



# Stormwater Bylaw

## Guidance Manual

1 July 2022

### Preface

The Stormwater Guidance Manual has been created to support the Stormwater Bylaw, by providing further information for consenting, planning processes and technical advice. It also provides the details for of the Contamination Guidance Values and the standards they are drawn from.

The Stormwater Guidance Manual is made under the Stormwater Bylaw, and it will govern the implementation and operation of the bylaw. The Stormwater Guidance Manual will be reviewed annually from the first operative date of the bylaw on 1 July 2022. If during the review it is found that amendments are required to include new guidelines or to reflect current best practice methods, an amended document will be authorised by the ICC's Executive Leadership Team, Infrastructure Manager or Chief Executive.

### Application to Connect to the Public Stormwater Network

Under section(s) 5.1 and 5.2 of the Stormwater Bylaw, prior written approval is needed from the Invercargill City Council (Council) to discharge stormwater into and/or to connect to the public stormwater network. This includes but is not limited to: kerb connections, drainage ditches or stormwater mains.

Council may impose conditions of connecting to the network based on the requirements of an operative Sediment and Erosion Control Plan or a stormwater network discharge consent. Compliance with relevant consent conditions may require onsite stormwater mitigation (treatment and/or attenuation/disposal). Before a building consent can be issued you must seek authorisation from the Council's Engineering Services Group by contacting [stormwater@icc.govt.nz](mailto:stormwater@icc.govt.nz)

### Stormwater Discharge Contamination Guideline Values

To comply with this bylaw; stormwater discharges to the public stormwater network from connected premises properties and other locations must comply with all relevant sections of the bylaw and guidance document, for clarification this includes section(s) 5.3, 5.5, 6.1, 6.2 and 6.3 and requires that stormwater must:

- Not contain any hazardous substances.

- Not contain substances that are toxic to the aquatic ecosystem (as measured relative to the ANZECC 2000 95% trigger value guidelines for freshwater).
- Not cause any conspicuous colour changes in the receiving water.
- Not cause the production of any conspicuous oil, grease films, scums or floatable materials.
- Not contain any wastes (including but not limited to wastewater or condensates) from a trade, industrial or commercial process, or premise, or a business, institutional or domestic premise.
- Not have waste from trade or industrial processes that should be discharged to a Trade Waste System, *e.g. Vehicle or equipment wash down areas etc.*
- Ensure that any water used during the repair, maintenance and/or construction of water mains, or the flushing or testing of water mains is de-chlorinated prior to the discharge into the reticulated stormwater system. All contractors will need to consult with the Council's Stormwater Department or Council's Laboratory prior to any discharges of flushing's to the stormwater network.

If the water used during work as described above is discharged directly into a receiving water body and not the Council's stormwater network, a discharge consent will need to be obtained from the Environment Southland and **not** the Invercargill City Council as per the requirements in the Southland Water and Land Plan.

