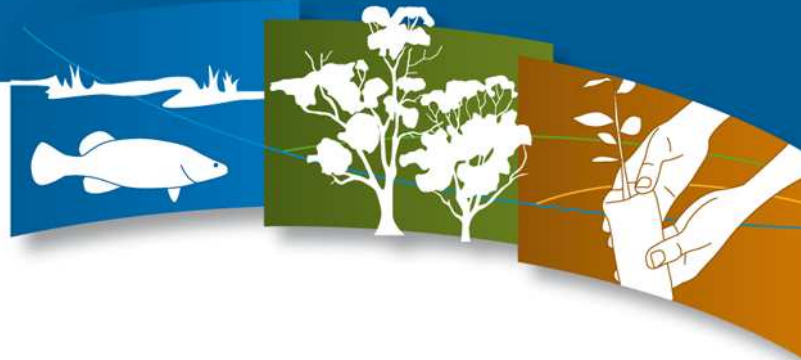


Flood Recovery Works Update

North Central CMA Region



NORTH CENTRAL
Catchment Management Authority
Connecting Rivers, Landscapes, People



February 2012

Key achievements

- Development of seven Flood and Drainage Management Plans for regional towns commenced, with one plan complete.
- Fencing repairs are complete at 55 of 232 sites to be completed.
- Survey and design of the first 24 of 144 erosion control repairs is complete with works scheduled to start in early March.
- Goulburn-Murray Water has been contracted to complete pre-works design surveys of the flood damaged Bullock Creek Improvement Trust regional drains ahead of works beginning in March.
- Six landholders and Landcare groups to undertake \$84,000 of environmental flood recovery projects.

Flood Management Plans

- The North Central CMA in partnership with local government and the community is currently developing Flood and Drainage Management Plans for **Charlton, Clunes, Carisbrook, Donald** and **Rochester** as well as the **Bendigo** Urban Flood Study.
- The final **Creswick** Flood Mitigation and Urban Drainage Plan was endorsed by the North Central CMA Board on 7 February and by the Hepburn Shire Council on 21 February, 2012.
- The Plan will now be sent to the Victorian Government with the aim of seeking funding to implement the priority actions.
- Plans for Charlton, Clunes and Bendigo are expected to be completed in mid-2012 with the remainder of the studies to be finalised at the end of 2012.

- The main outcome of these plans will be to determine the potential impact of flood events, assess potential mitigation options and guide the development of flood warning systems.
- Community information sessions were held in Charlton, Donald, Carisbrook and Rochester in late February 2012. The purpose of these meetings was to update residents and gain local knowledge and feedback.

Fencing repairs

- There are 232 properties deemed eligible under NDRRA for assistance to repair flood damaged fencing previously funded by the North Central CMA.
- North Central CMA staff began implementing fencing repairs throughout the region in September 2011 utilising the Flood Recovery Employment Program (FREP) crews, Conservation Volunteers Australia (CVA), Loddon Prison crew and fencing contractors.
- The aim is complete all fencing repairs and replacement by September 2012.



Figure 1: CVA crew replacing flood damaged fencing along the Campaspe River, Rochester. Photo: North Central CMA

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Figure 2: Progress with 232 fencing repair projects

- Landholders have welcomed this assistance:
"I'm just emailing you to thank you, the (CVA) volunteers, and the Loddon (Prison) team, for the wonderful job they have done with the fencing here. It was done so swiftly, so well, and with such a co-operative approach that I was amazed and very gratified. They have done a great job! Please thank them all on my behalf." (John Dunham, Coliban River at Lauriston).

Erosion control repairs

- The \$3.46M NDRRA funded erosion control repair program will be completed in two phases.
- Phase 1 - March to May 2012**
 - 24 erosion control repair sites over six properties in the Heathcote-Tooborac area (Campaspe catchment) and northwest of Lexton (Avoca catchment).
 - Phase 1 includes a range of on-ground activities (from simple to complex) that can be completed within the first limited construction period (works will need to be completed before sites become too wet, depending on winter weather conditions).



Figure 3: Erosion control structure previously installed by the North Central CMA requiring repair following the extreme flow event. Photo: North Central CMA.

- Phase 2 - May 2012 to September 2013**
 - 140 erosion control repair sites over 73 properties spread across the southern half of the North Central CMA region.
 - Construction at Phase 2 sites could begin as early as June 2012 weather permitting.

Stream gauge repairs

- 9 of 21 flood damaged water quality monitoring sites (toward which the North Central CMA contributes) have been repaired by contractors employed by DSE.
- NDRRA funding bid component \$94,624.

Blockage removal

- An ongoing program of flood debris blockage removal has been implemented throughout the flood affected parts of the region.
- To date, 74 reported blockages have been removed at a cost of almost \$1M.
- Sites are based on the eligibility criteria for natural disaster arrangements, i.e. the removal of flood debris which poses a threat of damage to works of the Authority or public assets.

