

# Three Waters Management (TWM)

## Overview

Three Waters Management implements provisions to manage the impact of landuse and subdivision on water resources, namely stormwater, wastewater and water supply:

- Stormwater systems manage the quality and quantity of stormwater runoff to minimise flood damage and to protect people, land, infrastructure and the receiving environment from adverse effects.
- Wastewater systems collect and convey wastewater for subsequent treatment and disposal. This will normally consist of either connection to the reticulated wastewater network, or on-site treatment and disposal (either individual or communal in nature).
- A water supply is necessary to ensure that a sufficient quality and quantity of water is available to all properties.

Where a reticulated three waters network with sufficient capacity is available, connection to it is required when undertaking subdivision where connection is practicable. Connection is also encouraged where this would be a logical extension of the reticulated network. Successfully implemented and managed reticulated three waters networks have significant economic, social, environmental and cultural benefits and should be protected as regionally significant infrastructure.

Where a connection is not available to the reticulated network or where a reticulated network does not have sufficient capacity, an alternative private non-reticulated system will be required when undertaking subdivision. It is important that private systems are appropriately designed to protect the health and wellbeing of residents as well as the health of the receiving environment both on-site and within the surrounding area.

In addition to the District Plan, Whangarei District Council Bylaws may impose controls and restrictions on three waters management. Consent may also be required from the Northland Regional Council with regard to stormwater, wastewater and water supply.

## Objectives

TWM-O1 – Connections	Ensure that connection to reticulated three waters networks is provided for within a reticulated area.
TWM-O2 – Reticulated Networks	Maintain the effectiveness, efficiency and sustainability of reticulated three waters networks.
TWM-O3 – Integrated Infrastructure	Plan and provide for three waters infrastructure in an integrated and comprehensive manner.
TWM-O4 – Private Systems	Ensure that private three waters systems are provided where connections are not provided to reticulated networks.

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TWM-O5 – Adverse  
Effects

Minimise adverse effects from stormwater and wastewater on people, property, infrastructure, the receiving environment and cultural values.

## Policies

TWM-P1 – Three waters  
Infrastructure

To ensure that three waters resources are appropriately managed by requiring subdivision and development to provide three waters infrastructure that:

1. Is coordinated, integrated and compatible with the existing infrastructure and capacities.
2. Enables the existing network to be expanded or extended to adjacent land where that land is suitable for future reticulated development.

TWM-P2 – Reticulated  
Areas

To sustainably and efficiently manage three waters resources by avoiding private three waters systems where connection to the reticulated network is practicable or where failure to connect may compromise the future extension of the reticulated network.

TWM-P3 – Capacity

To manage the scale and design of subdivision and development where connection is provided to reticulated three waters networks to ensure that there is sufficient capacity in the reticulated networks, and where necessary require upgrades and/or extensions to the reticulated networks.

TWM-P4 – Future  
Development

To ensure that reticulated three waters infrastructure is designed to accommodate planned and future development.

TWM-P5 – Vested  
Assets

To require vested assets, and connections to vested assets, to be designed and constructed in a manner that protects the ongoing operation, maintenance and upgrading of that asset.

TWM-P6 – Private  
Systems

To ensure that where connection to a reticulated three waters network is not available or practicable that provision can be made for:

1. A water supply.
2. The treatment, disposal, and where appropriate attenuation, of stormwater in a way that does not lead to significant adverse effects on or off site.
3. Management of wastewater via:
  - a. An on-site wastewater treatment system; or
  - b. Approval to connect to a private wastewater system.

TWM-P7 – Flooding

To reduce the risk of flood hazards or increased upstream and downstream flood levels resulting from stormwater discharges.

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TWM-P8 – Integrated Three Waters Assessments	To require Integrated Three Waters Assessments for large scale developments to: <ol style="list-style-type: none"> <li>1. Manage three waters in an integrated and comprehensive manner.</li> <li>2. Enable and recognise the benefits of green infrastructure and low impact and water sensitive design.</li> </ol>
TWM-P9 – Infrastructure	To require subdividers and developers to meet the costs of any upgrades or extensions of reticulated three waters infrastructure which are attributed to the impacts of the subdivision or development.

