



# Revitalising Geographe Waterways



## **Program Overview**



## **Revitalising Geographe Waterways 2016 - 2019**

The **Revitalising Geographe Waterways** program is a four year, Royalties for Regions funded initiative to tackle water quality problems in the Geographe Bay catchment. Revitalising Geographe Waterways integrates a range of actions and initiatives aimed to improve water quality and management of local water assets incorporating recommendations from the Independent Review of Waterways Management in the Geographe Catchment (2014). The program provides a framework for undertaking best-practice water quality and waterways management based on sound science and community input that will enable the transition to long-term management by local water asset managers and provide a model for improving water quality across South West Estuaries.

The following principles are central to the Revitalising Geographe Waterways program and will be critical to achieving the ambitious water quality improvements desired in this catchment:

- 1. Appointment of designated lead managers for key water assets
- 2. Collaboration across government agencies, industry, catchment groups and the community to implement and sustain the program
- 3. Establishment of clear management objectives, responsibilities and actions to support long-term management of key water assets
- 4. Partnership approach to delivering on-ground works
- 5. Science-based decision making for management
- 6. Proactive community communication and participation
- 7. Whole-of-catchment approach to improving water quality
- 8. Clear governance framework coordinated through the Vasse Taskforce
- 9. Long-term commitment to improving water quality

#### Vasse Taskforce

The **Revitalising Geographe Waterways** program will be coordinated through the Vasse Taskforce with representation from state and local government, water service providers and catchment groups. The taskforce will provide direction and support to the lead agencies responsible for delivering on projects, address broader issues and report to the community on outcomes of activities undertaken to improve waterway health.

An early initiative of the Taskforce has been the appointment of interim asset managers for the key water assets. These managers: GeoCatch, Vasse Wonnerup Wetlands Partnership, City of Busselton and Water Corporation will be responsible for leading and/or contributing to key projects and initiatives.

Projects and initiatives under the **Revitalising Geographe Waterways** program have been funded through \$7.15 million in Royalties for Regions funds and an additional \$7.65 million is being contributed through partner organisations.

The Department of Water will provide an overarching coordination role and secretariat support to the Vasse Taskforce to ensure the delivery of Revitalising Geographe Waterways actions and key initiatives.



An important aspect of implementing the program will be to ensure that the community is kept informed on its progress and facilitate community opportunities to influence future management. GeoCatch will lead and coordinate industry and community collaboration in the program through a dedicated communication and consultation program.

#### **Revitalising Geographe Waterways Actions and Initiatives**

The **Revitalising Geographe Waterways** program will improve the management of key water assets in the Geographe Catchment through five key actions: **Reduce nutrients**, **Rethink drainage**, **Revitalise waterways**, **Work together** and **Sustain momentum**. These actions will be delivered through projects across the key water assets.

Table 1	Revitalising Geographe waterways actions and key initiatives	
Program action	Key initiatives and outcomes	
Reduce nutrients	Reduce nutrient footprint from dairy farms through piloting the national Fert\$mart project	
	Minimise fertiliser runoff from agricultural areas by working with farmers and industry groups to improve fertiliser management	
	Enhance stream function through stock exclusion and re-vegetation to reduce nutrient and organic loading to streams	
	Reduce nutrient loss off high risk land uses through trialling effective soil amendments	
	Minimise nutrient loss from urban areas through enhancing the Bay OK community engagement program	
Rethink drainage	Investigate feasibility of reconnecting rivers to increase flows	
	Optimise the drainage network and infrastructure to maximise water quality outcomes including conducting a pilot trial to explore alternative management approaches for rural drains	
	Establish the long term governance arrangements for rural drainage including a review of drainage operating guidelines	
	Investigate options for enhancing visual amenity and water quality of the lower section of the Vasse diversion drain	
Revitalise waterways	Develop water management plans for the Vasse Wonnerup wetlands, Lower Vasse River and Toby Inlet with clearly defined management objectives, responsibilities and actions	
	Trial innovative technologies and practices to improve waterways management and water quality	
	Enhance management and understanding of key water assets through a dedicated science and monitoring program	
Work together	Provide up-to-date community friendly information to sustain an engaged and informed community	
	Enhance community participation in waterways management	
	Empower industry to define and maintain self-regulation	
	Build capacity and understanding in the community and local water asset managers to develop a shared responsibility for long-term waterways management	
Sustain momentum	Appoint permanent water asset managers	
	Build capacity in local water asset managers to transition long-term management of key water assets	
	Minimise nutrient loss from new developments by implementing Better Urban Water Management and optimising planning instruments	
	Develop a long-term business framework considering future funding options and governance to sustain Strategy initiatives	

