

## 6.4 Issues

### 6.4.1 Water Quality

Stormwater quality improvement has been a focus of Council since the introduction of the RMA 1991. This is reflected in the current stormwater discharge consents and the improvement works associated with them.

Stormwater quality can be influenced by the condition of the wastewater assets within the catchment and the presence of other contaminants, e.g. nutrients, sediment, faecal bacteria, heavy metals and hydrocarbons.

These contaminants are carried to streams in stormwater from roofs, roads and industrial areas, although some may come from chemical spills and wastewater-stormwater cross connections.

Current city wide monitoring projects (Beaches and Streams, Baywatch, GWRC's State of the Environment) are carried out to determine the status and trends of water quality in the harbour, sea, streams and culverts. The results are reported annually in hard copy (can be obtained from Council and GWRC) or can be sourced from the internet (MfE or GWRC).



### 6.4.2 Flood Management

The RMA 1991 requires Council to control potential development effects including mitigation of natural hazards. This requires Council to have records of natural hazards i.e. floodplain management plans. The Building Act 1991 also required buildings to be protected from flooding up to a 50-year average return index (ARI, the frequency, on average, a given rain event is expected to recur).

The urbanisation of the city has resulted in more buildings, gardens and roads being flooded more frequently than Council's agreed levels of service and those implied in the Building Act 1991. These flood problems are exacerbated by developments in natural ponding areas and secondary flow paths. The implementation of the Flood Protection Project aims to rectify the flooding risk in the majority of the City.

Flooding in the CBD

Large-scale stormwater flooding has occurred in the recent past in the Harris, Taranaki, Te Aro, Karori, Miramar, Island Bay/Berhampore, Kaiwharawhara catchments and the Tawa Basin due to a combination of mitigating factors, including capacity of existing infrastructure, topography and permeability of the land. Flood hazard maps have been completed for Newtown, Tawa and Miramar. Te Aro and Karori areas are being currently carried out.

Flood assessments have also been carried out for the Karori and Porirua Catchments and an environmental assessment for the Kaiwharawhara Stream, Porirua Stream, Karori Stream, Ngauranga Stream and Makara Stream.

#### 6.4.3 Asset Stewardship

Council adopted a stream management policy entitled “Wet and Wild” Bush and Stream Restoration Plan in October 2001 as part of its wider natural environmental strategy. The plan sets out the guidelines by which Council hope to maintain and enhance this part of our natural environment.

A considerable portion of the stormwater system has insufficient capacity to meet current Council levels of service for flood protection. It has been identified that some >\$85 million of work is required to upgrade the existing pipe works to meet current design flood protection standards. These works are identified in the stormwater 2004 AMP.

Some pipe upgrading works are undertaken as a consequence of pipe renewal. In these cases, although the condition of the pipe is the key driver, the additional cost to upsize and increase the level of flood protection is minor. The pipe diameter required to comply with the Code of Practice is always constructed.

The implementation of upgrading works normally involves the construction of large diameter concrete pipes. When there is a natural stream, serious consideration is given to installing a pipeline for the flood flows but retaining the stream for low flows (in line with Council Wet and Wild policy). This enables the ecological values associated with the stream to be retained.

With regards to asset management planning there is an identified lack systematic or co-ordinated action to consult with customers at grassroots level. This does not align with the transparency requirement of the LGA 2002. Council needs clearer definitions of community expectations on the levels of service provision and an increase in public consultation.