

## Submission on a Publically Notified Application for Resource Consent

**To:** Environment Southland  
Private Bag 90116  
**Invercargill 9840**

**Attention:** **Stephen West – Principal Consent Officer**

**Name of submitter:** Fish & Game New Zealand – Southland Region (Fish & Game)  
PO Box 159  
**Invercargill 9825**

**Name of Applicant:** Lake Waituna Control Association (the Applicant)

**Application:** Land use consent and coastal permit application APP-20211669

**Purpose:** To reduce inundation and improve drainage of farmland and to flush nutrients.

**Description of activity:** To periodically open Waituna Lagoon to the sea by excavating a channel through the barrier beach and berm between the lagoon and the sea.

**Location:** The barrier between Waituna Lagoon and Toetoes Bay at Walker's Bay and Hansen's Bay, and two other locations along the coastal barrier, Waituna Lagoon.

**Legal description of site:** Crown land and section 29 Block XIII Oteramika HUN.

**Our submission relates to:** The whole application.

**Our submission is:** We oppose the application in its entirety.

**Our reasons for comments are:**

The Applicant has applied for a suite of resource consents of 20 years duration to periodically excavate an open a channel in the seaward bank of Waituna Lagoon to divert and discharge its waters into Toetoes Bay, primarily to facilitate drainage of farmland within the lower Waituna catchment.

The Waituna catchment has significant fish and game values. Specifically:

1. It is a sensitive catchment draining into the Waituna wetland, which includes Waituna Lagoon.
2. Waituna wetland, including Waituna Lagoon, supports a significant population of native and introduced waterfowl, including game species that have been hunted since the late 19<sup>th</sup> century during the annual game bird hunting season.

3. Waituna Lagoon and its tributaries support a regionally significant brown trout fishery which offers coastal lagoon angling opportunities, especially when river systems in the Southland region are in flood.

The National Angling Survey, which is conducted every seven years, provides that:

- a. 2,200 ± 590 angler days were spent fishing Waituna Lagoon during the 2014 / 2015 angling season;
- b. Angling usage of Waituna Lagoon is increasing over time: 2,200 ± 590 angler days – 2014 / 2015, 1,840 ± 410 angler days – 2007 / 2008, 1,220 ± 550 angler days – 2001 / 2002, and 1,120 ± 320 angler days – 1994 / 1995; and
- c. Waituna Lagoon is the fifth most heavily fish lake fishery in Southland behind Lakes Te Anau (15,400 ± 1,770 angler-days), Manapouri (4,410 ± 770 angler-days) North and South Mavora (3,380 ± 1,300 and 1,410 ± 560 angler-days, respectively) and Lake Monowai (2,510 ± 660 angler-days).

Tributaries of Waituna Lagoon (Waituna, Moffat and Carrans Creeks and their tributaries) provide critical spawning habitat for the brown trout fishery.

Despite the fish and game values associated with Waituna Lagoon, the Applicant has not consulted with Fish & Game in relation to its application.

4. Great diversity of wildlife is associated with Waituna wetland and the Lagoon, including Northern Hemisphere migrant species and other bird species such as paradise shelduck, New Zealand shoveller, pukeko, white heron, gulls, spoonbill, kotuku, oystercatcher, dotterels, terns, marsh crakes, bitterns, and fernbirds. Some of these indigenous bird species are recognised as:
  - a. Having nationally critical and at risk (declining) conservation status under the New Zealand Threat Classification System;<sup>1</sup> and
  - b. Taonga species.
5. Waituna wetland, including Waituna Lagoon and its tributaries, provide important spawning grounds and habitat for indigenous fish species, including giant and banded kōkopu, varieties of flat fish, eels, lamprey, inanga, waikakahi, and koura. Many of these indigenous freshwater fish species are recognised as:
  - a. Having threatened (at risk) and threatened conservation status under the New Zealand Threat Classification System;<sup>2</sup> and

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<sup>1</sup> Robertson, H.A.; Baird, K.A.; Elliott, G.P.; Hitchmough, R.A.; McArthur, N.J.; Makan, T.D.; Miskelly, C.M.; O'Donnell, C.F.J.; Sagar, P.M.; Scofield, R.P.; Taylor, G.A.; Michel, P. 2021: Conservation status of birds in Aotearoa New Zealand, 2021. *New Zealand Threat Classification Series 36*. Department of Conservation, Wellington. 43 p.

<sup>2</sup> Dunn, N.R.; Allibone, R.M.; Closs, G.P.; Crow, S.K.; David, B.O.; Goodman, J.M.; Griffiths, M.; Jack, D.C.; Ling, N.; Waters, J.M.; Rolfe, J.R. 2018: Conservation status of New Zealand freshwater fishes, 2017. *New Zealand Threat Classification Series 24*. Department of Conservation, Wellington. 11 p.

- b. Taonga species.

In addition, Waituna Lagoon is popular for other recreational pursuits such as walking, boating, kayaking and scientific appeal / scope for scientific research.

