

## Getting Levee Management Right in Victoria

Mike Edwards & Ian Gauntlett



Department of Environment and Primary Industries 

## Overview

- Background
- 2010-11 Floods and reviews
- Government response
- Implementing the ENRC recommendations

## Levees in Victoria

- 4000 km rural, 100 km urban (excl. MW)
- Constructed over more than 150 years to protect urban communities and rural property
- Modern tools to manage new levees are in place (planning controls and regulation of urban levees through funding agreements and legislation)
- The old ones are a problem

## Chronology of Levees

1880	1900	1920	1940	1960	1980	2000	2020
Unregulated private rural levee construction							
Govt supported upgrades of some major rural systems							
			Irrigation expansion rural levees				
					River / Drainage Improvement Trusts (rural)		
Ad hoc urban levees							
							Water Management Schemes
							Planning Controls

Until 1980s there was mostly little control over standards

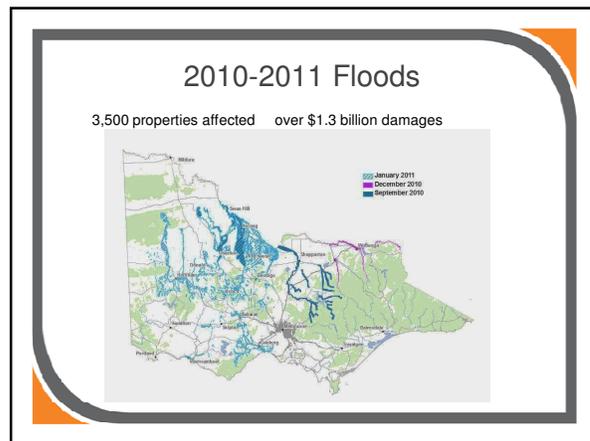
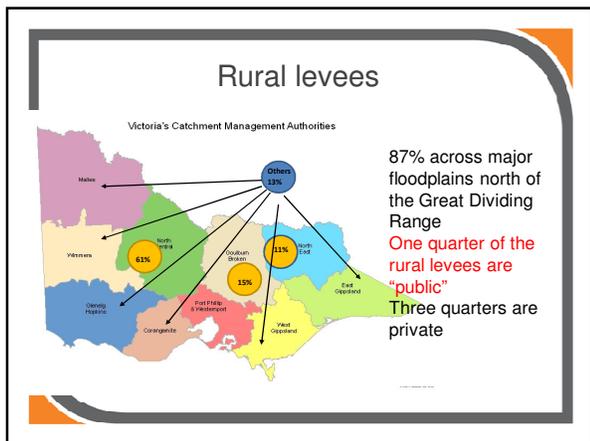
## Levees in Melbourne

- Most managed by Melbourne Water as part of waterways/drainage assets
- Revenue is collected through drainage rates on properties, developer contributions, etc.

## Urban Levees outside Melbourne

- 32 locations
- 40 km pre-scheme
  - standard unknown
  - no formal maintenance
- 60 km are managed through a scheme which locks in:
  - ownership
  - location
  - maintenance
  - standards





### Two Main Inquiries

**VFR inquiry into flood warnings**

**ENRC inquiry into flood mitigation**

Flood mitigation infrastructure means more than levees but levee management is the focus of the paper

### Key ENRC finding on management

*There was universal support among stakeholders for the resolution of ownership, management and maintenance issues associated with levees (ENRC report pg.47)*

However:

- There were different ideas and opinions on how to resolve
- Resolution of responsibilities is influenced by land tenure, who constructed the levee and who the beneficiaries are
- Of these ENRC considered that the beneficiary pays principle provided the best way forward

- ### The Government's response....
- All 20 recommendations on levees were accepted in principle
  - If the community wants a levee to be maintained they will have to pay for the service through Council rates
  - State government can be a beneficiary but won't contribute to maintenance
  - State government will not contribute to capital costs of works unless Council commits to maintenance
  - Maintenance arrangements have to be formalised

### So how will it work?

For the 200 odd km of levees in MW area retain the current management arrangements:

- Manage as waterway and drainage asset through drainage rate revenue or regulate privately (e.g. planning controls or developer obligations)
- For areas outside MW it depends....

### Existing rural levees

About 75% (3,000 km) are constructed privately

- Regulate through planning schemes
- Conditions of permit will require consideration of impacts

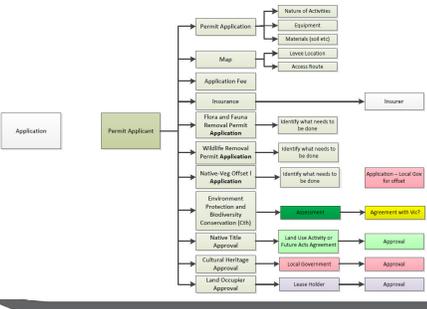


About 25% (1,000 km) are located on Crown land

- Licence beneficiary to repair and maintain but not raise the levee

Unmaintained levees will weather away

### Licensing process will be straight forward but involve a level of complexity



### Upgrading and managing a rural levee

- Councils decide in consultation with the community
- Only possible if cost effective, there is community support and funding is available implement a water management scheme\*
- Most rural levees are not likely to be supported if beneficiaries are expected to pay



\* Ministerially approved process under Victorian Water Act

### Urban Levees

- Expect local government to formally manage via a water management scheme process
  - There may be other processes for levees that specifically protect critical assets (e.g. water supplies)
- If a levee cannot provide adequate protection against the 1% flood then the area protected should also be subject to planning controls



### Issues

- Liability for those acting in good faith?
- Local government's role in identifying levees that are going to be formally maintained
- Data gaps and the cost of investigations
- Managing public perceptions if levees are not going to be maintained



### Conclusions

- The community wanted clarification on levee management and the Government has obliged
- Local government has a key role in sorting out management arrangements
- Processes are to be put into place to allow rural levees to be informally managed
- State government will not fund levees unless someone else maintains them
- Cost share arrangements apply
- Central government won't pay for maintenance
- Will it work?
  - Time will tell