut Procurement Manual for specifications for living area per person.

#### 4.2.6 *Flyscreens*

At huts where biting insects are a problem for visitors, flyscreens should be used on opening windows to make the hut as insect proof as possible.

### 4.3 **Hut Environment**

#### 4.3.1 *Rubbish*

A “pack it in, take it out” policy shall apply. No rubbish collection, on-site rubbish receptacles or rubbish holes shall be provided.

#### 4.3.2 *Vegetation Clearance*

- Vegetation shall be kept approximately 4 metres clear of the hut to ensure there is sufficient light and air right around the building to avoid degradation of building materials due to dampness, mould and mildew.

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- Vegetation shall also be cleared so that views from the hut are maintained, tree fall hazards are minimised and so that vegetation does not impede means of escape from the building.
- Clearance of vegetation around the hut as part of ongoing maintenance shall be done in a way that minimises any negative effects on the environment surrounding the hut, and cut vegetation shall be removed from view.

#### 4.3.3 *Wasp Control*

At huts with 1,000 or more bednights per year, the area immediately around the hut and toilets should be kept clear of wasps and similar pests. At huts with less than 1,000 bednights per year, wasp control should only be carried out if complaints are received.

#### 4.3.4 *Meat Safes/Dog Kennels*

Where huts are popular with hunters, meat safes and dog kennels should be provided, but they shall be located at least 20 metres away from the hut and the track to the toilet.

### 4.4 **Sleeping Facilities**

#### 4.4.1 *Mattresses*

Individual or platform bunks with mattresses shall be provided. All mattresses shall be fire retardant and meet the Department's mattress standard.

#### 4.4.2 *Sleeping Space Per Person*

- Where platform bunks are provided, sleeping capacity shall be calculated as 0.75 metres per person across the width of the platform.
- Visitor information containing sleeping capacity shall use sleeping capacity calculated in this way.

#### 4.4.3 *Safety Barriers on Bunks*

Where sleeping occurs with the body position parallel to the edge of a sleeping platform or bunk and there is a real danger of falling more than a metre by rolling off during sleep, a barrier shall be provided. The barrier shall be high enough and long enough to prevent a fall, but should not impede access onto or off the sleeping platform or bunk.

### 4.5 **Cooking**

#### 4.5.1 *Cookers*

Cookers shall not be provided.

#### 4.5.2 *Cooking Bench*

- Fire resistant and hygienic cooking bench(es) shall be provided.
- Huts should have 0.24 to 0.3 metres of cooking bench space per person. Cooking bench space excludes the area of any sinks.

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- For new huts, or extensions to existing huts, refer to the specifications in the Hut Procurement Manual for cooking bench space per person.

## 4.6 Heating

### 4.6.1 Heating and Fuel

- A wood burning stove for heating shall be provided in huts that are near or below the bush-line, where:
  - there is a reliable supply of dead wood available within 200 metres of the hut, and
  - there is a low risk that live vegetation will be cut for firewood.
- Heating shall not be provided in huts that do not meet the above criteria.
- Heating fuel shall not be provided (users find their own fuel).
- Existing open fireplaces (in huts that meet the above criteria for having heating) shall be phased out when they require maintenance or upgrading and replaced with wood burning stoves. This is because open fireplaces are not generally a safe and efficient way to heat a hut.
- Huts with heating shall have a dry place outside the hut to store wood.

### 4.6.2 Axes/Saws

- An axe shall be provided in huts where heating is supplied, except where the potential for vandalism is high. The axe shall be kept sharp.
- Saws may also be provided.

### 4.6.3 Ash Bucket

A metal bucket for carrying ash shall be provided at huts where heating is provided.

## 4.7 Water Supply/Ablutions

### 4.7.1 Water Supply/Sign

- Water supply shall be:
  - from a tank or tanks fed from rainwater off the roof; or
  - via piping from natural watercourses; or
  - from a natural watercourse or water body where water is available throughout the year and is within 100 metres of the hut.
- For huts in permanent snow, snow and ice is an acceptable supply.
- Water shall be clean but does not have to be potable.
- A sign shall be put up that states that in general the water is clean and able to be drunk without treatment, but users may, for their own protection, wish to boil or treat it.

### 4.7.2 Sinks – Food Rinsing/Dish Washing

Food rinsing/dish washing sinks should not be provided. Existing sinks may remain but shall not be replaced.

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#### 4.7.3 *Hand Washing Sinks*

- Hand washing sinks shall not be provided in existing huts except for environmental reasons, such as to avoid pollution from people washing in a small lake or tarn.
- Existing sinks may remain but shall only be replaced if needed for environmental reasons.
- In new huts, hand washing sinks may be provided outside the hut if needed for environmental reasons or where water is piped or supplied off the roof.
- Where a tap only is provided the area below it shall be well drained to ensure the ground does not become wet and muddy.

#### 4.7.4 *Showers/Washing Areas*

No showers or screened washing areas shall be provided.

### 4.8 **Toilets**

#### 4.8.1 *Toilets*

- A hut with a total capacity of up to 20 people shall have one toilet (ie one pan); between 21 and 36 people, two toilets (ie two pans); between 37 and 48 people, three toilets (ie three pans); over 48 people, four toilets (ie four pans).
- All toilets shall be located outside the hut, be fully enclosed, be unisex, have a door and have a toilet seat and should have a lid. All pit or containment (vault) toilets shall be vented.
- Toilets shall not be located more than 75 metres from the hut.
- Where the toilet(s) is not easily located from the hut, a direction sign to the toilet shall be provided.

#### 4.8.2 *Toilet Paper*

Toilet paper shall not be provided.

### 4.9 **Lighting**

- Lighting shall not be provided.
- Adequate numbers of candleholders shall be supplied. All new candleholders supplied shall be one of the Department's approved designs.

### 4.10 **Safety Facilities/Notices**

#### 4.10.1 *Radios*

- In Standard huts in alpine locations, radios may be provided for hut users to operate for emergency purposes only where:
  - the hut has 2,000 or more bednights annually, or
  - serious accidents have occurred near the hut in recent years and having a radio in the hut would have assisted in calling for help quickly after an accident.
- In all other huts radios shall not be provided.

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#### 4.10.2 *First Aid Kits*

First aid kits shall not be provided.

#### 4.10.3 *Fire Extinguishers/Bucket Pumps*

Fire extinguishers and bucket pumps shall not be provided.

#### 4.10.4 *Fire Safety Facilities (eg Smoke Detectors)*

Fire safety facilities, such as smoke detectors, shall be provided where a fire engineer's specific design requires them for building code compliance. For new huts, the Hut Procurement Manual only requires a fire engineer's design for building huts with a capacity of more than 20 bunks, although one may be requested for smaller huts.

#### 4.10.5 *Fire Evacuation Notice*

For huts with a sleeping capacity of 6 or more, where required by the Fire Safety and Evacuation of Buildings Regulations, a fire evacuation notice shall be put up inside the hut detailing the fire evacuation procedure and fire safety advice.

#### 4.10.6 *Soft Furnishings*

Apart from mattresses, to reduce fire risk, there shall be no soft furnishings (curtains, cloth or vinyl-covered furniture etc) in the hut.

#### 4.10.7 *Carbon Monoxide Warning*

A sign warning hut users of the dangers of the build up of carbon monoxide when using cookers shall be installed in the hut.

#### 4.10.8 *Intentions Book*

An intentions (hut user) book shall be provided.

#### 4.10.9 *Information for Users Notice*

- A hut user information notice shall be supplied (the standard national notice).
- A local hut information notice, with map, should also be supplied.
- Notices shall include visitor safety information.

#### 4.10.10 *Interpretation*

Where there are issues or features of significance interpretation may be provided in the hut or immediate surrounds.

#### 4.10.11 *"No Smoking" Sign*

"No Smoking" signs may be provided in the hut.

#### 4.10.12 *Hut Name*

The name of the hut shall be on a sign on the outside of the building.

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#### **4.11 Furniture/Drying Facilities**

##### **4.11.1 Seats and Tables**

- Tables and seating shall be provided, except in huts with a sleeping capacity of four or less where tables and seating should be provided if practicable.
- A length of between 300 and 500 mm of table should be provided per person.
- Between 300 and 500mm of seating should be provided per person inside the hut.
- For new huts, or extensions to existing huts, refer to the specifications in the Hut Procurement Manual for tables and seating.

##### **4.11.2 Pots/Utensils**

Cooking utensils, pots, billies etc shall not be provided. If they currently exist, they may stay but shall not be replaced.

##### **4.11.3 Drying Facilities**

- Drying rooms shall not be provided
- Sufficient hooks, nails, drying racks or lines shall be provided around (but not above) the stove, under the verandah and/or along the inside walls of the hut for each person to hang parkas and other wet gear when the hut is at capacity.

#### **4.12 Cleaning**

##### **4.12.1 Cleaning Requirements**

The hut and toilet shall be spring-cleaned (walls, ceiling, windows, surfaces and floor washed and cleaned) once a year.

##### **4.12.2 Cleaning Equipment**

- A broom, brush and pan shall be provided
- Cleaning cloths may be supplied
- Cleaning fluids shall not be supplied

#### **4.13 Wardens**

##### **4.13.1 Warden Requirements**

Wardens shall not be provided.

##### **4.13.2 Food Sales**

There shall be no sale of food from the hut.

#### **4.14 Actively Managed Historic Huts**

Variations or exceptions to any of the requirements of the standards set out in 4.1 to 4.13 above may be agreed for huts formally designated as actively managed historic assets, provided the health and safety of hut users is not compromised. This is further explained below.

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- A variation or exception may be approved when a requirement of these service standards conflicts with the key historic management objective of providing an authentic historic hut for visitors to use.
- Hut users' expectations of authenticity are generally met when they are aware that the hut, and its associated buildings, have had their original fabric, design and character retained, and the look and feel of the hut, both inside and out, have not substantially changed since it was built.
- Where authenticity is an issue it shall be defined in a heritage conservation plan for the hut. This plan shall set out any variations or exceptions required to the above standards in order to minimise the loss of authenticity.
- Interpretation shall be provided in all actively managed historic huts to explain to hut users the reasons for differences from the service standards and the historic importance and values of the hut.

#### 4.15 Visitor information on Huts

Pre-visit information provided by the Department on huts may include printed publications, information on the DOC website, visitor centre displays, information provided by visitor centre staff and signs at track entrances. The following information on service standards shall be included in pre-visit information on Standard huts:

- Hut category
- "Pack it in, take it out" rubbish policy
- Mattresses are provided
- Sleeping capacity
- Cookers are not provided and users should take their own
- Whether heating is provided and if it is, no heating fuel is supplied – users find wood to use as fuel
- Water supply is provided (and type)
- No showers are provided
- Toilets are provided
- Toilet paper is not supplied and users should take their own
- Lighting is not provided
- Whether radios are provided for users to operate
- No pots, plates or utensils provided – users to bring their own
- No wardens
- Whether the hut is an actively managed historic hut and, where it is, the historic importance of the hut

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# CAM SPEEDY

## Wildlife Management Associates Ltd

### Your Wildlife • Our Expertise

15 April 2025

#### To Whom it May Concern

My name is Campbell John Thorn (Cam) Speedy

I live at 20 Te Awamate Road, Tokaanu, TURANGI 3381. My contact details are contained in the footer.

I am a professional wildlife ecologist with extensive experience in the public (19 years) and private (23 years) sectors, working with a range of both indigenous and introduced species - including deer.

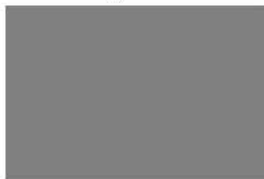
I write in support of the Fiordland Wapiti Foundation (FWF's) application for a Wild Animal Recovery Operation (WARO) Concession from the Department of Conservation (DOC). I have worked with the FWF since 2011 on developing a deer management model for the Fiordland Wapiti Area of Fiordland National Park – one that delivers a sustainable, low density, high quality, male dominated, trophy Wapiti Herd, that is compatible with the landscape and ecological values of this very special place.

In that time, I have witnessed substantial progress towards a modern, biologically appropriate, fit-for-purpose and more importantly, sustainable WARO approach over the ~190,000ha Fiordland Wapiti Area. FWF's evidence-based understanding of the deer management requirements within Fiordland is unparalleled. They operate at a scale and at times when other WARO concessionaires - who are wedded to financial outcomes rather than biological outcomes - are unable to do so. This is highlighted by FWF's ability to start going beyond the Wapiti Area into other important adjoining areas such as the Murchison Mountains, as deer numbers have increased under a 'traditional' WARO model.

In my professional opinion, FWF have developed a model that can be well supported by relevant science and has wide application across New Zealand – one that is appropriate for 2025, not stuck in 1977 when the Wild Animal Control (WAC) Act was passed in our Parliament. The ability and proficiency of FWF to deliver a WARO service that caters for the modern biological, ecological, social, financial and cultural needs of Fiordland is unquestionable.

I have no hesitation in offering my support for their DOC WARO Concession Application. Should you require further information, please do not hesitate to contact me.

Sincerely,



Cam Speedy  
Wildlife Ecologist/Director



## Testimonial for the Fiordland Wapiti Foundation

*From Southern Lakes Helicopters*

Southern Lakes Helicopters has proudly worked alongside the Fiordland Wapiti Foundation (FWF) for over two decades, providing aerial support for their deer management operations within Fiordland National Park. Over this time, we have developed a close and trusted working relationship built on professionalism, operational excellence, and shared conservation values.

From an operational perspective, the Foundation has consistently demonstrated a high level of capability in the planning and management of wild animal recovery (WARO) activities. The Fiordland Wapiti Foundation operates with a deep understanding of the terrain, environment, and necessary safety protocols, ensuring that all work is carried out effectively and with integrity.

From a financial standpoint, the Fiordland Wapiti Foundation has been a reliable and responsible partner. Over the course of our 20-year relationship, they have consistently met all financial obligations in a timely and professional manner. This financial reliability is a testament to the Foundation's strong internal management and accountability.

We have no hesitation in supporting the Foundation's application for a WARO concession and affirming their ability to manage deer recovery operations at the highest standard.

Sincerely,

**Michael Hayes**



**CEO**  
**Southern lakes Helicopters Ltd**

**P:** [+64 27 374 8140](tel:+64273748140)

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# Understanding deer impacts in northern Fiordland

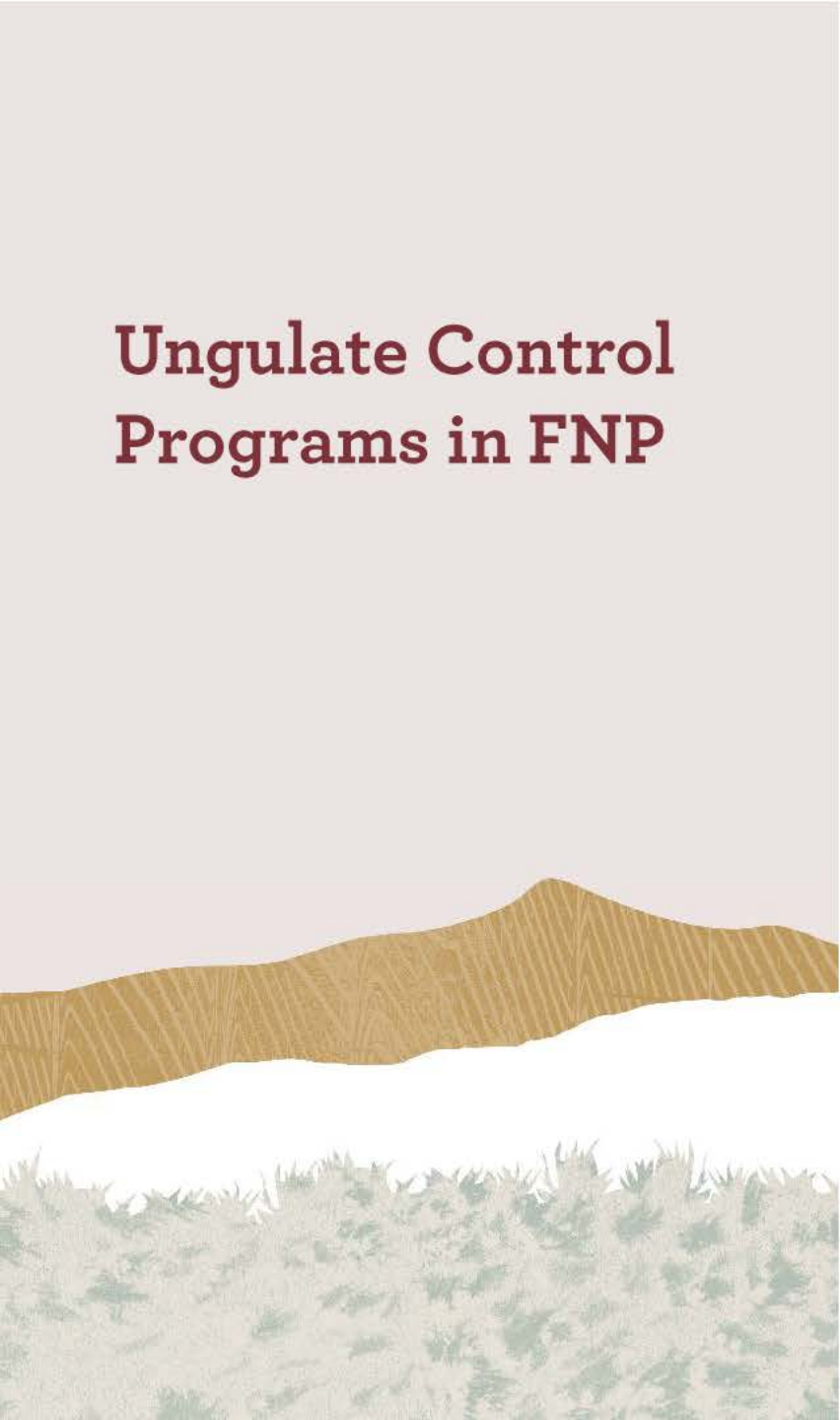
History and current state of alpine and forest health

September 2024



Department of  
Conservation  
*Te Papa Atawhai*

New Zealand Government



## Ungulate Control Programs in FNP

- › DOC Led

- Deer Free Areas
  - Suppression
  - Eradication

- › Community Led

- Fiordland Wapiti Foundation

- › Commercial

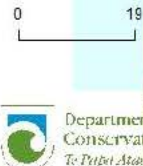
- Wild Animal Recovery Operators



Where we do work



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Conservation Act 1976  
Copyright Reserved © Department  
of Conservation 1/10/2011  
New Zealand Government





