Christchurch City Council
SUPPLEMENTARY AGENDA

Notice of Meeting:

An ordinary meeting of the Christchurch City Council will be held on:

Date:	**Thursday 13 June 2019**
Time:	**9.30am**
Venue:	**Council Chambers, Civic Offices, 53 Hereford Street, Christchurch**

Membership

Chairperson	Mayor Lianne Dalziel
Deputy Chairperson	Deputy Mayor Andrew Turner
Members	Councillor Vicki Buck
	Councillor Jimmy Chen
	Councillor Phil Clearwater
	Councillor Pauline Cotter
	Councillor Mike Davidson
	Councillor David East
	Councillor Anne Galloway
	Councillor James Gough
	Councillor Yani Johanson
	Councillor Aaron Keown
	Councillor Glenn Livingstone
	Councillor Raf Manji
	Councillor Tim Scandrett
	Councillor Deon Swiggs
	Councillor Sara Templeton

11 June 2019

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27. Resolution to Include Supplementary Reports

1. Background

1.1 Approval is sought to submit the following reports to the Council meeting on 13 June 2019:

28. Beyond wellheads
29. Community Facilities
30. Comprehensive Stormwater Network Discharge Consent

1.2 The reason, in terms of section 46A(7) of the Local Government Official Information and Meetings Act 1987, why the reports were not included on the main agenda is that they were not available at the time the agenda was prepared.

1.3 It is appropriate that the Council receive the reports at the current meeting.

2. Recommendation

2.1 That the reports be received and considered at the Council meeting on 13 June 2019.

28. Beyond wellheads
29. Community Facilities
30. Comprehensive Stormwater Network Discharge Consent

28. Beyond wellheads

Reference: 19/409895

Presenter(s): Helen Beaumont – Water Supply Improvement Programme

1. Purpose of Report

1.1 To provide information to the Council on opportunities for improvements to the security of the community water supplies in anticipation of stricter standards being introduced by central government.

2. Executive Summary

2.1 Community water suppliers across the country are responding to the increased focus on ensuring public safety following the Havelock North contamination incident and subsequent reviews of the regulatory environment for drinking water.

2.2 Central government have already made changes to the standards and guidelines for community drinking water supplies to improve management of contamination risks, require more monitoring information and provide more effective enforcement. Further changes have been clearly signalled and legislation to set up a new regulatory regime is expected to be introduced to Parliament before the end of this year.

2.3 While Christchurch has a high quality source of drinking water, from the aquifers beneath the city, there will be a requirement to significantly improve the infrastructure associated with extracting that water and delivering it to the customers' tap. Improvements are also required in the operation of the network, risk management and information on water quality.

2.4 Considerable progress has been made on improving the infrastructure for delivery of our drinking water supplies – new and deeper wells, reservoir repairs and well head upgrades. Further improvements are proposed to be considered as part of the Long Term Plan 2021-2031.

3. Staff Recommendations

That the Council:

1. Receive the information in this report and request staff to incorporate the opportunities for improvement of the water supply networks in the Asset Management Plan for Water Supply and the Infrastructure Strategy for consideration as part of the next Long term Plan 2021-2031.
2. Consider the following matters for inclusion in the Annual Plan 2019-20 for water supply:
    a. Pressure and acoustic sensor network - $1.5 million capital plus $500,000 operating expenditure
    b. Backflow prevention - $200,000 operating expenditure.

4. Key Points

4.1 Central government changes to the regulatory policy environment for drinking water supply have raised the bar for risk management and demonstrating the protection of public health.

4.2 Opportunities for further improvements to the security of the water supply network include:

4.2.1 Reconfiguration of our water supply zones and improved pressure management

4.2.2 Upgrades and replacements of water supply reservoirs and suction tanks

4.2.3 Improving the condition of the pipe network

4.2.4 Increased focus on ensuring backflow prevention at customer connections

4.2.5 Improved security and continuity of supply at pump stations

4.2.6 A 'smarter' water network to improve operation and provide an assurance as to the quality of the water.

4.3 This programme of work represents and step change in performance in response to central government's call for 'demonstrably safe' community water supplies.