Table 1	Revitalising	<b>Geographe Waterways</b>	actions and key initiatives
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#### Attachment 1 – Revitalising Geographe Waterways Project Descriptions

## **Key Action Area: Reduce Nutrients**

Nutrients, particularly nitrogen and phosphorus are one of the main factors leading to poor water quality in key water assets in the Geographe catchment. The combination of poor sandy soils, agricultural practices and urban expansion has led to water quality problems in catchment waterways from nutrient run-off. The Action area – Reduce Nutrients focuses on delivering management actions in the Geographe Catchment that reduce nutrients entering the waterway system. The Vasse Wonnerup Wetlands Geographe Bay water quality improvement plan (March 2010) and Five Year evaluation will guide projects under this action area.

#### **Project: Fertiliser Management**

Agricultural fertilisers are significant contributors of nutrients to waterways in Geographe Catchment. Over the last five years GeoCatch and the Department of Agriculture and Food have been working in partnership with farmers and industry to improve fertiliser management through various fertiliser management projects. This project will build on these partnerships and programs to pilot the project Fert\$mart, the dairy industry's national nutrient management framework. With additional funding the project will also work with beef farmers to continue innovative fertiliser management programs. Participating farmers will be provided with incentives for soil and tissue testing, independent agronomic advice on optimising fertiliser use and managing nutrients on a whole of farm scale.

This project will be led by the GeoCatch in partnership with the Department of Agriculture and Food WA.

#### Project: Dairy effluent management best practice

Dairy effluent is a significant contributor of nutrients to waterways in Geographe Catchment. For the last ten years GeoCatch and Department of Water have been working in partnership with farmers and the dairy industry to develop best practices management guidelines for dairy effluent management. In this project Western Dairy and GeoCatch will undertake a review of dairy effluent systems in the Geographe catchment against the Code of Practice for Dairy Shed Effluent Management. This review will provide technical advice to farmers and guide future investment of dairy effluent system upgrades. The project will also develop and implement best practice effluent management upgrades for at least 10 high risk dairies in the Geographe Catchment.

This project will be led by the GeoCatch in partnership with Western Dairy.

#### **Project: Riparian management**

Sedimentation and infilling of the Vasse Wonnerup wetlands and other parts of the estuary is a major issue in the catchment that is addressed by stock exclusion. Establishing functional rivers and streams enhances the uptake and removal of nutrients as well improving ecological and amenity values. Over the past 15 years, GeoCatch has developed and implemented seven River Action Plans and in partnership with farmers undertaken revegetation projects and fenced over 540 kilometres of Geographe waterways. This project will continue this work in priority catchments areas – developing additional River Action Plans and undertaking fencing and revegetation works.

This project will be led by the GeoCatch.

#### **Project: Soil Amendment Trials**

Due to the low phosphorous binding capacity of much of the soil in the Geographe catchment there will always be some phosphorous loss off the catchment, even when nutrient applications are reduced. In landuses that use substantial fertiliser (e.g. large horticulture enterprises) phosphorus runoff can be substantial even when best practice fertiliser management is undertaken. This project will investigate the use of soil amendments in reducing nutrient loss off high risk landuses in the Vasse Wonnerup catchment. This project will involve trialling and demonstrating use of soil amendment products and other innovative best nutrient management actions in high nutrient land uses such as turf farms and dairies.

This project will be led by the Department of Water.

#### **Project: Bay Ok**

GeoCatch's Bay Ok program works with the community to reduce nutrients entering waterways and Geographe Bay from everyday activities in the home, garden, school, business or farm. The project will continue the work of the Bay Ok program with a focus on engaging gardeners to adopt low nutrient gardening practices through targeted workshops, training and demonstrations. The Bay OK project will develop low nutrient gardening information for new residents and work with developers to ensure water sensitive urban design features are included in all new developments.

This project will be led by GeoCatch.

#### **Project: Catchment Monitoring**

On-going catchment monitoring is critical to assess the long-term success of projects and initiatives under the Revitalising Geographe Waterways program. This project will continue fortnightly catchment nutrient monitoring that has been undertaken since 2006. Information from this monitoring will be used to inform report cards to the Vasse Taskforce and community on the water quality and trends of waterways in the Geographe catchment.

This project will be led by the Department of Water.

#### **Project: Water Quality Improvement Plan Review**

The Vasse Wonnerup Wetlands and Geographe Bay water quality improvement plan (March 2010) has guided management actions to improve water quality in the Geographe catchment over the last five years. The water quality improvement plan presents a consolidated understanding of water quality issues, identifies sources of nutrients and recommends actions to reduce nutrients supported by cost/benefit analyses. This project will evaluate the success of the management actions undertaken between 2009 – 2014 to implement the water quality improvement plan and report on the nutrient status of catchment waterways.