# Forest and alpine deer and vegetation studies are not new in northern Fiordland

~20 reports between 1960's - 1980's

G. NUGENT  
Forest Rese

## SUMMARY REPORT ON VEGETATION AND AN IN NORTHERN FIORDLAND

G.R. Evans

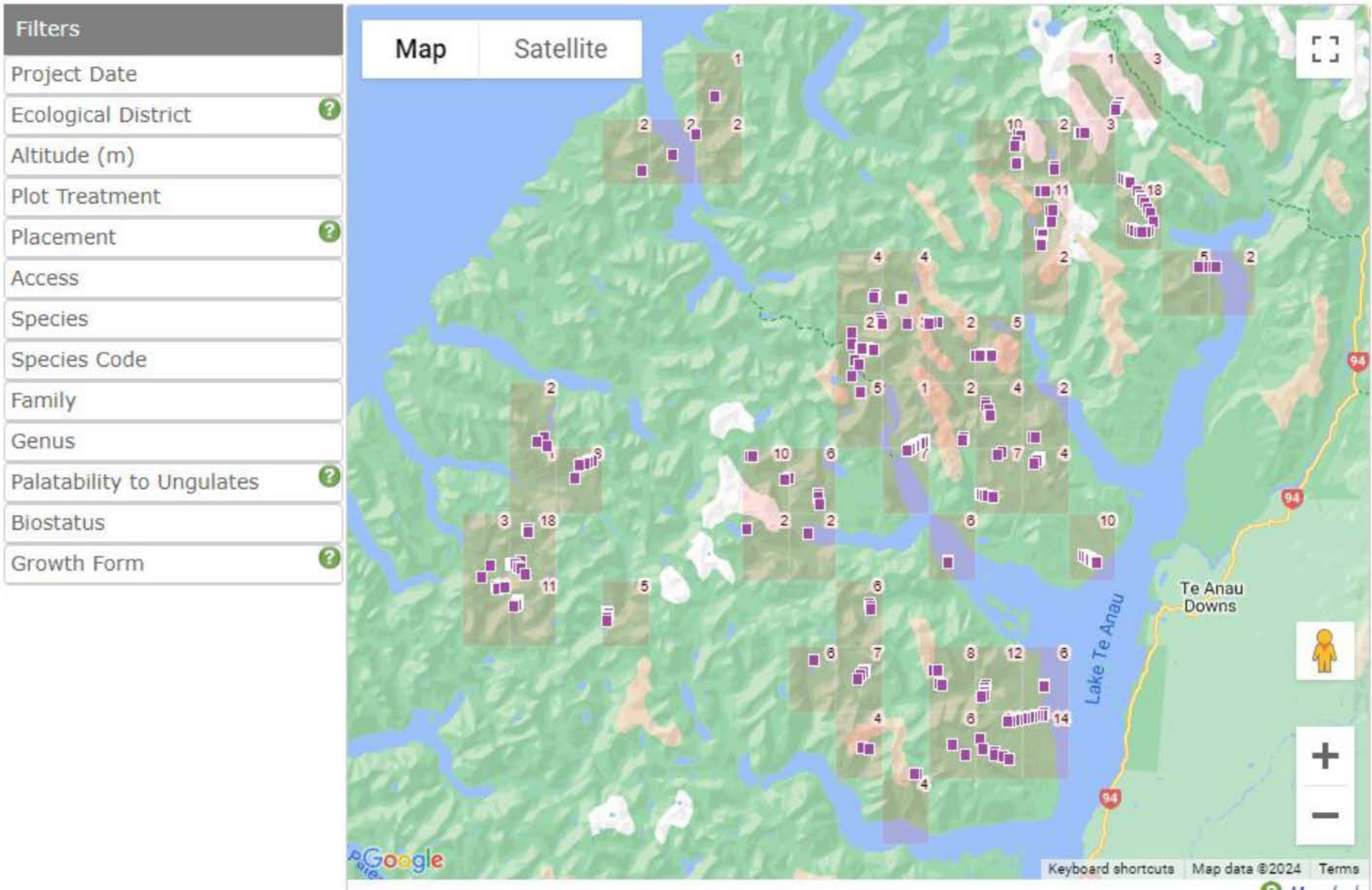
G. NUGENT<sup>1</sup> J.P. PARKES<sup>1</sup> and K.G. TUSTIN<sup>2</sup>  
<sup>1</sup> Forestry Research Centre, FRI, P.O. Box 31-011, Christchurch, New Zealand  
<sup>2</sup> P.O. Box 134, Wanaka, New Zealand

## CHANGES IN THE DENSITY AND DISTRIBUTION OF RED DEER AND WAPITI IN NORTHERN FIORDLAND

**Summary:** Deer density indices were estimated in 1969, 1975, and 1984 in the core of the Wapiti Area of Fiordland National Park. Between 1969 and 1984, density above timberline was reduced to near zero by commercial airborne hunting, with smaller decreases in the forest. Overall density declined by 81%. An estimated 2007 ± 385 deer were present in the 850 km<sup>2</sup> survey area in 1984, with an average density in the forest (red deer and wapiti)

By  
M. J. Appleton, J. Hayward and J. Herbert

Showing results 1 to 11 from 11 datasets. Total plots in search results: 345





# What did these studies in the 70's and 80's tell us?

## Alpine Areas

(Rose and Platt 1987)

- WARO pressure significantly reduced Wapiti/Red numbers in alpine areas:

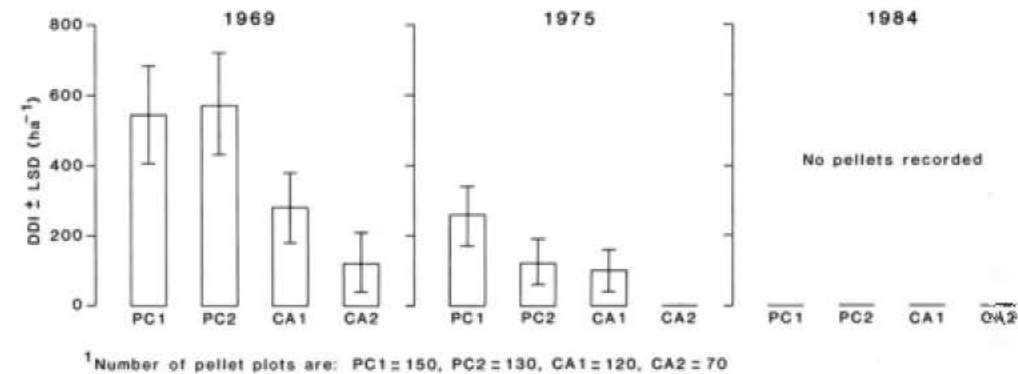


Figure 2: Deer density index (DDI ± LSD) by grassland type, calculated from the frequency of intact faecal pellets. For DDI = 0, LSD varies from 6-13 ha.

- The main feature in all three surveys was a large increase between 1969 and 1984 in the frequencies of the large-leaved herbs e.g. white snow marguerite\* & mountain daisy\*\*, which occurred in the most fertile, deer preferred, *Chionochloa pallens* grasslands



# What did these studies in the 70's and 80's tell us?

## Forested areas

(Stewart et al. 1987; Nugent and Sweetapple 1989)

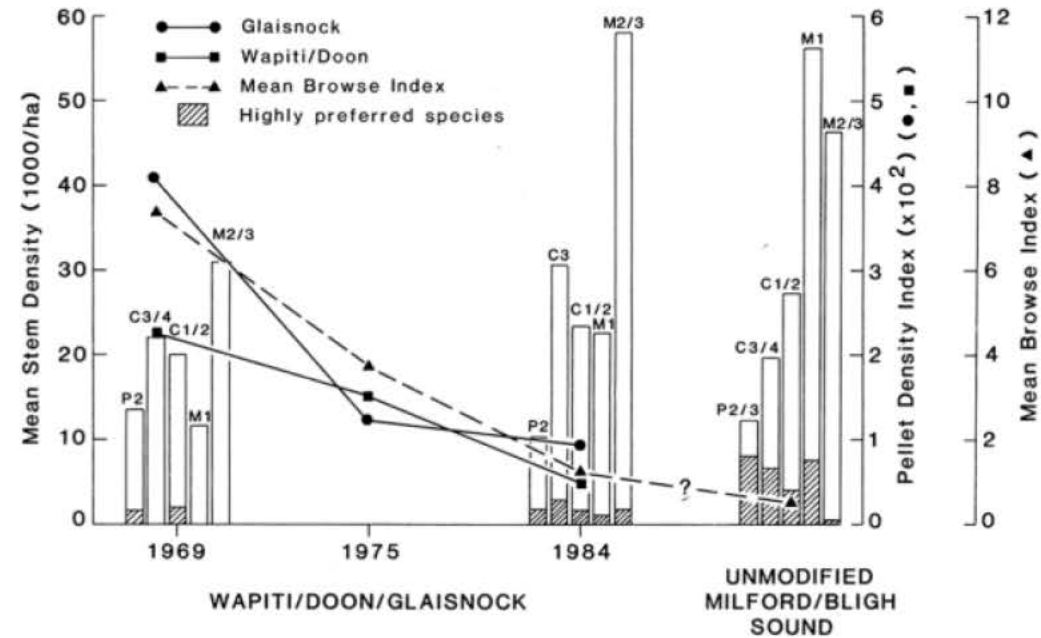


Figure 2: Mean density of all woody stems and highly preferred stems in the understorey of forest types of the Wapiti/Doon/Glaisnock and Milford/Bligh Sound catchments in 1969 and 1984 in relation to changes in deer numbers (from Nugent et al., 1987) and the mean browse index (Rose and Burrows, 1985).

- > Deer numbers were slower to decline in forested catchments, especially western catchments, and preferred species were slower to recover, and never to the level encountered in deer free forests
- > But, significant improvements were made, especially in catchments with a high Tops : Forest ratio

## Then what happened ....

1990 – 2006

- › The precursor to the DOC 'Tier 1' network was established 2001-2005
- › 17 forest plots established in the Wapiti Area (11 alpine plots established after 2010)
- › A study between 1989 – 2000 comparing grasslands in the head of the Glaisnock and Murchison Mountains found little difference between the catchments, with minor improvements for some deer preferred spp in the Glaisnock

**ANYONE THERE?!**



## Meanwhile in the Murchies.....

What do the results of intensive management look like?



Deer were being maintained at ~1 deer/km<sup>2</sup> in forested areas by ground hunters achieving a CPUE of 0.51 deer per hunter day during the mid 2000's.



Near zero density in alpine areas through aerial control (aerial ops were averaging 4 deer/hr)



In 2008 all the forest plots in the murchies were measured: Conclusion – deer preferred species were increasing in the forest, but not in highly preferred deer habitat (e.g. seral forest types)



Alpine deer browse monitoring in 2006 revealed <1% of monitored plants had browse and zero pellets were detected on the 20 transects established



Overall assessment: Alpine areas were pristine, forest was generally ok and palatable species were increasing, but deer were still impacting the regeneration of preferred forest species in deer preferred locations



Break for Questions

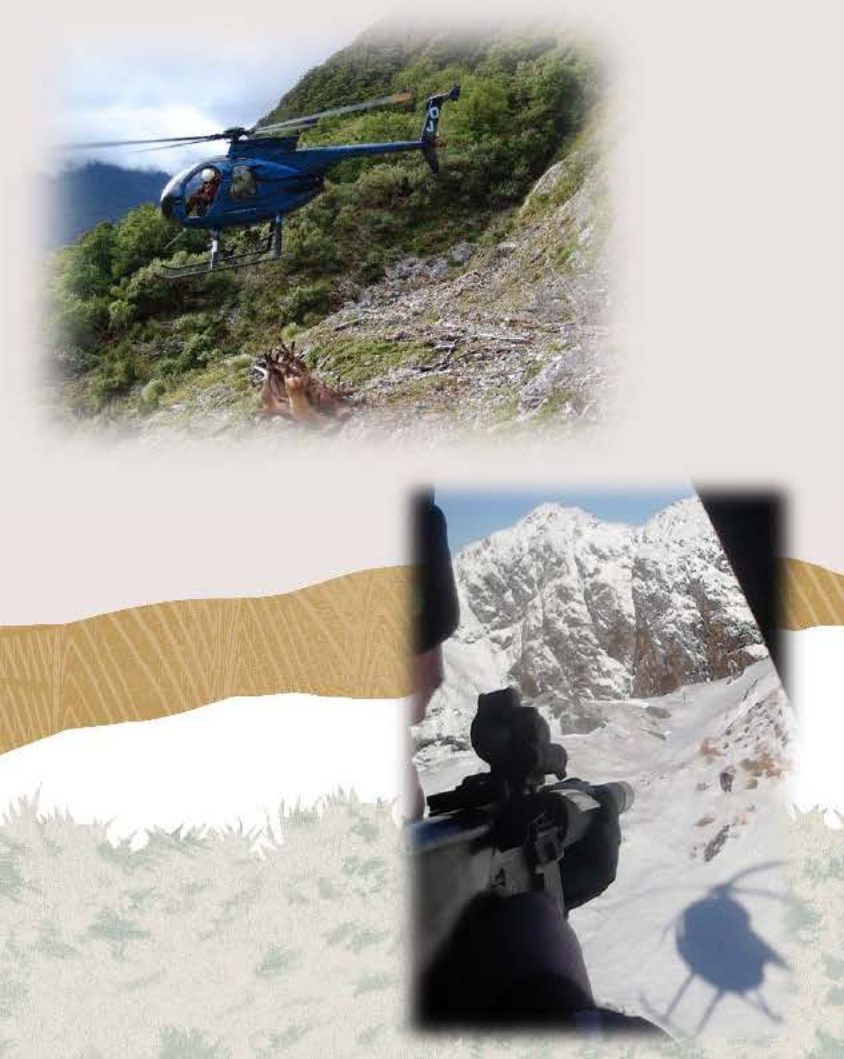


## 2006 - Today

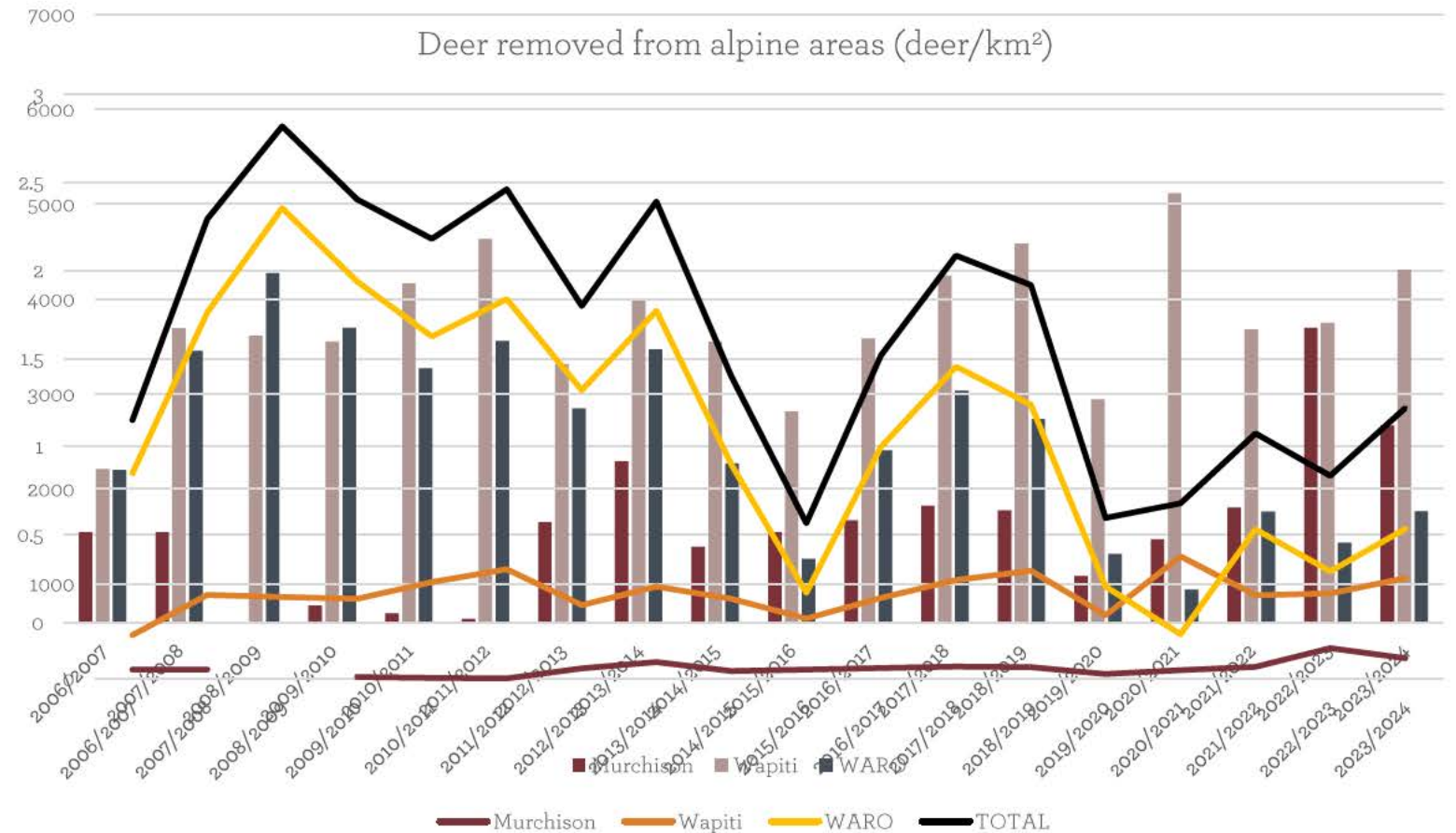
The establishment of rapid impacts assessment methods to compare across three deer control programs

- › The alpine deer browse sites were established across Fiordland to quantify the influence of WARO, FWF and DOC led control on deer impacts in alpine areas
- › We also wanted to understand if the changes we saw in the alpine areas were happening in the forest
- › Seedling Ratio Index (SRI) transects were established in selected forested catchments
- › All this can be analysed against deer control effort in these three management areas

# FNP Deer control 2006-2024



~65,000 deer removed by WARO, WAPITI and DOC

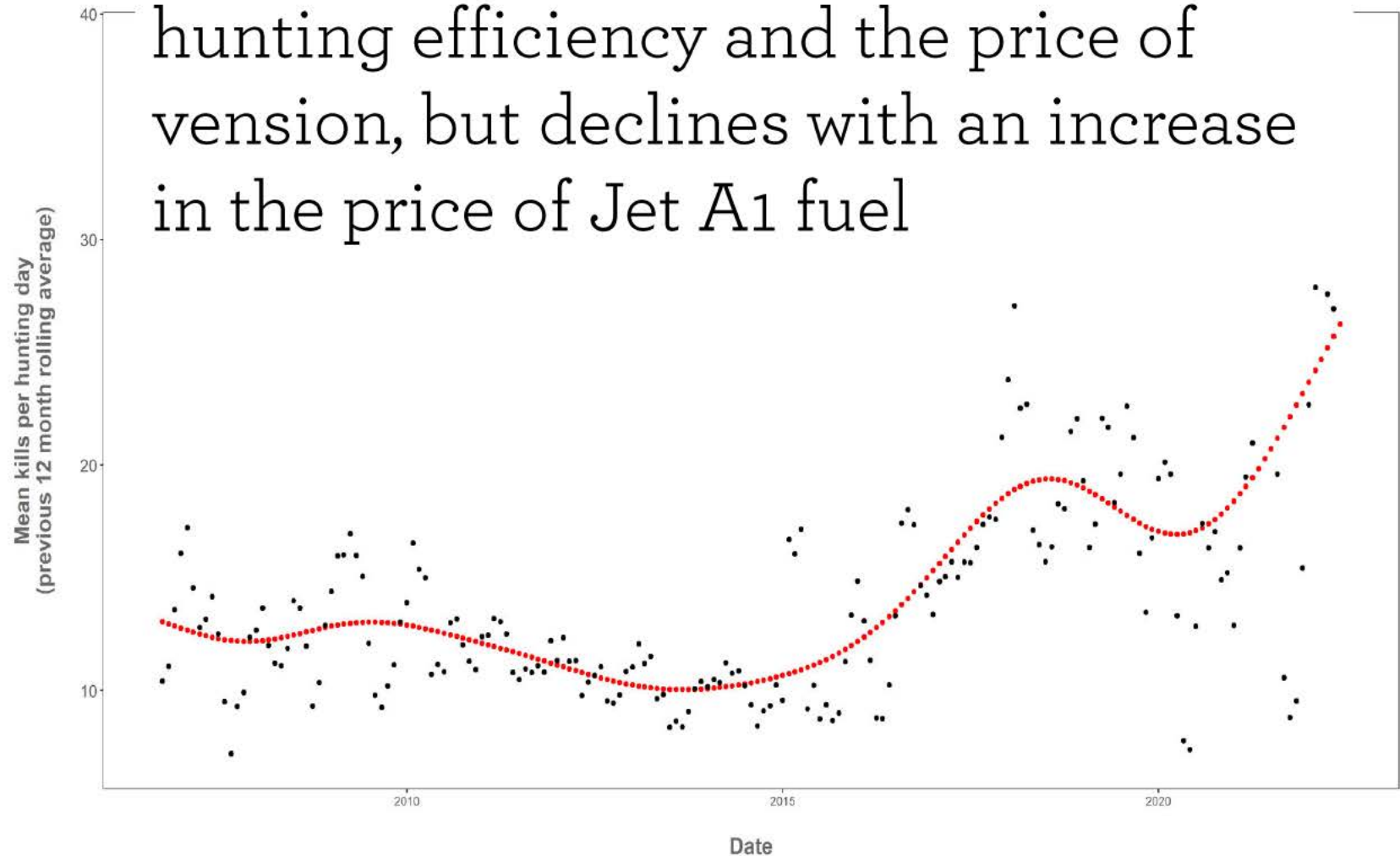




**WARO is driven  
by \$\$**

(and processor  
capacity)

