

Attachment 1

Discharge to Water Permit Application by The Hutt City Council for the Discharge of Sewage Overflows to the Black Stream, Wainuiomata

1. Application

1.1 Applicant

The Hutt City Council
Private Bag 31 912
Lower Hutt

1.2 Consent Applied For

WGN010101 [20893] Discharge to Water Permit to discharge sewage overflows from the Wellington Road Pump Station to the Black Stream during extreme wet weather events.

1.3 Location

The location of the site to which the application relates is the Black Stream, Wainuiomata, at or about map reference NZMS 260; R27; 732.931. The legal description of the property at which the discharge will occur is Sec 25 Lowry Bay District. The discharge will occur from the Hutt City Council's pump station located between Wellington Road and the Black Stream. The legal descriptions of the properties on which the pump station is located are Part Lot 138 DP 14784 and Lot 224 DP 14784.

2. Proposal

2.1 Background

The Hutt City Council (THCC) administers the municipal wastewater systems servicing the Hutt Valley, including Upper Hutt, Lower Hutt and Wainuiomata. Wainuiomata's wastewater system was constructed during the 1950's and 1960's and operates independently from the system servicing the Hutt Valley. Wastewater is currently pumped to the Wainuiomata wastewater treatment plant, where it undergoes secondary treatment before being discharged to the Wainuiomata River.

As part of the wider Hutt Valley Wastewater Scheme, THCC is currently constructing a new wastewater treatment plant at Seaview. The plant is due to be commissioned in October 2001. Under this scheme, THCC proposes to upgrade the existing Wainuiomata wastewater system. The Wainuiomata system has serious inflow/infiltration problems, which cause high flows during wet weather events. The

system has insufficient capacity to handle the peak flows which causes overflows to various watercourses around Wainuiomata.

Under the upgrades, THCC intends to decommission the existing Wainuiomata Wastewater Treatment Plant and to convey all wastewater from Wainuiomata to the new Seaview plant. The upper half of the Wainuiomata (wastewater) catchment will be intercepted and pumped directly to Seaview via upgraded pump stations at Wellington Road and Wise Park. At the Wainuiomata treatment plant a new pump station will be constructed to pump wastewater to Wise Park for on-pumping to Seaview.

Currently there are thirteen known overflow locations from the existing wastewater system. Under the proposed upgrades, the number of overflow points would be reduced to two:

- the site of the current Wainuiomata Wastewater Treatment Plant (overflows from the new pump station A stormwater tank will also be constructed at the site of the new Wainuiomata pump station to reduce the frequency of overflows to less than four annually); and
- the site of the current Wellington Road pump station.

THCC holds resource consent WGN980084 (03) for overflows during extreme events from the Wainuiomata treatment plant to the Wainuiomata River. THCC has now applied for resource consent for overflows from the Wellington Road pump station into the Black Stream, which forms the basis of this application.

2.2 Circumstances Under Which Discharge Will Occur

The Hutt City Council has outlined the circumstances in which sewage overflows may occur. These are:

1. *True emergency circumstances such as massive or prolonged power failures or during major mechanical problems (Type A);*
2. *Foreseeable overflow situations such as when pipes are overloaded in high flow events and the capacity of the system is exceeded (Type B); and*
3. *During programmed maintenance of the wastewater network when a temporary discharge is required to repair or improve the system (Type C).*

The Hutt City Council has stated that Type A overflows are beyond their reasonable control to contain and will rarely occur (e.g., massive power failure, earthquake, acts of God). Such events are provided for by the emergency provisions described in sections 330 and 341 of the Resource Management Act 1991.

Foreseeable overflow discharges (Type B), from the wastewater system occur during extreme rain events when pipes or pumping stations are overloaded due to stormwater inflow and groundwater infiltration into the wastewater system. This category of discharge requires resource consent and forms the subject of this application.

Type C overflows deal with discharges during planned maintenance work such as upgrading a pumping station or pipeline. The Hutt City Council has stated that in these instances, the work is programmed and the duration of the discharge will be known. These overflows are therefore, likely to require specific discharge permits. The current application is not in this category of discharge. Therefore, The Hutt City Council have applied to the Wellington Regional Council for consents for these activities.

2.3 **Overflow Description**

THCC has estimated the Average Return Interval (ARI) of the Wellington Road pump station overflow to be 0.9 years (i.e. the expected occurrence of an overflow event is less than one overflow in every 11 months). The peak flow overflow rate during an extreme wet weather event is predicted to be 136 L/s and during less intensive storm events, the rate is estimated to be less than 50 L/s. The expected yearly overflow duration is 11.4 hours at an average flow of 55 L/s. The values are based on sewer system modelling.

The discharge will occur from an overflow pipe adjacent to the Wellington Road pump station. The pumping station itself is situated at the back of a residential property on Wellington Road and extends into the drainage reserve on the true right bank of the Black Stream. The stream at this point is relatively straight with steep incised banks.