The significance of the Waituna catchment is recognised as far as:

1. The Waituna Wetland was designated in 1976 as a Ramsar Wetland of International Importance with respect to its waterfowl and wading bird habitat. The wider wetland complex was subsequently included in 2008. Great diversity of wildlife is associated with the Waituna wetland complex.
2. In 1983 Waituna Lagoon and the immediately surrounding wetland (an area of 3,500ha) was designated as the Waituna Wetland Scientific Reserve under the Reserves Act 1977 and is administered on behalf of the Crown by the Department of Conservation.
3. Waituna Wetland has a statutory acknowledgement under the Ngāi Tahu Claims Settlement Act 1998 which recognises Ngāi Tahu's cultural, spiritual, historic, and traditional association to Waituna.<sup>3</sup>

Despite the above recognition, the Applicant has not sought a cultural impact assessment nor undertaken cultural consultation in relation to the application.

4. Waituna Scientific Reserve is identified as a regionally significant wetland in Southland in Appendix B of the Regional Water Plan for Southland 2010 (the RWP) and Appendix A of the proposed Southland Water and Land Plan (the proposed SWLP).

### **Activity status of the application**

The application has been notified as follows:

1. Diversion of water (water permit) – relevant rules:
  - a. Rule 20(b) of the RWP;
  - b. Rule 51(d) of the pSWLP; and
  - c. Regulation 52(2) of the National Environmental Standards for Freshwater 2020 (the NES-FW)

Activity status – non-complying.

2. Disturbance of lake bed (land use consent) – relevant rules:
  - a. Rule 47 of the RWP;
  - b. Rule 4 of the pSWLP; and
  - c. Regulation 52(1) of the NES-FW.

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<sup>3</sup> Refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998.

Activity status – non-complying.

3. Opening of lake to the sea (coastal permit) – relevant rule:

a. Rule 7.4.2.2 of Regional Coastal Plan (RCP).

Activity status – discretionary.

4. Discharge of water into coastal waters (coastal permit) – relevant rule:

a. Rule 7.3.2.1 of RCP.

Activity status – discretionary.

#### Application of National Environmental Standards for Freshwater 2020 (NES-FW)

The application and notification report proceed on the basis that:

1. The diversion of water from Waituna Lagoon is a non-complying activity under Regulation 52(2) of the NES-FW; and
2. The disturbance of the bed of Waituna Lagoon is a non-complying activity under Rule 52(1) of the NES-FW.

Neither the application nor notification report establish that opening of Waituna Lagoon for land drainage purposes has status under any of Regulations 38 – 51 of the NES-FW.

Reg 52 of the NES-FW applies to earthworks and drainage activities outside, but within a 100m setback from a natural wetland, and provides:

**“52 Non-complying activities**

- (1) *Earthworks outside, but within a 100 m setback from, a natural wetland is a non-complying activity if it—*
  - (a) *results, or is likely to result, in the complete or partial drainage of all or part of a natural wetland; and*
  - (b) *does not have another status under any of regulations 38 to 51.*
- (2) *The taking, use, damming, diversion, or discharge of water outside, but within a 100m setback from, a natural wetland is a non-complying activity if it—*
  - (a) *results, or is likely to result, in the complete or partial drainage of all or part of a natural wetland; and*
  - (b) *does not have another status under any of regulations 38 to 51.”*

The application provides in terms of the NES-FW that:

1. The proposed Hansen Bay opening site is the only site within the 100m setback from any wetland and that the other sites are more than 100m from any wetland;<sup>4</sup> and
2. *“While Waituna Lagoon is in the Waituna Wetland Scientific Reserve, it is not part of the wetland itself. The wetlands are most of the land that surrounds the lagoon on which there is vegetation that is typical of a wetland environment.”*<sup>5</sup>

The Applicant’s position relies upon an interpretation that Waituna Lagoon is not ‘natural wetland’ for the purposes of the NES-FW. Fish & Game considers that the Applicant’s position, which has significant implications for application of the NES-FW in relation to wetland drainage and earthwork activities, is incorrect as far as:

1. Waituna Lagoon is part of Waituna Wetland Scientific Reserve, which is identified as a RAMSAR Wetland.
2. Waituna Wetland Scientific Reserve, which includes Waituna Lagoon, is identified as a regionally significant wetland in Appendix B of the RWP and Appendix A of the pSWLP.

Waituna Scientific Reserve, including Waituna Lagoon, is identified as ‘Wetland 3’ in Map 29 of Map Series 8: Regionally Significant Wetlands of the pSWLP.

3. Coastal lagoons are identified as a rare wetland habitat type in Appendix 2: Schedule of Threatened, At Risk and Rare Habitat Types of the Southland Regional Policy Statement (2017). Appendix 2 expressly identifies Waituna Lagoon as an example of a Coastal Lagoon.
4. The Southland conservancy chapter of *‘A Directory of Wetlands in New Zealand’*<sup>6</sup> identifies site 72(d) - ‘Seaward Moss-Waituna-Toetoes’ spatially as:

*“. . . part of the Awarua Plains Wetland Complex. It comprises Waituna Lagoon and numerous small ponds within an extensive area of peat wetlands. . .”*

5. Section 2 of the RMA defines ‘wetland’ as:

*“. . . permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions.”*

‘Natural wetland’ in the NES-FW is defined in Clause 3.21 of the National Policy Statement for Freshwater (2020) (the NPS-FW) as:

*“**natural wetland** means a wetland (as defined in the Act) that is not:*

- (a) *a wetland constructed by artificial means (unless it was constructed to offset impacts on, or restore, an existing or former natural wetland); or*
- (b) *a geothermal wetland; or*

<sup>4</sup> Application for resource consent by Waituna Lake Control Association – dated 9 November 2021, p.2.

