Road Controlling Authorities Forum (New Zealand) Incorporated

with assistance from

New Zealand Water and Wastes Association

presents

Managing Stormwater and Road Run-off Tools, Techniques and Devices

New Zealand Water & Wastes Association
Waiora Aotearoa

Auckland Stormwater

- Stormwater treatment has been a strong focus in larger overseas cities and in Auckland, but less so elsewhere in NZ

- This is due to:
  - High degrees of urbanisation
  - High traffic densities
  - Extensive industrial land use
  - High value, high use receiving environments
  - Sensitive receiving environments where contaminants will accumulate

History of TP10

- Best Practicable Option vs Water Quality Standards
- Auckland specific research on:
  - -Settling velocities of soils
  - -Rainfall Characteristics
- Section 32 analysis
  - -Costs
  - -Technology
  - -Receiving environment

TP10 provides guidance on:

- Selection of devices
- Stormwater Management concepts
- Sizing of devices
- Performance
- Maintenance requirements

Treatment Device Sizing

- If you treat 80% of the Annual SW volume- you will remove 75% of TSS on average
- Sizing of devices in TP10 is based on using TP108 " Stormwater Runoff Modelling"
- TP108 specific to Auckland conditions

What do you do outside Auckland??

How to apply TP10 elsewhere:

- Use **local rainfall** data: HIRDS or council supplied data
- Use **local hydrograph** or the Rational Method

Eg. CCC recommends a triangular hydrograph

- Think about your soils- TP10 may give a conservative sizing if soils aren't clay

How to apply elsewhere: Device sizing

- Volume based devices eg ponds, wetlands, raingardens

Volume generated by a 2 yr 24 hour event / 3

- Flow rate based devices eg swales

Flowrate in a 2 year 24 hour event / 3

- Volume and flowrate determined by Rational Method (generally) or a specific hydrograph shape