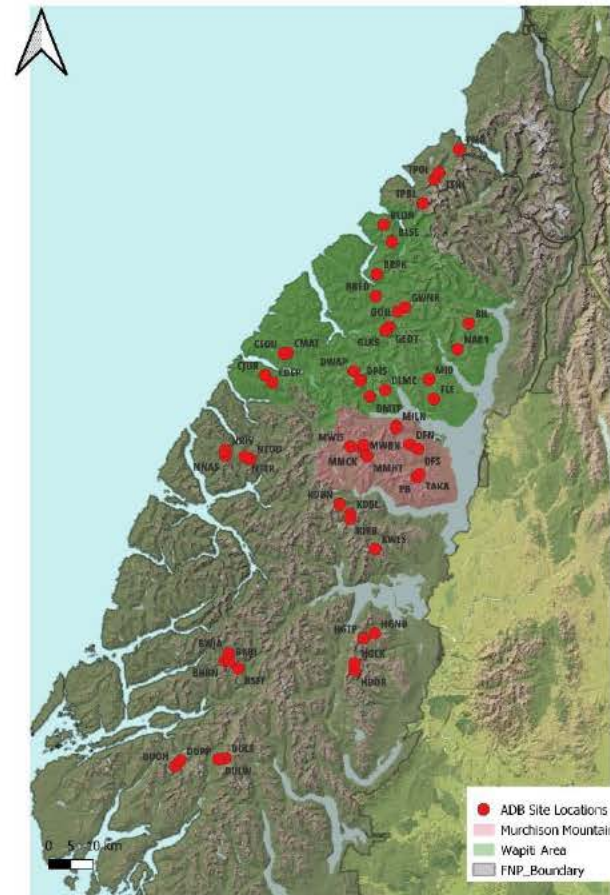
The number of deer killed in the WARO block increases with greater hunting efficiency and the price of venison, but declines with an increase in the price of Jet A1 fuel



# Alpine Deer Browse



- › Established across Fiordland in 2006 to look at rates of deer browse on selected palatable species in preferred alpine deer habitat
- › Measure pellet groups, browse, numbers of individuals and plant size class (1 spp. only)

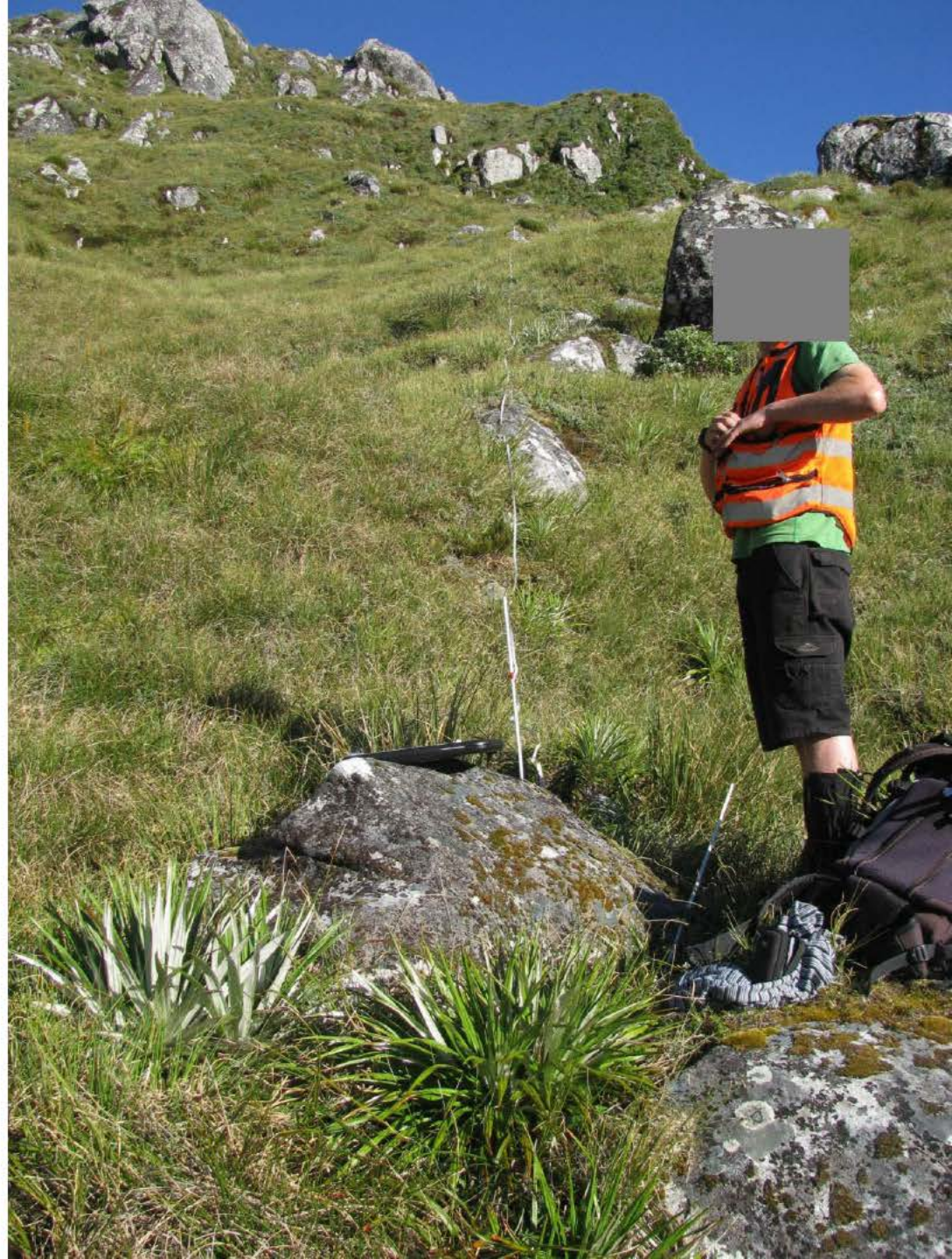


WARO: 24 sites

WAPITI: 20 sites

Murchison: 10 sites











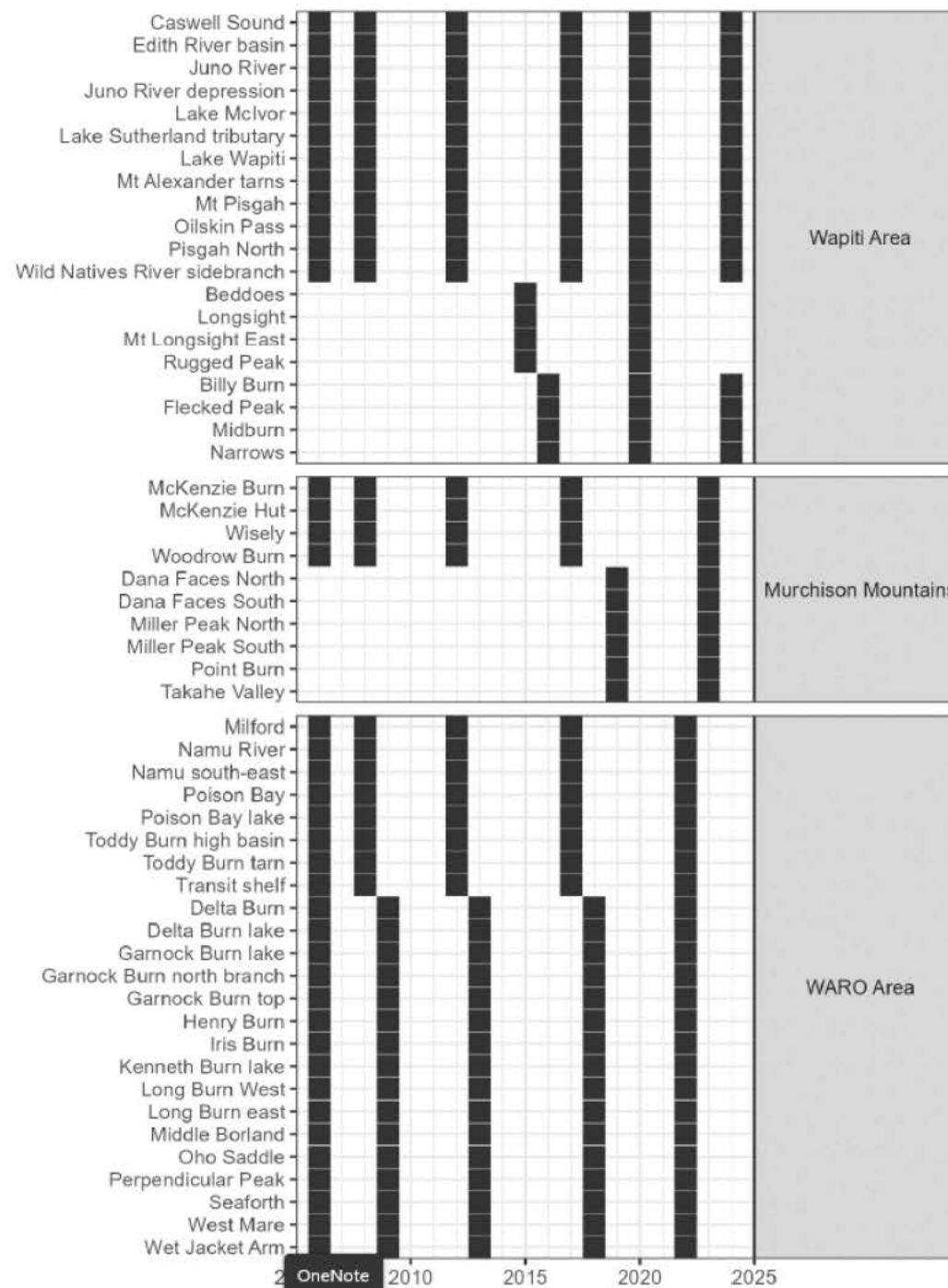








# Establishment, cycle and frequency of measurement



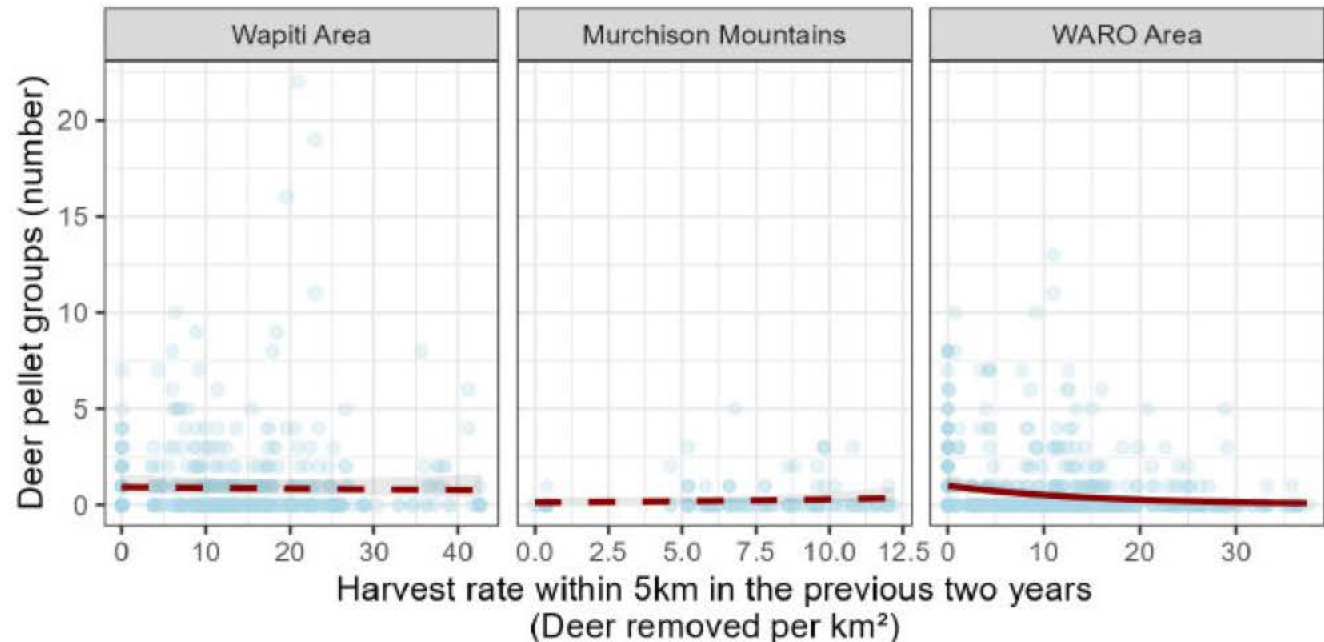
> N = 20

> N = 10

> N = 24

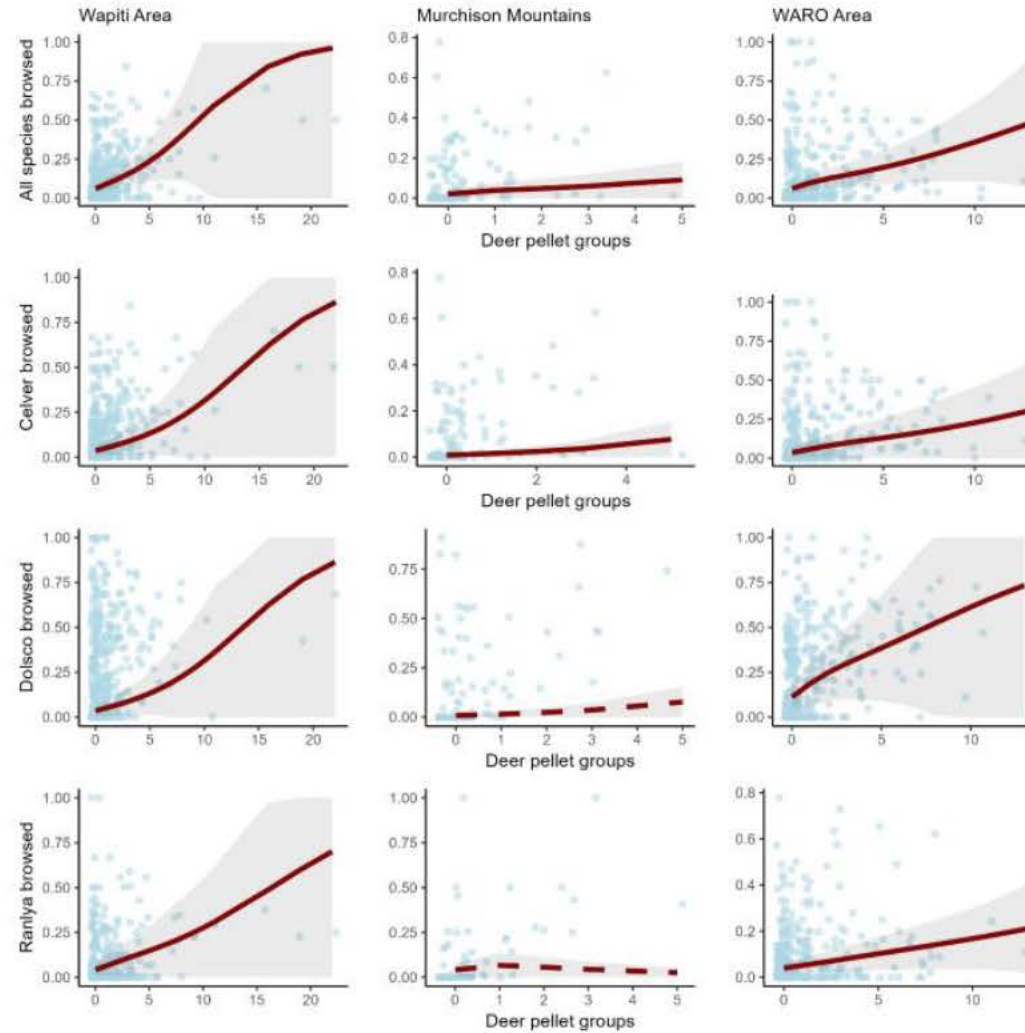
## Is there a relationship between harvest rate and deer abundance?

- There is only a significant relationship between harvest rate and deer abundance for the WARO area



# Is there a relationship between deer abundance and browse?

- Yes, positive relationship (i.e. browse increased with increasing pellet groups) for almost all species and areas

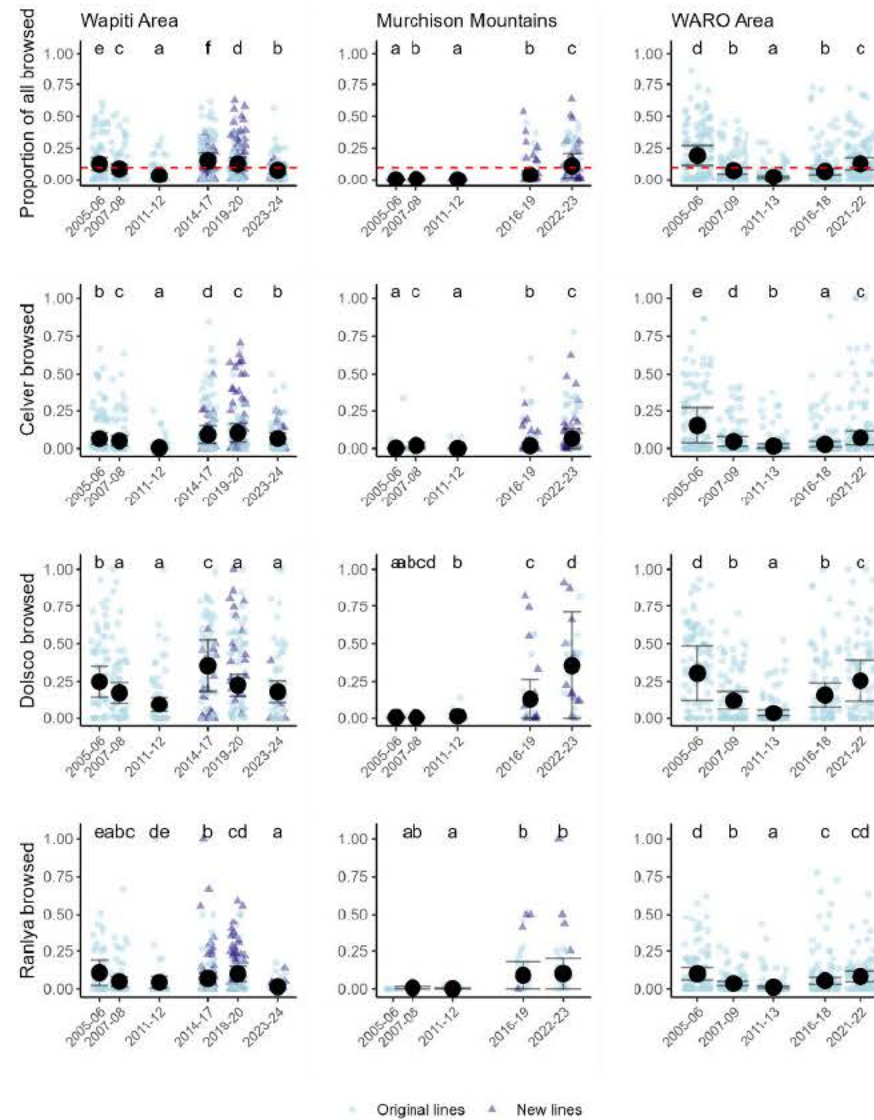




# Results

## Alpine Deer Browse

2006 - 2017



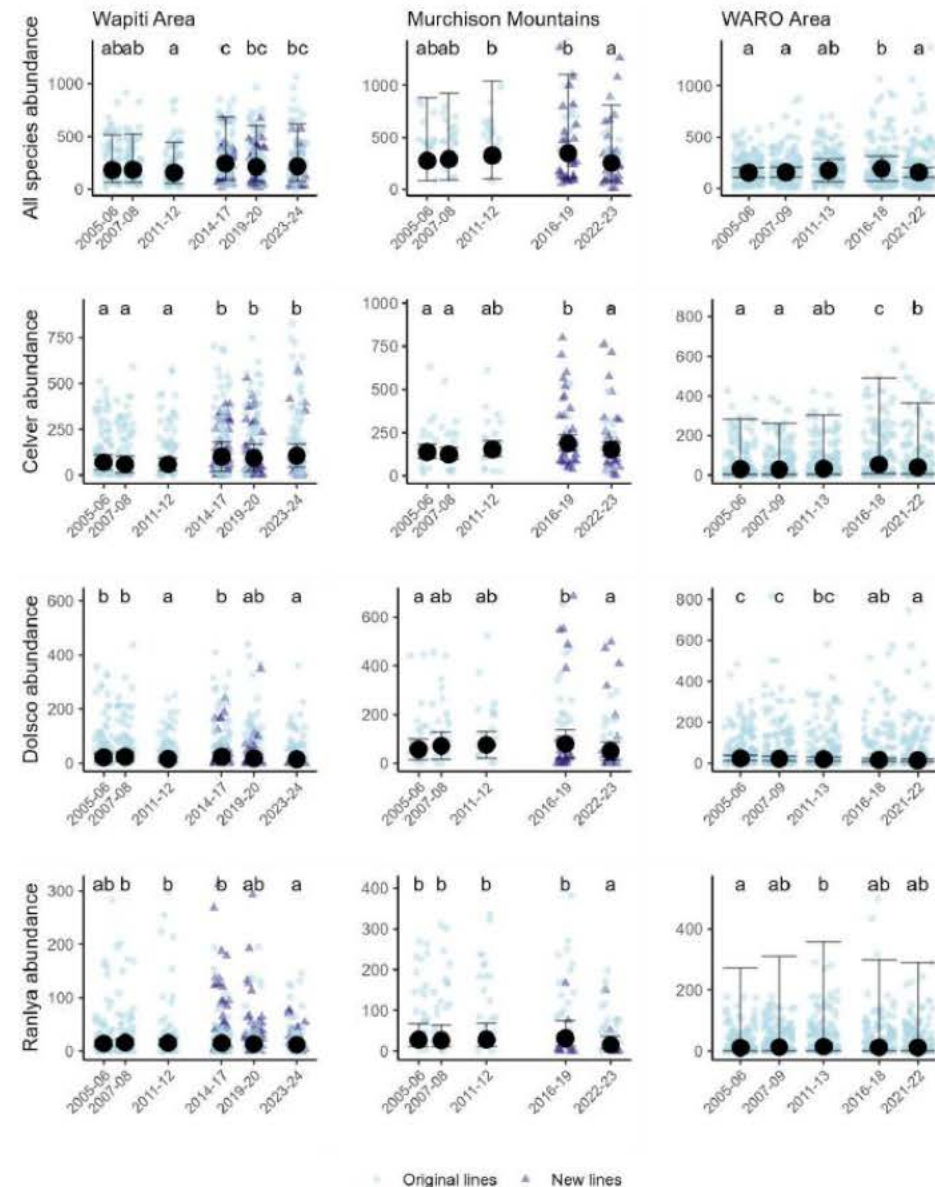
Q: How many kills are required for mean browse to be  $\leq 10\%$ ?

