



1 November 2016

Environment Southland  
Private Bag 90116  
**Invercargill**

**Attention: Stephen West – Consents Officer**

Dear Stephen

**Consent application APP-20168843 by Invercargill City Council**

Please find enclosed a submission on behalf of Fish & Game New Zealand – Southland Region opposing the publically notified application by Invercargill City Council ('the Applicant') for a discharge permit of 35 years duration to discharge water and contaminants into surface water bodies from reticulated stormwater systems in the vicinity of Invercargill.

I understand that submissions close at 5:00pm on Tuesday, 1 November 2016.

A copy of this letter and accompanying submission has been posted to the Applicant.

Yours sincerely

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

Enc: Written submission of Fish & Game New Zealand – Southland Region dated 1 November 2016 2016.

Cc: ~~MWH New Zealand Ltd  
P O Box 13-052  
Christchurch 8141~~

**Attention: Janan Dunning**

*Statutory managers of freshwater sports fish, game birds and their habitats*

**Southland Region**

## Submission on a Publically Notified Application for Resource Consent

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

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

**Attention:** **Stephen West – Consents Officer**

**Name of Applicant:** Invercargill City Council (the Applicant)

**Application:** APP-20168843

**Description of activity:** Discharge permit of 35 years duration to discharge water and contaminants into surface water bodies from reticulated stormwater systems in the vicinity of Invercargill.

**Location:** Waikiwi Stream:

- At approximately 20m upstream of the West Plains Road bridge (1,241,383E 4,854,413N NZTM); and
- West of Renfrew Street (1,240,508E 4,853,354N NZTM)

The discharges to the Waikiwi Stream occur via open drains west of Renfrew Street and along Gloucester Street and West Plains Road.

Waihopai River:

- Various outfalls between Racecourse Road and North Road (between 1,244,935E 4,852,915N and 1,242,280E 4,852,085N NZTM)

Otepunu Stream:

- Various outfalls between Rockdale Road and Bond Street (between 1,246,193E 4,849,937N and 1,241,885E 4,849,420N)

Kingswell Creek:

- Various outfalls between Chesney Street and Bluff Railway (between 1,245,243E 4,846,749N and 1,243,133E 4,846,241N NZTM)

Clifton Channel:

- Various outfalls between Bain Street and Bluff Railway (between 1,244,809E 4,845,678N and 1,243,621E 4,845,502N NZTM)

**Legal description of site:** Waikiwi Stream:  
Part Lot 3 DEEDS 94 and Road Reserve

Waihopai River:

Lot 7 DP 12822, Lot 1 DP 14230, Section 59 Block IV Invercargill HUN, Part Section 119 Block I Invercargill HUN and Road Reserve

Otepunu Stream:

Lot 1 DP 15235, Lot 1 DP 10250, Lot 1 DP 1969, Lot 1 DP 6030, Lot 3 DP 6949, Lots 15, 16, 17, 18 & 27 DP 308320, Lot 3 DP 491532, Lots 3 & 4 DP 13743, Lot 2 DP 3072, Part Section 3 Sec 43 Block II Invercargill HUN, Lot 22 DP 4583, Lot 1 DP 11938, Lots 4 & 5 DP 3463, Part Lot 6 DP 3463, Lots 4 & 6 DP 13476, Part Section 12 Block LXXVI TN OF Invercargill, Part Lot 1 DP 3072, Lot 1 DP 3076, Part Lots 3, 4 & 5 DP 3076, Part Lot 1 DP 2138, Railway Reserve and Road Reserve

Kingswell Creek:

Lot 4 DP 11973, Section 1 SO 11795, Lot 3 DP 11973, Lots 1 & 2 DP 14235, Lot 13 DP 6699, Lot 1 DP 9456, Lot 35 DP 6406, Lots 7, 8, 9, 10, 11 & 12 DP 6432, Lot 14 DP 11044 and Road Reserve

Clifton Channel:

Part Sections 42 & 67 Block XIX Invercargill HUN, Lot 3 DP 1944, Part Lot 1 Block III DP 110, Lot 6 DP 9369, Lot 16 Block III DP 143, Lot 3 Block V DP 143, Lot 1 DP 10293 and Road Reserve