<sup>5</sup> Ibid, pp. 2 – 3.

<sup>6</sup> Compiled by P Cromarty, Edited by D.A. Scott for the Department of Conservation – pp. 347 – 348 and pp. 360 - 361.

- (c) *any area of improved pasture that, at the commencement date, is dominated by (that is more than 50% of) exotic pasture species and is subject to temporary rain derived water pooling.*

***natural inland wetland*** means a natural wetland that is not in the coastal marine area.”

In this case:

- a. Waituna Lagoon is a naturally occurring shallow body of fresh-to-brackish water<sup>7</sup> enclosed on its seaward side by a gravel barrier and peat cushion bog on the remainder. Associated with Waituna Lagoon and the surrounding peat cushion bog is an ecosystem of plants and animals adapted to wet conditions.

The Applicant’s interpretation does not provide an assessment of ecological sequences and connectivity between Waituna Lagoon and the margins surrounding it and the extent to which they can be ecologically distinguished.

- b. For completeness, Waituna Lagoon is not an artificially constructed wetland, a geothermal wetland or an area of improved pasture dominated by more 50% exotic pasture and subject to temporary rain derived water pooling.

It is unclear if any wetland delineation or ecological assessment has been applied by the Applicant and / or Environment Southland to support the interpretation that Waituna Lagoon is not defined as ‘natural wetland’ under the NES-FW. If Applicant’s assessment is incorrect, which Fish & Game submits is the case, then the proposed activity is prohibited under Reg 53(1) and (2) of the NES-FW, which applies to drainage and water diversion activities within a natural wetland, and provides:

**“53 Prohibited activities**

- (1) *Earthworks within a natural wetland is a prohibited activity if it—*
- (a) *results, or is likely to result, in the complete or partial drainage of all or part of a natural wetland; and*
  - (b) *does not have another status under any of regulations 38 to 51.*
- (2) *The taking, use, damming, diversion, or discharge of water within a natural wetland is a prohibited activity if it—*
- (a) *results, or is likely to result, in the complete or partial drainage of all or part of a natural wetland; and*
  - (b) *does not have another status under any of regulations 38 to 51.”*

Prohibited activity status in Reg 53(1) and (2) of the NES-FW means that consent cannot be granted for the proposed activity.

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<sup>7</sup> Water depth is usually <2m.

## Actual and potential adverse effects on the environment

Monitoring of Waituna Lagoon over the last 15+ years has shown a rapid decline in lagoon condition to the point that it has deteriorated to a degraded condition and is at risk of 'flipping' irreversibly to an algal-dominated state. The two main risks to the ecological health of the lagoon are:

1. Poor water quality due to high nutrient and sediment inputs from its catchment; and
2. A hydrological regime that has been altered due to a history of opening the lagoon primarily for land drainage.

The adverse ecological effects associated with opening the lagoon are significant, particularly depending upon seasonal timing. If the lagoon is opened in spring (a time when it is unlikely to close again before summer), there is a major risk of adverse effects, or even complete loss, of *Ruppia* communities. *Ruppia* is a key macrophyte that grows on the bed of the lagoon, which is considered an indicator of its ecological health. *Ruppia* provides habitat for invertebrates and fish and is a food source for invertebrates and waterfowl. It also plays a role in regulating water quality by stabilizing sediments and reducing turbulence.<sup>8</sup>

A range of recommendations were made to Environment Southland in 2013 by the Lagoon Technical Group to guide management of the Waituna Lagoon, including that:

1. An ecological health objective should be set for the lagoon based on a stable and self-sustaining native macrophyte (aquatic plant) population.

A minimum target cover of >30-60% cover of *Ruppia* and other native macrophytes (based on average annual % cover at permanently wetted sites in March / April) was recommended as an indicator target that represents an ecological condition of 'moderate'.<sup>9</sup> To achieve this objective, it has been recommended that:

- a. Specific nitrogen and phosphorus loading rates to the lagoon be set; and
  - b. A lagoon opening regime consistent with the objective be established.
2. Waituna Lagoon is in an unstable ecological state and requires active management to improve its condition and reduce the risk of further degradation.
  3. Recommended catchment nutrient loading to achieve the proposed macrophyte targets by approximately 50% of the current estimated nitrogen and phosphorus inputs to the lagoon.<sup>10</sup>
  4. A change in the management of the lagoon opening regime is required to protect lagoon ecology. Specifically:
    - a. Periodic openings to flush out accumulated sediment and nutrients was recommended, but extended openings during summer that threaten the viability of keystone aquatic vegetation community (i.e., *Ruppia*) should be avoided.