A: 1,100 deer per annum. (WAPITI)  $\sim >2.0$  deer/km<sup>2</sup>

A: 3,500 deer per annum. (WARO)  $\sim >1.5$  deer/km<sup>2</sup>

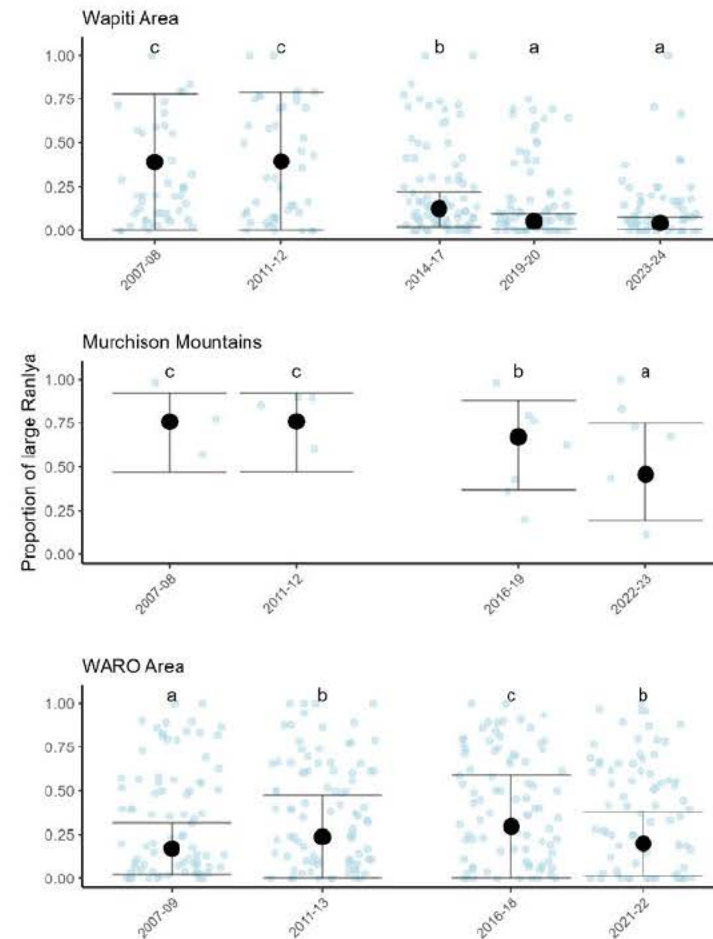
# Is plant abundance changing through time?

- Some declines and increases, but no large changes were detected



## Do the size classes of *RAN* lya change with browse

- › The proportion of large *Ranunculus lyallii* (leaf width >8cm) significantly decreased with increasing deer pellet groups across all management area





## Conclusions:

- › Pleasing to see declines in browse in the Wapiti Area,
- › Increases in browse in the Murchison mountains is of ongoing concern,
- › WARO is getting more browse, as we expected.
- › Plant numbers are not dropping off the cliff but there are some changes to keep a watch on.
- › The decline in *Ranunculus* demographics from large plants to more smaller plants is of concern, could be related to earlier high browse, need to keep an eye on this.

Break for Questions





- › The method evaluates deer abundance, browse and the ratio of seedlings : saplings for preferred, not selected, and avoided plant species

## Seedling Ratio Index

Comparing deer impacts in the WARO area with the Wapiti and Murchison Mtns Management units



Positive SRI value – More species in the sapling tier than the seedling tier

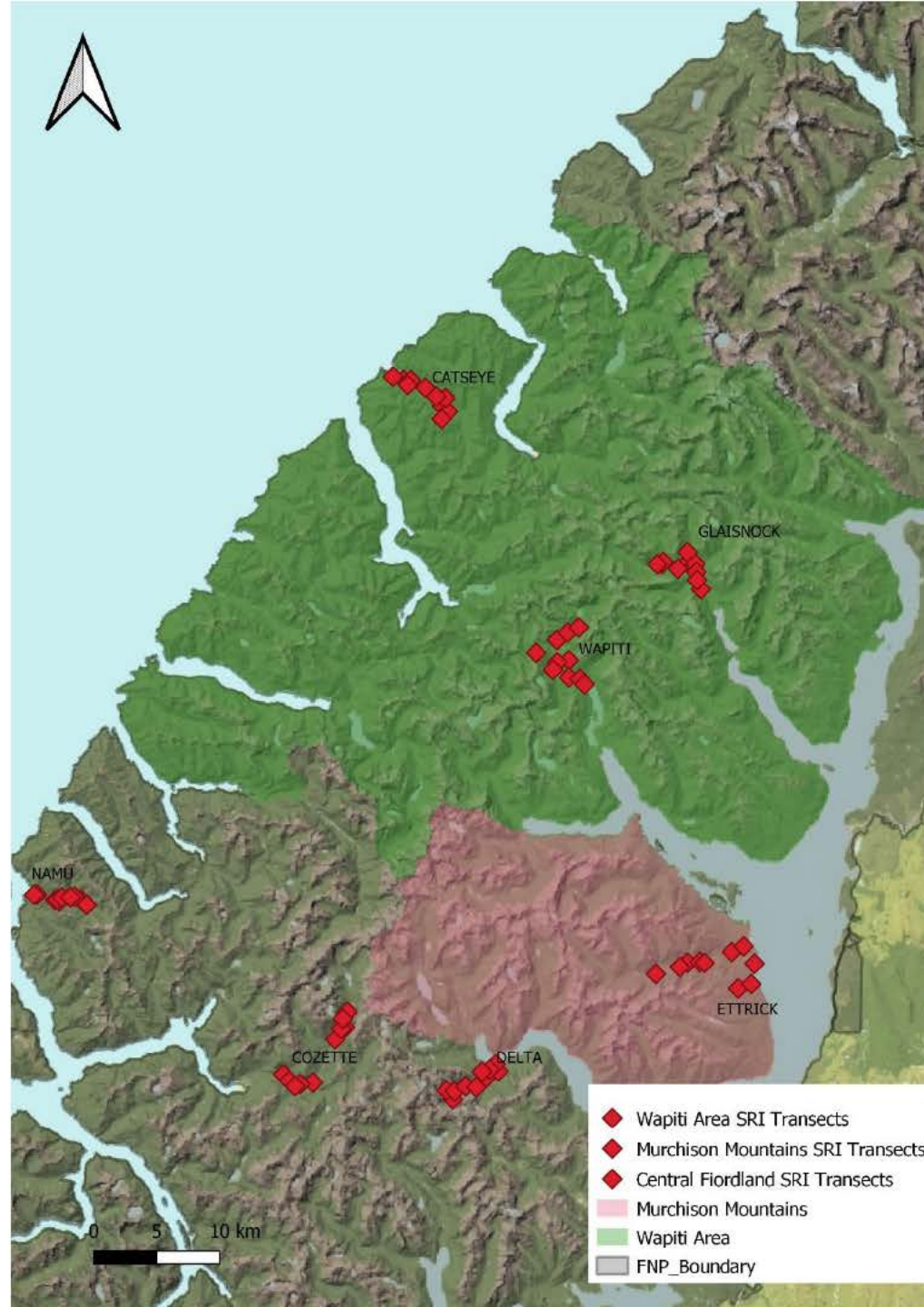
Negative SRI value – More species in the seedling tier than the sapling tier





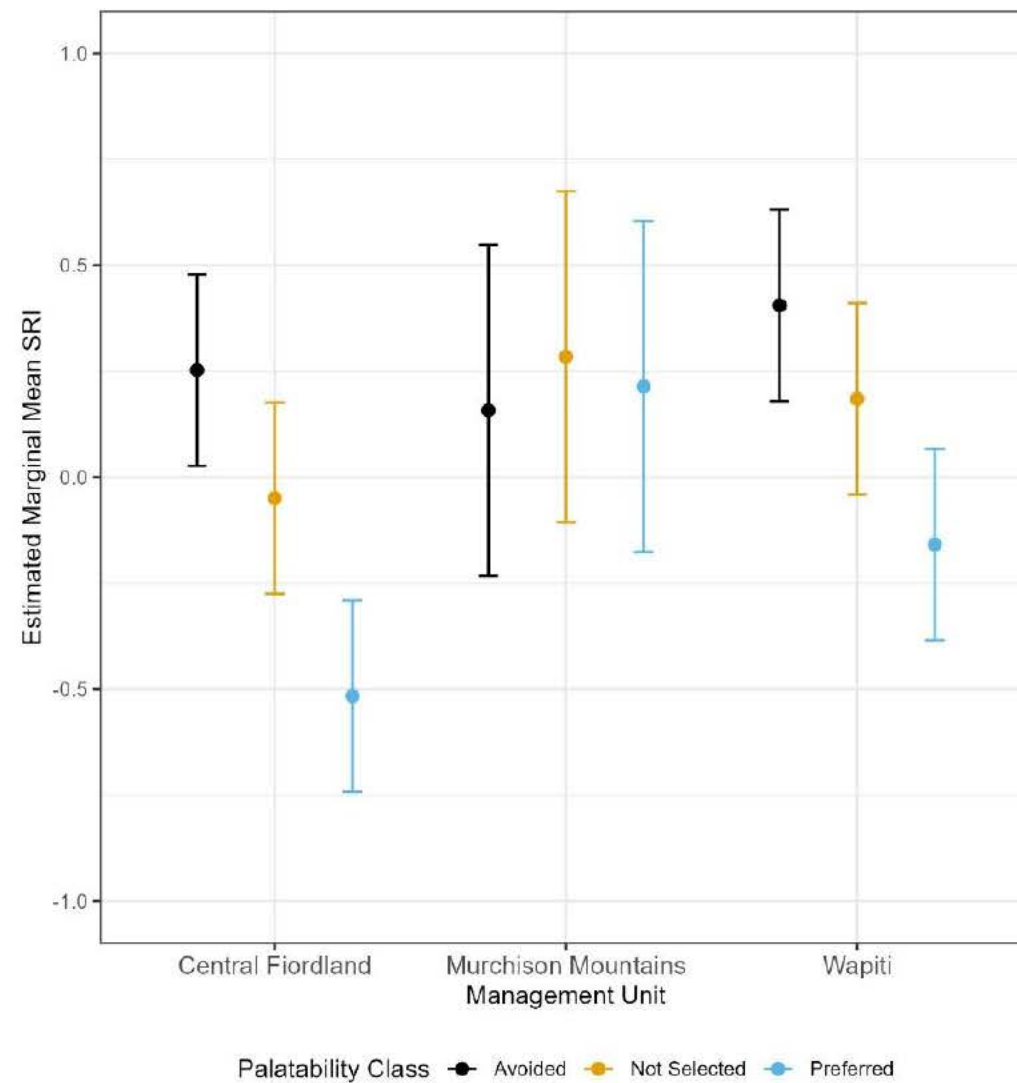
# Seedling Ratio Index

Sites established in 2008



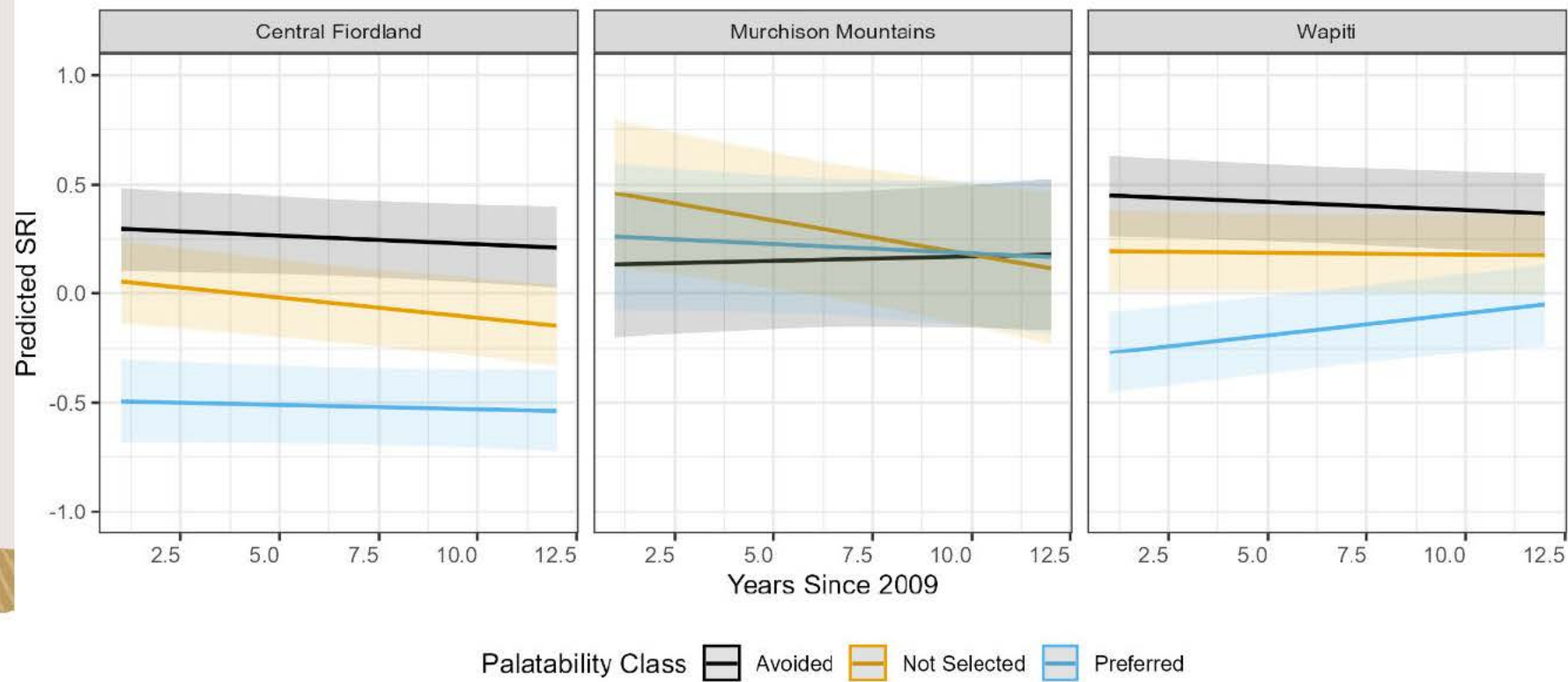
## Results

Mean SRI by  
management unit (all  
remeasures combined)



# Results

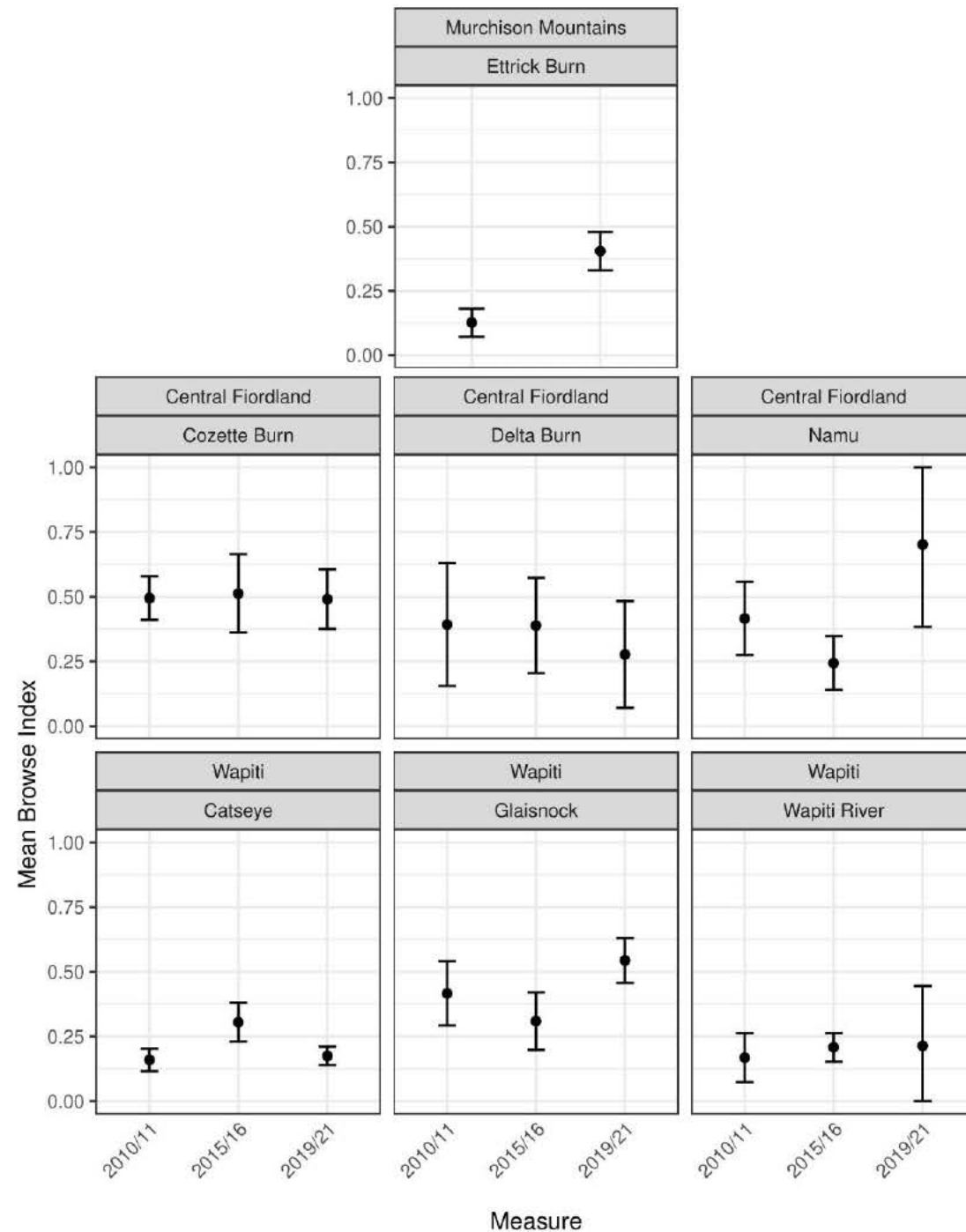
SRI by management unit through time





# Results

SRI and Browse by catchment, within management unit, through time



## Summary for the Wapiti Area

- › We would like mean browse across all spp. to be maintained @  $\leq 10\%$
- › We should aim for 1100 deer PA, mostly from the tops to try and achieve this
- › Browse and SRI values vary by catchment – a target SRI for deer preferred species of 0.25 seems reasonable, this is being achieved in the Wapiti River catchment
- › To achieve this, will require more deer control below the bush line in many catchments within the Wapiti Area

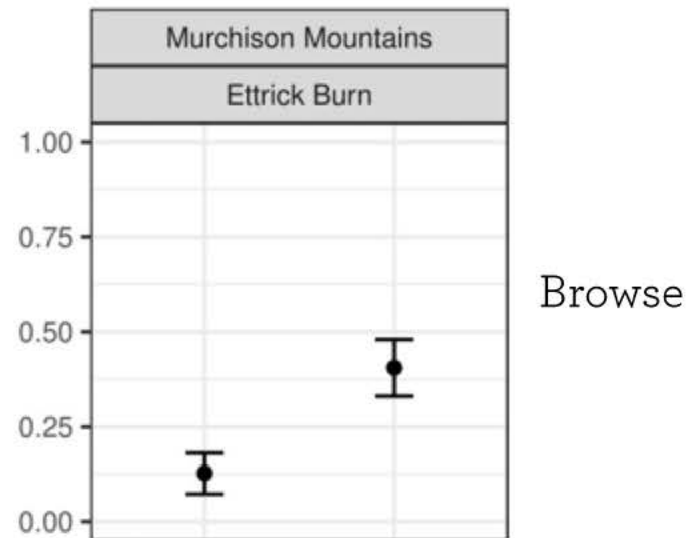
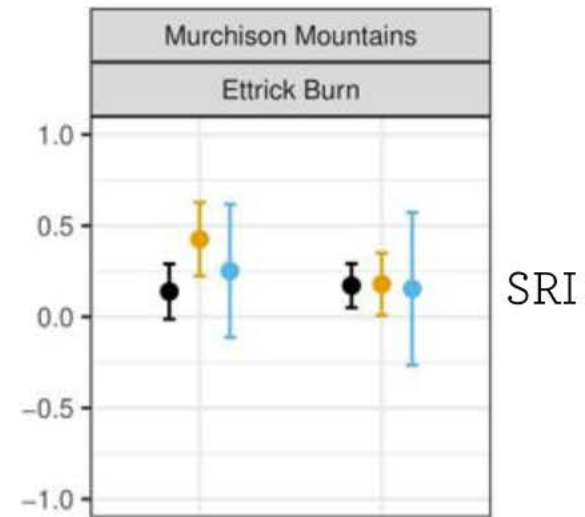
## Murchies Forest

2011: 10.7% of plots  
had pellets

2019: 14.1 % of plots  
had pellets

2011 vs. 2019

Palatability Class    ● Avoided    ● Not Selected    ● Preferred





## **Limitation of current monitoring**

- › The methods have served their purpose. They have given us an insight into forest and alpine impacts and their interplay with management and deer abundance.