## Table of Maximum Acceptable Values for Stormwater Discharge

General Physical Characteristics	Guidance Values	Source
Total Suspended Solids (Sediment)	< 100 mg/l	MfE guidance document for petroleum based industries and sites. Guidance from Christchurch City Council ESC information sheet, form B-332.
Colour	No change in receiving waters	Stormwater Discharge Consent AUTH-20168843
Temperature	No change in receiving waters	Stormwater Discharge Consent AUTH-20168843
Total ammoniacal nitrogen	< 0.1 mgN/L	Stormwater Discharge Consent AUTH-20168843
Total oxidised nitrogen	< 0.444 mgN/L	ANZECC 2000 trigger value for nutrient effects
Total nitrogen	< 0.614 mgN/L	ANZECC 2000 trigger value for nutrient effects
Dissolved reactive phosphorus	< 0.01 mgP/L	ANZECC 2000 trigger value for nutrient effects
Total phosphorus	< 0.033 mgP/L	ANZECC 2000 trigger value for nutrient effects
<b>Detergents</b>	Not Detectable	Stormwater Discharge Consent AUTH-20168843
<b>Metals</b>		
Aluminium	0.055 mg/l	ANZECC 2000 95% Trigger values for fresh water
Arsenic (Total of AsII & AsV)	0.024 mg/l	ANZECC 2000 95% Trigger values for fresh water
Boron	0.37 mg/l	ANZECC 2000 95% Trigger values for fresh water
Cadmium	0.0002 mg/l	ANZECC 2000 95% Trigger values for fresh water
Chromium (CrIII)	0.001 mg/l	ANZECC 2000 95% Trigger values for fresh water
Chromium (VI)	Prohibited	ANZECC 2000 95% Trigger values for fresh water
Copper	0.0014mg/l	ANZECC 2000 95% Trigger values for fresh water
Lead	0.0034 mg/l	ANZECC 2000 95% Trigger values for fresh water
Manganese	1.9 mg/l	ANZECC 2000 95% Trigger values for fresh water
Mercury	0.0006 mg/l	ANZECC 2000 95% Trigger values for fresh water
Nickel	0.011 mg/l	ANZECC 2000 95% Trigger values for fresh water
Selenium	0.011 mg/l	ANZECC 2000 95% Trigger values for fresh water
Silver	0.00005 mg/l	ANZECC 2000 95% Trigger values for fresh water
Zinc	0.008 mg/l	ANZECC 2000 95% Trigger values for fresh water
<b>Non- Metallic Inorganics</b>		
pH High	greater than 7.8	ANZECC 2000 95% Trigger values for fresh water
pH Low	less than 7.2	ANZECC 2000 95% Trigger values for fresh water
Ammonia	0.9 mg/l	ANZECC 2000 95% Trigger values for fresh water
Chlorine	0.003 mg/l	ANZECC 2000 95% Trigger values for fresh water
Cyanide	0.007 mg/l	ANZECC 2000 95% Trigger values for fresh water
<b>Alcohols</b>		
Ethanol	1.4 mg/l	ANZECC 2000 95% Trigger values for fresh water
Methylated Spirit	1.4 mg/l	ANZECC 2000 95% Trigger values for fresh water
Ethylene Glycol (Anti-Freeze)	Not detectable	Stormwater Discharge Consent AUTH-20168843
Isopropyl Alcohol	Not detectable	Stormwater Discharge Consent AUTH-20168843
<b>Aromatic Hydrocarbons</b>		
Benzene	0.95 mg/l	ANZECC 2000 95% Trigger values for fresh water
Total Petroleum Hydrocarbons (Oil and Petroleum)	15 mg/l	MfE guidance document for petroleum based industries and sites
<b>Pesticides</b>	Only at concentrations below threshold of measured effect of the ecology of the receiving waters.	Stormwater Discharge Consent AUTH-20168843

General Physical Characteristics	Guidance Values	Source
<b>Herbicides</b>	Only at concentrations below threshold of measured effect of the ecology of the receiving waters.	Stormwater Discharge Consent AUTH-20168843
<b>Fungicides</b>	Only at concentrations below threshold of measured effect of the ecology of the receiving waters.	Stormwater Discharge Consent AUTH-20168843
<b>Organic Contaminants</b>		
<i>Escherichia coli (E.coli)</i>	< 540 MPN/100mL	Threshold from proposed revision to NPS-FM, 2017 based on suitability for swimming
Faecal coliforms	< 1,000 MPN/100mL	Plan standard for Lowland Hard and Soft Beds
<b>Other In-organic Contaminants</b>	Shall have no observed effect in receiving water quality or ecology	Stormwater Discharge Consent AUTH-20168843
<b>Nuisance Materials</b>		
Gross Pollutants (papers, plastics, wood, litter, etc...)	Prohibited	Stormwater Discharge Consent AUTH-20168843

## Stormwater Management Plans

Where a site has been identified as having a high risk of potential contamination, a Hazardous Activities and Industries List (HAIL) site, or situated on land identified as potentially contaminated under Environment Southland's Selected Land Use register, the sites owner or manager may be required to prepare a Stormwater Management Plan (SMP) and submit it to Council for approval.

