

SUGGESTED HEADS OF CONSIDERATION **FOR INCLUSION IN AN** **INTEGRATED CATCHMENT MANAGEMENT PLAN**

Definition

“An Integrated Catchment Management Plan is a planning tool which investigates a full range of catchment wide effects and risks from stormwater discharges to the receiving environment and recommends options for the management of those effects.”

Discussion

The preparation of an Integrated Catchment Management Plan (ICMP) is a step towards the development of a comprehensive management strategy for stormwater within the Auckland Region. These plans aim to provide a systematic approach towards the viable management of stormwater discharges with an emphasis on Ecologically Sustainable Development and the protection, and where possible, enhancement of the receiving environment.

There is no statutory requirement to prepare an ICMP. However the Auckland Regional Council (ARC) will provide financial assistance, for a Territorial Authority (TA), where the ICMP has been prepared in accordance with the eligibility criteria in *ICMP Funding Eligibility Guideline - 22 April, 2005*. Many of the elements of an ICMP are similar to, or the same as, elements that need to be included in a Network Management Plan (NMP). Matters for inclusion in both have been identified in the *Proposed Auckland Regional Plan: Air, Land and Water - October, 2004 (ALWP)* (currently under appeal to the Environment Court) and are compared in the table at the end of this discussion paper.

The following Suggested Heads of Consideration has been prepared as an aid to assist in the preparation of an ICMP. It is not intended as a mandatory Table of Contents and has been prepared with the intent of providing continuity between individual ICMPs, compliance with the funding criteria, and conformity with the elements of the ALWP.

Although some of the Heads of Consideration are not included as an element of an ICMP in accordance with the ALWP, their inclusion in an ICMP will negate the need for them to be prepared as part of a Network Management Plan.

Suggested Heads of Consideration

1. Introduction
 - 1.1 Local Territorial Authority Stormwater Strategy
 - 1.2 Catchment Management Objectives (Social, Economic, Ecological, Amenity, Cultural)
 - 1.3 Regulatory Framework and Planning Considerations (District Plan, Structure Plans, etc)

2. Catchment Description
 - 2.1 Soils
 - 2.2 Geology
 - 2.3 Topography
 - 2.4 Vegetation
 - 2.5 Climate
 - 2.6 Existing Land Use
 - 2.7 Existing Stormwater & Wastewater Systems (Utilities & Services)

3. Status of the Receiving Environment
 - 3.1 Description of the Receiving Environment
 - 3.1.1 Estuaries
 - 3.1.2 High Energy Environments
 - 3.1.3 Infiltration and Soakage Areas
 - 3.1.4 Freshwater Lakes
 - 3.1.5 Freshwater Streams and Rivers
 - 3.2 Classification of Urban Streams
 - 3.2.1 Public Health
 - 3.2.2 Flooding
 - 3.2.3 Hydrology
 - 3.2.4 Erosion Hazard
 - 3.3 Gross Pollution and Sedimentation (visual inspection/site knowledge)
 - 3.4 Aquatic Habitat Ecology
 - 3.5 Amenity Values
 - 3.6 Aquifer Levels (where required)
 - 3.7 Vegetation (riparian, emergent and submerged, including weeds)
 - 3.8 Constraints on Native Fish Passage
 - 3.9 Cumulative Impact Assessment

4. Assessment of Effects (Catchment Values and Threats)

5. Consultation

6. Issues for Consideration
 - 6.1 District Plan Provisions/ Urban Growth Issues
 - 6.2 Management of Non-Network Discharges
 - 6.3 Community Education Initiatives
 - 6.4 Capabilities
 - 6.5 Long Term Council Community Plan
 - 6.6 Potential Urban Growth Patterns

7. Description of the Catchment Management Options

8. Options Assessment and Ranking

9. Twelve (12) Year Implementation Strategy

10. Funding Implementation and Maintenance

11. Monitoring

12. Reporting and Review

Appendices

**Matters for inclusion in ICMPs & NMPs
ALWP Policies 5.4.10 & 5.4.11**

5.4.10 ICMP	5.4.11 NMP
a) Need to achieve Obj. 5.3.7 of ALW P - (BPOs)*	a) Achieving as a minimum Obj. 5.3.7 of ALWP*.
b) Social, economic, ecological, amenity & cultural objectives being sought for the catchment and its receiving environment and the measures by which the ongoing achievement of those objectives will be assessed	b) Where an ICMP has not been completed: i) a description of the current status of the receiving environment for the network; ii) a description of the social, ecological, economic, amenity & cultural objectives for the network & its receiving environment;
c) Consultation that has been undertaken with the ARC, the general community and iwi in determining the ICMP objectives	c) Overall management approach for discharges & diversions that is consistent with the objectives & methods of implementation contained in any ICMP that exists for the catchment & which was prep. in accordance with 5.4.6 & 5.4.10 ALWP.
d) Identification of potential urban growth, urban redevelopment, and land use intensification within the catchment, taking into account the growth projections developed under the Regional Growth Strategy and related Sector Agreements produced by the Auckland Regional Growth, and District Plans, and the means by which stormwater diversions and discharges deriving from those areas will be provided for.	d) Identification of stormwater and wastewater diversions & discharges arising from projected urban growth, redevelopment & land use intensification within the extent of the network, consistent with 5.4.10(d).
e) Classification of urban rivers and streams within the catchment in accordance with Table 3.1 of this Plan.	e) Description of the relationship & interconnections between the local trunk drainage networks, & the way in which the relationship & interconnections will be managed to prevent or minimise adverse effects & mitigate or offset any significant unavoidable adverse effects of discharges & diversions.
f) An assessment of the current status of the receiving environment and the actual and potential effects of stormwater and wastewater diversions and discharges, and associated river and lake bed activities on: i) Public Health; ii) Flooding Hazards including legally authorised floor levels of habitable buildings with respect to 100-yr ARI flood events; iii) Watercourse Hydrology, including base flows in Category 1 (perennial) rivers and streams and long-term aquifer levels; iv) Receiving Environment, sediment quality and water quality including Environmental Response Criteria monitoring results; v) Aquatic Habitat, ecology and ecosystem health; vi) Natural and amenity values of lakes, rivers, wetlands and aquifers; vii) Riparian Vegetation; viii) Extent & quality of open stream channels; ix) Fish Passage for native fish; x) Erosion & Sedimentation of lakes, wetlands, and perennial rivers;	f) Integrated management, where practicable, of discharges from other networks where they share common receiving environments.