However,

- › Alpine browse gives us abundance size, class and browse data for sensitive plant species, within deer preferred locations, but cannot tell us about wider alpine structure and composition
- › SRI is only in three catchments – it can only tell us a story about those areas and the sample is not representative of the whole Wapiti Area and cannot provide inference across the entire Wapiti Area. It provides limited information on forest structural and compositional changes.

# Environmental Impact Assessment for the Fiordland Wapiti Foundation

---

Contract Report No. 8021

Providing outstanding ecological  
services to sustain and improve  
our environments



# Environmental Impact Assessment for the Fiordland Wapiti Foundation

## Contract Report No. 8021

August 2026

### Project Team:

██████████ – Report author  
██████████ – Report author  
██████████ – Technical advisor  
██████████ – Technical advisor  
██████████ – Technical advisor  
██████████ – Technical advisor  
██████████ – Technical advisor

### Prepared for:

Fiordland Wapiti Foundation,  
Te Anau

Reviewed and approved for release by:



Managing Director, Senior Principal Ecologist  
Wildland Consultants Ltd  
03/08/2026



Cite this report as follows:

Wildland Consultants (2026). *Environmental impact assessment for the Fiordland Wapiti Foundation*. Wildland Consultants Contract Report No. 8021. Prepared for Fiordland Wapiti Foundation. 35pp.

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## 1.0 Introduction

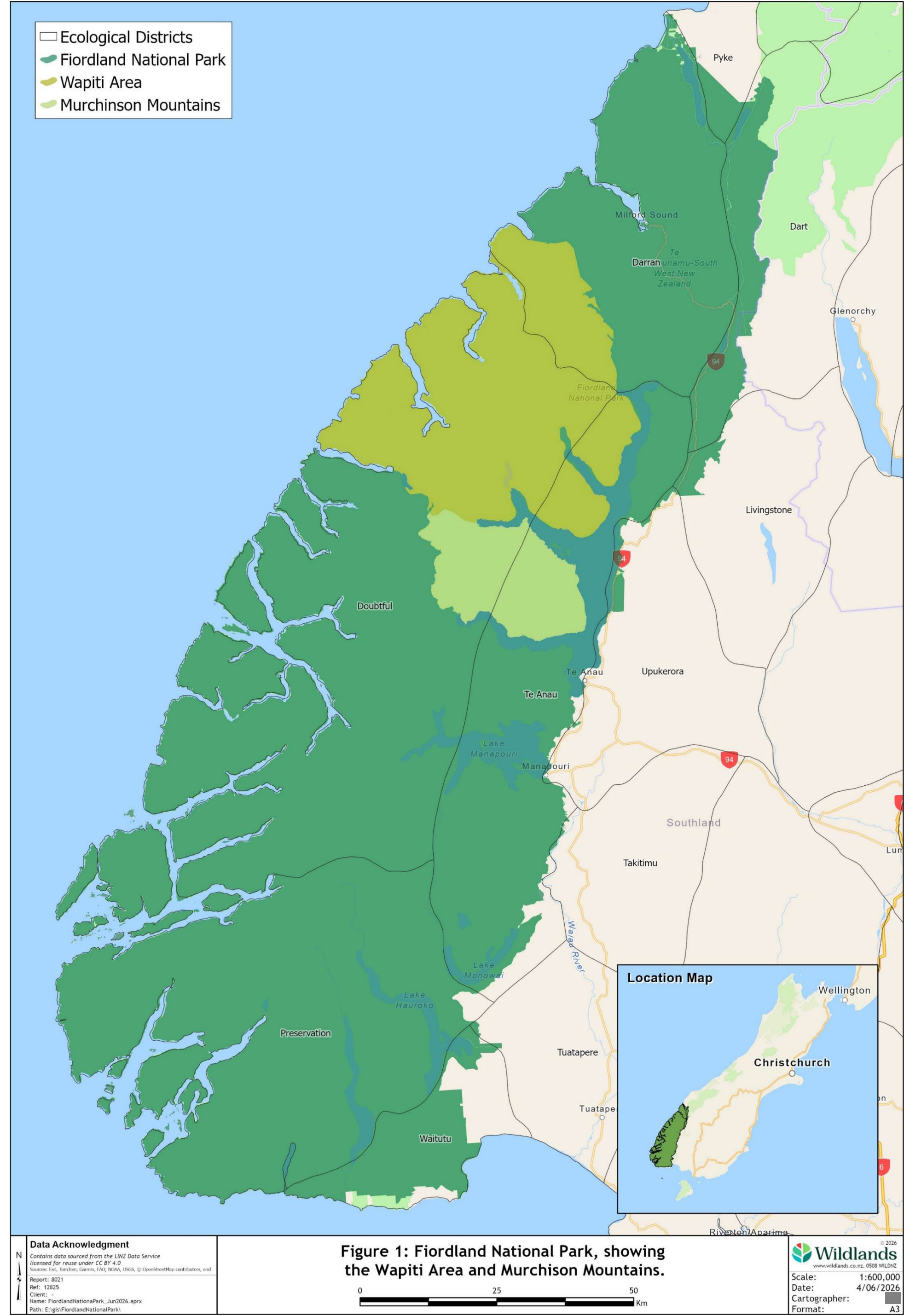
The Fiordland Wapiti Foundation (**FWF**) is a community group comprising hunters, outdoor enthusiasts, and community members who operate within a 190,700-hectare area known as the Fiordland Wapiti Area (**Wapiti Area**; Figure 1). The Wapiti Area includes parts of the Glaisnock Wilderness Area and the Western Remote visitor setting of Te Wāhipounamu/Fiordland National Park (**FNP**). FWF have been funding and undertaking animal control activities in FNP since 2005 (**The Fiordland Project**). FWF fund and undertake deer impact and herd management, stoat control, and infrastructure upgrades under an existing community agreement. The FWF consider that unless Fiordland thrives, the Wapiti will not thrive. This philosophy drives their approach to management.

The FWF is seeking a Wild Animal Recovery Operations (**WARO**) concession from the Department of Conservation (**DOC**) to run its activities in FNP. FWF have commissioned Wildland Consultants Ltd (**Wildlands**) to prepare an environmental impact assessment (**EIA**) to support the WARO application.

## 2.0 Objectives and Scope

The objectives of this report are to:

- Assess flora and fauna values at a desktop level.
- Assess potential ecological impacts from the following activities for which a concession is required:
  - Wapiti ballot (including use of fees collected for management of the area, briefing recreational hunters and other relevant tasks).
  - Deer capture and release for research.
  - WARO activities, including deer culling and harvesting of accessible culled deer carcasses.
  - Filming and advocacy.
  - Use of drones for deer management purposes and scientific research.
- Consider the potential ecological impacts and benefits of the above activities and make suggestions for managing any potential adverse ecological effects. Effects management will follow the effects management hierarchy and focus on avoidance and minimisation of effects.
- Assess other potential environmental impacts, and potential management.







## 3.0 Context

### 3.1 Wapiti-type deer in Fiordland

The American elk or wapiti (*Cervus canadensis*) is the second largest deer species in the world. Wapiti are indigenous to the open forest and grassland of North America and parts of Asia but were introduced to Fiordland in 1905. The original herd of 18 animals that were introduced has grown to thousands which populate the Wapiti Area. They have hybridised with red deer (*C. elaphus*) throughout their Fiordland range so that few, if any, pure wapiti remain. For the purposes of this report the hybrids are referred as wapiti-type deer to distinguish them from pure red deer.

The Fiordland wapiti-type deer herd is of recreational importance for hunters, a source of food for the community, and helps to fund the conservation efforts of the FWF. Wapiti-type deer in Fiordland were recognised as a Herd of Special Interest (**HOSI**) in 2026.

### 3.2 Wapiti biology

The subspecies of wapiti present in Fiordland is the Rocky Mountain subspecies (*C. c. nelsoni*), the second-largest wapiti subspecies. Their habitat in North America is primarily subalpine forests, alpine basins and floodplain marshes, but they have adapted to the dense rainforest and rugged terrain of Fiordland. Wapiti are grazers, preferring to eat grass over browse, but they will eat a variety of vegetation including shrubs, mosses and lichens, and tree bark (particularly when other food sources are scarce). Wapiti are highly social and females (**cows**) form large groups, with males (**bulls**) courting (**bugling**) and mating in autumn.

### 3.3 Wapiti impacts in Fiordland

Within the Wapiti Area, wapiti-type deer tend to roam the alpine areas. They feed on a variety of selected browse, favouring species with large leaves such as five-finger (*Pseudopanax arboreus*) and kāpuka/broadleaf (*Griselinia littoralis*; Department of Conservation, 2025). They also prefer alpine herbs and tussock grasses, such as *Dolichoglottis scorzonoides*, *Ranunculus lyallii* and *Chionocholea pallens* (Whitmore 2023; Rose & Platt, 1987).

Wapiti-type deer in the Wapiti Area are a significant driver of vegetation damage: removing wapiti numbers to near zero was correlated with significant increase in vegetation values in the Wapiti Area (Rose and Platt, 1987) and near-zero numbers of deer in the Murchison Mountains has been associated with vegetation recovery (Tanentzap *et al.* 2009). From 2010 to 2020, the Seedling Ratio Index (**SRI**) for highly palatable plant species within the Wapiti Area increased, correlating with FWF-driven wapiti removal. The average proportion of plants browsed in specific monitoring plots within the Wapiti Area also decreased from an average of 17% in 2014-2017 to an average of 8%, provisionally indicating that wapiti removal may be reducing plant browse, though the statistical significance of the data has not been tested. Between 2009 and 2024, the relationship between deer pellet group numbers and plant browse of selected palatable species was found to be strongly positive, potentially more so than in deer populations outside the Wapiti Area (Whitehead *et al.*, 2024).



Vegetation values such as recovery of palatable species are correlated with deer density (Tanentzap *et al.* 2009), but not necessarily deer control (Whitmore 2023). Deer control has a complicated relationship with improved vegetation values (Whitehead *et al.*, 2024; Whitmore 2023). Deer populations naturally fluctuate year-to-year, so that number of deer harvested annually does not always correlate with browsing observed on vegetation (Whitmore 2023). Factors not directly related to deer control, such as density of other introduced mammals, plant population dynamics, seed bank deficits, shifts in ecosystem processes, and weed prevalence can affect the ability of vegetation communities to recover (Coomes *et al.*, 2003).

### 3.4 Hunting and social aspects of wapiti in Fiordland

Recreational hunting, deer culling and the venison industry are historically and culturally important to Fiordland (Department of Conservation, 2007). Access, gear requirements, and recovery issues make deer control expensive in remote Fiordland. Many areas where wapiti-type deer are controlled are only accessible via helicopter or a hike of several days. Hunting provides an opportunity for cost-effective deer management. By self-funding their efforts, hunters relieve DOC of control costs, including during periods of limited funding. However, hunting is may not always be as effective as DOC managed control, necessitating supplemental hunting by FWF.

As the largest deer in Aotearoa New Zealand, the older (7+ years) bull wapiti-type deer in Fiordland are highly desirable for trophy hunters. Hunters enjoy the experience of hunting specifically for wapiti in remote areas of Fiordland and the ballot is highly competitive.

### 3.5 Herd structure management

The FWF promotes selective breeding of wapiti-type deer by:

- Actively suppressing herd density by targeting females.
- Shifting sex ratios to favour males.
- Encouraging hunters to shoot mainly older bulls.
- Leaving young bulls with favourable antler traits to mature (>7 years) to create strong competition for mating rights.

This is strongly encouraged by FWF<sup>1</sup>. FWF culls young bulls that do not appear to have desirable trophy traits, as well as cows and calves to keep family groups small and promote vegetation growth. Anecdotal evidence suggests that bulls and their antlers are becoming larger, though no data is currently available to assess this. Family groups appear to be declining, with a lower ratio of cows to bulls. This reduces overall reproductive output of the herd (to <25% per annum). FWF wishes to artificially drive wapiti-type deer population dynamics and genetics towards older bulls with larger antlers through selective culling, so that the older bulls can be shot by hunters as trophy animals.

### 3.6 Deer control for conservation in Fiordland

Deer are recognised in the Fiordland National Park Management Plan (FNPMP; Department of Conservation, 2007) as having a greater impact on Fiordland's vegetation than other introduced mammals. Deer browse the forest understorey and large herbs in the tussock grasslands. Deer control is therefore necessary to protect Fiordland's delicate plant communities.

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<sup>1</sup> According to the FWF website, <https://fwf.net.nz/>.



## Deer control efforts

Deer control in Fiordland is primarily managed by three regimes:

- DOC undertake intense deer control in the Murchison Mountains, aiming to reduce deer numbers to near zero, primarily for takahē (*Porphyrio hochstetteri*; Threatened – Nationally Vulnerable) conservation.
- FWF control deer and wapiti-type deer herd structure for recreational hunting and conservation purposes in the Wapiti Area.
- WARO permit holders undertake sporadic hunting in the rest of Fiordland outside the Murchison Mountains and Wapiti Area.

Deer control efforts, and the resulting outcomes in terms of both harvest rates and resulting deer abundance, vary among these three management regimes. For all three regimes, annual hunting effort per km<sup>2</sup> declined between 2006 and 2024, but most sharply in the areas relying solely on WARO operations (Whitehead *et al.*, 2024). In contrast, annual harvest rates per km<sup>2</sup> have increased within the same period in the Murchison Mountains, remained stable in the Wapiti Area and decreased in the WARO-only area. This indicates that while effort may have decreased, gains in efficiency have resulted in similar outcomes in the Murchison Mountains and the Wapiti Area. Deer abundance and activity<sup>1</sup> was found to be lowest overall in the Murchison Mountains in 2009 due to the high intensity of control over a smaller area, followed by the Wapiti Area where it is more variable because it is a larger area (Whitehead *et al.*, 2024). Deer abundance and activity was highest in the WARO areas where control fluctuates with venison demand, economic constraints and other factors.

Overall, while a link between intensive control and deer abundance and activity levels is likely, deer abundance and activity are currently not well monitored in the three areas. Decreased control in the WARO areas is likely to have led to increased deer abundance and activity, but abundance and activity levels in the Wapiti Area compared to the Murchison Mountains are not known. Since control was increasing in the Murchison Mountains and remaining stable in the Wapiti Area, deer abundance and activity is most likely to be lowest in the Murchison Mountains. This is a conservative assessment, and deer numbers may be lower overall in the Wapiti Area due to the higher overall harvest rate in the Wapiti Area per km<sup>2</sup>.

Deer control between 2006 and 2024 was, on average, highest in the Wapiti Area, both in terms of hunting effort and annual harvest rates per km<sup>2</sup> (Whitehead *et al.*, 2024).

## Relationship between deer control, pellet counts, and deer abundance

Deer harvest rate and effort does not necessarily predict deer abundance or activity. In addition, pellet counts are considered to be a relatively poor correlate of true animal numbers (Husheer and Tanantzap, 2023).

Pellet counts nevertheless comprise the best available data, and indicate that there may be some population responses to deer control. Between 2006 and 2024, pellet group counts remained relatively stable in the Wapiti Area and Murchison Mountains, while in the WARO-only area, pellet group counts increased as annual harvest effort and rates decreased.

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<sup>1</sup> Note that deer activity in this study was quantified using deer pellet counts, which is not considered a reliable indicator of deer populations (Husheer and Tanantzap 2024).





In the Murchison Mountains and Wapiti Area, no significant relationship was found between increased harvest effort or rate per km<sup>2</sup> and pellet group counts. However, the magnitude of the decrease in harvest rate and effort in the WARO-only area was greater than the magnitude of the increase in harvest rate and effort in the Wapiti Area and Murchison Mountains, indicating that very large changes in control rates are necessary to see significant changes in deer pellet counts.

### 3.7 Statutory context

#### National Parks Act

National parks in Aotearoa New Zealand are regulated via the National Parks Act (New Zealand Government, 1980). Part 1 of the National Parks Act states:

“Except where the Authority [DOC] otherwise determines, the native plants and animals of the parks shall as far as possible be preserved and the introduced plants and animals shall as far as possible be exterminated.”

The goal of pest management in National Parks is therefore to exterminate introduced species as far as possible, except in specific situations determined by DOC. The most effective method of deer control available should therefore be preferred in most situations.

The FNPMP discusses deer control extensively, recognising it as integral to conservation of Fiordland’s ecological values. In particular, the FNPMP states:

- The scale of deer control undertaken by DOC is dependent on distribution and availability of resources.
- The general approach to deer control in FNP is to encourage commercial WAROs.
- Government-driven deer control prioritises deer-free areas and the Murchison Mountains.
- Deer control in the Murchison Mountains is specifically for the protection of takahē habitat. However, the control programme could be extended outside the Murchison Mountains, if necessary, due to takahē population expansion.
- Options for integrating pest management of introduced animals from different species are prioritised.
- Recreational hunting of deer is encouraged, including the maintenance of huts and tracks for hunters, and allowing aerial access and carcass recovery to designated areas.

#### Herd of Special Interest

Wapiti-type deer were recently designated as New Zealand’s first Herd of Special Interest (**HOSI**), which adds context to the management undertaken for wapiti-type deer. Management is intended to support both a high-quality hunting experience and reduce impacts on native vegetation. Management is driven by the herd management plan<sup>1</sup> and delivered through annual operational planning. On-the-ground delivery will be led by FWF, working closely with DOC and seeking increased opportunities for iwi and hapū involvement. There are defined roles for DOC and delivery partners, including FWF. Management actions will be informed by monitoring data and regularly reviewed.

Some aspects noted by DOC regarding this designation<sup>2</sup>:

<sup>1</sup> <https://www.doc.govt.nz/globalassets/documents/conservation/biodiversity/fiordland-wapiti-herd-of-special-interest-herd-management-plan.pdf>.

<sup>2</sup> <https://www.doc.govt.nz/nature/biodiversity/wild-animals-management/waipiti-deer-proposal-for-a-herd-of-special-interest/>.



- The designation does not seek to increase deer numbers.
- Management will focus on maintaining herd quality while reducing browsing impacts on native vegetation.
- The Minister retains overall authority for the HOSI and can amend or remove the designation if required.

The new approach to manage the herd for hunting quality should be accompanied by improved monitoring of vegetation condition and herd quality to guide decisions.

