Sustainable Water Management in the City Environment

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Sustainability

- PM speech
- 6 activity areas
- Infusing sustainability
- Rallying point for existing work

6 Activity Areas

- Sustainable Households programme
- Towards a Carbon Neutral Public Service
- Waste Minimisation and Management
- Business Partnerships for Sustainability
- Enhanced Sustainable Government Procurement
- Enhanced Eco-verification

Common themes across the six activities include :

- Government leadership through a call to action and changes to government's own practices
- Encouraging uptake of sustainable practices across New Zealand by promoting the practicalities and benefits of being more sustainable

Common themes across the six activities include :

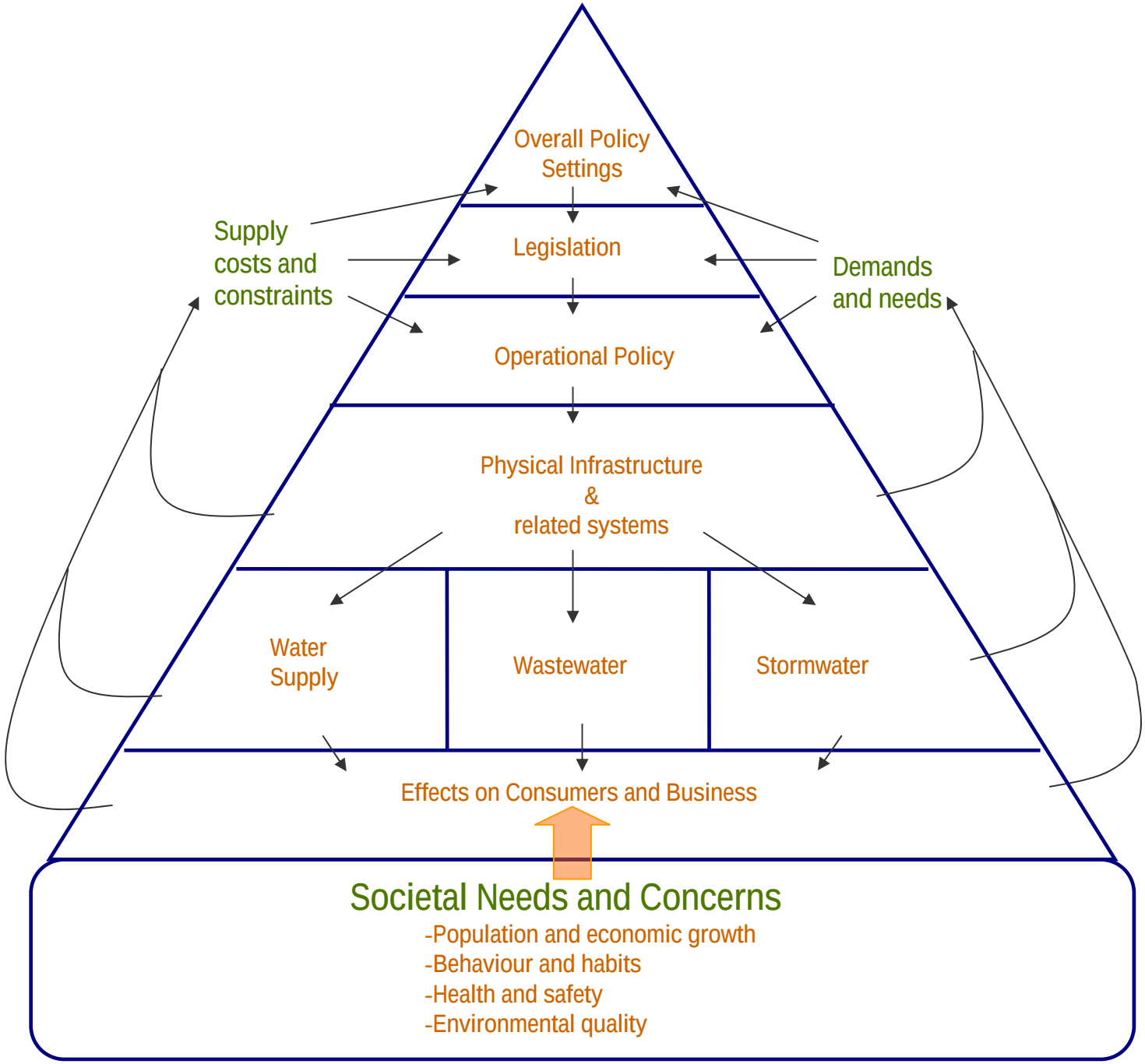
- Recognising and giving impetus to the good work already being done in communities, local government and business
- The use of partnerships to promote change

Sustainable Water Programme of Action (SWPOA)