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<sup>8</sup> Waituna Lagoon Technical Group, *Ecological Guidelines for Waituna Lagoon*, December 2013, p. 9.

<sup>9</sup> Ibid, p. 14.

<sup>10</sup> Ibid, pp. 16 – 17.

- b. Opening management should aim for regular winter openings (May – July) because they have a high chance of closing before summer and should be associated with the most efficient flushing effect.
- c. By comparison, spring openings have a high likelihood of staying open through the summer period, with consequently large disturbance to the aquatic vegetation cover.<sup>11</sup>

To achieve the 'moderate' ecological target recommended for Waituna Lagoon, it was desirable to have a fresh-water lagoon with a short marine phase (e.g., two months) to limit the levels of salinity over spring and summer, which are having an adverse effect on *Ruppia* germination and growth.<sup>12</sup>

### **Position on the Application**

Fish & Game is concerned that:

1. The application does not address the sustainability of the proposed activity or provide an adequate assessment of environmental effects that:
  - a. Corresponds with the scale and significance of potential adverse effects that the activity may have on the environment; or
  - b. Sufficiently addresses matters set out in s 88 and Schedule 4 of the RMA, including Part 2, and Appendix A of the RWP. Specifically, the application does not:
    - i. Address in detail any potential adverse effects of the activity, including recommendations with respect to ecological health of the lagoon and the opening regime; or
    - ii. Propose consent conditions to ensure that any potential adverse effects of the activity will be avoided, remedied, or mitigated.
2. Maintaining the ecological functioning of the lagoon is critical to the health of the brown trout fishery.

Fish & Game considers that the application overstates the 'benefits' for the brown trout fishery associated with opening of the lagoon to the sea. Technical advice is that:

- a. While opportunities to target brown trout congregating in or around the opening will be reduced during years when the lagoon is closed, the resident trout population will benefit from closed lagoon conditions. The lagoon is highly productive when closed over the summer periods and the available foraging area for trout will be increased.

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<sup>11</sup> Ibid, pp. 18 – 19.

<sup>12</sup> Ibid, p. 40.



This will provide good fishing conditions for anglers targeting trout around the lagoon edge and near tributary inflows.<sup>13</sup>

- b. Optimising the lagoon for ecological health will protect the trout population by helping to maintain water quality and clarity. Failure to do so, increases the risk of the lagoon 'flipping' to an algal dominated state, with very low clarity and severely reduced fisheries values. Overall, the impact of an ecologically focused opening regime should protect and enhance the brown trout population and its fishery values.<sup>14</sup>

Holmes (2019) observed no detectable pattern between brown trout density (or biomass) and lagoon open-closure status, stating that the effects of lagoon opening and closed status on trout populations may be indirect or subtle, though food web effects.<sup>15</sup>

### Management of water level in Waituna Lagoon

The Applicant's short term (5-year) consent, which expired on 14 February 2022, allows it to artificially open Waituna Lagoon to the sea for land drainage purposes once its water level exceeds a trigger level that varies seasonally. Openings for land drainage purposes occur at lower levels and more frequently than would occur compared to the background of a 'natural' opening regime – there has been no natural breaches of the lagoon barrier since 1972.<sup>16</sup> Commentary on lagoon hydrology suggest the natural opening regime would have involved the lagoon rising as much as 4m above sea level before overtopping and breaching the gravel barrier to the sea.<sup>17</sup>

Because artificial openings by the Applicant are left to close naturally, Waituna Lagoon can remain open for anywhere between several weeks to over a year. For example, in December 1997 the lagoon was artificially opened to the sea and remained open for the longest time on record, closing in May 2000.<sup>18</sup>

Engineering advice provides that:

1. The likelihood of successfully undertaking a mechanical closure is uncertain; and
2. The practicality of an aided closure using temporary structures such as sand-filled geotextile tubes is uncertain and on-going costs are high.<sup>19</sup>

Against this background, it is well recognised that ill-timed and prolonged openings of the lagoon to the sea, particularly during the spring and summer period, is having a significant adverse impact on the ecological functioning of the lagoon. To reduce the frequency of opening events and decrease negative effects on aquatic plants associated with spring – summer openings changes were made

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<sup>13</sup> Robertson, H., Ryder, G., Atkinson, N., Ward, N., Jenkins, C., de Winton, M., Schallenberg, M., Holmes, R., Kitson, J., Whaanga, D., Blair, S., and Murray, D. (July 2021), *Review of conditions for opening Waituna Lagoon Supporting Information*, Prepared for The Whakamana Te Waituna Trust.

<sup>14</sup> Ibid.

<sup>15</sup> Holmes, R. (2019). *Native fish population responses to Waituna Lagoon outlet open-closure periods*. Prepared for Whakamana Te Waituna and Environment Southland. Cawthron Report No. 3351.

<sup>16</sup> Thompson, R. and Ryder, G. (January 2003). *Waituna Lagoon: summary of existing knowledge and identification of knowledge gaps*. Department of Conservation – Science for Conservation 215.

<sup>17</sup> Ibid.

<sup>18</sup> Ibid.