5. Context/Background

Issue or Opportunity

5.1 Central government has embarked on a regulatory reform programme to ensure the safety of drinking water supplies and better protect public health. Following the recommendations in the second report of the Havelock North Inquiry, this is likely to include mandatory residual disinfection unless a supplier can demonstrate that the drinking water is safe.

5.2 There is still some uncertainty around the changes to the regulations and standards for drinking water. The timetable for reform has a Cabinet paper due at the end of June 2019 and a bill being introduced to Parliament late 2019 or early 2020. There will be further opportunities to contribute to the ongoing development of regulatory policy and make submissions on any proposed standards through the select committee process.

5.3 While the Council has made considerable progress on improving the security of the water supply network – through the North-West well deepening programme, reservoir improvements and the well head upgrades – there is scope for further improvement over the next ten years.

Strategic Alignment

5.4 This report is aligned with the Council's safe and sustainable water supply and improved waterways strategic priority and the community outcomes seeking high quality drinking water and a healthy environment.

5.5 The Water Supply Strategy 2009 and the draft Integrated Water Strategy (adopted for public consultation in May 2019) provide the framework for the Council to ensure it is continually working to meet the community's expectations to deliver drinking water that is demonstrably safe and, where the supply is high quality groundwater, without residual disinfection.

Community water supplies – the national picture

5.6 The majority of drinking water in New Zealand is provided by local authorities, however, there are some private suppliers[1]. The 2017/2018 National Performance Review (the Review) carried out by Water NZ provides an annual comparison of drinking water, wastewater and stormwater service provision in New Zealand. Forty six Councils and two Council Controlled Organisations (Watercare and Wellington Water) participated in the Review, covering 94 per cent of the population.

5.7 Christchurch is the second largest water supplier in the country, with three waters assets valued at $7.5 billion, following Auckland (Watercare), with assets valued at $13.5 billion. Christchurch is about the same size as Wellington Water in terms of assets and the number of properties connected.

Economic sustainability

5.8 Christchurch has the lowest annual operational expenditure per property connected to the network for drinking water at $86. The median annual operational expenditure per property connected for large sized water suppliers is $337, slightly higher than the national median of $295. Wellington's annual operational expenditure per property is $315.

5.9 The very low operational cost of the Christchurch water supply is partly due to the availability of a pristine water source for the city, from the aquifers, that requires little or no treatment. The aquifer water is under artesian pressure for a large proportion of the supply wells.

5.10 Christchurch has a relatively low annual capital expenditure per property connected – being $156 compared with the median of $263 and $259 for Wellington. While the low capital costs are also as result of the availability of water from the aquifers the level of investment has fallen well behind depreciation.

5.11 Christchurch also has lowest cost coverage[2] of all large water suppliers at 0.664. Where a value is less than 1 (100%), revenue is assessed as insufficient to meet costs and/or maintain assets to current levels. Auckland (0.860) and Wellington (0.905) also had cost coverage below 100%. Nationally only Horowhenua (0.649) a medium sized supplier, as well as Mackenzie (0.460) and Southland (0.614), both small sized suppliers have cost coverage less than Christchurch.

Reliability of supply

5.12 The leading cause of interruptions to water supply is unplanned interruptions (which does not include third-party damage). Christchurch had 10.12 unplanned interruptions to the water supply system per 1000 properties serviced. This was above the national median of 5.41. In comparison, Wellington had significantly fewer unplanned interruptions: 1.39 per 1000 properties serviced.

5.13 Assessing the condition of infrastructure, Christchurch has an average age for its water pipeline of 31 years with 18 per cent of the water pipelines assessed as 'poor or very poor condition'. Wellington has an average age for its water pipeline of 44 years, with 19 per cent of its water pipelines assessed as poor or very poor condition. In Auckland the average age is 36 years with just 2 per cent in poor or very poor condition.

[1] For example, the Ministry of Health's Annual Report on Drinking-water Quality 2016-2017 has the total population covered by water suppliers in Christchurch City as 350,395. Within this, Christchurch International Airport and the Waterloo Business Park are private suppliers, and Okains Bay is a communal supply, together providing services to 6505 people.

[2] Measure of revenue (excluding revenue from developer contributions) over operational costs including interest payments and depreciation. Costs related to capital expenditure not included.

5.14 For third party damage, the national median per kilometre of pipe was 0.0268. Christchurch had the national high with 0.1925. Wellington had 0.1092 third party damage to the water supply system per kilometre of pipe.