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

**Our submission is:** We oppose the application.

**Our reasons for comments are:**

The receiving environment for the stormwater discharges is the lower Oreti catchment. Specifically:

1. The Clifton Channel, Kingswell Creek and Waihopai Stream flow directly into the New River Estuary, commonly known as the Invercargill Estuary or Oreti Estuary ('the Oreti Estuary');
2. The Otepunu Stream flows into the tidal waters of the Waihopai River approximately 600m upstream of its confluence with the Oreti Estuary; and
3. The Waikiwi Stream flows into the tidal waters of the Oreti River approximately 8km upstream of its confluence with the Oreti Estuary.

The lower Oreti catchment, including its estuarine waters, has significant fish and game values, including recreational hunting and fishing opportunities.

1. The lower reaches of the Oreti River, including its estuarine waters, support a significant sports fishery and provide year round angling opportunities. Specifically:
  - a. The Waikiwi Stream provides habitat for a moderate population of brown trout and about 8km of fishable water from its mouth to West Plains Road. The confluence of the Oreti River and Waikiwi Stream is a popular fishing spot
  - b. The Waihopai River provides habitat for a moderate population of brown trout and is a popular local fishery, particularly with youth anglers given its proximity to Invercargill. The 2014 / 2015 National Angling Survey provides that  $910 \pm 370$  angler days were spent on the Waihopai River during the 2014 / 2015 season.

In addition, the tidal reaches of the Waihopai, particularly downstream of Queens Drive, are popular for recreational white baiting using scoop and sock nets during the annual white bait season.

- c. The tidal reaches of the Oreti River, its estuarine waters and tributaries provide important passage for brown trout and Chinook salmon moving between the freshwater, estuarine and sea environment. Whilst at sea or in estuarine waters brown trout can grow extremely fast. Upstream of the Wallacetown Bridge the Oreti River and its tributaries support a nationally significant brown trout fishery and angling amenity features which are recognized pursuant to the Water Conservation (Oreti River) Order 2008.

The lower Oreti River supports a significant brown trout fishery that is very popular, particularly with Invercargill based anglers targeting estuarine and sea run brown trout. The 2014 / 2015 National Angling Survey provides that  $12,940 \pm 1,960$  angler days were spent on the Oreti River below Lumsden during the 2014 / 2015 season.

2. The lower Oreti catchment, including its estuarine waters, 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. Great diversity of wildlife is associated with the lower Oreti catchment, including waterfowl, Northern Hemisphere migrant species and other bird species such as heron, gulls, spoonbill, kotuku, oyster-catcher and dotterels.
4. The lower Oreti catchment, including its estuarine waters and tributaries, provide important spawning grounds and habitat for a number of indigenous fish species, including: varieties of flat fish, eels, lamprey and whitebait.
5. The lower Oreti catchment is popular for other recreational pursuits such as walking, boating / kayaking / rowing / water skiing, fishing for flat fish and whitebait and amenity appeal.

In addition, the lower Oreti catchment is the receiving environment for a number of industrial / municipal discharges, including treated wastewater discharges from meat processing plants at Lorneville and Makarewa and the sewage processing plant at Clifton.

The significance of the lower Oreti catchment is recognised insofar as:

1. The Waituna wetland complex was designated in 1976 as a Ramsar Wetland of International Importance with respect to its waterfowl and wading bird habitat. In 2008 the Ramsar site associated with Waituna was extended by some 15,000 ha with the addition of the Toes, Awarua Bay and the Invercargill (New River / Oreti) Estuaries. Great diversity of wildlife is associated with the wetland complex.
2. The Oreti River has a statutory acknowledgement under the Ngāi Tahu Claims Settlement Act 1998 which recognises Ngāi Tahu's cultural, spiritual, historic and traditional association to the Oreti River and its estuarine waters.<sup>1</sup>
3. The Oreti Estuary and wetlands adjoining it are identified as a regionally significant wetland in Southland in Appendix B of the Regional Water Plan.

