



Diploma/Masters of Environmental Studies
GSE 811 Coastal Management

Estuary and Coastline management planning

Presentation by Daylan Cameron
Senior Environment Officer
Natural Environment Unit, Warringah Council

Presentation outline

- Responsibilities of Local Government
- NSW Coastal Policy
- NSW Estuary Management Program
- NSW Coastal Management Program
- Issues
- Case-studies

Presentation outline

Case-studies

1. Narrabeen Lagoon Estuary Mgt. Plan
2. Narrabeen Lagoon entrance
3. Collaroy-Narrabeen Hazard Lines
4. Impact of June-July 2007 coastal storms on Warringah's coastline
5. Narrabeen Lagoon – creating a sustainable catchment project

Council responsibilities

- Local councils have primary responsibility for planning and development in the coastal zone.

Environmental Responsibilities

- Under the Local Government Act (1993), a council has the following charter:

to properly manage, develop, protect, restore, enhance and conserve the environment of the area for which it is responsible, in a manner that is consistent with and promotes the principles of ecologically sustainable development.

NSW Coastal Policy (1997)

The Policy addresses a number of key coastal themes, including:

- population growth
- coastal water quality issues, especially in estuaries
- disturbance of acid sulfate soils
- establishing a CAR system of reserves
- better integration of the range of government agencies and community organisations
- integration of the principles of ESD into coastal zone management and decision making.

NSW Coastal Policy (1997)

- The 1997 Coastal Policy is based on the four principles of ESD contained in the Intergovernmental Agreement on the Environment (IGAE) signed in 1992.

ESD Principles

1. Conservation of biological diversity and ecological integrity.
2. Inter-generational equity.
3. Improved valuation, pricing and incentive mechanisms.
4. The precautionary principle.

NSW Coastal Policy (1997)

- The Policy provides a framework for the balanced and coordinated management of the coast's unique physical, ecological, cultural and economic attributes.
- In preparing a draft local environmental plan (LEP), councils are required to include provisions that give effect to and are consistent with the Coastal Policy.
- Councils are also required to consider the Coastal Policy when determining development applications under Section 90 of the EPA Act, 1979.

NSW Coastal Policy (1997)

Included a new definition of the coastal zone:

- a one kilometre strip along the coastline, three nautical miles seaward and all coastal rivers, lakes, lagoons, estuaries and islands. The definition also included land within one kilometre of coastal rivers, lakes, lagoons, estuaries and islands.

NSW Coastal Policy (1997)

- One way in which local councils implement the Coastal Policy is through the management plans which they are required to prepare under Section 402 of the Local Government Act, 1993.



Coastal and Estuary Programs



Context

- 85% living in coastal zone
- \$1 Billion coastal assets at risk
- \$200 Million flood losses annually
- Existing policies and programs support key decision makers – local government
- Climate change - increased damage risk
- Recent drought and mild ocean conditions have concealed potential losses

Historical Context - Coastal Zone

NSW has a long history of coastal erosion and estuary degradation.



Collaroy 1974

Wamberal 1976



Legislative and Policy Frameworks

- Coastal Protection Act 1978
- Lake Illawarra Authority Act 1987
- Coastline Hazards Policy 1988
- Estuary Management Policy 1992
- NSW Coastal Policy 1997
- Coastal Protection Regulations 2000
- National Framework for Integrated Coastal Zone Management 2006
- State Plan – priority E4
- New Coastal Zone Management Manual



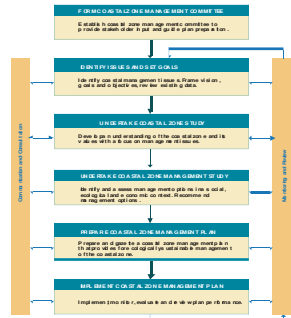
The objectives of the programs

- To conserve and improve recreational amenities and environmental qualities of the coastal zone;
- Enhance and improve public access to beaches, foreshores, headlands and waterways;
- Reduce the impacts of physical coastal and estuarine processes on development; and
- Ensure development is planned in an ecologically sustainable manner.



Coastal and Estuary Management Plans

- Programs work in partnership with local councils and community
- develops coastal zone management plans
- 1:1 State and council funding



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Partnerships and outputs (Statewide)

Coastal

- 35 committees
- 11 plans completed
- Since 1992, \$49 million directed to projects
- Major projects and studies undertaken at Maroubra, Lady Robyns Beach, Jimmys Beach Wollongong, Byron, Newcastle, Gosford, Woyang, Manly and Warringah.