The existing discharge point comprises of a 12-metre 150-mm diameter pipe which discharges directly into the Black Stream. Under the proposed upgrades the current pipeline will be replaced with a 400 mm pipe that will discharge at the same location.

The inlet to the overflow will pass through a course screen that is intended to remove objectionable solid material from the overflow. Solid material will collect in the wet well of the pump station and will either be entrained back into the sewage and pumped to the Seaview treatment plant or manually removed from the pump station after the overflows have subsided. If the screen binds, sewage flow will pass over the top of the screen.

THCC has stated that the Wellington Road overflows will consist of dilute, screened domestic sewage and that the levels of contaminants present in the discharge will be consistent with the lower levels recorded at the current discharges from the Wainuiomata Wastewater Treatment Plant.

2.4 **Reducing Overflow Occurrences**

As part of the application THCC has detailed the studies undertaken to evaluate the performance of the Wainuiomata wastewater system and to assess options for reducing overflow frequencies. THCC commissioned Australian Water Technologies (AWT) to perform flow monitoring and build a computer model of the system. The May 2000 AWT report *Wastewater Transfer Options at Wainuiomata* examined pumping options for three different inflow reduction scenarios of 90%, 70% and 50%. A 70% inflow reduction combined with a 10% infiltration reduction was considered

the likely scenario and the recommended pumping option is based on this inflow/infiltration (I/I) reduction scenario.

The solution adopted by THCC involves a combination of reducing the peak flows through I/I reduction and increasing the capacity of the system.

The net effect of the system reconfiguration will be to increase the capacity of the main sewer feeding the Wainuiomata treatment plant from 200 L/s to 470 L/s. This increased system capacity, combined with the proposed Inflow/Infiltration reduction is expected to virtually eliminate overflows for all but extreme rainfall events at all locations except the Wellington Road and Wainuiomata Pump Stations.

To achieve the assumed 70% inflow reduction and 10% infiltration reduction, THCC have proposed to undertake a programme of property inspections to identify and correct illegal stormwater connections, cross connections and low gully traps. Further monitoring and modelling will then be performed to measure the effectiveness of this programme.

The programme is not intended to target infiltration such as entry of groundwater through faulty pipes, joints or manholes because of the high cost involved in reducing infiltration.

3. **Statutory Reasons for Requiring Resource Consents**

Resource Management Act 1991

Section 15 (1) (a) of the Resource Management Act 1991 (RMA) prohibits the discharge of any contaminant into water unless the discharge is permitted by a rule in a regional plan or relevant proposed regional plan or expressly allowed by a resource consent.

Section 2 of the Act defines contaminant to include:

Any substance (including gases, liquids, solids and micro-organisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar or other substances, energy or heat-

- (a) When discharged into water, changes or is likely to change the physical, chemical or biological condition of water; or*
- (b) When discharged onto or into land or into air, changes or is likely to change the physical, chemical, or biological condition of the land or air onto or into which it is discharged.*

Regional Freshwater Plan

Rules 1 – 4 of the Regional Freshwater Plan (RFP) provide for the discharge of the following in to freshwater:

- water and minor contaminants;
- stormwater; and
- water contaminated by heat.

All other discharges are described as a discretionary activity under Rule 5 of the RFP. As the proposed discharge is not expressly allowed by a rule in Regional Plan, a resource consent is required for the discharge in accordance with section 15 (1) (a) of the RMA.

4. **Consultation**

The Hutt City Council consulted with several potentially affected parties prior to the notification of the resource consent application. The Hutt City Council consulted with:

- Regional Public Health
- Te Runanganui o Taranaki Whanui ki te Upoko o Te Ika a Maui
- Wellington Tenth Trust

The Hutt City Council also arranged a public meeting on 1 February 2001 to which approximately 100 householders and local organisations were invited. No local residents or organisations attended the meeting and only the Regional Public Health attended.

5. **Notification**

The application was publicly notified in the *Evening Post* on Saturday 3 February 2001 and in the *Wainuiomata News* on Thursday 8 February 2001. Several signs were posted around the pumping station and along the banks of the Black Stream on 2 February 2001. The signs were attached to the fence of the pumping station itself and were posted downstream of the discharge point, adjacent to public access points.

Approximately 100 households and occupiers of adjacent properties 1 kilometre downstream of the discharge point were individually notified. The radius encompassed properties on:

- Best Street
- Dunn Street
- Frederick Street
- Fullerton Grove
- Heath Street
- Hyde Street
- McKay Street
- Miles Crescent
- Moohan Street
- Nelson Crescent
- Wellington Road

Also individually notified were:

- The Hutt City Council, Approvals & Department
- The Hutt City Council, Stormwater Department
- Regional Public Health
- Wellington Tenth Trust
- Te Runanganui o Taranaki Whanui ki te Upoko o Te Ika a Maui
- Department of Conservation
- Wellington Fish & Game Council
- Wainuiomata Wastewater Community Panel

Copies of the application were held at the following locations during the course of the submission period:

- The Hutt City Council Customer Service Centre, Laings Road, Lower Hutt
- Wainuiomata Public Library, Queen Street, Wainuiomata
- Environment Help Desk, Wellington Regional Council Centre, Wakefield Street, Wellington.

