



Factsheet: 3 Rural drainage networks

Vasse Taskforce

| May 2015 |



Major drainage works in the Geographe Catchment commenced in the 1880s when the Capel River was diverted away from the Wonnerup Estuary into Geographe Bay through the Higgins cut. Over the past 100 years drainage works including the construction of surge barriers on the Vasse and Wonnerup estuaries, a network of small drains to remove water from farmland, river diversions and a series of large arterial drains, including the Vasse diversion drain, were undertaken. This has significantly altered the hydrology of the catchment. The drainage system enabled farming on the coastal plain that was previously inundated during winter and protected the growing town of Busselton from flooding. The combined effect of catchment clearing and major drainage works, however, also substantially reduced the capacity of the catchment to retain sediment and nutrients, greatly increasing nutrients and organic matter entering catchment waterways and Geographe Bay.

The Water Corporation is the lead asset manager for the rural drainage network and will work closely with the Department of Water, which will lead the implementation of projects to improve water quality in catchment waterways through improved management of the rural drainage network.

Key initiatives include:

- new catchment water, flood and landform model
- feasibility study into reconnecting rivers
- water quality guidelines for infrastructure manager
- drainage management plan



Project Spotlight

New catchment water, flood and landform model



A range of options for improving water quality in waterways in the Geographe catchment has been raised over a number of years. This project will develop a whole of catchment water model and develop an estuarine model for the Vasse estuary to assess the feasibility of these and new innovative options for changing water flow in the catchment. Different options for bar openings, floodgate operations, drainage changes and increasing flows will be assessed under different rainfall, riverflow and climate conditions. Outputs from these models will be used to assess effective drainage, river flows and reconnecting wetlands to meet community objectives. We will also assess the impact of climate change on flow regimes.

Project Spotlight

Feasibility study into reconnecting rivers

The Vasse Diversion drain was constructed in 1927 to divert approximately 60% of flow from the Sabina River and 90% of flow from the Vasse River away from the Lower Vasse River and the Vasse Wonnerup wetlands. Similarly, smaller rivers in the west of the catchment that would have once flowed through the Toby Inlet have been diverted to Geographe Bay. A commonly asked question from the community is can we reconnect these rivers to increase flows and improve flushing and water quality in these systems?

This project will use hydrology models to investigate the feasibility and desirability of reconnecting rivers such as the Sabina to the Vasse estuary. The models will assess the risk of flooding and potential increase in flows. The project will investigate the possibilities and practicalities of moving water in different ways in the drainage system to improve water quality. Once the practicality and desirability of reconnecting rivers or drains to the wetlands is established, then one or more reconnections may be implemented in the field.



More information

More information about the Vasse Taskforce and projects delivered under the Vasse Geographe strategy is available on the GeoCatch website

www.geocatch.asn.au

Be involved

Community members will have opportunities to be involved in events and workshops as work progresses. Information on how you can be involved will be available on the GeoCatch website

www.geocatch.asn.au