- Long Term Council Community Plan
- Bush and Stream Restoration Plan 2001
- Asset Management Plan.

6.3 Stormwater Infrastructure

6.3.1 Catchments

A catchment is defined by topography. A main stream and tributaries join together in the catchment to form a water system which drains through a single outlet into the harbour or south coast. Council catchments are generally based upon actual drainage characteristics, but are also affected by management boundaries.

The more urbanised eastern side of the Wellington region has been broken up into 42 individual catchments ranging in size and elevation from rural Kaiwharawhara (1917 ha, 420m) to smaller urban catchments such as Thorndon (12 ha, sea level). The rural western region has not been subdivided into catchments at this time. Figure 9 shows the main stormwater catchments. All these catchments contain a multitude of small watercourses, streams and piped stormwater infrastructure.

The rural streams are generally narrow and restricted channels with over hanging vegetation, compared to the channelised urban streams. Streams have an average grade of 7.25% throughout the region, representing the steep topography associated with most of the Wellington catchments.

Wellington stormwater from these catchments is discharged directly into the City's streams, harbour and south coast. Eleven of the major discharges to the sea are currently consented under the RMA 1991. The consents for the discharge of wastewater-contaminated stormwater to the coastal marine area were issued in 1994 and require Council to carry out improvement works by 2013. The works are dependent on the individual consent conditions.

In addition to the eleven consented discharges, there are thirteen significant unconsented discharges to the harbour and south coast with varying states of water quality. Appendix 4 lists these consented and unconsented catchments.

N

Legend

Outfalls

Stormwater Pipes

Operational

Abandoned

Horokiwi

Ngauranga

BP

Ngauranga Stream

Onslow

Kaiwharawhara La

Kaiwharawhara

Sar

Aotea North

Thorndon Quay Culvert

Tinakori

Thorndon

Davis St Culvert

Aitken

Bowen

Bowen Large

Bunny

Waring Taylor St Culvert

Glenmore

Davis

Karori

Lambton

Waring Taylor

Taranaki St Culvert

Harris

Tory St Culvert

OPT Culvert

Tory

Grafton

Oriental Bay

GraftonRata

Te Aro

Crawford

Taranaki

Hataitai

Rata

Newtown

Karaka Bays

Evans Bay Culvert

Miramar

Kilbirnie

Rongotai

Owhiro Bay

Seatoun

Lyall Bay East

Island Bay

Lyall Bay West

Airport

Breaker Bay

Eve Bay

Lyall Bay West

South East Coast

Houghton Bay

Houghton Bay

Owhiro Bay Stream

Island Bay Culvert

DATA STATEMENT

Property boundaries
Land Information NZ
Licence WN08533547/2
Crown Copyright reserved
Accuracy in urban areas: +/-1m
Accuracy in rural areas: +/-30m

Other data has been compiled from a variety of sources and its accuracy may vary

Topographic data:
Wellington City Council
WCC copyright reserved
Accuracy: +/- 30cm

Any contours displayed are only approximate and must not be used for detailed engineering design

Colour Orthophotography 1:500 flown Feb 2002 owned by Terralink International Ltd and used under licence by WCC

Figure 9. The stormwater catchments showing the consented outfalls.

1:65,000

0 1,000 2,000 4,000 6,000 8,000 Meters

Absolutely Positively Wellington
Me Heke Ki Pōneke
Wellington City Council

As a general rule, the care and maintenance of all watercourses is the responsibility of the landowner. However, GWRC has an agreement with Council that GWRC will manage the following sections of watercourses, along with the detention dams at Seton Nossiter Park and Stebbings Valley and debris arrestor at Glenside, to keep them clear for flood flows:

- 10km of Porirua Stream: From the Wellington City boundary to Seton Nossiter Park
- 1.0 km of Takapu Stream from the Porirua Stream to top of the industrial area,
- Makara and Ohariu Streams and their tributaries, including Makara Stream mouth
- Karori Stream below the urban area,

The agreement does not override the regulatory requirements that apply to all watercourses under the Resource Management Act.

Council funds 33% of all maintenance works on the Porirua Stream.

Council is responsible for the maintenance and operation of the remaining stormwater infrastructure (see Table 8).

6.3.2 Reticulated

The reticulated stormwater transportation system is divided in terms of streams and piped infrastructure.

There are some 62,733 residential and 4,450 commercial properties contributing stormwater to the Council reticulated system.

Kerbs and channels, sumps and the sump outlet pipe are also integral in the collection of stormwater. The majority of sumps are constructed with a baffle to trap floatables, debris and silt.

The maintenance of the system, including culverts and drains is carried out by Council in accordance with agreed Service Levels set out in the Stormwater 2004 AMP.

Many of the natural streams in the Wellington City area were piped many years ago. Typically, the larger pipes in the stormwater drainage system are laid along the beds of the original streams (often in private property) with the smaller feeder pipes in legal road.

	Diameter (mm)	Length (km)	Total Length (km)
Pipes and tunnels	100 & 150	76	683
	225	177	
	300, 375 & 450	143	
	450+	117	
	unknown	170	
Outfalls	163 direct to coast		
Open Streams	Porirua, Ngauranga, Kaiwharawhara, Karori, Makara, Ohariu and Owhiro		
Sediment/ debris collection facilities	Kaiwharawhara, Ngauranga and Karori		

Table 8.Stormwater Infrastructure

The remaining major streams are still considered part of the reticulated stormwater infrastructure.

6.3.3 Non-Reticulated

There are fewer than 100 rural dwellings which are not currently connected to the stormwater system. These properties generally feed stormwater from rooves to water supply tanks.

The tanks provide the primary source of potable water and any other residential needs for these non-reticulated properties. Overflows from the tanks and runoff from other impervious surfaces are generally discharged from each section via appropriate means (soak pits, channels etc) to avoid overland flow flooding the property. These discharges are often direct to any nearby watercourse or stream.