6. Submissions

Four submissions were received by the close of the submission period, on Friday 9 March 2001. Submissions were received by:

- Regional Public Health
- Te Runanganui o Taranaki Whanui ki te Upoko o Te Ika a Maui
- Iris Fraser (a local resident)
- Grey Power Wainuiomata

With the exception of Regional Public Health, all submissions were in opposition to the application. Details of the submissions are briefly outlined below.

6.1 Regional Public Health Submission

Regional Public Health (RPH) made the submission in the organisation's capacity as a public health provider. RPH neither supported nor opposed the application. The organisation acknowledged that the overflows were estimated to occur infrequently, however, they held concerns relating to the potential public health risks associated with exposure to untreated sewage.

RPH recommended that consent conditions be imposed that required a sewage overflow contingency plan to be developed which would include the responses Hutt City Council would take to reduce public health risks in any overflow event (e.g. signage).

6.2 **Te Runanganui o Taranaki Whanui ki te Upoko o Te Ika a Maui**

Te Runanganui o Taranaki Whanui ki te Upoko o Te Ika a Maui opposed the discharge to the Black Stream on cultural grounds. The Runanganui recommended that the Regional Council ensure provisions were made to upgrade the pipe and pump capacities of the wastewater system to prevent the need for such a discharge. The group also requested that a programme be implemented to ensure that infiltration of non-sewage related water be reduced to a minimum.

6.3 **Iris Fraser**

Iris opposed the application due to concerns held regarding flood waters containing sewage entering her property during extreme wet weather events. Iris requested that no discharges of sewage be permitted into the Black Stream.

6.4 **Grey Power Wainuiomata**

Grey Power opposed the application due to concerns regarding the following:

- The level of scientific research to supporting the application.
- The level of proposed screening to control the passage of solids in to the Black Stream.
- The level of assessment of procedures to identify illegal stormwater connections, cross connections and low gully traps.
- The reliability of the overflow occurrence estimates.
- THCC's justification and policy towards funding wastewater services in Wainuiomata in relation to the population dynamics (size and age distribution).
- The possibility of sewage odour from the discharge.

In their submission, Grey Power further noted that:

- the Black Stream is a play area for children.
- the Black Stream enters the Wainuiomata River where there is an adjacent recreational area.
- the Black Stream is a breeding area for wild life.
- there is the potential to contaminate trout fishing in the Wainuiomata River and effect surfing at the Wainuiomata River mouth.
- the banks of the Black Stream are used for recreational walking and exercise.

Grey Power requested that the Regional Council, in their assessment of the application:

- decline the application.
- require a comprehensive scientific and environmental study of the Black Stream to be undertaken.
- negotiate with THCC and insist that the overflow problems be overcome before granting the application.
- request that THCC provide estimates of discharge volumes under varying conditions and their relationship to the size of the discharge pipe.

A summary of the submissions is attached in Appendix 1.

7. **Pre-hearing Meeting**

A pre-hearing meeting regarding the application was held on Tuesday 27 March 2001. Representatives of THCC, all the submitters and several members of the public attended the meeting. Alan Bannatyne, on behalf of THCC, made a presentation to the meeting attendees regarding the application and the wider Hutt Valley wastewater project.

While the meeting served to answer several of the questions and concerns raised in the submissions, no agreement was reached between the submitters and The Hutt City Council at this meeting. However, all submitters agreed to the Regional Council drafting a set of conditions for the application, which would attempt to alleviate submitters concerns and prove workable for the applicant.

The notes taken from the pre-hearing meeting are attached in Appendix 2.

8. **Draft Consent Conditions**

A set of draft consent conditions were formulated and sent to all submitters on 18 April 2001. Also enclosed was a form requesting written approval of the application if submitters were satisfied that the conditions addressed their concerns. A copy of the conditions was provided to THCC and the conditions discussed with the City Council prior to being sent out submitters.

Outcome of draft conditions:

- all parties signed off and withdrew right to be heard. All parties were satisfied that the draft conditions addressed their concerns.
- Teri Puketapu of Te Runanganui o Taranaki Whanui ki te Upoko o Te Ika a Maui requested a minor amendment to condition 10. This was made in consultation with THCC, and the change was discussed with submitters who all approved.

9. **Matters to be Considered by the Committee**

Appendix 3 outlines the matters that a consent authority must have regard to when making a decision on an application in relation to sections 104 and 105 of the Resource Management Act 1991. These matters include:

- the relevant sections of the Resource Management Act 1991, including Part II, sections 104(1), 104(3), 105 and 107;
- the relevant policies and objectives in the Regional Policy Statement; and
- the relevant policies, objectives and rules of the Regional Freshwater Plan.