## 4.0 Scope of Activities

Activities undertaken by the FWF are restricted to the Fiordland Wapiti Area and focus on culling red deer and non-trophy wapiti. FWF activities include:

- Culling all red deer and wapiti that look like red deer.
- Culling cows and calves.
- Culling bulls that are not likely to grow into trophy-standard animals.
- Managing the wapiti ballot, including use of wapiti ballot fees to manage the area, briefing recreational hunters, and other relevant tasks.
- Deer capture and release for research.
- Harvesting accessible culled deer carcasses.
- Filming and advocacy.
- Use of drones for deer management purposes and scientific research.

## 5.0 Methods

### 5.1 Desktop ecological surveys

Biodiversity records within the Wapiti Area are scarce due to the remoteness and ruggedness of the country. However, along the tracks and particularly in the northern side of the Wapiti Area, citizen science records have been collected and are available on the Global Biodiversity Information Facility (GBIF; GBIF.org). DOC and the New Zealand Institute for Bioeconomy Science (Manaaki Whenua – Landcare Research group) have run plant biodiversity surveys and monitoring, some of which are in the public domain.

The following sources of data were used:

- GBIF.
- Expert experience and opinion.
- Previous surveys done by Wildlands in the local area.
- Literature web search.
- A data request was made to DOC and Manaaki Whenua (National Vegetation Survey data), however due to data accessibility issues none of these data were available to be used.

New Zealand Threat Classification System (**NZTCS**) rankings were taken from the relevant literature:



- Vegetation (De Lange *et al.*, 2024).
- Avifauna (Robertson *et al.*, 2021).
- Lizards (Hitchmough *et al.*, 2026).
- Bats (O'Donnell *et al.*, 2023).
- Terrestrial invertebrates (Andrew *et al.*, 2012; T. Buckley *et al.*, 2016; T. R. Buckley *et al.*, 2012, 2015; Leschen *et al.*, 2012; Sirvid *et al.*, 2020; Stringer & Hitchmough, 2012; Trewick *et al.*, 2022).
- Freshwater fish (Dunn *et al.*, 2025).

## 5.2 Assessing environmental impacts

Potential impacts of continued FWF activities (Section 4) on ecological values within the Wapiti Area (vegetation, avifauna, lizards, invertebrates, freshwater fish and bats) were assessed. The potential effects were also assessed against relevant provisions in the operative Southland District Plan (**SDP**) and the National Policy Statement for Indigenous Biodiversity (**NPS-IB**). Potential measures for avoiding, minimising, and/or remediating adverse effects of the proposal on ecological values were identified and evaluated, along with suggested management actions. In quantifying the level of effects, the following framework was used:

- Positive Effects  
An effect that will have a positive impact on the environment.
- Negligible Effects  
Effects, if any, are not noticeable and have no long-term environmental consequences.
- Less than Minor Adverse Effects  
Adverse effects that are discernible day-to-day effects, but to which ecological values are resilient.
- Minor Adverse Effects  
Adverse effects that are noticeable but will not cause any significant adverse impacts.
- More than Minor Adverse Effects  
Adverse effects that are noticeable that may cause an adverse impact but could be potentially mitigated or remedied.
- Significant Adverse Effects that could be remedied or mitigated  
An effect that is noticeable and will have a serious adverse impact on the environment but could potentially be mitigated or remedied.
- Unacceptable Adverse Effects  
Extensive adverse effects that cannot be avoided, remedied or mitigated.

No long-term vegetation data, nor reliable, consistent deer population data over a longer term were available to inform this analysis. Therefore, the assessment was undertaken qualitatively, using information provided by FWF and other sources. Notably, previous assessments of deer impacts within the Wapiti area have varied in their conclusions, due to data scarcity. A substantially more robust assessment could be undertaken if reliable long-term datasets become available.

## 5.3 Counterfactual scenarios

A typical EIA considers the impacts of a proposed activity compared to the impact of not undertaking the activity. In this case, the counterfactual scenario (in which FWF are not granted concession to continue activities in the Wapiti Area) is not known, because it is unclear what management regime





would be most likely if FWF's activities were not permitted. Thus, we chose to provide effects relative to three different counterfactuals. Effects have been assessed against each counterfactual (Department of Conservation, 2007; Whitehead *et al.*, 2024). Considering relevant counterfactuals is important because environmental effects can only be meaningfully assessed relative to an alternative future, not in isolation.

**Scenario A: Organised deer control is not carried out in the Wapiti Area.** This is conceivable due to the rugged terrain and lack of easy access to the Wapiti Area and is similar to the lack of deer control in some other parts of Fiordland (such as parts of southern Fiordland).

Under Scenario A, recreational hunting may occasionally occur but deer are not otherwise controlled. Lack of deer control results in increased deer numbers, activity and group sizes. 1080 drops organised by DOC are possible, depending on resourcing and prioritisation, but are not guaranteed and bait drops are unlikely to be consistently applied.<sup>1</sup>

**Scenario B: Deer control is carried out by non-FWF WARO operators.** Under this scenario, deer are controlled by WARO operators to a similar extent as they are controlled through most of FNP (excepting the Murchison Mountains and other areas of very intensive control, and areas where deer are not controlled). This control is highly variable, fluctuating with economic conditions. When venison harvesting is highly profitable, deer numbers and activity can decline rapidly, but deer numbers increase when harvesting is not profitable (Department of Conservation, 2007; Whitehead *et al.*, 2024). Distribution is also affected as areas that are easier and cheaper to access for deer recovery are prioritised, leaving deer to multiply in less accessible areas. 1080 drops organised by DOC are possible but not guaranteed. The population structure is also expected to be different from FWF management. WARO operators target large males in velvet (which are most valuable animals), often leaving females. This type of hunting regime would shift the sex ratio and herd structure significantly towards females and reduce the number of males maturing. The outcome would be a highly reproductive herd with no trophy males. Family group sizes would also grow.

**Scenario C: Deer control is carried out by DOC to the same extent as in the Murchison Mountains.** Under this scenario, deer are controlled to the same level as the Murchison Mountains by DOC. Intensive deer control by DOC results in low deer densities (potentially lower than those achieved by FWF within the Wapiti Area) and potentially reduced group sizes. However, deer control per unit area is on average slightly lower in the Murchison Mountains than in the Wapiti Area, in terms of annual hunting effort and harvest rates (Whitehead *et al.*, 2024).

This level of control could occur, depending on resourcing and prioritisation. If this level of control were achieved, it would likely be driven by takahē management if takahē were to spread to the Wapiti Area in future<sup>2</sup>. Deer control to this high standard by DOC is unlikely to be financially sustainable long-term due to the large size of the Wapiti Area and Murchison Mountains combined.

For the purposes of this report, deer abundance and activity is considered to be slightly lower under Scenario C than either Scenarios A or B. This is a conservative view as the actual relationship is not known and is likely to be complex and fluctuating.

<sup>1</sup> Most of Fiordland is able to be subject to occasional or periodic 1080 drops. Along with extensive trapping networks, this enables a high intensity of pest mammal control to be achieved in priority areas. In remote locations, 1080 drops are the only feasible method of pest mammal control. 1080 drops do not usually cover areas as large as the Wapiti Area, but are typically localised to smaller areas and carefully planned in response to monitoring results and depend on available resources, ecological values and other criteria. Harvesting venison from the Wapiti Area currently causes concern regarding 1080 as it can contaminate deer meat and has previously caused localised deer poisoning issues (although with modern bait, deer repellent and broadcast protocols the risk of poisoning deer is minimised). If venison harvest was no longer a conflicting issue, parts of the Wapiti Area could theoretically be targeted for 1080 drops, though this would be likely to be infrequent and localised.

<sup>2</sup> Noting that takahē are not currently known to be spreading into the Wapiti Area.



## 6.0 Ecological Values

### 6.1 Vegetation

The GBIF search returned records of 1,470 plant species<sup>1</sup> within the Fiordland Wapiti Area.

The forest habitats within the Wapiti Area are dominated by silver beech (*Lophozonia menziesii*) with a subcanopy of broadleaved species such as kaikōmako (*Pennantia corymbosa*), horopito (*Pseudowintera colorata*), piripiriwhata/marbleleaf (*Carpodetus serratus*), kāpuka, kātote/soft tree fern (*Alsophila smithii*), and *Coprosma rotundifolia*. Sporadic rimu (*Dacrydium cupressinum*) and southern rātā (*Metrosideros umbellata*) are present.

Subalpine shrubland is typically characterised by lacebarks (*Hoheria glabrata*) and *Coprosma* spp. (e.g. *C. rugosa*, *C. crenulata*, *C. ciliata*). *Dracophyllum fiordense* (At Risk – Declining) and a high diversity of indigenous herbs such as mountain daisy (*Celmisia* spp.), and tree daisies (*Olearia* spp.) including *Olearia crosby-smithiana* (At Risk – Naturally Uncommon).

Alpine grasslands are characterised by tussocks (*Chionochloa* spp, 15 species on GBIF) and sedges (*Carex* spp.; 44 species on GBIF including *Carex longifructus*; At Risk – Naturally Uncommon). Spaniards such as *Aciphylla takahea* (At Risk – Declining) are present in high diversity. Snow marguerite (*D. scorzonoides*), *Abrotanella rostrata* (At Risk – Naturally Uncommon) and *Celmisia holosericea* (At Risk – Declining) are present. Fiordland parahebe (*Veronica catarractae*) is endemic to Fiordland and present in the alpine grasslands.

The small wetlands, seepages and numerous tarns found in alpine grasslands are particularly fragile to compaction, pugging and quagmires created by ungulates. Wetland margins may include dwarf rush (*Juncus pusillus*; At Risk – Naturally Uncommon), *Chionochloa ovata* (At Risk – Declining), *Carex cirrhosa* (Threatened – Nationally Endangered), *C. rubicunda* (Threatened – Nationally Vulnerable), and *Ranunculus ternatifolius* (Threatened – Nationally Vulnerable), which are all vulnerable to pugging.

Cliffs, landslides and boulderfields form the basis for fragile plant communities that are vulnerable to damage from ungulates. Typical plant species include *Coprosma dumosa*, *Veronica subalpina*, pūnui/prickly shield fern (*Polystichum vestitum*), porcupine shrub (*Melicytus alpinus*), alpine holy grass (*Hierochloa novae-zelandiae*), snow tussocks (*Chionochloa* spp.), inaka shrub (*Dracophyllum rosmarinifolium*) and subalpine herbs such as Haast's carrot (*Anisotome haastii*), *Brachyglottis revoluta*, giant buttercup (*Ranunculus lyallii*), *Bulbinella gibbsii* var. *balanifera*, *Dolichoglottis lyallii*, *Celmisia petriei*, and *Pachycladon crenatum* (At Risk – Naturally Uncommon). Many of these herbs are highly palatable to ungulates, especially giant buttercup.

Poorly drained alluvial terraces on lower valley floors often contain swamps and marshes dominated by *Juncus* and *Carex* species. Woody species include weeping māpou (*Myrsine divaricata*) and rōhutu (*Neomyrtus pedunculata*). Exotic species may also be present, including sweet vernal (*Anthoxanthum odoratum*), Scotch thistle (*Cirsium vulgare*) and Californian thistle (*Cirsium arvense*). Higher elevation valley floors are frequently dominated by *Veronica odora* and *Carex sinclairii*, with numerous indigenous herbs and ferns.

<sup>1</sup> GBIF.org (16 June 2026) GBIF Occurrence Download <https://doi.org/10.15468/dl.g8b9gy>.



## 6.2 Avifauna

The GBIF search<sup>1</sup> returned records of 92 bird species in the Wapiti Area. The area contains some of the most important avifauna habitat in mainland Aotearoa New Zealand for many of these species. The species list includes many species that are highly sensitive to predation and habitat loss, such as those listed below:

- Whio/blue duck (*Hymenolaimus malachorhynchus*; Threatened – Nationally Vulnerable) is found in fast-flowing streams and has been subject to a conservation programme within the Wapiti Area.
- Tokoeka/northern Fiordland tokoeka (*Apteryx australis* “northern Fiordland”; Threatened – Nationally Vulnerable) is present in the forest.
- Kākāriki/yellow-crowned parakeet (*Cyanoramphus auriceps*; At Risk – Declining) is present in the forest.
- Kākā/South Island kaka (*Nestor meridionalis meridionalis*; Threatened – Nationally Vulnerable) is present in the forest.
- Kea (*Nestor notabilis*; Threatened – Nationally Endangered) is present in the alpine and subalpine zones, and occasionally occurs in the forest and on lakeshores.
- Pīwauwau/southern rock wren (*Xenicus gilviventris rineyi*; Threatened – Nationally Endangered) lives in open scree and boulderfields in the subalpine and alpine zones and relies on invertebrates as a food source.
- Koekoeā/long-tailed cuckoo (*Eudynamis taitensis*; Threatened – Nationally Vulnerable) is present in the forest.
- South Island takahē (*Porphyrio hochstetteri*; Threatened – Nationally Vulnerable) are present in the alpine grasslands and shrubland edges, and in river flats, in the nearby Murchison Mountains. Takahē may move into the forest at times, such as when snow covers the alpine grasslands. Takahē are not currently known within the Wapiti Area but may spread there in future.

The Wapiti Area is characterised by diverse avifauna assemblages that are not found in many parts of mainland Aotearoa New Zealand. All indigenous habitats present are vital to support the diverse bird life. Stoat control and captive breeding programmes have contributed to survival of species such as the South Island takahē and whio/blue duck in the Wapiti Area.

## 6.3 Lizards

Two lizard records were available within the Fiordland Wapiti Area<sup>2</sup>. The lizard fauna is largely unknown and understudied. However, records from north and south of the Wapiti Area, and habitat availability, indicate the species in Table 1 may be present.

<sup>1</sup> GBIF.org (16 June 2026) GBIF Occurrence Download <https://doi.org/10.15468/dl.g4j7vf>.

<sup>2</sup> GBIF.org (16 June 2026) GBIF Occurrence Download <https://doi.org/10.15468/dl.zfqyze>.



**Table 1** – Lizard species and their likelihood of presence in the Fiordland Wapiti Area.

| Common Name          | Scientific Name                                     | Threat Status                      | Likelihood of Presence in the Wapiti Area                                                                                                                                                      | Likely Habitat Usage Within the Fiordland Wapiti Area (if Present)                                                                                                                                                                                           |
|----------------------|-----------------------------------------------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fiordland skink      | <i>Oligosoma acrinasum</i>                          | Threatened – Nationally Vulnerable | Certain.                                                                                                                                                                                       | Likely to be found on the boulders and beaches at the Wapiti Area's shorelines and islands, feeding on invertebrates near the high tide mark. They require low numbers of predators such as rats. Fiordland skink have been recorded within the Wapiti Area. |
| Cryptic skink        | <i>Oligosoma inconspicuum</i>                       | At Risk – Declining                | Likely, or almost certain to be present. Cryptic skink have been recorded in an adjoining mountain range slightly north of the Wapiti Area and are highly likely to be within the Wapiti Area. | Likely to be found within alpine grasslands, boulderfields and slips, and alpine shrubland. They require low predator numbers (including rats, mice and hedgehogs) and loose rock and/or wood for shelter.                                                   |
| Eyres skink          | <i>Oligosoma repens</i>                             | At Risk – Declining                | Present in the Murchison Mountains and is highly likely to be present within the Wapiti Area, at the northern end of its range.                                                                | Habitat includes rock piles and screes in mountain foothills and valley flats, as well as low-growing shrubs on alpine ridges.                                                                                                                               |
| Cascade gecko        | <i>Mokopirirakau</i> "Cascades"                     | Threatened – Nationally Vulnerable | Likely, or almost certain to be present                                                                                                                                                        | Highly likely to be in the alpine grasslands, subalpine shrubland, cliffs, landslides and boulderfields, though no records are nearby. They require rocky habitat and are seldom seen in forest.                                                             |
| Southern grass skink | <i>Oligosoma chionocloescens</i>                    | At Risk – Declining                | May be present in valleys.                                                                                                                                                                     | Inhabit a range of habitats including coastal dunes, wetlands, grassland, shrublands, rocky shrubland/herbfield, screes, tussock, stony riverbeds and even cities (from sea level, up to 1,800m)                                                             |
| Mahogany skink       | <i>Oligosma</i> aff. <i>inconspicuum</i> 'Mahogany' | Threatened – Nationally Vulnerable | Found to the north and south of the Wapiti Area so likely to be within the Wapiti Area.                                                                                                        | Alpine creviced rock bluffs, vegetated ledges and rocky fellfield beneath cliffs. Occupies extreme high altitude (>1,000m) habitats prove to avalanches, rock falls and intense weather                                                                      |
| Sinbad skink         | <i>Oligosoma pikitanga</i>                          | Threatened – Nationally Critical   | None have been found outside the Sinbad Valley, but other populations are possible.                                                                                                            | Alpine creviced rock bluffs, vegetated ledges and rocky fellfield beneath cliffs (>1,000m)                                                                                                                                                                   |



Other species known from surrounding areas that are unlikely to be within the Wapiti Area due to the Wapiti Area being outside the known species distribution:

- Barrier skink (*Oligosoma judgei*; Threatened – Nationally Vulnerable).
- Humboldt skink (*Oligosoma* aff. *inconspicuum* 'Humboldt'; Taxonomically Indistinct).

Lizards depend upon cover and interstitial space availability, as they shelter in crevices and under vegetation when not foraging or basking. However, cover for lizards also provides cover for predators. Therefore, lizards benefit from low numbers of rodents. Lizards also require abundance of fruit and invertebrates as a food source.

## 6.4 Bats

Bat habitat is present in the Wapiti Area, but no bat records are available. The Wapiti Area is likely to support both extant indigenous bat species, which have been found nearby:

- Long-tailed bat (*Chalinolobus tuberculatus*; Threatened – Nationally Critical) are aerial insectivores which fly at dusk along forest edges. They roost in large trees with hollows. They are threatened by habitat loss (particularly felling of large and dead trees) and introduced predators such as rats and stoats.
- Southern lesser short-tailed bat (*Mystacina tuberculata tuberculata*; Threatened – Nationally Increasing) are likely to be found in the forests, roosting in hollows in large trees. As a ground-foraging species, it is reliant on rat, stoat and feral cat suppression to zero or near zero.

## 6.5 Terrestrial invertebrates

The GBIF search returned records of 240 invertebrate taxa<sup>1</sup>. Species diversity is likely to be extremely high within the Wapiti Area, including undescribed species. The following notable species are present within the Wapiti Area:

- Helms' stag beetle (*Geodorcus helmsi*; not assessed) is likely to be ubiquitous within the Wapiti Area. Helms' stag beetles are protected under the Wildlife Act 1953. They inhabit tussockland and forests with deep litter and mature trees. They may be declining due to predation by rats, making Fiordland an important stronghold for the species.
- Speargrass weevil (*Lyperobius montana*; not assessed) relies entirely on speargrass (*Aciphylla* spp.) as a food source and are likely to be found in the open areas outside the forest.
- Darkling beetles (*Cerodolus curvellus*; At Risk – Naturally Uncommon) are forest beetles.
- Darkling beetles (*Zeadelium hudsoni*; At Risk – Naturally Uncommon) are forest beetles.
- Plant bugs (*Kiwimiris concavus*; At Risk – Naturally Uncommon) are under-studied and their host plants are unknown. They have been found at forest edges by beating vegetation but may also be present in other habitats.
- Looper moth (*Dasyuris partheniata*; At Risk – Declining) are found in grasslands and coastal cliffs where speargrass (their larval food plant) is available.
- The giant Fiordland cave wētā (*Pachyrhamma delli*; At Risk – Declining) requires dark, damp environments and frequents caves and rock crevices.
- Trap-jaw spiders (*Aotearoa magna*; Not Threatened) are usually found in forest leaf litter.

<sup>1</sup> GBIF.org (16 June 2026) GBIF Occurrence Download <https://doi.org/10.15468/dl.r83pd3>.



## 6.6 Freshwater

Records of 10 freshwater fish species were retrieved from GBIF<sup>1</sup>. The water quality, lack of introduced predators such as trout, and diversity of habitats make the Wapiti Area valuable freshwater fish habitat.

The following notable species have been recorded within the Wapiti Area:

- Longfin eel (*Anguilla dieffenbachii*; At Risk – Declining).
- Kōaro (*Galaxias brevipinnis*; At Risk – Declining).
- Lamprey (*Geotria australis*; Threatened – Nationally Vulnerable).
- Gollum galaxias (*Galaxias gollumoides*; At Risk – Declining).
- Redfin bully (*Gobiomorphus huttoni*; At Risk – Naturally Uncommon).
- Giant kōkopu (*Galaxias argenteus*; At Risk – Declining).
- Inanga (*Galaxias maculatus*; Threatened – Nationally Vulnerable).