This project will be led by the Department of Water.

## Key Action Area: Rethink Drainage

The Geographe Catchment has been highly modified since the 1880s with major drainage works including the construction of surge barriers on Vasse Wonnerup Wetlands, a network of over 400 kilometres of rural drains to remove water from farmland, river diversions and a series of large arterial drains including the Vasse diversion drain. The Action area – Rethink Drainage seeks to reimagine how water is moved through the Geographe Catchment landscape to optimise water quality improvements where possible.

#### **Project: 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 for flood mitigation and to reclaim agricultural land. Similarly, smaller rivers in the west of the catchment that would have once flowed through 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 of reconnecting rivers to improve water quality. The models will assess the risk of flooding and potential increase in flows.

This project will be led by the Department of Water.

#### **Project: Optimising Drainage**

The Geographe catchment has over 400 km of rural drainage network, nearly 50 floodgates, and over 80 culverts. Currently most of the rural drainage infrastructure is used predominately for the transfer of water off rural properties within a 72 hour period. The Vasse Diversion Drain was designed to provide additional capacity to protect adjoining land from flooding. A key recommendation from the Hart review, and regular request from the community, is to investigate options for the drainage network to be used for the dual purpose of water transfer and water quality management. This project will investigate options to optimise drainage infrastructure including rural drains, detention basins and surge barriers to improve water quality.

This project will be led by the Department of Water in partnership with Water Corporation and Busselton Water.

#### **Project: Enhancing the Vasse Diversion Drain**

The Vasse diversion drain was designed and engineered to divert flows from the rivers and drains of the catchment to the ocean to prevent flooding of Busselton and surrounds. Since its construction and as the townsite has expanded around it has attracted considerable criticism for its size and unattractiveness. This project will design and implement a plan to reshape and revegetate the bottom section of the Vasse Diversion Drain in line with living streams principles to improve amenity value and ecological functions, whilst maintaining the flood protection function of the drain. The conversion of the Vasse Diversion Drain to a living stream will turn a utilitarian flood control feature and drain into a waterway asset providing visual amenity values while at the same time reducing nutrient and organic loading to the Geographe Bay.

This project will be led by GeoCatch in partnership with Water Corporation.

#### **Project: Waterways Transition Framework Pilot**

The Waterways Transition Framework aims to transform the existing open rural drainage system towards a managed waterways system, taking into account a range of management objectives including water conveyance, flood protection, biodiversity, water quality, flow regimes and water re-use with a strong emphasis on improving the ecological health of the system. This model will be applied in a trial on the Buayanyup sub-catchment.

This project will be led by Busselton Water with support from the Water Corporation, Department of Water, GeoCatch and the City of Busselton. This project is currently underway.

#### **Project: Long Term Asset Manager**

This project is aimed at determining the best model for ownership of the drainage network. The Water Corporation is the current drainage operator in the Geographe catchment. Busselton Water has expressed an interest in taking over this role and is preparing a business case to Government for the transfer of rural drainage infrastructure and management to Busselton Water. The business case is being prepared by Busselton Water, independently of the Taskforce, as part of their commercial business growth strategy and will be submitted to Government in late 2015. As well as enabling Government to assess the best model for ownership of the drainage network, the project will assist the Taskforce in establishing the long term governance arrangements for rural drainage. Regular progress updates will be provided to the Vasse Taskforce for noting.

This project is being undertaken by Busselton Water.

### Key Action Area: Revitalise waterways

The Action area – revitalise waterways will focus on improving water quality and enhancing ecological and social values at a local water asset level – the Vasse Wonnerup Wetlands, Lower Vasse River and Toby Inlet. Work in this action area will focus on two aspects – undertaking short term water quality improvement activities that will improve water quality, visual amenity and ecological integrity; and developing a long term consulted management plan for each water asset with clear management objectives.

#### **Lower Vasse River**

The Lower Vasse River flows through the centre of Busselton into the internationally significant Vasse-Wonnerup Wetland System. The river is highly valued by the local community and has historically been an iconic feature of the town and focal point for recreational and social events. Improving the visual amenity and water quality of the Lower Vasse River is a priority for the community.