10. Discussion of Matters to be Considered - Assessment of Effects

10.1 Introduction

The following is my assessment of the potential and actual effects arising from the discharge of sewage overflows to the Black Stream. This section of my report includes discussions of the relevant planning provisions, submitters' concerns and the mitigation measures proposed by the THCC.

Section 104 (3) of the Resource Management Act 1991 states that where an application is for a discharge permit, the consent authority shall, in having regard to the actual and potential effects on the environment of allowing the activity, have regard to:

- (a) *the nature of the discharge and the sensitivity of the proposed receiving environment to adverse effects and the applicant's reasons for making the proposed choice; and*
- (b) *any possible alternative methods of discharge, including discharge into any other receiving environment.*

The receiving environment of the discharges, the potential effects of the overflows and the alternative methods of discharge are discussed below.

10.2 Beneficial Effects

The Hutt City Council has stated in the application and during the pre-hearing meeting that;

- The number of overflow points will reduce from 13 to two under the new wastewater proposal (one at Black Stream and one at the Wainuiomata Sewage Treatment Plant site).
- The number of overflow occurrences and volume of wastewater in each occurrence will decrease from that currently existing.

10.3 Description of the Receiving Environment

The Black Steam is a highly modified suburban stream. The steam is straight with incised banks for much of its length prior to entering the Wainuiomata River, approximately 2.6 km downstream of the discharge point. The stream is predominantly bordered by drainage reserves with adjoining residential properties. Public access to the stream is moderately high, with several accessways and pedestrian bridges between the discharge point and the confluence with the Wainuiomata River. Information provided in submissions, suggests that the stream banks are used regularly by local residents for recreational purposes.

The bed of the stream is approximately 1 metre wide (during dry weather flows) and aside from grass around the stream banks there appears to be little in-stream vegetation or any significant aquatic life downstream of the discharge point. The water quality of

the stream appears to be moderate and is likely to be influenced by urban storm water run-off including possibly some inputs from light industry.

The Black Stream has been identified in the Regional Freshwater Plan as a water body with water quality needing enhancement for aquatic ecosystems purposes.

10.4 Adverse Effects

10.4.1 Nature of the Discharge

THCC has stated that the discharge will consist of dilute and screened domestic sewage. From information provided in the application and in information forwarded under section 92 of the Resource Management Act 1991, THCC have indicated that the levels of contaminants present will be consistent with the lower levels currently recorded at the existing Wainuiomata Wastewater Treatment Plant. Table 1 indicates the predicted characterises and levels of contaminants in the discharge.

Table 1. Predicted levels of contaminants in the overflows and current background levels in the Black Stream

Parameter/ Contaminant	Levels in the Overflows	Background (Mean)³
Flow	0-136 L/s ¹	
Temperature	10-20°C ¹	13.6°C ¹
Dissolved Oxygen	< saturation ¹	8.5
Suspended Solids	100-300 mg/L ¹	
PH	6-8 ¹	6.94
BOD₅	63-165 mg/L ²	< 1 mg/L
Faecal Coliforms	106-107 CFU/100ml ²	2520 CFU/100ml
Cd	0.01-0.017 mg/L ²	
Cr	0.01 – 0.02 mg/L ²	
Lu	0.02-0.08 mg/L ²	
Fe	1.68 mg/L ²	
Pb	0.011 – 0.055 mg/L ²	
Ni	0.01 – 0.031 mg/L ²	
Zn	0.1 – 0.177 mg/L ²	

1 Resource consent application, lodged November 2000

2 Section 92 further information received December 2000

3 1993 (Wainuiomata Resource Statement, 1993, WRC)

10.4.2 Effects on Water Quality

Little or no water quality monitoring data is known to exist for the Black Stream itself. Wellington Regional Council conducted some monitoring in 1993 which provides some indication of the likely background levels of certain contaminants within the stream. The levels of these parameters are indicated in table 1 above as “background”

levels. It is important to note however, that the levels are likely to have been recorded during calm weather flows and therefore, may not necessarily reflect water quality during wet weather events when overflows are likely to occur.

Black Stream is not included in the Council routine monitoring programmes but five samples were collected on consecutive weeks during February and March 1993. The report states that the water quality data “*shows that Black Stream is heavily influenced by urban run-off and sewage overflows. Consequently the stream carries high levels of turbidity and faecal coliform bacteria, while dissolved oxygen concentration levels were below saturation levels*”. Increased sediment in a river or stream can have the effect of smothering existing communities on the river bed, interfere with fish spawning, cause fluctuations in pH, dissolved oxygen, temperature and reduce the penetration of light for the growth of aquatic organisms. The high turbidity results found in Black Stream indicate that the stream has a limited capacity to support aquatic communities.