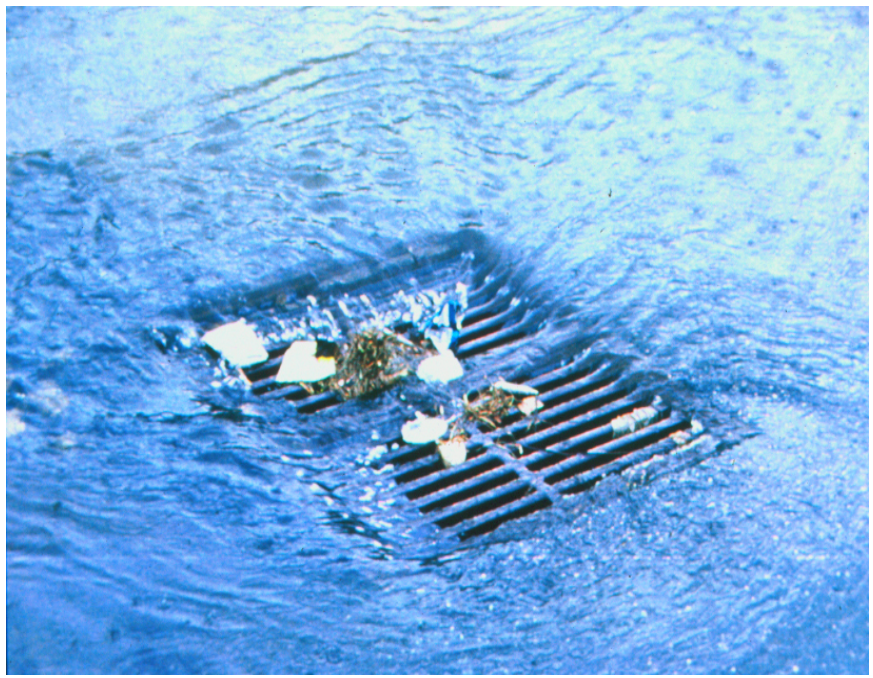
- Started in 2003
- Historical emphasis on rural water (quality and quantity)
- Integrated Catchment Management
- National Policy Statement
- National Environmental Standards
- SWPOA consultation confirms that urban water is of concern

Urban Water

- Part of the SWPOA
- Integrated Catchment Management
- Focus on the three waters (Wastewater, Stormwater and Supply)
- Strong links with urban design


Overall Policy Settings
Legislation
Supply costs and constraints
Demands and needs
Operational Policy
Physical Infrastructure & related systems
Water Supply
Wastewater
Stormwater
Effects on Consumers and Business
Societal Needs and Concerns
-Population and economic growth
-Behaviour and habits
-Health and safety
-Environmental quality

Urban Stormwater



A New Approach to Stormwater Management

- Attitudes are changing
- Stormwater recognised as a key element of integrated urban and infrastructure design
- Urban water as a resource, not a problem?

Response to this Challenge?

- Catchment based approach to the built environment “integrated catchment management”
- Awareness of upstream and downstream elements
- Low impact Urban design and development
- Future proofed

Multiple Gains to this Approach

- Longer term viability of systems "future proofed"
- Lower environmental impact of built infrastructure "better for the environment"
- Lower costs in system hardware and maintenance (longer term) "financially sustainable"
- Design incorporates other beneficial uses "better for people"
- All leading to a "better quality of life"

Urban Water as a Resource

- Longer term sustainability issue
- Reduces need for new supply side infrastructure
- Reduces specifications for stormwater infrastructure
- Reduces power use

Getting Sustainable?

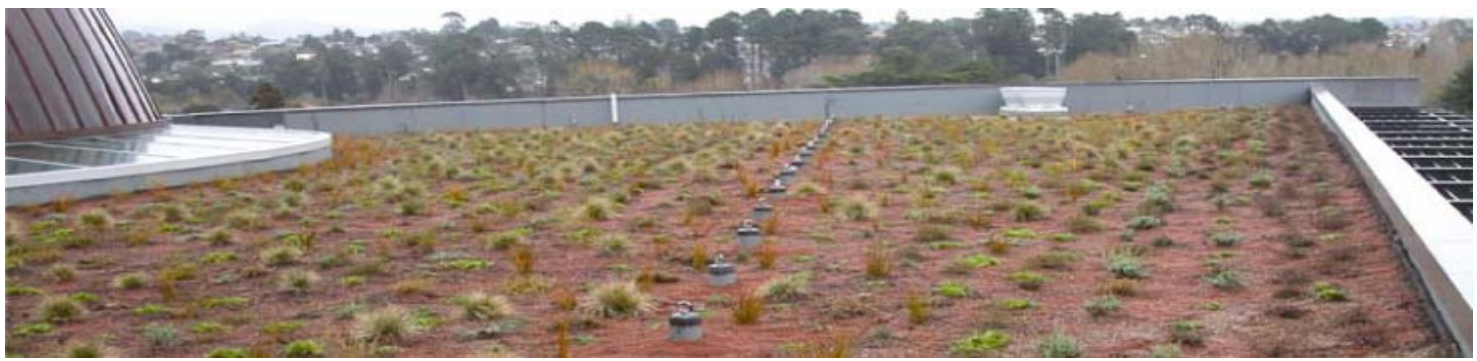
- Sustainability 3 Rs
  - –Reduce
  - –Recycle
  - –Reuse
- Design to complement other infrastructure design
- Find good examples of integrated stormwater design
- Work out how to do them here

Removing Barriers

- Institutional and systemic issues
- Legal issues
- Engineering standards
- Funding

Learning from others

- Mix and mingle!
- Share new ideas and approaches
- Learning by doing
- Learning through other's experiences



Melbourne


Permeable paving
Minimal width carriageways
Central swale - planting strip, trees visually narrow road

Green Roofs

Examples Closer to Home

Rain Gardens

Stormwater as an Asset

Improved Streetscapes

Central Government Action

- Continued consultation through SWPOA
- NPS, NES
- Help remove barriers
- Highlight good work
- Design objectives & technical guidelines – Urban Design Protocol