Resource efficiency - water losses

5.15 Of the large water suppliers, Christchurch has the highest current annual real loss at 186 litres/property/day. Wellington has a similar rate at 181. Using the Infrastructure leakage index[3] (a comparison of the operational management of real water losses), Christchurch's leakage figure of 2.77 puts it in the 'possibilities for further improvement' performance band.

5.16 Both the current annual real loss and Infrastructure leakage index for Christchurch have increased over the past few annual reviews.

Overall picture for Christchurch

5.17 Public water supply began in Christchurch in 1903, expanded between 1908 and 1914, and experienced significant growth between 1950 and 1975. Many of the pipes installed in these growth periods are now coming to the end of their lives. Some of the network was severely affected by the 2010 and 2011 earthquakes.

5.18 The overall picture today is one of under investment, an increasing back log of infrastructure renewals and declining levels of service in terms of leakage and more interruptions to service than typical elsewhere in NZ. Some of this under investment is due to earthquake repairs being prioritised over planned renewals.

5.19 The consequential increase in leaks and interruptions to service (pipe bursts and reactive repairs) is leading to a consistent increase in operational and maintenance costs.

Opportunities for improvement

(i) Water supply zones

5.20 The Christchurch urban supply is structured into eight water supply zones (largely following previous jurisdictional boundaries) each containing the source and distribution network which provides water to the properties within the zone. Water transfer between the zones, which operate at different pressures, is controlled through manually operated isolation valves at the boundaries.

5.21 Planning for re-zoning started in 2012 and proposed 14 more evenly sized zones and lower the pressures in the east and central parts of the city (to bring them in line with other zones). The changes to boundaries and pressure management have been trialled in the Rawhiti zone – the pressure has been reduced from 700 kilopascals (kPa) to 600 kPa since October 2018.

5.22 A larger number of evenly sized zones with consistent operating pressures will deliver a number of benefits:

5.22.1 Optimal pressure management

- Reduced pipe burst frequency
- Reduced water leakage
- Reduced pressure transients and improved stability of supply.

5.22.2 Improved demand management – zoning in combination with smart water meters

- Early identification of water loss and pipe breaks

[3] The Infrastructure leakage index is a non-dimensional performance indicator used for comparing the operational management of real water losses. It is the ratio of *Current Annual Real Losses* to *Unavailable Annual Real Losses*.

- Better utilisation of infrastructure and energy savings
- More sustainable ground water abstraction.

5.22.3 Improved risk management

- Reduced risk of contamination entering the network
- Reduced impact of interruption to supply
- Dedicated water safety plans.

5.23 The required infrastructure modifications include new boundary valves and zone meters, pipe upgrades, and pump station improvements and replacements. The costs for implementing the re-zoning were estimated at $20 million for the 2018 Infrastructure Strategy. This cost has been reviewed, following the Rawhiti trial, and is now expected to be $24.5 million.

(ii) Reservoirs and suction tanks

5.24 There are 95 sites with reservoirs and/or suction tanks across the district. The reservoirs are storage tanks at elevated sites across the Port Hills and Banks Peninsula. Suction tanks are located at some pump stations and provide a buffer between the source wells and the intakes (reticulation booster pumps 'suck' water from the tank and pump it into the pipe network). The design, age and condition of these reservoirs and tanks vary considerably.

5.25 Water sampling information and records of Escherichia coli (E. coli) transgressions since 2012 show that reservoirs and suction tanks are the source of most contamination incidents within our distribution system – 57 per cent from tanks, 30 per cent from the reticulation, 7 per cent within a pump station, 7 per cent at a treatment plant, and no transgressions related to the water source (from above or below ground wells). Nineteen high risk tanks have been repaired and or re-lined over the last three years and works are underway or scheduled at a further three sites.

5.26 A specialist consultant has been engaged to develop a detailed specification for tanks which will be to a higher standard than our current designs and include additional safety features – such as site security and filtration of any air that could come in contact with the water. It is recommended that all reservoirs and suction tanks are assessed and prioritised for remedial works to achieve a 'demonstrably safe' standard.