## Rules

<b>TWM-R1</b>	<b>Any Activity Not Otherwise Listed in This Chapter</b>
<b>All Zones</b>	Activity Status: P  Where: <ol style="list-style-type: none"> <li>1. Resource consent is not required under any rule of the District Plan.</li> <li>2. The activity is not prohibited under any rule of the District Plan.</li> </ol>

## Stormwater

<b>TWM-R2</b>	<b>Impervious Areas</b>
<b>All Zones</b>	Activity Status: P  Where: <ol style="list-style-type: none"> <li>1. Any impervious area complies with the requirements under rule TWM-R3.</li> </ol>
	Activity Status when compliance not achieved: D

<b>TWM-R3</b>	<b>Subdivision</b>
<b>All Zones</b>	Activity Status: RD  Where: <ol style="list-style-type: none"> <li>1. All allotments are designed and located so that provision is made for: <ol style="list-style-type: none"> <li>a. The collection, treatment and disposal of stormwater that meets the following requirements: <ol style="list-style-type: none"> <li>i. There will not be an increase in peak discharge flow rates to receiving environments.</li> </ol> </li> </ol> </li> </ol>
	Activity Status when compliance not achieved: D

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- ii. In Flood Susceptible Areas, the post-development 1% Annual Exceedance Probability (AEP) storm event flow rates is limited to 80% of the pre-development 1% AEP event flow rates.
  - iii. Outside Flood Susceptible Areas, the post-development 2% and 5% AEP storm event flow rates is limited to 80% of the pre-development 1% AEP event flow rates.
  - iv. Any attenuation required by TWM-R3.1(a)(ii)-(iii) is able to accommodate an additional 20% for climate change.
  - v. The primary stormwater system is capable of conveying a 50% AEP storm event (+20%) where the system is a piped network with no surcharge.
  - vi. The primary stormwater system is capable of conveying a 20% AEP storm event (+20%) where the system is a piped network allowing a discharge within 0.3m of the lid level.
  - vii. The secondary stormwater system is capable of conveying the 1% AEP storm event (+20%) within a defined path to ensure that surface water will not enter buildings (excluding detached garages).
  - viii. The stormwater system will not connect or overflow to any wastewater system.
  - ix. The stormwater system is designed and constructed for an asset life of at least 50 years.
- b. Connection to a reticulated stormwater network where the allotment is located within a reticulated stormwater area.

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## Matters of Discretion:

1. Adverse effects on existing reticulated stormwater networks.
2. The capacity of existing reticulated stormwater networks and whether the servicing needs of the proposal require upgrades to existing infrastructure.
3. Feasibility of connection to and logical extension of the existing reticulated stormwater networks.
4. Adverse effects on the surrounding environment and neighbouring properties from the collection, treatment and disposal of stormwater.
5. The efficient provision of services to the land being subdivided and to nearby land that might be subdivided in future.

## Note:

1. *Acceptable means of compliance for the provision, design and construction of stormwater infrastructure is contained within the Whangarei District Council Engineering Standards.*

## Wastewater

### TWM-R4

### Subdivision

#### All Zones

Activity Status: RD

Where:

1. All allotments (excluding any allotment for access, roads, utilities and reserves) are designed and located so that provision is made for:
  - a. Collection, treatment and disposal of wastewater.
  - b. Connection to a reticulated wastewater network where the allotment is located within a reticulated wastewater area.

Activity Status when compliance not achieved: D

# Three Waters Management (TWM)

Matters of discretion:

1. Adverse effects on existing reticulated wastewater networks.
2. The capacity of existing reticulated wastewater networks and whether the servicing needs of the proposal require upgrades to existing infrastructure.
3. Feasibility of connection to and logical extension of the existing reticulated wastewater networks.
4. Provision of wastewater collection, treatment and disposal.
5. Adverse effects on the surrounding environment and neighbouring properties from the collection, treatment and disposal of wastewater.
6. The efficient provision of services to the land being subdivided and to nearby land that might be subdivided in future.

*Note:*

1. *Acceptable means of compliance for the provision, design and construction of infrastructure is contained within the Whangarei District Council Engineering Standards.*

## Water Supply

### TWM-R5

### Subdivision

**All Zones**

Activity Status: RD

Where:

1. All allotments (excluding any allotment for access, roads, utilities and reserves where no irrigation is required) are designed and located so that provision is made for:
  - a. A water supply.
  - b. Connection to a reticulated water supply network where the

Activity Status when compliance not achieved: D

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allotment is located within a reticulated water supply area.

Matters of discretion:

1. Adverse effects on existing reticulated water supply networks.
2. The capacity of existing reticulated water supply networks and whether the servicing needs of the proposal require upgrades to existing infrastructure.
3. Feasibility of connection to and logical extension of the existing reticulated water supply networks.
4. Provision of suitable drinking water.
5. The efficient provision of services to the land being subdivided and to nearby land that might be subdivided in future.

## Integrated Three Waters Assessments

### TWM-R6 Subdivision

**All Zones** Activity Status: D

Where:

1. Any subdivision results in 8 or more additional allotments (excluding lots for the purposes of reserves, network utilities or transport corridors) from one parent allotment which existed at [Operative Date].

*Note: Any application shall comply with information requirement TWM-REQ3.*

### TWM-R7 Landuse

**Business Zones** Activity Status: C

Where:

1. Any activity increases the impervious area within a site by 1,000m<sup>2</sup> – 5,000m<sup>2</sup> from what existed at [Operative Date].