There have been sewage overflow discharges to the Black Stream since the Wainuiomata Sewage Treatment Plant was commissioned. However, under the current proposal the number of discharge points, the frequency and volume of each overflow will decrease. The reduction in overflows to the Black stream should provide opportunity for the stream quality to improve.

10.4.3 **Effects on Ecology**

Macroinvertebrates are aquatic insects, crustaceans, worms and snails living in the bed of a river. The Wellington Regional Council also carried out macroinvertebrate studies in 1993. This study is based on the tolerance of aquatic invertebrates where a community represented by mainly pollution tolerant taxa (species) suggests waters are or have recently been polluted, and a community index represented by pollution intolerant taxa suggests the presence of good water quality. Results showed that instream conditions in the lower reaches of Black Stream were very poor, with Macroinvertebrate Community Indices (MCI) scores ranging from 40 – 60.

The stream is also a highly modified watercourse that has steep incised banks and no riparian growth on the bank edges to provide any shelter and shade for ecology. The sewage overflows will adversely reduce the water quality at times of overflows but will only be for a short duration and are temporary in nature.

10.4.4 **Human Health Risks**

The main contaminants from the overflows of concern in terms of human health are pathogenic micro-organisms, in particular, viruses, some bacteria and some protozoans such as *Giardia* and *Cryptosporidium*. Such organisms can cause a variety of health problems including ear, nose, throat and skin infections, and stomach ailments. It is important that the potential health risks of these organisms are addressed and mitigated.

The applicant has indicated that there will be an overflow approximately once every year. However, information provided by submitters at the pre hearing indicates that

Black Stream has previously flooded properties once every five years and sometimes the floodwaters have included sewage overflows.

Recommended conditions of the resource consent to address risks to human health include the following mitigation measures.

- Signs - To help warn recreational users of the health risk, a recommended condition of the consent requires THCC to place signs at or near the discharge site detailing the location and health risks of the overflows
- Contingency plan - Contingency plan details actions to be taken to minimise the potential health risk of an overflow and are developed in consultation with Regional Public Health
- Construction of course screen - THCC intends to redesign and install the screen to more effectively remove solid material. Condition 5 requires the permit holder to design the screen to prevent overtopping as a result of binding or blocking during an overflow event.
- Maintenance of streams – Condition 8 requires the permit holder to appropriately maintain the stream for purposes of reducing the risk of property flooding adjacent to the stream.

10.4.5 Effects on Recreational Activities

The section of the stream likely to be affected by overflows is easily accessed by adjacent residential streets, for most of the stream's length down to the confluence with the Wainuiomata River. This portion of the stream offers moderate recreational amenity value for streamside activities and submitters expressed that the stream was of important recreational value to them. The water quality of the stream itself is moderate and therefore unlikely to offer contact recreational values during normal flows.

During heavy rain, when the Black Stream contains high levels of suspended solids and organic material from a variety of urbanised sources, there will be a temporary reduction in the general amenity value of the stream. The addition of wastewater overflows is likely to further reduce the overall water quality of the stream. However, during flood events, the opportunity for streamside recreational activities is likely to be curtailed, thereby avoiding some of the risk of adverse health effects from the overflows.

10.4.6 Effects of Aquatic Ecosystems

The Black Stream has been identified in the Proposed Regional Freshwater Plan as a water body with water quality needing enhancement for aquatic ecosystems purposes. Overflows will occur during storm events when the quality of the stream is already reduced. Stream biota is likely to suffer some short-term adverse impact during high stream flows, these impacts are due to physical disruptions and loss of habitat, and any additional impact caused by contributions of sewage overflows is likely to be negligible.

10.4.7 Downstream Effects on the Wainuiomata River

The Wainuiomata River is identified in the Regional Freshwater plan as a waterbody to be managed for contact recreation purposes between the Coast Road bridge and the mouth, specifically angling. The Wainuiomata River is also identified in the Regional Freshwater plan as waterbody with important trout habitat.

The Wainuiomata River currently receives secondary treated wastewater from Wainuiomata Wastewater Treatment Plant and the existing overflows from Black Stream and other watercourse. The reduction in discharge points to the Wainuiomata River catchment will reduce potential health risks to recreational users of the river from overflows.

Sewage overflows from Black Stream that ultimately enter the Wainuiomata River will have an adverse effect on water quality for the short duration of the overflow event. At these times, the Wainuiomata River is also likely to have significantly higher flows curtailing the use of the river therefore decreasing the potential health risk to anglers. It is also likely that at these times, water quality will be reduced from natural flood characteristics and not just sewage overflows.

While the Wainuiomata River biota is likely to suffer some short-term adverse impact during high river flows, these impacts are due to physical disruptions and loss of habitat, and any additional impact caused by contributions of sewage overflows is likely to be negligible. However, with the decommissioning of the Wainuiomata sewage treatment plant and the reduction in the total number of overflows to two, there is the potential for an improvement in the water quality of the Wainuiomata River.