5.27 The cost of the assessment and programme of remedial works is estimated at $20 to $30 million, based on an indicative scope of works and our current understanding of the condition of the assets. $24 million was budgeted in the LTP and $12 million of this is already allocated to specific projects, including replacing two earthquake damaged suction tanks.

(iii) The reticulation network

5.28 Council's network consists of 1822 kilometres of mains and 1686 kilometres of submains with 12 per cent being condition grade 5 – expected to fail in 1 to 2 years. The average annual renewals budget in the current Long Term Plan is $28 million for water supply mains and $3.6 million for submains. This is sufficient to slightly improve the overall network condition, with the percentage of condition grade 5 pipes (expected to fail in the next 1 to 2 years) dropping from 12 per cent currently to 10 per cent after 10 years.

5.29 The network of water supply pipes is inherently safe so long as the pressure within the network remains higher than that of the surrounding groundwater. However any pipe failure can lead to a drop in pressure in the network and a consequential risk of contamination occurring. Repairs to the water supply pipes are another potential cause of contamination in the network.

5.30 Existing initiatives to minimise the risk of contamination in the network include:

- Safe hygiene working practices
- Works must be carried out by an 'authorised water installer'
- Sterilisation and water testing procedures to be followed in the event of contamination
- Design specifications for mains renewals using earthquake resilient approved materials.

5.31 Focused renewal planning, through the Asset Assessment Intervention Framework, assigns a priority to those pipes at highest risk of failure and/or with the most impact on customers, and this approach is being used to inform the next Long Term Plan. The factors considered include:

- Material and condition – particularly asbestos cement, early generation plastic pipes (PVC / HDPE) and galvanised pipes which are brittle compared to cast iron and steel pipes
- Exposure to pressure transients – close to pump stations and/or high water users
- Pipes installed below the water table
- Pipes that service reservoirs.

5.32 Leakage is often used as an indicator of the risk of contamination of the network. In unchlorinated supplies in Europe, pipe networks are maintained in excellent condition, with very low levels of leakage (around 6 per cent) and almost no few pipe bursts. This compares with Christchurch which in the last financial year had leakage of 18 per cent and 9.81 unplanned interruptions per 1000 connections.

5.33 An annual capital expenditure of $55 million per year would represent best practice and replace all condition grade 5 pipes over a 10 year period, as described in the draft Infrastructure Strategy 2018. This would significantly reduce leakage and the number of pipe bursts, thus reducing the risk of contamination. This would mean an increase of $234 million in the next LTP.

(iv) Backflow prevention

5.34 Water flowing back from residential or commercial premises can introduce contamination into the water supply network. Backflow can occur as a result of:

- Back-siphon – when the pressure drops in the mains and water flows in the reverse direction. This can be due to incidents such as a water main break or large volumes of water being drawn off for fire-fighting.
- Back-pressure – when the water pressure on the customer side exceeds that in the water supply and water is forced back into the mains. Examples include tank being installed at a higher level than the current water supply or a customer's pumping system set at a pressure above that in the supply main.

5.35 New Zealand has strict legislation to prevent backflow and protect the safety of our water. The Building Code outlines the method or device required to prevent backflow depending on the level of hazard: high – potential to cause death; medium – potential to injure or endanger health; and low – would constitute a nuisance by colour, odour or taste.

5.36 The Ministry of Health have published guidance material on comparative levels of risk to public health from different situations:

- High – medical, dental, hospital or mortuary services; meatworks and abattoirs; sewage treatment plants; piers, marinas and wharves; commercial and industrial facilities where

toxic or hazardous chemicals are used (timber treatment, laboratories, dry-cleaning, nurseries etc.)

- Medium – premises such as for food and beverage processing, commercial laundries, hair-dressing, swimming pools and spas; premises with greywater recycling, water recycled for heating and/or cooling, automatic sprinkler systems
- Low – premises used for storage or preparation of food or beverages; drink dispensers; hose taps for fixed domestic irrigation systems
- Very low – household units.

5.37 The Council's Water Supply, Wastewater and Stormwater Bylaw 2014 requires connections to have backflow prevention installed, if this is necessary or desirable, with the customer responsible for installation and maintenance.