Matters of Control:

Activity Status: D

Where:

1. Any activity increases the impervious area within a site by more than 5,000m<sup>2</sup> from what existed at [Operative Date].

*Note: Any application shall comply with information requirement TWM-REQ3.*

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1. Adverse effects on environmental and cultural values from the management and discharge of stormwater and wastewater.
2. The provision of integrated low impact design or green infrastructure solutions to minimise adverse effects.
3. Opportunities for multipurpose infrastructure (i.e. stormwater reserves that function as walking tracks).
4. The ability of three waters infrastructure to service potential future development within the site.

*Note: Any application shall comply with information requirement TWM-REQ3.*

## Rule Requirements

TWM-REQ1	Information Requirement
<b>All Zones</b>	<ol style="list-style-type: none"> <li>1. Any consent application where connection will be provided to reticulated three waters network(s) shall include an assessment detailing (where relevant):               <ol style="list-style-type: none"> <li>a. Provision made for connections to reticulated three waters networks.</li> <li>b. Confirmation that sufficient capacity exists within reticulated three waters networks to service the proposed development.</li> <li>c. Any upgrades and/or extensions to existing reticulated three waters infrastructure that are proposed or necessary.</li> <li>d. Consideration of the elevation of each proposed lot to establish a service envelope where that lot is able to be serviced without the need for on-site pumping. Reference shall be made to any part of the lot that is outside the service envelope.</li> <li>e. Land and infrastructure to be vested in the Council.</li> </ol> </li> </ol>

TWM-REQ2	Information Requirement
<b>All Zones</b>	<ol style="list-style-type: none"> <li>1. Any consent application where connection will not be provided to reticulated three waters networks is required to show the details and layout of the proposed three waters system(s) including (where relevant):               <ol style="list-style-type: none"> <li>a. In reticulated areas, demonstration as to why connection to the reticulated three waters network is not proposed or is not practicable.</li> <li>b. In reticulated areas, an assessment of any effects on the practicability of future expansion of the reticulated network.</li> </ol> </li> </ol>



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- c. Evidence that the proposed system either complies with the permitted activity standards of the Northland Regional Plan or a regional consent has been obtained.
- d. A site plan detailing the overall proposed development, showing existing contours in areas proposed for development of three waters infrastructure, and any overland flow-paths, rivers, wetlands, water bores etc. which exist pre-development in the subject property and in adjoining properties.
- e. Where any buildings or structures are located within overland flow-paths, rivers, wetlands, water bores, etc. demonstration of how the development will maintain their capacity to convey flows.
- f. Details of an effluent disposal area and reserve area and provision for ongoing maintenance and operation of the proposed wastewater system.
- g. Proposed stormwater attenuation and/or water quality treatment system(s), including location, preliminary sizing and associated works (e.g. landscaping, road construction).
- h. Demonstration (by drawings, calculations and reports) that the requirements of rule TWM-R3.1(a) can be achieved.
- i. Details of water demand (flow and pressure) and suitable drinking water sources.
- j. Copies of any correspondence or written approvals from private persons or Council departments in relation to the proposed stormwater system, and confirmation of how any conditions of those approvals will be met.
- k. Where a private communal three waters system is proposed, details of a formal legal mechanism by which each allotment owner is individually and severally responsible for the maintenance and performance of the system and ongoing ownership of the disposal area

*Notes:*

1. Additional information on details to be provided is contained within the Whangarei District Council Engineering Standards.
2. Evidence of a satisfactory water supply will be assessed as part of the building consent application. Applicants are advised to consult with the New Zealand Fire Service, Northland Health and the Northland Regional Council, and to refer to the Drinking Water Standards for New Zealand 2005 (Revised 2008).

TWM-REQ3	Information Requirement
<b>All Zones</b>	<ol style="list-style-type: none"> <li>1. Any application under rules TWM-R6 – R7 shall include a n Integrated Three Waters Assessment which details:               <ul style="list-style-type: none"> <li>a. How the proposal is consistent with the recommendations, measures and targets of any relevant Council approved Catchment Management Plan.</li> </ul> </li> </ol>

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- b. An assessment of any potential effects (including cumulative effects) of the development in relation to the site, any adjoining sites, the wider catchment and cultural values.
- c. Information on how wastewater (including trade waste) will be managed to minimise any impacts on the reticulated network or from on-site discharges.
- d. The provision of water supply, wastewater disposal and/or stormwater disposal reticulation through the proposed development or subdivision to a standard necessary to provide adequate reticulation to adjacent land zoned for reticulated development.
- e. Any low impact design, green infrastructure or water sensitive design solutions that are proposed, what benefits these will provide, and how they will be operated and maintained to ensure ongoing water efficiency benefits.
- f. Consideration of opportunities to integrate three waters infrastructure and informal or passive recreation opportunities.
- g. Any proposed conditions.