xi) Discharge and accumulation of Litter	
g) Cumulative effects of stormwater & wastewater diversions & discharges within the catchment (including those from redevelopment within urban areas); the range of general management options available and the identification of the BPO to prevent or minimise the adverse effects of those diversions & discharges & associated river & lake bed activities, & to mitigate or offset any significant unavoidable adverse effects.	g) An assessment of the actual and potential effects of any existing & future planned diversions & discharges, & associated river & lake bed activities within the extent of the network on: <ul style="list-style-type: none"> i) Public Health; ii) Flooding Hazard, including legally authorised floor levels of habitable buildings with respect to 100-yr flood events; iii) Watercourse Hydrology, including base flows in Category 1 rivers & streams, long-term aquifer levels, flow regimes & authorised surface water & groundwater uses; iv) Receiving Environment, Sediment quality and water quality; v) Aquatic Habitat, ecology & ecosystem health; vi) Natural and amenity values of lakes, rivers, Wetlands & aquifers ; vii) Riparian Vegetation; viii) Extent & quality of open stream channels; ix) Fish Passage for native fish; x) Erosion and Sedimentation of lakes, wetlands, and perennial rivers; xi) Discharge and accumulation of litter; xii) For discharges to Coastal Marine Area: littoral drift, erosion or accretion, natural character and public access.
h) Effectiveness of the District Plan provisions to implement the management approach adopted within the ICMP & where necessary any changes or variations to relevant District Plan provisions that will be initiated or advocated to achieve the objectives of the ICMP.	h) Methods (source control, traditional or innovative) proposed at a stormwater network level to reduce the concentration and load of contaminants discharged to estuarine receiving environments and in particular methods for managing run-off from land uses with a high contaminant generation potential, including in particular, heavily trafficked roads/carparks and industrial areas. Contaminants of particular concern include finer sediments (<100 um), total zinc, and total petroleum hydrocarbon (TPH).
i) Education Initiatives to support the catchment management objectives	i) Methods by which Low Impact Design is to be implemented in green field areas.
j) Methods by which non-network discharges & assoc. activities are proposed to be managed	j) Methods by which stormwater diversions and discharges (connected to networks) from private properties and redevelopment within urban areas will be managed.
k) Description of all infrastructure works scheduled by the TA for initiation within a 12-year planning horizon, which may significantly affect stormwater and wastewater management within the catchment.	k) Range of management options available and the identification of the Best Practicable Option to prevent or minimise the adverse effects of any existing and future planned diversions and discharges, and associated river and lake bed activities within the extent of the network, and to mitigate or offset any significant unavoidable adverse effects.
	l) Prioritised work programmes to implement the

	BPO, recognising that any programme beyond 3-years may be indicative only.
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	m) Design Standard and level of service for the network relating to managing the adverse effects of discharges and diversions.
	n) Operation and maintenance programmes to ensure the effective functioning of the network and in particular the minimisation of unforeseen dry weather wastewater overflows to the environment.
	o) Methods of monitoring and reporting progress towards achieving the NMP objectives including: <ul style="list-style-type: none"> i) monitoring the receiving environments relative to the effects of discharges from the network; ii) conducting regular reviews of monitoring results and identifying those situations & circumstances where overall management responses & physical works programmes can be adapted to in response to feedback provided by monitoring & review processes; iii) monitoring & reporting on the effectiveness of the prioritised works programme set out in the NMP.
	p) Notwithstanding (a) to (o) above, the ARC recognises that in some circumstances where it is difficult to quantify the volume & quality of stormwater network discharges it will also be difficult to reliably predict the environmental effects of those discharges. In such cases, the NMP shall also include the following: <ul style="list-style-type: none"> i) Identification of any Environmental Risks & the methods proposed to manage those risks & reduce high risks, including the use of management plans & monitoring & review processes; ii) A process for reviewing the network management approach based on an increased understanding of environmental responses, community needs and network priorities.

*** Air Land and Water Plan – General Objective 5.3.7**

*To provide for and enable diversions and discharges associated with **stormwater and wastewater networks** within **Urban Areas** consistent with the Auckland Regional Growth Strategy and Sector Agreements, while adopting the Best Practicable Option to prevent or minimise any actual or potential adverse effects on the environment of these activities.*

(This Objective relates to Issues 5.2.3 – 5.2.7)