<sup>19</sup> DHI (2015): *Engineering options for managing Waituna Lagoon water levels and values*. Technical comment prepared for Environment Southland and DairyNZ.

to the Applicant's short-term consent when granted in 2017 to increase the lagoon opening height trigger to 2.2m ASL. Prior to 2017, the water level threshold at which the lagoon was consented to be opened to the sea was ~2.0m ASL, although the specific water level when openings occurred varied, as the opening activity was also dependent on suitable wind and sea conditions.<sup>20</sup>

Review of the water level variation between 2015 – 2021 indicates that there have been five opening events in the lagoon this period, including four opening events since the commencement of the Applicant's short-term consent. Fish & Game understands that all these opening have been for land drainage, as opposed to nutrient and sediment flushing, purposes. Notably, since February 2017, 50% of the opening events (2 of 4) have resulted in the lagoon being opened during the spring – summer period. This means that changes made to the water level thresholds for lagoon opening in 2017 have been insufficient to prevent the consent conditions being triggered and opening events from occurring. **Significantly, target lagoon-wide *Ruppia* cover has only been achieved in 2019 and 2016 – both years where the lagoon had been closed for two consecutive growing seasons for >3 months.**<sup>21</sup>

Optimal resource consent conditions for the ecological and cultural health of the Waituna Lagoon ecosystem were again recently assessed by an expert technical panel to better manage lagoon openings.<sup>22</sup> Key recommendations include:

1. An increase in the lagoon opening trigger level to 2.5m to avoid the frequency of spring – summer openings for land drainage;
2. Inclusion of a new condition providing for opening to facilitate fish passage; and
3. Refinement of the condition providing for emergency lagoon opening to mitigate risks to water quality.

The proposed amended conditions were considered likely to advantage *Ruppia* populations by reducing the risk of successive years of an open lagoon during key growth seasons and increasing the probability of adequate replenishment of seed banks. It was also considered that replenished and persistent seed banks would enable *Ruppia* recovery under a scenario of low frequency (i.e., up to every three years) disruptions caused by spring – summer openings to meet additional conditions for fish passage or water quality.<sup>23</sup>

#### Lagoon opening regime for land drainage

The application provides for opening the lagoon for land drainage purposes at the levels set out in its short-term consent. In response:

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<sup>20</sup> Robertson et al (2021).

<sup>21</sup> de Winton, M. (2022). *Technical Report on Vegetation Status in Waituna Lagoon: 2009 – 2022*. NIWA publication commissioned by the Department of Conservation.

<sup>22</sup> Robertson, H., Ryder, G., Atkinson, N., Ward, N., Jenkins, C., de Winton, M., Schallenberg, M., Holmes, R., Kitson, J., Whaanga, D., Blair, S., and Murray, D. (July 2021), *Review of conditions for opening Waituna Lagoon Supporting Information*, Prepared for The Whakamana Te Waituna Trust.

<sup>23</sup> de Winton, M. (2022). *Vegetation Status in Waituna Lagoon: Summer 2022*. NIWA publication commissioned by the Department of Conservation.

1. This approach is inconsistent with recommendations to increase in the lagoon opening trigger level to 2.5m to avoid the frequency of spring – summer drainage openings and places farmland drainage ahead of the ecological functioning of Waituna Lagoon.
2. Fish & Game agrees with the notification report that the artificial opening regime is not part of existing environment for the purposes of determining the adverse effects of the proposal. Proper consideration of the effects of the proposal is against the background of a 'natural' opening regime, which is markedly different in frequency and seasonality to the proposed regime.
3. The application fails to acknowledge that the current short-term consent held by the Applicant was an interim measure agreed to by parties, including submitters, to resolve the conflict between farming operations and need to improve the long-term management of the lagoon opening by adopting higher trigger levels for land drainage. Specifically:
  - a. It was established in 2017 that a higher water level of 2.5m would be beneficial to ecology of Waituna Lagoon.<sup>24</sup>
  - b. Most of the land area purported to experience impeded drainage when lagoon levels are high is now owned by the Department of Conservation, Te Wai Parera Trust, or Environment Southland. None of these parties are part of the Lake Waituna Control Association nor a party to the application. Significantly:
    - i. Parties, including Fish & Game, recognised when agreeing to a short-term consent in 2017 that it was an interim measure to facilitate land acquisition, i.e., a means to an end; and
    - ii. In 2019 / 20 the Te Wai Parera Trust (with freshwater remediation funding from Central Government and funding from Ngāi Tahu, and Environment Southland) purchased most farmland affected by inundation at a lagoon water level of 2.5m with a view to enabling an increase in the maximum water level in the lagoon. These purchases were highly strategic and recognized as being regionally and nationally significant.
  - c. The necessity for lagoon opening to facilitate land drainage at levels below 2.5m is unclear. Technical advice provides that:
    - i. Any residual effects on land drainage for low-lying properties not purchased by the Te Wai Paerera Trust are minor in both extent and frequency;<sup>25</sup> and
    - ii. The duration of any inundation on road infrastructure is short-lived and principally limited to Department of Conservation owned land or land acquired by the Te Wai Paerera Trust. Alternative access exists for limited areas of private land with any impeded access.<sup>26</sup>

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<sup>24</sup> Shallenberg, M., and Robertson, H. (September 2017). *Maximum Lagoon Trigger Level – Report for the Waituna Science Advisory Group*.