11. Summary of Effects

THCC has stated that *“the wastewater overflows will result in a temporary decrease in the water quality of the Black Stream, with a short-term increase in bacterial concentrations”*. THCC has indicated that the discharge will occur in times of heavy rainfall and higher stream flows, when background water quality within the Black Stream is already likely to be poor, with elevated levels of suspended solids, nutrients, oxygen demand, and in particular bacterial (faecal coliform) content.

THCC has further indicated that the wastewater will be dilute before it is discharged into the receiving waters due to stormwater infiltration and inflow into the sewerage system. Inflow and infiltration can generally provide a 4 to 10 fold dilution of in typical sewage concentrations.

However, it is also important to acknowledge that sewage overflows, although dilute, are an offensive mixture of dissolved and suspended solids, containing human wastes with the potential for disease transmission. The wastewater contains faecal matter, bath and shower water, domestic waste disposal machines, basins, dishwashers, and washing machines. Wastewater also contains wastes from hotels, restaurants, shops, offices, laundries and industries; and other liquids, which may enter into the wastewater system.

11.1 Mitigation Measures Proposed

Although the effects of the discharges could be considered to be intermittent and short-term, efforts need to be made to reduce the adverse effects of the overflows in the long-term. THCC has developed mitigation measures and a works programme to continue reduce the potential for overflows. These measures include:

- an inflow-infiltration (70/10%) programme to determine the areas where there is direct entry of stormwater into the sewer system, and to determine the sub-surface entry of groundwater into the sewer through open joints and cracks.
- an upgrade of the Wellington Road pump station.

Other mitigation measures are proposed for the other overflow location located at the Wainuiomata Wastewater Treatment Plant including a wet weather storage tank.

Teri Puketapu of Te Runanganui o Taranaki Whanui ki te Upoko o Te Ika a Maui requested a change to condition 10 requiring the permit holder to take steps to investigate and implement ways of reducing infiltration and stormwater to the sewage system and to complete this by 2007. The change to this condition also involved the permit holder reporting to the Manager, Consents Management, Wellington Regional Council on the progress of the investigating.

11.2 Alternatives

The applicant stated in their application that the alternative to the overflow arrangement would be to substantially increase the capacity of the proposed rising main and pump stations conveying sewage to the Seaview Wastewater Treatment Plant, both at a considerable capital and operational expense.

The local population is decreasing and the average age increasing, so priority has been to limit capital expenditure and make the best use of existing assets. The costs associated with providing the increased capacity make this option not feasible.

12. Iwi

Policies 4.2 of the Regional Freshwater Plan emphasises fresh water is taonga to the tangata whenua, and the many cultural uses and values associated with it mean that any discharge into water, including sewage in any form, adversely affects the mauri (life essence) of the resource. The tangata whenua therefore, consider that discharges into freshwater of the Region should be avoided.

Furthermore, objective 5.1.3 states that the quality of the water should be as far as practicable, consistent with the values of the tangata whenua. The discharge will diminish the cultural and spiritual values of the receiving environments to the local tangata whenua.

Wellington Tenth Trust were consulted prior to and after THCC lodged the application, and copy of application sent to Wellington Tenth Trust by THCC and

WRC. Wellington Tenth Trust provided support for the application but did not submit.

Teri Puketapu submitted on behalf of Te Runanganui o Taranaki Whanui ki te Upoko o te Ika a Maui Inc opposing the application. Any discharge of sewage to any natural waterway is opposed on strongly held cultural grounds. Teri Puketapu asked in the submission for WRC to ensure provision was made to upgrade pipe and pump capacities and to ensure infiltration of non-sewage water is reduced to an absolute minimum. Liaison between Teri Puketapu and THCC enabled condition 10 to be drafted requiring the permit holder to investigate and implement ways of reducing stormwater to the sewage system. Te Runanganui o Taranaki Whanui ki te Upoko o te Ika a Maui Inc consequently then signed off on the draft conditions.

13. Conclusions

As stated above, the discharge of dilute sewage into the Black Stream will result in a deterioration of the water quality increasing the suspended solids, organic load and bacterial content. This deterioration will further render the watercourse unsuitable for contact recreation during heavy rainfall events, resulting in a temporary reduction in the general amenity value. It is also likely that people's appreciation of the stream's cultural, aesthetic and recreational attributes will be adversely affected. However, it is important to note that these overflows will occur when the water quality of the stream is already likely to be reduced due to flooding and that they will be an improvement on the current situation.