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

The application has been notified as follows:

1. The discharges are non-complying activities under Rule 2 of the operative Regional Water Plan for Southland (2010) ('the Regional Water Plan') in circumstances where they cannot meet the conditions set out in Rule 1, i.e. the discharge reduces water quality below the standards set for the relevant water body in Appendix G "Water Quality Standards" after reasonable mixing; and
2. The discharges are non-complying under Rule 6 of the Proposed Southland Water & Land Plan (2016) ('the Proposed Water and Land Plan').

As such, the Applicant must demonstrate under s 104D of the Resource Management Act 1991 ('the RMA') that the effects of the discharges are minor, or that they are not contrary to the objectives and rules of the relevant plan.

Fish & Game notes that:

1. The application, which provides a description of the nature of the discharge, details three primary pathways by which untreated sewage can enter the stormwater system, including:
  - a. Sewage resulting from illegal connections to the stormwater network;
  - b. Sewage resulting from cross-contamination between the sewage and networks; and
  - c. Overflows from the sewerage network that discharge sewage into the stormwater network during storm events.

In addition, the application provides that monitoring of the stormwater discharges shows that there are a number of sites (2, 3, 6 and 14) where highly elevated concentrations of E.coli and elevated ammoniacal nitrogen, which indicate sewage contamination.

---

<sup>1</sup> Refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998.

2. The sewage components of the discharge are not included in the application for consent.

For the avoidance of doubt, the discharge of raw sewage or foul water into water is a prohibited activity under Rule 14 of the Regional Water Plan. As such, resource consent cannot be granted for this activity.

### **Actual and potential adverse effects on the environment**

The proposed discharge site locations fall within the Oreti Freshwater Management Unit (FMU) area, in terms of Environment Southland's catchment limit setting process under the Proposed Water and Land Plan.

In this case, the final receiving environment for the Applicant's discharges is the Oreti Estuary, which is Southland's largest estuary and is considered to be in poor condition with increasing eutrophication.<sup>2</sup> Recent reports commissioned by Environment Southland indicate the nuisance macroalgal blooms have increased from <1% in 2001 to >13% in 2013 for the estuary as a whole.<sup>3</sup> In Daffodil Bay, the area of nuisance macroalgal cover (>50% cover) has increased 470% from 9 ha in 2001 to 43 ha in 2012. Seagrass (a highly valuable habitat) has declined dramatically in the estuary, 85% since 2001 within the Waihopai Arm, with a further 50% reduction between 2012 and 2013.<sup>4</sup>

### **Position on the Application**

#### Discharge to surface water

Fish & Game acknowledges that the applicant's stormwater system has a number of positive social and economic benefits in terms of public health, stormwater management and land drainage. However, Fish & Game is concerned that:

1. The application is premised on the basis that effects, excluding sewage, will not increase as a result of granting the discharge permits sought. Specifically, the application concludes that:
  - a. The stormwater discharges (excluding sewage) are currently having a minor impact on water quality in the Waikiwi Stream, Waihopai River, Kingswell Creek; and
  - b. The stormwater discharges (excluding sewage) are currently having a moderate impact on water quality in the Otepuni Creek and Clifton Channel.

In response, Fish & Game considers that it is misleading to exclude the effects of sewage from consideration of the effects of the discharges in circumstances where monitoring of the stormwater discharges shows that there are a number of sites where there are highly elevated concentrations of E.coli and elevated ammoniacal nitrogen, which indicate sewage

---

<sup>2</sup> Robertson, B. M., and Stevens, L. M. (July 2013). 'New River Estuary Macroalgal Monitoring 2012/13' Report prepared by Wriggle Coastal Management for Environment Southland, 11p. Report available at: [http://www.es.govt.nz/Document%20Library/Research%20and%20reports/Estuarine%20reports/new\\_river\\_estuary\\_-\\_macroalgal\\_monitoring\\_-\\_2012\\_2013.pdf](http://www.es.govt.nz/Document%20Library/Research%20and%20reports/Estuarine%20reports/new_river_estuary_-_macroalgal_monitoring_-_2012_2013.pdf)

<sup>3</sup> Stevens & Robertson 2013

<sup>4</sup> Stevens & Robertson 2013

contamination. Ignoring the identified effects of sewage associated with the discharges understates the significance of effects.