<sup>25</sup> Robertson, H., Ryder, G., Atkinson, N., Ward, N., Jenkins, C., de Winton, M., Schallenberg, M., Holmes, R., Kitson, J., Whaanga, D., Blair, S., and Murray, D. (July 2021), *Review of conditions for opening Waituna Lagoon Supporting Information*, Prepared for The Whakamana Te Waituna Trust.

<sup>26</sup> Ibid.

4. The application provides limited evidence regarding the lost productive or economic value associated with the adjacent privately owned farmland that is subject to inundation for the purposes of having regard to the actual and potential adverse effects of allowing the activity, which are known to be significant.

#### Appropriateness of the Applicant holding consent to open the lagoon for flushing or fish passage

The application provides no comment or detail regarding the appropriateness of the Applicant holding a consent providing for flushing of the lagoon to allow catchment derived nutrients and sediments to be flushed from the lagoon or to facilitate fish passage. Indeed, the primary purpose of the lagoon opening regime sought by the Applicant is to maintain farmland drainage, notwithstanding the limited amount of land drainage effects on privately owned land following acquisition.

Fish & Game submits that:

1. It is entirely possible to separate the two opening regimes for land drainage and ecological purposes (flushing and fish passage).

The two opening regimes are not so sufficiently intertwined that you cannot have one without the other. This is illustrated by the fact that the Department of Conservation, which is responsible for administration of the Waituna Scientific Reserve (including Waituna Lagoon), and Ngāi Tahu have applied for consent to periodically open Waituna Lagoon to flush accumulated sediment and nutrients. Fish & Game understand that this application, which was filed prior to the Applicant's, has been placed on hold by Environment Southland pending resolution of the Applicant's application.

2. The significant adverse effects associated with the opening regime to maintain catchment drainage are not offset by any benefits associated with opening of the lagoon to facilitate either flushing and / or fish passage. Flushing benefits are only applicable if the lagoon is opened in winter for a relatively short period of time.

#### Willingness of the Applicant to discuss exercise of discretion not to open Waituna Lagoon for land drainage

Fish & Game proactively communicated with the Applicant's representative, Ewen Pirie, by phone and in writing in response to its proposed opening of Waituna Lagoon to the sea in spring 2021, i.e., at a time when it was unlikely to close before summer. In response, the Applicant's representative was unwilling to delay opening of the lagoon to allow natural drainage to occur. Despite predictions to the contrary, the opening made by the Applicant fortuitously closed naturally. However, because of the opening, Waituna Lagoon was de-watered to a level of half what it would have been had it remained closed. This left Waituna Lagoon vulnerable to high water temperatures through the summer, algal blooms, and suppressed ruppia and eco-system health – this scenario illustrates the tension between the Applicant's primary focus on land drainage, notwithstanding the land acquisition process, over the health of the lagoon.

#### **Comment on proposed consent conditions**

Fish & Game submits that the proposed consent conditions provided by the Applicant are deficient for the following reasons:

1. Consent duration of 20-years

Consent of 20 years duration for land drainage purposes is unwarranted because:

- a. The scale and implications of ongoing drainage effects on privately owned land, i.e., unacquired land, and associated farming activities has been assessed as minor in both extent and frequency – necessity for the opening activity for land drainage is not adequately demonstrated;
- b. The significant adverse effects of the activity on ecological, cultural, and spiritual values are well recognized and understood; and
- c. The proposal is inconsistent with information supporting a higher opening regime for land drainage, which will have less adverse effects on ecological, cultural, and spiritual values.

The application emphasises the possibility of amendment of conditions controlling lake opening by way of a review or an amendment of the application. This 'suck it and see' approach is unrealistic for the following reasons:

- a. The Applicant's opening of the lagoon for land drainage purposes is the source of considerable and ongoing environmental concern because of the risk it poses to the ecological health of the lagoon. The prospect of review or amendment of consent conditions will not diminish the risk in the interim, if in fact either actually occur;
- b. Review and or amendment of conditions cannot be initiated by affected parties, including those responsible for exercising statutory functions / relationships in relation to Waituna Lagoon – these include the Department of Conservation, Ngāi Tahu, and Fish & Game; and
- c. Consent conditions sought by the Applicant for land drainage are not supported by technical reviews conducted in 2017 and 2021, which have not been acted on by Environment Southland.

2. Monitoring and reporting

The Applicant proposes limited scientific monitoring and reporting of environmental effects associated with the effects of its opening regime for land drainage.

Monitoring conditions are particularly important if consent is granted because of concerns about adverse environmental effects, which have been clearly identified over time. Further, no cost recovery provisions are proposed if Environment Southland or other parties, including the Technical Advisory Group, are required to undertake monitoring to assess the environmental effects of the opening regime for land drainage purposes. Costs of monitoring and reporting on the land drainage opening activity should be met by the Applicant, whose members are the beneficiaries of the activity.