Section 107 of the Resource Management Act, 1991 states that a discharge can only be granted if, after reasonable mixing, the discharge does not result in a number of adverse effects as follows:

- *The production of any conspicuous oil or grease films, scums or foams or floatable or suspended material.*
- *Any conspicuous change in colour or visual clarity.*
- *Any emission of objectionable odour.*
- *The rendering of fresh water unsuitable for consumption by farm animals.*
- *Any significant adverse effect on aquatic life.*

The overflows will result in most of the adverse effects outlined above. However, the receiving water of the stream will also not meet these standards due to decreases in water quality caused by flood conditions. The discharge therefore breaches the above standards and the water policy guidelines of the Regional Freshwater Plan derived under section 70 of the Act.

Consent can be granted for a discharge that breaches section 107 (1) of the Resource Management Act, 1991 under section 107 (2), if the discharge meets certain criteria as follows:

- exceptionable circumstances justify the granting of the permit; or
- the discharge is of a temporary nature; or
- the discharge is associated with necessary maintenance work.

Policy 5.2.10 of the Regional Freshwater Plan also encompasses this criteria and states that a discharge of contaminants to freshwater which does not satisfy relevant water classifications, can be granted only where;

- The discharge is of a temporary nature;
- The discharge is associated with necessary maintenance works;
- The discharge will result in an overall improvement in the water quality of the water body; or
- The discharge was present at the time this Plan was notified and meets the following:
 - the person responsible for the discharge has defined a program of work for upgrading the discharge; and
 - after reasonable mixing and disregarding natural perturbations, the discharge is not likely to cause a decrease in existing water quality.

The question arises as to whether the wastewater overflows that do not comply with section 107(1) standards can be considered as “temporary” discharges for the purposes of s107(2) and 369(4) of the Act. Cases such as *Bell v Wellington Regional Water Board* (1976) 6 NZTPA 165 (PT) provide guidance on what constitutes temporary.

The proposed discharges are intermittent and should only occur during wet weather events (estimated to be just over one per year). They could therefore be interpreted as being temporary. Furthermore, The Hutt City Council has outlined a comprehensive program to upgrade and eliminate most of the foreseeable wastewater overflows within three to seven years. Some of these measures are well underway and the applicant has stated they “*are already providing a progressive reduction in overflow frequency, and should help to improve the overall existing water quality*”.

14. **Recommendation**

On balance, I recommend that consent applications to discharge wastewater overflows to the Black Stream, be granted. The recommendation is based on the following reasons:

- the adverse effects on the environment can be sufficiently remedied and mitigated by imposing appropriate consent conditions;
- the applicant will adhere to the proposed mitigation measures and timeframes to eliminate the discharges as outlined in the consent application, to ensure the applicant can meet the requirements of section 107(1) and relevant water classifications; and
- all of the submitters provided their written approval to the proposed discharges, subject to conditions.

15. **Decisions on Applications**

Section 105 (1) (b) of the Resource Management Act 1991 provides that, after considering an application for a resource consent, a consent authority may grant or

refuse its consent and may, in accordance with section 108 include conditions in the consent.

16. Term of Consent

I have recommended a consent term of eighteen years.

Resource consents were granted to THCC in 1999 for similar sewage overflows to the Hutt River for a term of 20 years and are due to expire in 2019. A consent term of 18 years would therefore, ensure that the resource consent (should it be granted) would expire at a similar time to these consents.

I believe that the term is also appropriate given the intermittent nature of the discharge.

Such a term will also:

- provide THCC with a pre-determined period of time in which to operate the upgraded Wainuiomata wastewater system
- allow time to undertake Inflow/Infiltration measures
- allow time to demonstrate a commitment to reducing the frequency and volume of the overflows.
- allow THCC to reassess the operation and requirement of the discharge at the renewal of the consent.

Should the resource consent be granted, I recommend that the following conditions be stipulated under the resource consent. The applicant and the submitters have agreed to these conditions.

1. The location, implementation, design and operation of the discharge shall be in accordance with the resource consent application lodged with the Wellington Regional Council on 16 November 2000 and in accordance with the further information lodged with the Wellington Regional Council on 11 December 2000.

Note: Any change from the location, design, implementation and/or operation of the discharge may require a change in permit conditions pursuant to section 127 of the Resource Management Act 1991.

2. No overflows shall discharge into the Black Stream during dry weather flow.
3. The permit holder shall notify the Manager, Consents Management, Wellington Regional Council, and the Medical Officer of Health, Regional Public Health, within 24 hours of any overflow occurring.
4. The discharge shall remain the responsibility of the permit holder and shall be operated and maintained to the satisfaction of the Manager, Consents Management, Wellington Regional Council.

5. The permit holder shall design and install a course screen at the upstream end of the overflow discharge pipe to the satisfaction of the Manager, Consents Management, Wellington Regional Council. The screen shall be designed and installed in such a way to minimise overtopping of the screen as a result of blocking or binding during an overflow event.
6. The permit holder shall place and maintain signs on the banks of the Black Stream identifying and outlining details of the discharge. The signs shall:
 - (a) Provide clear identification of the location and nature of the discharge and the risk to public health from contact with the stream and/or collecting food in the vicinity of the discharge;
 - (b) Be visible to the public visiting the area; and
 - (c) Conform generally to the wording contained in the Response Manual For Sewage Discharges prepared by the Public Health Service, Wellington Region (Regional Public Health).