2. The application largely focuses on the concentration of contaminants associated with the discharges, this is particularly the case in relation to heavy metals which in most cases are elevated above the 95% toxicity levels (it is unclear whether this result is from water quality sampling or sediment sampling). Fish & Game considers that further investigation is required to determine the significance of contaminant loadings in the downstream receiving environments, including the Oreti Estuary.
3. The application does not consider the effects of the discharges on the subsequent downstream receiving environments, including the lower Oreti River and the Oreti Estuary. Key effects for the Oreti Estuary are elevated nutrient levels, macrophyte bed loss, and high levels of sedimentation and resulting effects of nuisance algal growth.
4. The application does not provide an assessment against the attribute states set out in Appendix 2 of the National Policy Statement for Freshwater Management (2014) (the NPS-FWM) nor provide for compliance with those attribute states despite the 35 year consent duration sought.
5. The application does not fully consider the use / implementation of alternatives to reduce the rate of stormwater flow and improve the quality of the discharge and / or the quantity of the discharge to surface water. Options include:
  - a. The adoption of on-site / source control mitigations, such as the use of pervious surfaces / reduction in impervious surfaces / rain gardens;
  - b. The use of vegetated water retention areas in relation to areas of new development, such as residential and industrial development, and existing infrastructure. Whilst this may not be possible in all cases, there are areas of land between the channels of the Waihopai Stream and Otepuni Creek and the stop banks that could be utilised for stormwater treatment via detention ponds / wetlands / vegetative swales; and
  - c. The use of interceptors or filtration systems.

A range of alternatives is set out in detail in Auckland Regional Council technical publication TP10 (Design Guideline Manual for Stormwater Treatment Devices).<sup>5</sup>

6. The macroinvertebrate sampling results, which found poor habitat quality and evidence of degraded water quality and habitat throughout the stormwater catchments sampled, are comprised in the Otepuni, Waikiwi and Waihopai Streams by significant habitat differences unrelated to the discharges. If consent is granted, consideration should be given to choosing down stream sampling sites that are more closely matched to upstream sampling sites to determine whether the discharges in the Otepuni, Waikiwi and Waihopai Streams are having an adverse effect on macroinvertebrate communities.

---

<sup>5</sup>Auckland Regional Council technical publication TP10 (Design Guideline Manual for Stormwater Treatment Devices) 2003. TP10 available at:  
<http://www.aucklandcouncil.govt.nz/EN/planspoliciesprojects/plansstrategies/unitaryplan/Documents/Material%20incorporated%20by%20reference/upmirbcounciltp10stormwater.pdf>

## Consent duration

Fish & Game considers that the proposed 35 year consent duration, the maximum available under the RMA, is too long in circumstances where:

1. The application identifies that there are issues associated with sewage contamination.

Staged renewal of the ageing earthenware infrastructure network, which is 50 – 70+ years old, at the rate of 1% of the network on an annual basis is proposed as a mitigation to address sewage contamination. Such as proposal has merit, however the application acknowledges at this rate of renewal “the replacement of the aging earthenware infrastructure could take an estimated 50 – 60 years”<sup>6</sup>, i.e. extend beyond the life of the consent sought, and appears to be premised on affordability.

Fish & Game considers that any renewal programme / plan set out in the consent should have clear aims and an accelerated timeframe for implementation, including reporting against annual progress.

2. There is a lack of certainty about compliance with water quality standards and timeframes for improvements in the quality and quantity of the discharges to meet water quality standards.

Fish & Game considers that the consent duration should be abridged to 15 – 20 years, which is consistent with other discharge consents issued by Environment Southland for municipal and commercial discharges to surface water, which include conditions with respect to the quality of the discharge and the receiving environment downstream of the zone of reasonable mixing.

## **Comment on proposed consent conditions**

The application refers generally to proposed consent conditions, such as in relation to monitoring and network upgrade programmes. However, no comprehensive set of draft consent conditions is set out in the application, including water quality standards. As such, it is not possible to determine whether proposed consent conditions ensure that adverse effects of the activity are avoided, remedied or mitigated.