Quambatook Weir replacement

- \$150,000 (NDRRA funding) was secured to replace the flood damaged Quambatook Weir with a fixed crest rock weir.
- Key requirements for a replacement structure are to:
 - minimise risk to public safety
 - limit ongoing management costs
 - manage the risk of flooding to Quambatook township and surrounding properties
 - maintain community and environmental values associated with the weir pool.
- Final design of the replacement weir is pending a decision by Gannawarra Shire regarding potential cost share arrangements.
- Construction is planned for summer 2012-13.

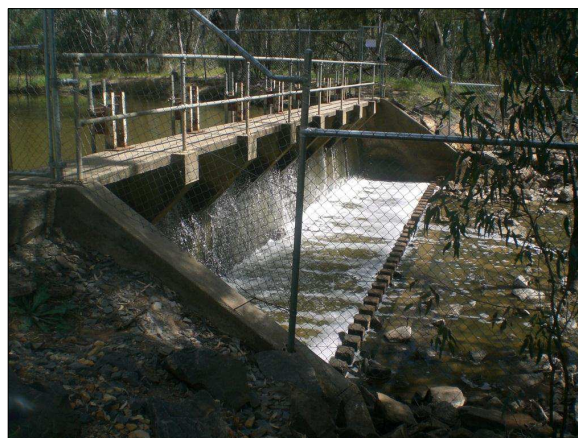


Figure 4: Quambatook Weir, built in 1976 by the Avoca River Improvement Trust became an asset of the North Central CMA when it was formed on 1 July 1997. Photo: North Central CMA.

Drainage maintenance

- Goulburn-Murray Water has been engaged by the North Central CMA as a contractor to undertake the survey and earthworks to repair flood damage to the Bullock Creek Improvement Trust regional drains funded through the NDRRA program.
- Eligible works comprise approximately 172 km of desilting and reinstatement of 20 culvert structures.
- Over 100 landholders have been contacted about the works and 38 works agreements are complete.
- Works will commence in March 2012.

Pental Island levee repair

- A two-kilometre section of flood damaged levee on Pental Island will be repaired to current standards in consultation with affected landholders and Parks Victoria.
- A feature survey has been completed and a flora and fauna assessment and Cultural Heritage Management Plan is underway and should be complete by late May.
- Final design and planning permits will need to be completed following further consultation with DSE, Parks Victoria and the landowners after the flora and fauna assessments are complete.

Levee breach repairs

- 174 levee breaches have been identified on the lower Loddon floodplain to date with additional sites still being identified by landowners.
- The focus is on completing as many sites as possible before winter.
- Total levee repairs to date have cost \$708,110 through funding provided by the Victorian government.

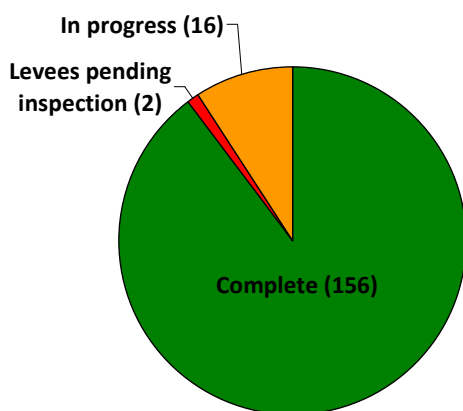


Figure 5: Progress on repairs to 174 levee breaches

Levee assessment project

- A project to map and assess the condition of up to 373 km of levees within the North Central CMA region is soon to be released for public tender.
- Coordinated by the North Central CMA, the outcomes will enable the North Central CMA to provide the SES and the community with better information during a flood and will assist DSE in the decision making process about long-term management of levees.

Natural Disaster Environmental Recovery program

- As part of the Australian government's *Caring for our Country* (CfoC) initiative, an additional \$400,000 was injected into the region to support the community to undertake environmental flood recovery projects.
- Following an open grants process in late 2011, \$84,000 has been distributed to six individuals and Landcare groups to:
 - Repair flood damage to non-North Central CMA environmental protection works
 - Protect or enhance environmental benefits from the floods, such as natural regeneration.
- The program has also supported the work of the Department of Primary Industries (DPI) and the Flood Recovery Employment Program (FREP) to undertake Alligator Weed surveillance along the entire length of Bendigo Creek and Kow Swamp.
- The program will also support the North West Indigenous Training, Employment and Enterprise Project to undertake works and training in the Swan Hill area of the region.
- Works targeting Weeds of National Significance will occur along Bendigo and Gunbower creeks.
- Additional support will be provided to several other CfoC funded projects in the region which have been adversely affected by the floods.

Flood Recovery Employment Program

- Eight on-ground crews are currently undertaking environmental works throughout the region.
- The Gannawarra #1 crew has recently been removing woody weeds such as Desert ash, olive trees and Deadly Nightshade along the Campaspe River through Echuca.
- The Bendigo #1 crew is targeting Hawthorn along Sedgwick Road, southeast of Bendigo.
- The Bendigo #2 crew has been installing stock-proof fencing around parts of Cairn Curran and Laanecoore reservoirs.
- The Gannawarra #2 crew has recently completed over three kilometres of rabbit-proof fencing on a Trust for Nature property 'Wanderer's Plains', in the Kerang area.