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Partnerships and outputs (Statewide)

Estuaries

- 75% of 130 significant estuaries covered
- 84 committees
- 54 plans completed
- Since 1992, \$41 million directed to 805 minor projects
- Major environmental projects undertaken at Chipping Norton, Tuggerah Lakes, Lake Macquarie, Lake Illawarra, Kooragang Island and the Tweed River



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Coastal and Estuary Programs Outcomes

Planning



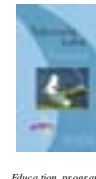
Buffer to development
Moonee Creek

Studies



Causeway investigation
Berrill Lake

Education



Education programs

Recreation



Weemala Wetland and
beach access

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Coastal and Estuary Programs Outcomes

Plans



Litter trap Lake Macquarie



Repair and rehabilitation
Tweed River

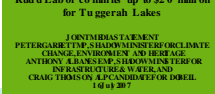


Rud d Lab or committees up to \$20 million
for Tuggerah Lakes



Works

Repair of seawall
Cronulla Beach



FOOTMBRSTAEVENT
PETERGARETTP SHADOWNINSTERFORCLIMATE
CHANGE ENVIRONMENT ANDREAGE
ANTHONY ALKANESEMP SHADOWNINSTERFOR
INFRASTRUCTURE ANDWATERAND
CRAIG THOMSON ALPCANDIDATEFOR DOREIL
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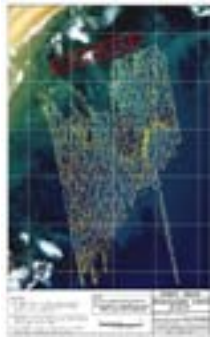
How grants are allocated

- Allocation \$3-\$4 million pa matched by councils
- Call for an expression of interest from councils with an application form
- Assessment of applications and preparation of priority list
- Approval of priority list and grant offers by Minister (DECC)
- Acceptance of grant offer by local council

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State wide data collection

- Oversee coastal data collection to support management plans and decision making;
 - Waves, tides, water levels, water quality.
 - Hydrographic survey.
 - Photogrammetry.
- Provide data and information to agencies and community for decision making (800,000 applications per annum).
- Provide expert/specialist advice to courts for NSW Government.



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Gazettal of Coastal Zone Management Plans Coastal Protection Act (1979)

- Council is required to seek approval by the Minister to gazette an adopted plan
- There are statutory requirements for the preparation, public exhibition, approval & gazettal
- Following the public exhibition, submit a draft coastal zone management plan to the Minister
- If plan is approved by the Minister, council is to make the plan and publish it in the Gazette
- Commences on date on which it is published in the Gazette

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Warringah Council Natural Environment Unit



Natural Environment Unit

Manager: Gareth Curtis

Three teams:

- Environmental Education
- Bushland and Biodiversity
- Catchment Management



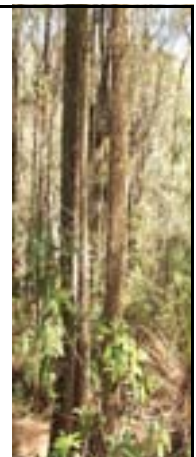
Natural Environment Unit Objectives

1. Deliver quality service to internal & external customers
2. Identify & manage hazards associated with the natural environment for protection of life & property
3. Maintain & enhance the diversity & resilience of terrestrial & aquatic ecosystems
4. Practice, promote & facilitate sustainable living in Warringah
5. Provide infrastructure that meets current & future community needs which are shared equitably & sustainably



Legislation

- *Environment Planning and Assessment Act (1979)*
- *Threatened Species Conservation Act (1995)*
- *Environment Protection and Biodiversity Conservation Act (1999)*
- *National Parks and Wildlife Act (1974)*
- *Local Government Act (1993)*
- *Fisheries Management Act (1994)*
- *Water Management Act (2000)*
- *Protection of the Environment Operations Act (1997)*
- *Coastal Protection Act (1979)*



Bushland and Biodiversity Team



Responsibilities

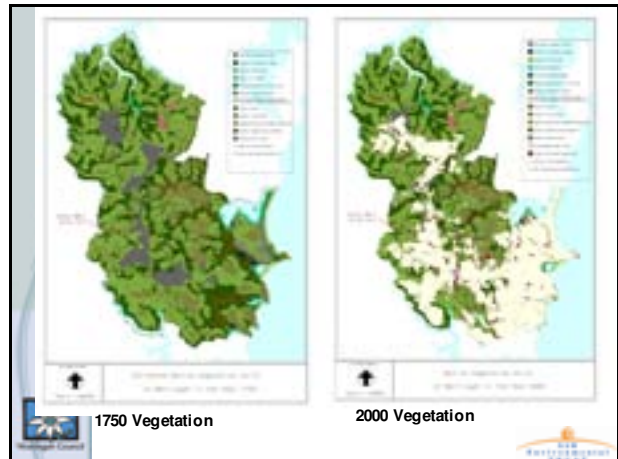
Bushland and Biodiversity is responsible for management of 1100ha of council bushland (125 reserves) and strategic planning input for 2600ha urban bushland:

1. Fire protection works on urban bushland boundaries (138km)
2. Bushcare volunteers (50 sites)
3. Bush regeneration contracts (150 sites)



Responsibilities

4. Feral animal control
5. Noxious weed control (public and private land)
6. Threatened species habitat management
7. Maintenance and construction of tracks and trails in bushland
8. Advisory and education role on biodiversity/threatened species planning and management issues (public and private land)



Main facts

- 37 vegetation communities - 17 threatened, 13 not in National Parks
- 914 native plants – 19 threatened, 159 not in National Parks
- 408 native fauna, 56 threatened, 144 not recorded in National Parks
- 47 birds listed on International Migratory Agreements



Catchment Management Team



Responsibilities

Catchment Management is responsible for:

1. Flooding (6 floodplains mapped so far)
2. Creeks (approx 100km of creeks)
3. Coastline (14km of coastline)
4. Lagoons (4 coastal lagoons)
5. Stormwater (331 km of pipes and 14,000 pits)
6. Water quality and ecological monitoring (15 sites)



Areas of Management

1. Flooding

- Flood studies & flood risk management
- Community complaints & flooding investigations
- Internal customer advice



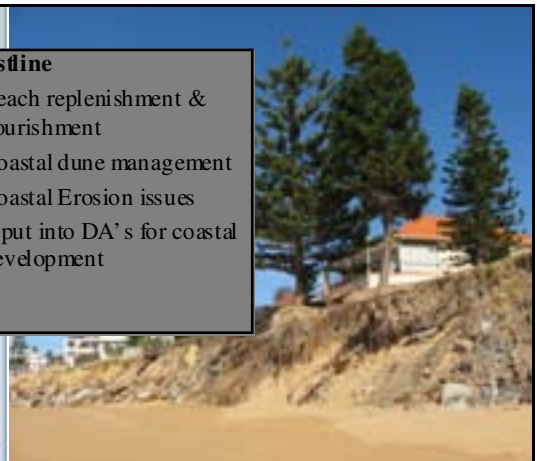
2. Creeks

- Creek policy & management
- Advice on DA applications that affect creeks or wetlands



3. Coastline

- Beach replenishment & nourishment
- Coastal dune management
- Coastal Erosion issues
- Input into DA's for coastal development



4. Lagoons

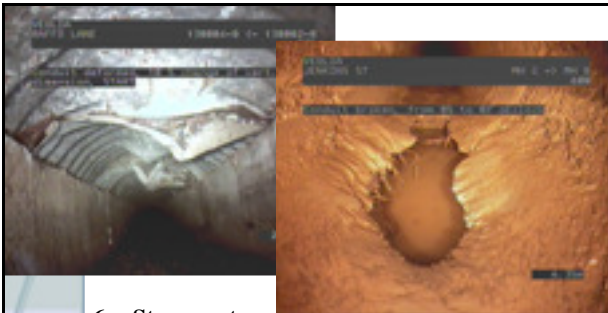
- Entrance management (breakouts & clearance projects)
- Rehabilitation Projects



5. Water Quality



- Environmental monitoring of creeks & waterways throughout Warringah

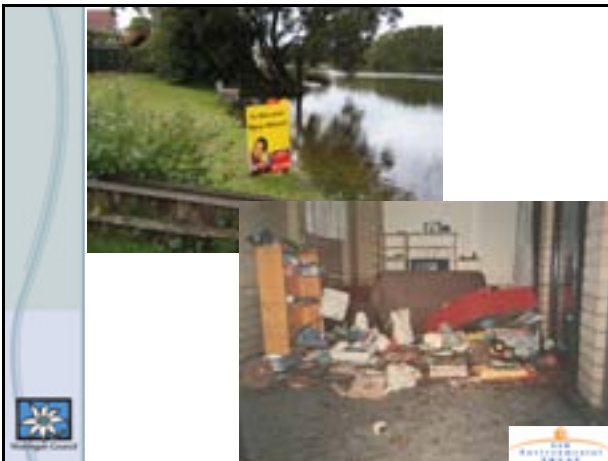






6. Stormwater


- Management of Council stormwater assets
- Stormwater design & upgrade projects

Useful references and resources

- NSW Coastline Management Manual (1990)
- NSW Estuary Management Manual (1992)
- NSW Floodplain Management Manual (2006)
- NSW Coastal Policy (1997)
- www.planning.nsw.gov.au
- www.environment.nsw.gov.au
- www.nature.nsw.gov.au
- www.fisheries.nsw.gov.au
- www.anstfi.edu.au
- www.bom.gov.au
- www.mhl.nsw.gov.au
- www.wrl.unsw.edu.au
- www.coastalconference.com
- www.sydneycoastalcouncils.com.au



Case Studies