## 7.0 Potential Impacts on Environmental Values Before Management

Potential impacts from the continued work of the FWF are complex and nuanced. Fiordland biodiversity is healthiest and most pristine when introduced mammals are not present. This is observed on some islands (such as Pukenui/Anchor Island and Indian Island) in the Fiordland sounds, where deer have been removed. Even low densities of deer can have extremely detrimental impacts on vegetation, causing knock-on effects on wider biodiversity as habitats are degraded, and impacts grow with deer density. However, throughout mainland Fiordland deer eradication is not feasible. High-intensity deer control targeting every deer found is carried out in the Murchison Mountains, but deer persist there in low numbers.

The main potential impacts from deer hunting and WARO activities in the wapiti area stem from hunter access and use of the area, and the managing of wapiti-type deer herd structure to increase the size of individuals. However, controlling herd size and family group size protects vegetation from further degradation which would likely occur if deer numbers were allowed to grow due to lessened control.

Impacts below are assessed against the three potential counterfactuals discussed in Section 5.3:

- Scenario A: Organised deer control is not carried out in the Wapiti Area.
- Scenario B: Deer control is carried out by non-FWF WARO operators.
- Scenario C: Deer control is carried out by DOC to the same extent as in the Murchison Mountains.

Impact levels reported in this section are estimated impact levels **before management** is undertaken. Many of the impact levels can be reduced by applying effects management outlined in Section 8.

<sup>1</sup> GBIF.org (23 June 2026) GBIF Occurrence Download <https://doi.org/10.15468/dl.euwn9e>.





## 7.1 Deer abundance in the Wapiti Area

The greatest impact of FWF activities (particularly as part of WARO activities, including deer culling and harvesting of accessible culled deer carcasses) is expected to be the influence of deer culling on the resident deer population. Deer influence the environment through browse, noise and disturbance and soil effects. Deer activity can also cause water contamination; this is discussed in Section 7.2.2, together with other water contamination impacts.

### 7.1.1 Deer browsing

Deer browse selectively, impacting vegetation health and the structure of vegetation communities. Extensive deer browsing in alpine and subalpine habitats targets specific plants such as buttercups and daisies which can be greatly affected even where populations are intensively controlled. A population density of more than one deer per square kilometre is likely to prevent recovery of highly palatable species from browse (Tanentzap *et al.* 2009; Husheer & Tanentzap 2024). In forest, deer tend to destroy the understory and regenerating forest including seedlings, saplings and shrubs. This reduces habitat complexity for fauna, and may restrict food availability for lizards, birds and bats as invertebrate abundance and diversity is reduced. Lack of seedling recruitment in the forest has potential long-term knock-on effects as mature trees needed for bat roosting are not replaced when they die and fall.

When deer numbers are reduced, the following positive effects can occur from removal of browsing (if no other limiting effects are in place):

- Previously browsed forest can regenerate.
- Species that are preferred by deer (such as daisies and buttercups) can become more abundant.
- Plant diversity and biomass can increase.
- Habitat and food sources for birds, lizards and invertebrates can increase.

When deer numbers increase, the following detrimental effects are likely to occur:

- Forest understorey becomes degraded or destroyed.
- Plant communities are represented by fewer species.
- Species preferred by deer become rare.
- Forest is unable to regenerate and old, dying trees are not replaced by regrowth.
- Habitat and food sources for birds, lizards and invertebrates are less available.

Browsing of vegetation reduces the availability of habitat for fauna. Avifauna such as the South Island takahē rely on high-quality vegetation as a food source, therefore unmanaged deer browsing may restrict the range of South Island takahē due to reduced food availability.

Table 2 shows the impact of FWF activities on deer browsing, compared with each of the three potential counterfactuals detailed in Section 5.3.



**Table 2** – The impact of FWF activities due to deer browsing assessed against each of the three potential counterfactuals.

| Counterfactual Scenario                                                                          | Impact of FWF Activities on Effect Level Compared to Scenario | Description of Effect                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scenario A: Organised deer control is not carried out in the Wapiti Area.                        | Net positive                                                  | Controlling wapiti-type deer is likely to drive numbers (and subsequent browsing levels) lower than if no control is implemented.                                                                                                                                                                                                                                                             |
| Scenario B: Deer control is carried out by non-FWF WARO operators.                               | Negligible                                                    | Consistent control of wapiti-type deer is likely to benefit plant communities more than fluctuating control levels, which may lead to large biodiversity gains followed by large biodiversity losses as deer populations fluctuate with control levels. When operating, WARO would target large males, with repercussions for herd structure and ongoing reproductive rate of the population. |
| Scenario C: Deer control is carried out by DOC to the same extent as in the Murchison Mountains. | Minor                                                         | Changing the herd structure to favour larger bulls is likely to cause increased browsing. Slightly higher wapiti-type deer numbers are likely to cause more browsing issues than lower numbers.                                                                                                                                                                                               |

### 7.1.2 Noise and disturbance from deer activity

Deer activity, mostly restricted to tracks, clearings and open areas (particularly subalpine and alpine areas), can cause disturbance and stress to indigenous fauna. The noise caused by bugling bulls and deer moving through an area is likely to impact animal behaviour including avifauna feeding and breeding activity and lizard basking and movement. Deer may also trample ground-based bird nests and trample or kick flightless birds.

Table 3 shows the impact of FWF activities on deer-related noise and disturbance, compared with each of the three potential counterfactuals detailed in Section 5.3.

**Table 3** – The impact of FWF activities due to noise and disturbance from deer, assessed against each of the three potential counterfactuals.

| Counterfactual Scenario                                                                          | Impact of FWF Activities on Effect Level Compared to Scenario | Description of Effect                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scenario A: Organised deer control is not carried out in the Wapiti Area.                        | Net positive                                                  | Controlling wapiti-type deer is likely to reduce disturbance and noise from deer.                                                                                                                                |
| Scenario B: Deer control is carried out by non-FWF WARO operators.                               | Negligible                                                    | Consistent control of wapiti-type deer is likely to provide more consistent low levels of disturbance, but under Scenario B there will be times when deer-related disturbance is driven to extremely low levels. |
| Scenario C: Deer control is carried out by DOC to the same extent as in the Murchison Mountains. | Negligible                                                    | Deer-related disturbance is likely to be approximately the same under both Scenario C and FWF operations.                                                                                                        |



### 7.1.3 Soil compaction, erosion and pugging

Outside the forest, soil compaction, erosion and pugging from deer walking over the land is likely to be the greatest cause of deer-related vegetation damage. Deer and other ungulates are more detrimental to vegetation communities than other introduced mammals such as possums due to these effects, as they alter substrates and hydrology, soil stability and the ability of vegetation to regenerate.

A large amount of terrain within the Wapiti Area is too steep for deer to access, leading to greater concentration of activity in accessible areas. The most accessible areas are the subalpine and alpine areas, which also have plant species and habitats that are most vulnerable to soil effects from deer. Detrimental effects to soil and vegetation in the Wapiti Area may be particularly concentrated in subalpine and alpine habitats outside the forested areas, and around wetlands where the soil and vegetation are more vulnerable to damage from pugging. In Fiordland, wapiti-type deer appear to prefer alpine grassland, shrubland and forest, avoiding the herbfields and slips, during winter. Seasonal changes in deer behaviour are therefore likely to affect soil and vegetation quality at different times of the year.

Wapiti-type deer are larger than red deer (adults weigh up to 260 kg for wapiti-type deer and up to 215 kg for red deer), likely resulting in greater damage to the soil and vegetation (a relationship between animal size and soil compaction is well-known in livestock; Jordon, 2021). Given the herd structure management maintained by FWF, a stable population of fewer deer overall, but an increased percentage of larger deer (including trophy-quality bulls) in the population are expected. The consequences of this herd structure are very poorly understood. The relative effects on vegetation of fewer larger deer versus larger populations of smaller deer are not known.

The aims of FWF include increasing the proportion of mature (at least six years old) bulls in the herd to 10%. Additionally, balancing the sex ratio of bulls:cows to reduce impact. Cows which are 5–8 years old are retained as breeding stock. If a FWF hunter or staff member sees a young bull that may grow into a trophy-quality animal, they do not cull that animal. Occasionally young bulls may be shot by accident if their age is incorrectly assessed. The FWF also aims to reduce family group size to 5–7 individuals per group, promoting smaller group size by culling small bulls, cows and calves.

Table 4 shows the impact of FWF activities due to soil compaction, erosion and pugging, compared with each of the three potential counterfactuals detailed in Section 5.3.

**Table 4** – The impact of FWF activities due to soil compaction, erosion and pugging, assessed against each of the three potential counterfactuals.

| Counterfactual Scenario                                                                          | Impact of FWF Activities on Effect Level Compared to Scenario | Description of Effect                                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scenario A: Organised deer control is not carried out in the Wapiti Area.                        | Net positive                                                  | Controlling wapiti-type deer is likely to drive numbers (and subsequent activity levels) lower than if no organised control is implemented.                                                              |
| Scenario B: Deer control is carried out by non-FWF WARO operators.                               | Negligible                                                    | While consistent deer control is likely to be of greater benefit to soil and vegetation over time, changing herd structure to favour larger animals may reduce the benefits of this effect.              |
| Scenario C: Deer control is carried out by DOC to the same extent as in the Murchison Mountains. | Minor                                                         | Changing the herd structure to favour larger bulls is likely to cause increased soil and vegetation damage. Slightly higher wapiti-type deer numbers are likely to cause more damage than lower numbers. |





### 7.1.4 Compaction of interstitial spaces

Deer walking over rocky ground and vegetation are likely to compact surfaces, reducing the availability of interstitial spaces as habitat for invertebrates and lizards. Habitat within vertical surfaces such as cliffs and trees will remain unaffected (except for a low level of damage due to bulls rubbing their antlers on trees), but boulderfields, herbfields and grasslands will be particularly impacted. Where high levels of damage occur, localised reduced availability of invertebrate hiding places could also have effects on foraging opportunities for lizards and birds, which would otherwise search for invertebrates in interstitial spaces.

Table 5 shows the impact of FWF activities due to compacted interstitial spaces, compared with each of the three potential counterfactuals detailed in Section 5.3.

**Table 5** – The impact of FWF activities due to compaction of interstitial spaces, assessed against each of the three potential counterfactuals.

| Counterfactual Scenario                                                                          | Impact of FWF Activities on Effect Level Compared to Scenario | Description of Effect                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scenario A: Organised deer control is not carried out in the Wapiti Area.                        | Net positive                                                  | Controlling wapiti-type deer is likely to reduce compaction of interstitial spaces.                                                                                                                                                                                                          |
| Scenario B: Deer control is carried out by non-FWF WARO operators.                               | Net positive                                                  | Consistent deer control to a high intensity as carried out by the FWF is likely to reduce compaction of interstitial spaces long-term. Under Scenario B, gains in the number of available interstitial spaces during periods of high control intensity are likely to be small and temporary. |
| Scenario C: Deer control is carried out by DOC to the same extent as in the Murchison Mountains. | Negligible                                                    | Slightly higher wapiti-type deer numbers, and larger average animal size, are likely to cause more damage to interstitial spaces than lower numbers, but the difference in effect is unlikely to be noticeable.                                                                              |

## 7.2 Human activities

The most notable impact of hunters is expected to be the influence of these activities on deer numbers, which have been discussed above. However, hunters and other people engaged by FWF (e.g. for maintenance, deer capture and release research, or filming and advocacy) can have additional impacts on the environment, particularly where good practice guidelines are not followed. The wapiti ballot includes a briefing of recreational hunters as part of their regular activities. This is likely to reduce the following impacts substantially. The way in which this briefing can be leveraged to ensure the greatest possible effects management is discussed in detail in Section 8.

### 7.2.1 Disturbance and environmental degradation from human activity

Impacts of hunters, deer control operators and other parties within the Wapiti Area include:

- Helicopter flights to retrieve carcasses and deploy hunters and other parties.
- Human movement through the bush, on and off tracks, including at dawn and dusk when deer are most active.



- Hut use and maintenance.
- Use of clearings for tent-based camping and taking breaks.
- Litter, lost gear and food scraps left in the bush, for example due to high winds blowing gear and food packaging away from camp sites.
- Appropriate distance not being kept from indigenous wildlife, for example, for the creation of promotional material.

*Water contamination and noise disturbance from human activity are considered separately in following sections.*

These can impact ecological values in a temporary and localised manner, impacting the behaviour of fauna such as lizards and avifauna. Disturbance from deer control and hunting occurs in small amounts seasonally and is highly temporally restricted. Disturbance levels may be high in one area for one night and then disappear the next day when hunters have moved on.

Avifauna feeding and nesting may be affected where disturbance and human activity is increased and avifauna stress levels may be increased. FWF have a Code of Conduct which hunters must agree to as part of their ballot application to hunt within the Wapiti Area. The Code of Conduct includes that all rubbish must be carried out of the National Park.

Table 6 shows the impact of FWF activities due to human activities, compared with each of the three potential counterfactuals detailed in Section 5.3.

**Table 6** – The impact of FWF activities due to human disturbance and environmental degradation, assessed against each of the three potential counterfactuals.

| Counterfactual Scenario                                                                          | Impact of FWF Activities on Effect Level Compared to Scenario | Description of Effect                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scenario A: Organised deer control is not carried out in the Wapiti Area.                        | Less than minor                                               | Human activity within the Wapiti Area would be greatly reduced if no regular hunting, or FWF-driven maintenance or research, occurs.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Scenario B: Deer control is carried out by non-FWF WARO operators.                               | Less than minor                                               | WARO operations in most of Fiordland rely heavily on helicopter use and disturbance from ground-based hunting is lower. Hunting frequency is likely to fluctuate more under Scenario B; disturbance and noise from helicopters and ground-based hunting will be low during periods of low-frequency hunting, allowing flora and fauna to recover. However, when recovery operations increase, biodiversity gains may be lost. Human activity related to FWF-driven maintenance or research would not occur under scenario B, but this is not expected to have a substantial influence. |
| Scenario C: Deer control is carried out by DOC to the same extent as in the Murchison Mountains. | Negligible                                                    | Human-caused disturbance is likely to be similar in Scenario C as it would be under FWF WARO concession. However, drone use will be less, and professional hunters are likely to cause less disturbance than recreational hunters due to their professional backgrounds, DOC standards of environmental care, and training.                                                                                                                                                                                                                                                            |



## 7.2.2 Water contamination

Human activity may increase human faecal contamination of waterways, or lead to a minor increase in chemicals such as detergents, sunscreen or insect repellents. Trampers and other national park users also cause pollution of waterways from similar activities. Water pollution from recreational use has not been studied in Fiordland and the level of waterway pollution is not known and is unlikely to be substantial. Water pollution is likely to be spatially and temporally limited if it does occur.

Deer activity can also cause water contamination by increasing sediment levels due to soil erosion and pugging near freshwater bodies and increased faecal contamination. Water contamination effects are likely to be highest during periods of high deer activity. Notably, harvesting of accessible culled deer carcasses can have a positive influence on water quality, particularly if carcasses are removed from areas adjacent to flowing water.

Weather extremes (excessively wet or dry weather) are likely to cause increased sedimentation, which may become more important as the climate changes and extreme weather events increase in frequency.

Water contamination can have both ecological and whole-environment impacts, which are assessed separately below.

### 7.2.2.1 Impacts on ecology

Water contamination is most likely to impact freshwater fauna, though avifauna feeding in and near waterways may also be impacted if visibility under water is reduced, or freshwater fish or invertebrates become less available as food sources. Whio/blue duck rely on streams with high water quality and low sediment loads for foraging.

Table 7 shows the impact of FWF activities due to water contamination, compared with each of the three potential counterfactuals detailed in Section 5.3.

**Table 7** – The impact of FWF activities due to water contamination, assessed against each of the three potential counterfactuals.

| Counterfactual Scenario                                                                          | Impact of FWF Activities on Effect Level Compared to Scenario | Description of Effect                                                                                                                                                                   |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scenario A: Organised deer control is not carried out in the Wapiti Area.                        | Net positive                                                  | Controlling wapiti-type deer is likely to reduce faecal contamination and sedimentation entering waterways.                                                                             |
| Scenario B: Deer control is carried out by non-FWF WARO operators.                               | Net positive                                                  | Consistent deer control to a high intensity as carried out by the FWF is likely to reduce contamination of waterways consistently long-term, more effectively than fluctuating control. |
| Scenario C: Deer control is carried out by DOC to the same extent as in the Murchison Mountains. | Negligible                                                    | Slightly higher wapiti-type deer numbers are likely to cause more water contamination than lower numbers, but the difference in effect is unlikely to be noticeable.                    |





### 7.2.2.2 Whole-environment impacts

Pollution driven by human activity, such as washing, swimming and drinking from waterways, is likely to lower aesthetic and wilderness values. Hunters using waterways, like other backcountry users, may leave traces of activity behind, detracting from wilderness and remoteness values.

Table 8 shows the impact of FWF activities due to pollution of waterways, compared with each of the three potential counterfactuals detailed in Section 5.3.

**Table 8** – The impact of FWF activities due to pollution of waterways, assessed against each of the three potential counterfactuals.

| Counterfactual Scenario                                                                          | Impact of FWF Activities on Effect Level Compared to Scenario | Description of Effect                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scenario A: Organised deer control is not carried out in the Wapiti Area.                        | Less than minor                                               | Human-driven pollution of waterways is likely to be slight under FWF operations but will still be greater than if no deer control is carried out.                                                                                                                                                   |
| Scenario B: Deer control is carried out by non-FWF WARO operators.                               | Less than minor                                               | Human-driven pollution of waterways is likely to be less than minor under Scenario B due to the relative lack of ground-based control and recreational hunting. Most human-driven pollution would not be from hunting activity under this scenario.                                                 |
| Scenario C: Deer control is carried out by DOC to the same extent as in the Murchison Mountains. | Negligible                                                    | Human-driven pollution of waterways is likely to be similar under FWF operations to DOC-driven control. Professional hunters and DOC staff are likely to cause less disturbance than recreational hunters due to their professional backgrounds, DOC standards of environmental care, and training. |

### 7.2.3 Noise disturbance

Noise disturbance from human activity within the Wapiti Area is likely to impact the environment by reducing the wilderness and remoteness values, particularly in the Glaisnock Wilderness Area. Helicopter and drone use in particular detract from the area's aesthetic and remoteness values.

Aesthetic values of remote wilderness areas are reduced by noise disturbance from human activity, including:

- Helicopter flights, including for the transport of people and harvesting of accessible culled deer carcasses.
- Noise from firearm discharge and hunting groups.
- Track and hut maintenance.
- The use of drones for deer management purposes and scientific research.

It is expected that noise disturbance from FWF operations will be primarily driven by hunting and culling, with research-based noise disturbance (such as the use of drones for surveys) likely either being one-off disturbance of an area, or irregular i.e. occurring every couple of years.



Table 9 shows the impact of FWF activities due to noise disturbance, compared with each of the three potential counterfactuals detailed in Section 5.3.

**Table 9** – The impact of FWF activities due to noise and disturbance, assessed against each of the three potential counterfactuals.

| Counterfactual Scenario                                                                          | Impact of FWF Activities on Effect Level Compared to Scenario | Description of Effect                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scenario A: Organised deer control is not carried out in the Wapiti Area.                        | Minor                                                         | Human-driven noise disturbance is likely to be greater than if no deer control is carried out. Research will make marginal contributions to noise disturbance under FWF management that would not occur if no organised deer control is implemented.                                                                                                                                                                                                                                                                           |
| Scenario B: Deer control is carried out by non-FWF WARO operators.                               | Less than minor                                               | WARO operations in most of Fiordland rely heavily on helicopter use and disturbance from ground-based hunting is lower. Hunting frequency is likely to fluctuate more under Scenario B; disturbance and noise from helicopters and ground-based hunting will be low during periods of low-frequency hunting. However, helicopter use will increase during times of high venison demand. Research will make marginal contributions to noise disturbance under FWF management that would not occur under non-FWF WARO operators. |
| Scenario C: Deer control is carried out by DOC to the same extent as in the Murchison Mountains. | Less than minor                                               | Human-driven noise and disturbance is likely to be slightly greater under FWF operations than DOC-driven control. Professional hunters and DOC staff are likely to cause less disturbance than recreational hunters due to their professional backgrounds, DOC standards of environmental care, and training. Some research contributions to noise disturbance are expected under both scenarios.                                                                                                                              |

## 7.3 Research, management and other activities

The use of the Wapiti ballot results in many tangential activities, many of which drive important positive biodiversity initiatives. FWF drive data collection within the Wapiti Area, which is more centralised and standardised than information which might otherwise be collected. This can be harnessed to drive critical research. Further, fees collected for management of the area are used to manage stoats and other mammalian predators. Other tasks driven by FWF activities include filming and advocacy.