5.38 All commercial connections are required to have appropriate backflow prevention devices and the owner is responsible for annual inspections which should be reported to Council. In addition the Council undertakes 100 audit inspections each year focusing on the highest risk connections. However Council's systems for recording information about backflow devices and annual testing are poor. Improving the information systems and increasing the audit effort would require additional operational funding of $200,000.

5.39 Residential properties with low backflow risk can be protected by a non-testable dual check valve at the water meter. A comprehensive programme to replace all old water meters would improve backflow prevention. This also presents an opportunity to install smart water meters which can be read remotely. They can also include features such as backflow alarms and vibration sensors for leak detection.

5.40 Installing smart meters across the entire network would cost up to $65 million (compared with up to $40 million for 'dumb' meters).

(v) Pump station resilience and security

5.41 There are 53 pump stations that extract and distribute water across the Christchurch city supply. Failure rates are increasing in frequency largely due to ageing assets. Currently we repair on a 'fix when fail' basis and there can be long delays when critical parts (motors, pumps, bearings, seals and starters) are not available. An additional capital investment of $1 million is required to purchase critical spares and enable rapid repairs to reinstate the supply at 17 'primary' pump stations.

5.42 The standard of documentation of operations and maintenance procedures, including site security, at each of the pump stations is variable. The updating of the documentation is in progress. An additional $100,000 operational funding and $3 million capital funding is required to bring the security of these pump station sites up to consistent good practice standards.

(vi) Smart water network

5.43 New technologies and the Internet of Things present an opportunity to significantly improve the understanding, management and operation of infrastructure and 'smart' water networks are being developed around the world. Smart monitoring and control of the water supply is also necessary to demonstrate that our water is safe in the absence of disinfection.

5.44 This includes monitoring of water quality parameters as water leaves pump stations and reservoirs, and enters the network, to check for any variability that could indicate potential microbial contamination. Ideally this would be in conjunction with a control system that

would automatically turn off the pump station, isolate part of the network or treat the supply if contamination was suspected.

5.45 Parameters such as pH, temperature, turbidity and conductivity could be used to indicate changes in water quality. Instruments to measure these parameters are well established. The time taken to detect bacteria in the network (24 hours using traditional laboratory techniques) is one of the reasons given for requiring residual disinfection. Instruments to provide rapid on-line assays (1 to 2 hours) and instantaneous detection of microbial contamination could be installed, noting that this technology is rapidly developing. The estimated capital cost of continuous water quality monitoring is $10 to $20 million, plus $300,000 per annum operational costs.

5.46 High speed pressure and acoustic sensors have been trialled in the network to detect transient pressures[4] that can damage our network and cause pipe bursts. The information is used to improve infrastructure (e.g. variable speed pumps, pressure reduction valves) and make operational changes to reduce transient pressures (e.g. to valve and pump station operations, and by working with customers whose water use causes transient pressures). This information can also be used to determine critical pipes at most risk of failure, to inform the renewals programme.

5.47 The trial of these sensors in the Riccarton and North West water supply zones also used AI (artificial intelligence) to learn the pressure and acoustic signatures to detect leaks in some pipe materials. Early identification and pinpoint location of leaks, followed up with repair works to resolve the leak, can avoid catastrophic pipe breaks and reduce the risk of contamination and disruption to the supply.

5.48 The estimated capital cost of rolling out pressure and acoustic sensors across the city is $1.5 million, plus an additional $375,000 operational expenditure per annum and continuing the Riccarton and North West trial sensors for $125,000 per annum.

5.49 Smart water meters for both commercial and residential customers have been trialled in Duvauchelle. This technology combined with flow meters at key points in the network gives a much better understanding of the movement of water through the network and picks up any problems (such as leaks and illegal connections).

5.50 As noted above, rolling out smart meters across the Christchurch network would cost up to $65 million. Smart meters would provide better information on water use as well as a mechanism for more sophisticated demand management across our network.

5.51 At present our infrastructure is dictated by the peak summer demand – a very small number of hours in any one year – with the base demand being very much lower. The investment required to meet these peaks is considerable and spreading the demand outside of peak times would lead to significant savings in future capital expenditure (particularly on pump stations and new wells) and reduce energy costs. This could be achieved through metering and charging high users for volumes above basic requirements – the high summer peaks are largely due to early evening garden watering.

5.52 Another benefit of smart meters is to inform customers on the levels and patterns of consumption and identify any leaks on their property.