3. Conditions 4 and 5 – Lagoon opening for land drainage

Conditions 4 and 5 provide for seasonal lagoon opening at levels between 1.8 - 2.2m for land drainage purposes as follows:

- a. A lagoon opening threshold of 2.2m in spring – summer;
- b. A lagoon opening threshold of 2.0m in spring - summer if there has been strong macrophyte growth in the previous 3-year period;
- c. A lagoon opening threshold of 2.0m in winter; and
- d. A lagoon opening threshold of 1.8m in winter if it has not been open in the previous 12-month period.

Fish & Game submits that these conditions are inadequate for the following reasons:

- a. Review of the existing 5-year consent identified that the 2.2m lagoon opening trigger level did not prevent spring - summer opening events, and these events corresponded with poor health of submerged macrophytes.

The 2017 and 2021 reviews concluded that the health of the lagoon would benefit from higher water levels of 2.5m.

- b. No restrictions are proposed with respect to the seasonality or timing of lagoon openings, notwithstanding the recommendations that timing of the opening period is important to limit the level of salinity over spring and summer to achieve the 'moderate' ecological target recommended for Waituna Lagoon, including maintaining a target of >30-60% cover of *Ruppia* and other native macrophytes.

Interactions between when the lagoon is open and how long it stays open for mean that the timing of the opening period is critical, particularly in circumstances where there is no ability for the Applicant to manually close the lagoon once it is mechanically opened, i.e., effects cannot be mitigated.

- c. No use of hydrological modelling is proposed to determine whether water in the lagoon is likely to stay above a certain height for an extended period, or whether it is likely to recede, i.e., whether it is necessary to open the lagoon. In this case, Environment Southland can advise on the duration of high-water levels using modelling linked to rain forecasts that can be used to predict lagoon levels over time, including recession below identified levels.

#### 4. Condition 6 – Lagoon opening in the case of poor water quality events

Condition 6 provides for emergency opening at >1.5m in the event of prolonged algal blooms or poor water quality. The application provides no comment on the appropriateness of the Applicant holding consent providing for flushing of the lagoon to allow catchment derived nutrients and sediments to be flushed from the lagoon. It is unclear:

- a. Whether the exercise of condition 6 requires the approval of the proposed Technical Advisory Group (including Environment Southland, Department of Conservation, and Iwi), because such 'secondary approvals' are unlawful;

- b. What party is to meet the cost of physical opening and monitoring associated with flushing of the lagoon for flushing; or
- c. What, if any, process is to apply in the event of there being disagreement between parties to the consent regarding the need to open the lagoon for flushing?

5. Condition 7 – Lagoon opening to provide fish passage

Condition 7 provides for lagoon opening to the sea to facilitate diadromous fish passage at >1.5m. The application provides no comment on the appropriateness of the Applicant holding consent for opening of the lagoon to facilitate fish passage to the sea. Like Condition 6, it is unclear:

- a. Whether the exercise of condition 7 requires the approval of the proposed Technical Advisory Group (including Environment Southland, Department of Conservation, and Iwi), because such ‘secondary approvals’ are unlawful;
- b. What party is to meet the cost of physical opening and monitoring associated with flushing of the lagoon for fish passage; or
- c. What, if any, process is to apply in the event of there being disagreement between parties to the consent regarding the need to open the lagoon for fish passage?

6. Condition 11 – Consent review and council charges

Condition 11 provides for Environment Southland to review consent conditions to assess the appropriateness of the consent considering monitoring data and any relevant studies. Condition 11 is inadequate for the following reasons:

- a. It is not linked to any measurable trigger level or response conditions.
- b. The actual adverse effect or degree of adverse effect associated with land drainage opening are well recognised and have been commented upon in much detail by various experts, including successive recommended changes to the opening regime. It is nonsensical to propose a review condition that suggests the adverse effect of the Applicant’s opening regime for land drainage remain in question or the degree of effect is uncertain – this is not the case.
- c. The review process cannot be used to materially alter the consent's nature. There seem to be little, if any, means available to the Applicant to address adverse effects of its drainage opening activity, other than cease it.

Further, Fish & Game notes that Environment Southland has not proactively reviewed the Applicant’s previous consent conditions allowing opening for land drainage despite advice identifying the need to so in 2013, 2017 and 2021. This does not give Fish & Game confidence in the review process as a suitable mechanism to implement change.

**Planning assessment**

As presented, the application is contrary to:

1. The purpose of sustainable management defined in Part 2 of the RMA, including the s 5 purpose of enabling people and communities to provide for their social, economic, and cultural wellbeing while safeguarding the life-supporting capacity of water and ecosystems and avoiding, remedying, or mitigating any adverse effect on the environment.
2. Matters of national importance outlined in s 6 of the RMA, including: 6(a), 6(b), 6(c) and 6(e).
3. Other matters outlined in s 7 of the RMA, including: 7 (a), (aa), 7(b), 7(c), 7(d), 7(f), 7(g), and 7(h) of the RMA.
4. Environment Southland's functions in relation to:
  - a. controlling the use of land for the purpose of maintaining the quality of water in water bodies and coastal waters, and the maintenance and enhancement of ecosystems in water bodies and coastal water – s 30(c)(ii) and (iia) of the RMA; and
  - b. the control of the quantity, level, and flow of water in any waterbody – s 30(1)(e).
5. Other matters outlined in s 7 of the RMA, including: 7 (a), (aa), 7(b), 7(c), 7(d), 7(f), 7(g), and 7(h) of the RMA.
6. The information requirements set out in s 88 and Schedule 4 of the RMA and Appendix A of the RWP.
7. The objectives and policies of the New Zealand Coastal Policy 2010, including objectives 1, 2 and 3 and policies 3, 5, 11 and 13. This includes the obligation to avoid adverse effects, and avoid, remedy, or mitigate other effects, on indigenous biodiversity in the coastal environment under Policy 11.
8. The fundamental concepts of Te Mana o Te Wai, including prioritizing the health and well-being of water bodies and freshwater eco-systems, and the overarching Objectives and Policies 1, 2, 6, 8, and 9 of the NPS-FW (2020).
9. The objectives and policies of the Regional Coastal Plan for Southland, including Objective 7.4.2.1 and Policy 7.4.2.2 regarding opening of Waituna Lagoon to the sea.
10. The overarching objectives 1 and 2 (and accompanying interpretation statement) of the pSWLP and accompanying objectives 4, 14, 15, 17 and 18 and policies 1, 2, 3, 30, 28, 30, 32, 33, 34, 39A, 40, 41 and 44.
11. The objectives and policies of the RWP, including objectives 10 and 13 and policies B7, 14, 14A, 32, 38, and 40.
12. Objectives COAST .3, BIO. .2 and .3, and Policies COAST.5, WQUAL. .1, .3 and .4, and BIO. .2, .3, .4, .7. and .9 and Appendix 2 of the Regional Policy Statement.
13. Policies 3.5.10.1 and 3.5.18.1 of Te Tangi a Taurira.
14. Outcomes 2, 5, 6 and 8 of the Strategy and Action Plan for Waituna (2015).



In addition, it has not been established that opening Waituna Lagoon for land drainage purposes has status under any of Regulations 38 – 51 of the NES-FW. Fish & Game submits that the activity is prohibited under Reg 53(1) and (2) of the NES-FW. This gives an additional indication as to the purpose and object of the RMA in relation to this activity.

Together, the above aspects of the RMA and subordinate documents place a very high priority on the wellbeing of waterbodies and their associate ecosystems and are directive in requiring their protection. Provisions of the RMA and policy statements relating to cultural values and the Treaty of Waitangi are also relevant considering the high cultural significance of Waituna Lagoon.

## **Overall**

As presented, Fish & Game considers that:

1. Ecological, planning, and legal advice is required as to whether the Applicant's application to open the lagoon for land drainage purposes is a prohibited activity under Reg 53(1) and (2) of the NES-FW. If so, consent cannot be granted for the proposed activity.
2. The application and accompanying AEE does not provide an assessment of the effects which corresponds with the significant adverse effects of opening the lagoon for land drainage. This activity cannot be separated from the inherent risk of individual and cumulative adverse effects on the ecological functioning of Waituna Lagoon.

## **Decision we wish the Council to make**

That the application be declined.

Fish & Game wishes to be heard in support of its submission at a hearing if needed.

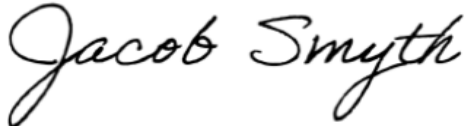
Fish & Game considers that its opposition to the application is unlikely to be resolved at a pre-hearing meeting. Fish & Game requests that Environment Southland appoint suitably qualified Hearing Commissioners and expediate the application to a hearing for the following reasons:

1. The previous process for the Applicant's short-term consent was very drawn out (approximately three years);
2. A request for further information was submitted to the Applicant by Environment Southland. The Applicant has only been partially complied with this request;
3. No consultation has occurred with affected parties in relation to the application;
4. There is limited scope for debate and compromise considering abundant scientific research and recommendations that the Applicant's incumbent and proposed opening activities for land drainage is inappropriate;
5. Environment Southland, as consent authority, is required under s 21 of the RMA to avoid unreasonable delay. The Applicant should not be able to delay resolution of the application by unduly placing it on hold for extended periods, including to provide further information or consult with affected parties; and

6. Environment Southland has exercised its discretion under s 124 of the RMA to allow the Applicant to continue to undertake lagoon opening pending pursuant to its expired short term consent pending resolution of its application. The Applicant's expired short term consent does not achieve the statutory and policy outcomes sought for Waituna Lagoon.

If others make a similar submission, Fish & Game will consider presenting a joint case with them at a hearing.

Fish & Game has served a copy of its submission on the Applicant's planner.



.....  
Jacob Smyth  
Resource Management Officer  
Fish & Game New Zealand – Southland Region

Date: Wednesday, 13 July 2022

Cc: Lake Waituna Control Association  
C/- Bonisch  
PO Box 1262  
**Invercargill 9840**

**Attention: John Engel – Senior Environmental Planner**