The wording, placement and maintenance of the signs shall be to the satisfaction of the Manager, Consents Management, Wellington Regional Council. The signs shall be placed within one month of the date of commencement of this permit.

7. The permit holder shall undertake monitoring to determine the time, duration and approximate volume of each overflow event. The permit holder shall report the results of this monitoring to the Manager, Consents Management, Wellington Regional Council, within six months of the date of commencement of this permit, and six monthly thereafter, or on request.
8. The permit holder shall appropriately maintain the Black Stream for the purposes of reducing the risk of property flooding adjacent to the stream during an overflow event. The permit holder shall monitor the Black Stream from bank to bank, from the discharge point to the confluence with the Wainuiomata River at least twice a year, to the satisfaction of the Manager, Consents Management, Wellington Regional Council. The maintenance of the stream shall include but is not limited to, clearing the stream of obstacles and maintaining a clear flow path.
9. The permit holder shall prepare and submit an Overflow Contingency Plan outlining procedures that will be adopted during an overflow event. The plan shall be developed in consultation with Regional Public Health. The plan shall be prepared to the satisfaction of the Manager, Consents Management, Wellington Regional Council and shall be submitted within six months of the date of commencement of this permit.

The plan shall include, but not be limited to, the following considerations:

- (a) Procedures the permit holder will adopt during and following an overflow event to ensure that the potential adverse effects of the discharge minimised as much as practicable;
- (b) Procedures for the notification of potentially affected parties and regulatory authorities in the event that any overflows present a potential risk to human health;
- (c) Procedures for recording and reporting the time, duration and approximate volume of each overflow event as required under condition 7; and
- (d) Procedures to ensure that the conditions of this permit are complied with at all times during and following overflow event.

The permit holder shall operate in accordance with this plan once prepared and submitted to the Wellington Regional Council.

- 10. The permit holder shall take all reasonable steps to investigate and implement ways and means of minimising infiltration and stormwater ingress into the sewerage system. In particular, the permit holder shall complete work by 2007 to reduce stormwater inflow in the Wainuiomata Catchment. The permit holder shall also provide the Manager, Consents Management, Wellington Regional Council with an annual report detailing what progress has been made to reduce infiltration and stormwater ingress. The report shall be submitted to the Manager, Consents Management, Wellington Regional Council within six months of the date of commencement of this permit, and annually thereafter.
- 11. The permit holder shall provide the Wellington Tenth Trust and Te Runanganui o Taranaki Whanui ki te Upoko o Te Ika a Maui with a report on the overflows entering the Black Stream. The report shall include, but is not limited to, details of the flow rates and duration of overflows and the measures to minimise infiltration and stormwater ingress recorded and reported under conditions 7 and 10 respectively. The report shall be forwarded to both groups within six months of the date of commencement of this permit, and annually thereafter.
- 12. The permit holder shall keep a record of any complaints that are received. The record shall contain at least the following details, where practical:
 - (a) Name and address of the complainant;
 - (b) Identification of the nature of the complaint;
 - (c) Date and time of the complaint and of the alleged event; and
 - (d) Weather conditions at the time of the complaint.

The permit holder shall notify the Manager, Consents Management, Wellington Regional Council of any complaints relating to the exercise of this permit, within

twenty-four hours of being received by the permit holder or the next working day. The permit holder shall forward to the Manager, Consents Management, Wellington Regional Council a copy of any complaints recorded on request.

13. The Wellington Regional Council may review any or all the conditions of this permit by giving notice of its intention to do so pursuant to section 128 of the Resource Management Act 1991, within six months of the first, third, fifth, tenth, and fifteenth anniversary of the date of commencement of this permit for the following reasons:
 - (a) To deal with any adverse effects on the environment which may arise from the exercise of this permit.
 - (b) To review the adequacy of the reporting and/or monitoring requirements, so as to incorporate into this permit any modifications to the reporting requirements and/or addition of further monitoring requirements that may be necessary to deal with any adverse effects on the environment arising from the discharge.
14. The permit holder may apply, at any time, pursuant to section 127 of the Resource Management Act 1991, for the change or cancellation of any condition of this permit, other than any condition relating to the term of this permit.
15. In terms of section 123(c) of the Resource Management Act 1991, the period for which this permit is granted is limited to 18 years from date of commencement of this permit.

Term of the Consent

14. In terms of section 123(c) of the Resource Management Act 1991, the period for which this permit is granted is limited to 18 years from date of commencement of this permit.

Report prepared by:

Recommendation approved:

ANNETTE MCGOVERN
Resource Advisor, Consents Management

ROB FORLONG
Manager, Consents Management