If granted, Fish & Game considers that consent conditions are required that provide for:

1. Monitoring and reporting of environmental effects associated with the activity, including sampling of water quality and sediment sampling (in relation to heavy metals).

Monitoring and reporting conditions are particularly important if consent is granted because of concerns about environmental effects.

2. The Applicant to meet any specific objectives and / or measurable standards to avoid, remedy or mitigate any potential adverse associated with the discharges.
3. Review consent conditions to assess the appropriateness of the consent in light of monitoring data and any relevant studies. The review condition should be linked to specific and measurable trigger levels.

---

<sup>6</sup> Application, p. 17.



## Planning assessment

As presented, the application is contrary to:

1. The purpose of sustainable management defined in Part 2 of the RMA. Proposed consent conditions do not ensure that adverse effects of the activities are avoided, remedied or mitigated;
2. Matters of national importance outlined in s 6 of the RMA, including: 6(a);
3. Other matters outlined in s 7 of the RMA, including: 7 (a), (aa), 7(b), 7(d), 7(f), 7(g), and 7(h) of the RMA;
4. The objectives and policies of the NPS-FWM, including:
  - a. Objective A1(a) which seeks to safeguard the life supporting capacity, ecosystem processes and indigenous species, including their associated ecosystems, of freshwater;
  - b. Policies A2, A3 and A4 which require the Council to set objectives and limits to assist improvements of water quality in water bodies;
  - c. Objective B4 which provides for the protection of significant values of wetlands and outstanding freshwater bodies.
  - d. Policies B5 and B7 which seek to protect the life-supporting capacity of freshwater resources;
  - e. Objective C1 which seeks to improve integrated management of freshwater and the use and development of land in whole catchments, including the interaction between freshwater, land, associated ecosystems and the coastal environment; and
  - f. Policy C1 which requires integrated management of freshwater and land use and development in catchments in an integrated and sustainable way, so as to avoid, remedy or mitigate adverse effects, including cumulative effects.
5. The objectives and policies of the New Zealand Coastal Policy 2010, including objectives 1, 2 and 3 and policy 23, which relates to the discharge of contaminants (including stormwater and stormwater contaminated by sewage);
6. The objectives and policies of the Regional Coastal Plan for Southland, including objective 7.3.4.1, policies 7.3.4.1 and 7.3.4.2 and outcome 7.3.4;
7. The objectives and policies of the Regional Water Plan, including objectives 2, 3, 4 and 10 and policies 3, 4, 7, 11, 13, B7, 14, 32, 36, 38, 39, and 40 of the RWP;
8. The objectives and policies of the Proposed Water and Land Plan, including objectives 1, 3, 4, 6, 7, 14, 15 and 18 and policies 3, Policy A4 of the NPS-FWM, 13, 14, 15, 17, 40 and 41; and

9. The objectives and policies of the Operative Regional Policy Statement for Southland (1997) ('the RPs'), including objectives 2.1 and 2.2, policies 4.4 and 4.5, objectives 5.1, 5.2 and 5.3, policies 5.2 and 5.4 and outcomes 5.1 and 5.3 and objective 6.4 and policies 6.6 and is contrary to similar objectives and policies of the Proposed Regional Policy Statement for Southland (2012).

**Decision we wish the Council to make**

That the application be declined, unless:

1. The consent duration is reduced to 15 – 20 years;
2. The consent includes provision for a stormwater infrastructure renewal programme to address sewage contamination and an accelerated timeframe for implementation, including reporting against annual progress;
3. Sediment and surface water quality standards downstream of the zone of reasonable mixing are imposed in relation to the receiving environment; and
4. A robust water quality and sediment sampling programme is imposed.

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

Fish & Game wishes to be involved in any pre-hearing meeting that may be held for this application.

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.



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

Date: Tuesday, 1 November 2016

Cc: MWH New Zealand Ltd  
P O Box 13-052  
**Christchurch 8141**

**Attention: Janan Dunning**