A Stormwater Management Plan is only required once the site owner/occupant has been informed in person or in writing by an authorised officer from the Invercargill City Council following a council site inspection. A site owner/manager may request a site inspection by contacting [stormwater@icc.govt.nz](mailto:stormwater@icc.govt.nz).

The plan must include:

- Address and legal description(s);
- Business name (*non-applicable to private residence*);
- A brief description of the predominate activities undertaken on the site;
- A list of all hazardous activities carried out on site as referenced by the Ministry for the Environment's HAIL: <https://environment.govt.nz/assets/Publications/HAIL.pdf>;
- Contact person or position;
- A suitably scaled drawing or aerial imagery showing the site layout, boundaries, relevant buildings, outdoor spaces and their uses, all private stormwater and waste water drainage including the point of connection to the public networks. (*Aerial imagery, stormwater and wastewater connection points for selected sites can be found by using Council's public GIS system*)  
<https://gis.icc.govt.nz/ICCVIEWER/?map=f00f264726c944889564f51dc6aedc1f>;
- A site assessment identifying all of the actual and potential sources of contamination.
- Methods in place to prevent contaminants from entering the public stormwater network;
- A description of site maintenance procedures in place, the maintenance schedule and the nominated person(s) responsible for ensuring the maintenance is carried out;
- Spill prevention and spill response procedures; and
- If construction, mitigation or remediation works are required to be carried out, a description of the works to be completed and the construction methodology.

If onsite soils are suspected to be contaminated, Council may require a soil assessment to be undertaken by a suitably qualified and experienced practitioner and this will need to be addressed in the Stormwater Management Plan. *(The site occupant will be contacted in writing by the Council should a soil assessment be required.)*

If you move, sell or close the business, contact Council regarding your site specific Stormwater Management Plan.

## **Sediment and Erosion Control Plans**

A sediment and erosion control plan (SECP) is a tool that is used to ensure the appropriate management of soils onsite and prevent sediment loss and minimise erosion as a result of soil disturbing activities. Site works that require a building or RMA consent must undertake an SECP before undertaking any earthworks on site. As per section 5.5 of the Stormwater Bylaw, the ICC recommends that applicants utilise the ECan erosion and sediment control guidelines for design and performance criteria. An SECP must be submitted to [stormwater@icc.govt.nz](mailto:stormwater@icc.govt.nz) for approval prior to any earthworks being undertaken.

Below is a list of all the relevant information that all SECP's should contain. Should you require further advice on how to complete an SECP for your site, please contact [stormwater@icc.govt.nz](mailto:stormwater@icc.govt.nz)

- Site description
- A title, date, drawing reference number, north arrow, scale and legend
- A site plan, with accompanying diagrams, photos and pictures as necessary
- Programme of works
- The areal extent of soil disturbance (earthworks' footprint)
- The location of ESC devices, including volumes and dimensions where relevant
- The location of topsoil stockpiles
- Contributing catchments for each ESC device
- Arrows depicting the general flow path/direction of water within each catchment
- All watercourses and/or overland flow paths
- Site entrance ways
- The site boundaries
- Inspection and monitoring programme
- Emergency spill procedures, including contact details of site manager.
- Contour lines – both within and around the site
- Staging (if applicable)
- High risk areas (if applicable)
- Aerial image (if available and clear without affecting readability of drawing).

For any further information or examples of completed erosion and sediment control plans, please visit:

Detailed Site Plans: <https://esccanterbury.co.nz/project/detailed-plan/>

Smaller Site Plans: <https://www.ecan.govt.nz/document/download?uri=3033470>

<b>Revision History:</b>	NIL
<b>Effective Date:</b>	01 July 2022
<b>Review Period:</b>	This Manual will be reviewed every three years unless earlier review is required due to legislative change, or is warranted by another reason.
<b>New Review Date:</b>	01 July 2025
<b>Associated Documents / References:</b>	Local Government Act 2002 Resource Management Act 1991 Southland Water and Land Plan Building Act 2004
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