### 7.3.1 Increased understanding of deer activity, ecology and impacts in the Wapiti Area

Deer and their impacts are heavily monitored by FWF and plans for research (including catch and release studies of deer) are likely to increase understanding of deer activity and impacts in the Wapiti Area. Observations of bird life and other fauna are also recorded by hunters and FWF staff (as part of the Code of Conduct for entering the Wapiti Ballot, hunters agree to fill in a bird data return). Research and monitoring have long-term benefits, including outside the Wapiti Area, by allowing control and restoration methods to be adjusted and refined.

Research may also result in some adverse effects, including noise pollution from drone research, or disturbance of researchers to the environment through use of the landscape and water contamination. These aspects are covered in Section 7.3 above.



Table 10 shows the impact of FWF activities due to increased understanding of deer activity, ecology and impacts, compared with each of the three potential counterfactuals detailed in Section 5.3.

**Table 10** – The impact of FWF activities due to increased understanding of deer activity, ecology and impacts assessed against each of the three potential counterfactuals.

| Counterfactual Scenario                                                                          | Impact of FWF Activities on Effect Level Compared to Scenario | Description of Effect                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scenario A: Organised deer control is not carried out in the Wapiti Area.                        | Net positive                                                  | Data collected by FWF and hunters is useful in increasing understanding of deer in Fiordland and would not occur in the absence of organised deer control.                                                                                                                                                                                                                                                                                     |
| Scenario B: Deer control is carried out by non-FWF WARO operators.                               | Net positive                                                  | WARO operators do not typically collect data on biodiversity or deer activity and impacts.                                                                                                                                                                                                                                                                                                                                                     |
| Scenario C: Deer control is carried out by DOC to the same extent as in the Murchison Mountains. | Negligible                                                    | Under Scenario C, monitoring and observational biodiversity data is likely to be more structured and collected by DOC staff and professionals, who are likely to have a greater and more consistent ability to identify biodiversity values such as plant and bird species than recreational hunters. Data are more likely to be used for conservation purposes and analysed using appropriate statistical methods than data collected by FWF. |

### 7.3.2 Stoat control

Stoat trapping is carried out by FWF along maintained tracks. The stoat trapping network is intensive, and stoat numbers are believed to be low in the Wapiti Area due to control undertaken by the FWF. However, the effects of stoat trapping in the Wapiti Area on stoat populations needs further assessment.

Table 11 shows the impact of FWF activities due to stoat control, compared with each of the three potential counterfactuals detailed in Section 5.3.

**Table 11** – The impact of FWF activities due to stoat control, assessed against each of the three potential counterfactuals.

| Counterfactual Scenario                                                                          | Impact of FWF Activities on Effect Level Compared to Scenario | Description of Effect                                                                                                                  |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Scenario A: Organised deer control is not carried out in the Wapiti Area.                        | Net positive                                                  | In the absence of deer harvesting, regular stoat control would likely not occur outside of potential occasional, localised 1080 drops. |
| Scenario B: Deer control is carried out by non-FWF WARO operators.                               | Net positive                                                  | Regular stoat control would likely not occur.                                                                                          |
| Scenario C: Deer control is carried out by DOC to the same extent as in the Murchison Mountains. | Net positive                                                  | Regular stoat control would likely not occur outside of potential occasional, localised 1080 drops.                                    |





### 7.3.3 Control of introduced mammals other than ungulates and stoats

Currently, stoats and ungulates are the only introduced mammals controlled within the Wapiti Area. Possum densities are thought to be low but may be increasing. Habitat and food availability for possums is conducive to high population growth rates. Therefore, possum densities within FNP are likely to increase where they are not controlled. Weasels are also likely to be present and may be caught in stoat traps. Rat and mouse populations will be widespread in the Wapiti Area but are not well researched. Hedgehogs are unlikely to be present. Feral cats may be present at forest edges and along tracks.

Introduced mammals are highly detrimental to indigenous flora and fauna and are one of the greatest threats to Aotearoa New Zealand's biodiversity. In the Wapiti Area, species such as whio/blue duck, kaka, tokoeka/northern Fiordland tokoeka and pīwauwau/southern rock wren are extremely vulnerable to predation by introduced mammals (particularly stoats for whio).

Table 12 shows the impact of mammalian pests other than stoats and ungulates, compared with each of the three potential counterfactuals detailed in Section 5.3.

**Table 12** – The impact of FWF activities on control of mammalian pests other than stoats and ungulates, assessed against each of the three potential counterfactuals.

| Counterfactual Scenario                                                                          | Impact of FWF Activities on Effect Level Compared to Scenario | Description of Effect                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scenario A: Organised deer control is not carried out in the Wapiti Area.                        | Minor                                                         | In the absence of deer harvesting, periodic pest control operations (such as 1080 drops) would possibly be implemented to control pest mammal numbers more than they are controlled within the Wapiti Area. Rodent and possum population growth would be curtailed by 1080 in areas where they occurred. However, the use of 1080 would be restricted by resources and prioritisation criteria.            |
| Scenario B: Deer control is carried out by non-FWF WARO operators.                               | Less than minor                                               | Permanent trapping networks would be feasible under Scenario B, but control using poison drops or bait stations would need to be carefully planned around WAROs.                                                                                                                                                                                                                                           |
| Scenario C: Deer control is carried out by DOC to the same extent as in the Murchison Mountains. | Minor                                                         | In the absence of deer harvesting, periodic pest control operations (such as 1080 drops) would possibly be implemented to control pest mammal numbers more than they are controlled within the Wapiti Area. Rodent and possum population growth would be effectively curtailed by 1080 drops if they were to occur. However, the use of 1080 would be restricted by resources and prioritisation criteria. |



### 7.3.4 Filming and advocacy

Filming and advocacy can influence the environment of the Wapiti Area in a variety of ways. The most quantifiable impacts of these activities would occur through undertaking filming. These impacts are dealt with elsewhere throughout this report, and include disturbance and environmental degradation from human activity and noise disturbance from drone use, primarily for collecting footage to use in outreach and promotion.

These activities are also likely to have other impacts on the Wapiti Area via their exposure of this area to a wider audience. For example, advocacy may drive greater investment into conservation of this area from philanthropists or alter the pool of hunters interested in securing a ballot. These effects are considered too speculative to formally evaluate.

## 8.0 Management of Impacts

### 8.1 Alteration of approach to deer control thresholds

Currently, the FWF provides a commendable effort in data collection and the provision of information for scientific research. However, data collected by FWF is insufficient to enable reliable analyses of the population within the Wapiti area, nor to determine the long-term trajectory of the environment within the Wapiti area. Data collected from short-term studies are inherently challenging to analyse.

A higher standard of data collection should be implemented in future, with standardised, repeatable methods maintained in the long term. Standardised protocols for data collection should be determined in collaboration with an appropriately specialised ecologist and should be based on robust methods such as mark-recapture, trail camera data (to understand population dynamics and demography as well as abundance), and permanent vegetation plots.

Deer control thresholds and goals should be updated based on browse metrics or other data that align with environmental benefits (see suggested research in the section below). Thresholds should be based on knowledge of current deer abundance and distribution, and how ecological impacts scale with deer population dynamics and abundance. Scaling should be based on results from monitoring of deer populations and biodiversity effects over time, and should be informed by ecological statistical modelling, with routine formal reporting on deer numbers. This would feed into harvest and cull targets to ensure that deer control efforts are sufficient to mitigate the environmental effects of the herd.

The scaling used is likely to be unique to Fiordland wapiti-type deer and should not be based on red deer or American wapiti. For example, in China, wapiti cows have smaller home ranges than bulls (Tian *et al.*, 2019) and therefore may do more damage in concentrated areas. However in Fiordland wapiti-type deer were found to have small home ranges in winter, that were similar between sexes (Harvey, 2014). Concentrating control efforts towards cows may therefore be more effective at managing vegetation damage in China than in the Wapiti Area, but this is unknown.



## 8.2 Research the effects of selection towards larger bulls on herd structure and vegetation impacts

Leaving bulls alive to reproduce and grow larger, as per FWF protocol and hunter culture, in itself, has no direct conservation benefits, though indirect benefits may arise from increasing revenue for conservation as hunters are more likely to pay for the chance to shoot a larger animal. Research into herd selection and its impacts will help to clarify any issues and pinpoint where improvements in management for conservation can be made, without impacting revenue sources for conservation or the financial sustainability of the FWF deer control model.

The FWF deer control model depends on wapiti-type deer within the Wapiti Area having a reputation for high-quality large antlers sustained by artificial selection. Hunters are less likely to pay to access difficult terrain with low deer densities if there is no perceived chance of seeing a trophy-quality animal. This perception of herd quality is increased when hunters know that other hunters are leaving young bulls to grow and reproduce. However, culling larger numbers of deer (i.e. every animal seen) may also produce trophy-sized bulls, due to reduced feeding competition leading to healthier animals.

Research should be undertaken on a long-term basis to answer the following two questions:

1. Does selectively culling deer, as per the current FWF protocols, produce a larger average antler size in wapiti-type bulls?
2. If the average antler size increases under the current artificial selection regime, how rapid are the changes?
3. What are the long-term population and demographic trends of wapiti-type deer in the Wapiti Area?
4. What are the long-term trends in growth of palatable plant species within the Wapiti Area (measured using vegetation plots and exclosures, as well as browse data)?
5. How do trends in deer populations and vegetation compare with trends in the Murchison Mountains?<sup>1</sup>

These questions can be answered by monitoring:

- Average deer head weight and antler size over time (including both culled and hunted animals).
- Deer abundance and activity (using trail cameras and catch and release data)
- Continued monitoring of permanent vegetation plots for browse and community composition (particularly of palatable species).
- Other damage such as pugging and erosion
- Collection of hunter observations.

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<sup>1</sup> This will require collaboration with DOC to enable data sharing.





Antler size in wapiti-type deer may only be partially genetic, as it is in white-tailed deer and red deer, with stress levels and food availability more important in a male deer's ability to grow large antlers (Kruuk *et al.*, 2002; Michel *et al.*, 2016; Williams *et al.*, 1994). Heritability of a bull's antler size is also likely to be from both parents, not only the sire (Williams *et al.*, 1994). Artificial selection by hunters, including leaving young deer with large antlers, may therefore not be effective in promoting larger average antler size in the population (Michel *et al.*, 2016). Over 30 years, a study found that red deer antler size did not increase despite the greater lifetime breeding success of stags with larger antlers (Kruuk *et al.*, 2002). Intense artificial selection may be more successful in some cases (Williams *et al.*, 1994), but the low genetic variability of the wapiti-type deer in Fiordland (due to low founder numbers and low densities) may restrict the efficacy of artificial selection. The merit of leaving a bull to grow and reproduce to increase chances of having offspring with large antlers may therefore be smaller than the gains from reducing the competition for food that young male wapiti-type deer face. These types of questions could be answered using data collected in the manner described above.

Permanently marked vegetation monitoring plots should be established and the plant community composition in these plots should be measured according to standardised methodologies by vegetation ecologists at regular intervals. A re-measurement interval of 5 years would be appropriate for detecting trends in vegetation over time. Plots should be placed to ensure they are representative of different habitat types, and to capture species that are known to be particularly palatable. These plots would be most useful if design were undertaken in collaboration with DOC. Comparison of trends within the Wapiti area with other surveyed areas will make the data substantially more valuable, and will only be possible if these are done with comparable methodologies.

### 8.3 Increase pest mammal management efforts

Pest mammal control efforts should be increased to include rodents and possums. Stoat traplines and tracks should have multi-species automatic traps (e.g. AT220s) set along them to target possums and rats. Bird exclusion devices should be implemented as necessary to protect bird species that may otherwise be harmed by the traps.

Bait stations along tracks and around huts will help to control rodents. Second-generation anticoagulants such as brodifacoum should not be used in the bait stations due to buildup in the environment and food chain, and the likelihood of deer meat contamination.

Tracking tunnel lines should be used to monitor rodents and mustelids (Gillies & William, 2013), and wax tags to monitor possums (National Pest Control Agencies, 2015). If pest mammal numbers in some areas are tracking at more than 5%, more intensive control could be implemented. This could include an intensification of ground-based control, or possibly a localised 1080 bait drop outside of the bugle (using cereal bait with deer repellent). Cholecalciferol strikers could be used in areas of high rat population density if density is spatially stratified.

The placement of monitoring lines would need to be carefully considered given the scale of the Wapiti Area, but could be focussed on areas of known high biodiversity value.

All pest control and monitoring efforts should be recorded and coordinated using an application such as Trap.nz.

### 8.4 Education and culture building amongst recreational hunters

The Wapiti Ballot is highly competitive and likely to attract experienced hunters. Education and building a positive conservation culture is therefore more likely to be managed effectively by the FWF than in locations where independent hunters or commercial operators are controlling deer. FWF education and culture is already aimed at fostering respect for the Fiordland environment and the Wapiti Area, including a Code of Conduct which dictates that rubbish must be packed out, briefing recreational hunters. This could be expanded to include other behaviours to reduce disturbance, such as:



- Restricting the use of spiked footwear (such as mountain spikes) to situations where they are absolutely necessary.
- Avoiding walking through fragile habitats, including avoiding walking on wetland and turf communities.
- Giving wildlife the right of way e.g. whio at river crossings.
- Strict requirements to pack out all rubbish (including plastic food wrapping), food and toilet waste.
- Biosecurity checks.
- Minimisation of noise around campsites.

A culture of love for the environment should also be fostered using newsletter items, the FWF website, and apps, to promote biodiversity gains. Stories from hunters about the wildlife they have encountered would help to widen the focus of hunters from wapiti-type deer to the Fiordland environment in general. Increased awareness and education on caring for the Wapiti Area's ecology will encourage hunters to consider the impacts of their activities during the bugle.

## 8.5 Improvement of hunter selection process for the Wapiti Ballot

Due to the competitiveness of the Wapiti Ballot, FWF can screen hunters based on their track record. For example, hunters with a known track record of leaving rubbish or disturbing wildlife could be less likely to win a wapiti block unless under mentorship from a more ecologically aware hunter. Hunters could be given a questionnaire to complete that assesses their attitude and knowledge of the Wapiti Area so that only hunters likely to respect ecological values will be awarded a wapiti block.

## 8.6 Increased data collection by recreational hunters and staff

All hunters and staff should record all wildlife observations (including bats, invertebrates and lizards), either in a notebook, the FWF app, or using the iNaturalist citizen science app. FWF staff could increase observational data by establishing volunteer-led permanent biodiversity monitoring transects, along which all observations are recorded. This will help to increase understanding of the relationship between current wapiti-type deer control and biodiversity values in different areas of the Wapiti Area, enabling control thresholds to be adjusted as needed to protect biodiversity.

## 8.7 Data analysis and publication

Where practical data collected by the FWF and recreational hunters should be analysed and published so that knowledge gains can be applied elsewhere. The effects management outlined in this report should also be reviewed and updated periodically as more data becomes available.

## 8.8 Summary of impacts after effects management has been applied

Table 13 summarises impacts of the FWF activities outlined in Section 4, linking them to specific activities undertaken by FWF, after effects management has been undertaken as described in Section 8.

**Table 13** – Summary of impacts caused by Fiordland Wapiti Foundation operations.

| Type of Impact                            | Impact                                                        | Level Before Management (Assessed Against Potential Counterfactuals)             |                 |                 | Level After Management (Assessed Against Potential Counterfactuals) |              |                 |
|-------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------|-----------------|---------------------------------------------------------------------|--------------|-----------------|
|                                           |                                                               | Scenario A                                                                       | Scenario B      | Scenario C      | Scenario A                                                          | Scenario B   | Scenario C      |
| Deer abundance                            | Deer browsing                                                 | Net positive                                                                     | Negligible      | Minor           | Net positive                                                        | Net positive | Negligible      |
|                                           | Noise and disturbance from deer activity                      | Net positive                                                                     | Negligible      | Negligible      | Net positive                                                        | Net positive | Negligible      |
|                                           | Soil compaction, erosion and pugging                          | Net positive                                                                     | Negligible      | Minor           | Net positive                                                        | Net positive | Less than minor |
|                                           | Compaction of interstitial spaces                             | Net positive                                                                     | Net positive    | Negligible      | Net positive                                                        | Net positive | Negligible      |
| Human activities                          | Disturbance and environmental degradation from human activity | Less than minor                                                                  | Less than minor | Negligible      | Negligible                                                          | Negligible   | Negligible      |
|                                           | Water contamination: impacts on ecology                       | Net positive                                                                     | Net positive    | Negligible      | Net positive                                                        | Net positive | Negligible      |
|                                           | Water contamination: whole-environment impacts                | Less than minor                                                                  | Less than minor | Negligible      | Negligible                                                          | Negligible   | Negligible      |
|                                           | Noise disturbance                                             | Minor                                                                            | Less than minor | Less than minor | Less than minor                                                     | Negligible   | Negligible      |
| Research, management and other activities | Increased understanding of deer activity, ecology and impacts | Net positive                                                                     | Net positive    | Negligible      | Net positive                                                        | Net positive | Net positive    |
|                                           | Stoat control                                                 | Net positive                                                                     | Net positive    | Net positive    | Net positive                                                        | Net positive | Net positive    |
|                                           | Control of introduced mammals other than ungulates and stoats | Minor                                                                            | Less than minor | Minor           | Net positive                                                        | Net positive | Negligible      |
|                                           | Filming and advocacy:                                         | <i>Assessed as part of other impacts within this assessment, where possible.</i> |                 |                 |                                                                     |              |                 |





## 9.0 Conclusions

Deer control in Fiordland is vital for the protection of biodiversity. Unmanaged deer populations can cause significant damage to rare and vulnerable ecosystems through selective browsing, destruction of forest understorey, erosion and damage to wetlands through pugging.

The FWF controls deer effectively throughout the Wapiti Area, including in places that are remote and difficult to reach. Due to the FWF's efforts, deer densities are low and relatively stable and browsing on palatable species has been reduced and is now stable or decreasing. The FWF encourages a culture of conservation and respect for the environment amongst its staff and hunters which has led to valuable stoat management and observation data collection which would otherwise be logistically difficult in such a remote area. The FWF intend to run a programme of wapiti-type deer herd management underpinned by strong conservation principles and looking after the Fiordland environment. FWF aim to maintain deer densities below 2 deer/km<sup>2</sup>, shift the sex ratio to 1.1 bulls: 1 cow and containing family group sizes to < 5-7. These actions reduce the impact the herd has on the vegetation.

The main issue for consideration with FWF operations is the approach of leaving live bull wapiti-type deer to grow and reproduce, instead of implementing an elimination strategy. This is contrary to the National Parks Act, which stipulates that introduced animals should be eradicated. However, eradicating deer within the Wapiti Area is unfeasible. Deer control is the only option to reduce numbers and achieve conservation outcomes. Intensive government-funded deer control such as in the Murchison Mountains is unlikely to be financially sustainable or prioritised in the Wapiti Area due to its much larger size and lack of priority conservation species that necessitate deer control, such as the Murchison Mountains' takahē.

The deer control regime run by the FWF includes additional initiatives to aid in conservation such as biodiversity data collection and pest mammal control. It is also self-financing through the Wapiti Ballot, increasing the likelihood that the programme can provide long-term consistent deer control compared with the fluctuating and non-uniform control which results from the WARO-based venison harvest over most of Fiordland.

Disturbance, and other factors caused by FWF staff and recreational hunters, are likely to be short-lived and relatively small impacts, particularly due to the control that FWF over hunter culture in the Wapiti Area, and the focus on conservation and respect for the environment currently fostered by FWF.

Of the four potential scenarios going forward (including the FWF's continued activities), the two scenarios with least detrimental environmental impacts and most positive environmental benefits are intensive deer control such as is undertaken in the Murchison Mountains by DOC (assuming that it achieves lower deer densities than are achieved by the FWF), and the continued operation of the FWF. With the application of the effects management outlined in this report, the FWF continuing its current activities is likely to have the most positive environmental effects. Due to resource constraints and the size of the Wapiti Area, deer control by DOC of an intensity comparable to current Murchison Mountains deer control is highly unlikely to be feasible or financially sustainable.

Potential impacts from FWF activities can be managed through researching, monitoring and adaptively managing deer control thresholds to align with biodiversity gains. This will be achieved through efficient data collection and analysis, and continued and improved hunter education and selection, to foster a culture of environmental care in the community of hunters operating within the Wapiti Area.



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