5.53 The implementation of any or all of the 'smart network' components would need to be staged as the business case for each aspect is confirmed and to minimise disruption to customers.

[4] Pressure waves can be generated by the fast closing of valves, pump station adjustments and large variations in customer demand in a short space of time. These waves of water stretch and flex the pipework, weakening the walls and eventually leading to a pipe burst.

Trials within one or two water supply zones are recommended to select the best technology and properly evaluate the approach within our network. A trial is estimated to cost $6 to $10 million.

Next steps

5.54 Two of the opportunities for improvements to the water supply network are considered to be urgent and could be funded through additional budget in the Annual Plan:

5.54.1 The pressure and acoustic sensor network – $1.5 million capital expenditure plus $500,000 operational expenditure.

5.54.2 The improvements for backflow prevention – $200,000 operational expenditure.

5.55 The additional investment required to maintain a 'demonstrably safe' water supply, following the anticipated revisions Drinking Water Standards, will be considerable. This information will be incorporated into the Asset Management Plans and the Infrastructure Strategy as part of the Long Term Plan 2021-2031.

5.56 The additional capital and operational expenditure that may be required if all initiatives were implemented, beyond that included in the current LTP, is shown in the table below.

Improvement initiative	Capital expenditure estimate (10 year LTP)	Operational expenditure estimate (per annum)
Water supply zones	$24.5 million	$100,000
Reticulation supply network	$234 million	
Reservoirs and suction tanks	$8 - $18 million	$250,000
Backflow prevention		$200,000
Continuous water quality monitoring	$10 - $20 million	$300,000
High speed pressure and acoustic sensors	$1.5 million	$500,000
Smart water meters	$50 - 65 million	$500,000 (one off)
TOTAL	$343 - $363 million	$1,850,000

5.57 Alternative approaches such as additional ultraviolet treatment and residual disinfection within the water supply network will also need be scoped and costed to clearly lay out the options for ratepayers as part of the Long Term Plan.

Attachments

There are no attachments to this report.

Confirmation of Statutory Compliance

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).

(a) This report contains:
  (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
  (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.

(b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.

Signatories

Authors	Helen Beaumont - Acting Head of Three Waters & Waste Bridget O'Brien - Manager Planning & Delivery
Approved By	Peter Langbein - Finance Business Partner David Adamson - General Manager City Services Karleen Edwards - Chief Executive

22. Resolution to Exclude the Public

Section 48, Local Government Official Information and Meetings Act 1987.

I move that the public be excluded from the following parts of the proceedings of this meeting, namely items listed overleaf.

Reason for passing this resolution: good reason to withhold exists under section 7.
Specific grounds under section 48(1) for the passing of this resolution: Section 48(1)(a)

Note

Section 48(4) of the Local Government Official Information and Meetings Act 1987 provides as follows:

"(4) Every resolution to exclude the public shall be put at a time when the meeting is open to the public, and the text of that resolution (or copies thereof):

(a) Shall be available to any member of the public who is present; and
(b) Shall form part of the minutes of the local authority."

This resolution is made in reliance on Section 48(1)(a) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by Section 6 or Section 7 of that Act which would be prejudiced by the holding of the whole or relevant part of the proceedings of the meeting in public are as follows:

ITEM NO.	GENERAL SUBJECT OF EACH MATTER TO BE CONSIDERED	SECTION	SUBCLAUSE AND REASON UNDER THE ACT	PLAIN ENGLISH REASON	WHEN REPORTS CAN BE RELEASED
29	COMMUNITY FACILITIES	S7(2)(B)(II), S7(2)(I)	PREJUDICE COMMERCIAL POSITION, CONDUCT NEGOTIATIONS	PREJUDICE COMMERCIAL POSITION AND PARTNERS' NEGOTIATIONS	AT CE DISCRETION AFTER PARTNERS HAVE COMPLETED THEIR NEGOTIATIONS
30	COMPREHENSIVE STORMWATER NETWORK DISCHARGE CONSENT	S7(2)(G)	MAINTAIN LEGAL PROFESSIONAL PRIVILEGE	TO KEEP LEGAL ADVICE CONFIDENTIAL	WHEN ALL LEGAL PROCEEDINGS ARE COMPLETE.