#### **Project: Stormwater Upgrades**

The Lower Vasse River meanders through the heart of the City of Busselton, directly passing through residential areas and the light industrial area. Urban stormwater was recognised in the Water Quality Improvement Plan as a source of nutrients to the Lower Vasse River and the Vasse Wonnerup Wetland system. The Department of Water, GeoCatch and City of Busselton have long partnered in implementing urban stormwater treatment initiatives. With additional funding this project will build on previous work and undertake works to retrofit high risk stormwater systems flowing into the Lower Vasse River.

The City of Busselton will lead this project.

#### **Project: Water treatment trials**

Water quality decline has occurred over many decades and improvements in visual amenity in heavily degraded assets such as the Lower Vasse River will take time. In the short-term, this project will investigate options for treating the symptoms of toxic algal blooms and poor visual amenity within the Lower Vasse River. A number of water quality treatment trials have previously been conducted by the City of Busselton and GeoCatch. This project will review and evaluate the results from previous work and investigate and trial products and treatments new to the market. These trials will assist Vasse Taskforce partners to assess the feasibility, limitations and costs of a range of water quality treatment options.

The Department of Water will lead this project.

#### **Project: Water management plan**

The Lower Vasse River currently does not have an overarching management plan. While management actions have been undertaken over the years by a number of different agencies, it has generally been on an ad hoc basis and often driven by a need to respond to a critical problem or issue (eg health concerns). This project will develop a water management plan to guide how the Lower Vasse River will be managed to improve it into the future. Community input into the establishment of management objectives for the river and future management actions will be an integral part to the development of the plan. To achieve this the project will develop a community consultation and collaboration program that balances the perspectives of different stakeholders and seeks to represent the general community to establish a realistic long-term vision for the Lower Vasse River.

The City of Busselton will lead this project.

#### **Toby Inlet**

The Toby Inlet is a small estuary at the east entrance of Dunsborough town site. Artificial drainage has substantially reduced water flow into the Inlet and during the summer months the Inlet bar opening to the ocean is often blocked resulting in the nuisance and toxic algal blooms and poor visual amenity.

#### **Project: Reconnecting Toby Inlet**

Catchment flow into the Toby Inlet has been substantially reduced through artificial drainage. As a result, the natural Inlet sand bar opening is almost always blocked. This project will use new hydrology models to investigate the feasibility of reconnecting Toby Inlet to the ocean by re-diverting flows in the catchment area. The project will assess reconnection options to increase flow and investigate options for bar management.

The Department of Water will lead this project.

#### **Project: Infill Sewerage**

Septic systems were identified in the Water Quality Improvement Plan (2010) as a significant source of nitrogen and phosphorous in the Toby Inlet. In-fill sewage connection is considered a critical action in high water table areas adjoining the Inlet to reduce both environmental and human health risk. This project will provide deep sewage connections to 147 dwellings in the Quindalup area between Toby Inlet and Geographe Bay. The project will also include monitoring before and after connections to measure reductions achieved in nutrients.

The Water Corporation will lead this project.

#### **Project: Water Management Plan**

The Toby Inlet Catchment Group has a long history in managing the Toby Inlet. This project will build upon management plans developed by the Group and develop a comprehensive water management plan to guide how the Toby Inlet will be managed into the future. Community input into the establishment of management objectives for the Inlet and future management actions will be an integral part to the development of the plan. To achieve this the project will develop a community consultation and collaboration program that balances the perspectives of different stakeholders and seeks to represent the general community to establish a realistic long-term vision for the Toby Inlet.

The City of Busselton will lead this project.

#### **Vasse Wonnerup Wetlands**

The Vasse Wonnerup Wetlands has a wide range of ecological, social, recreation and economic values and benefits. The importance of the wetlands for water bird habitat was recognised in 1990 with Ramsar listing. Despite their significance, the wetlands are characterised by poor water quality in the summer months resulting in reduced visual amenity, algal blooms, noxious odours and fish deaths. The decline in water quality has occurred over a number of decades as a result of highly modified catchment flows through drains and increasing nutrient run off from the catchment.

#### **Project: Fish Kill Mitigation Plan**

Major fish death events have been recorded in the Vasse Wonnerup system since 1905. To reduce the frequency and severity of fish death events the Vasse Wonnerup Wetlands Partnership (formerly the Vasse Estuary Technical Working Group), a collaborative interagency group with representatives from catchment and industry groups, has developed a fish kill mitigation and response plan. This project will implement and update the plan to minimise the risk of major fish kills.

The Vasse Wonnerup Wetlands Partnership will lead this project.

#### **Project: Review surge barrier operations**

Floodgates (surge barriers) were installed on the Vasse and Wonnerup estuaries in 1908 to allow agricultural pursuits on land that would otherwise have been flooded by estuary waters in winter and spring or inundated by saltwater during summer and autumn. The surge barriers also prevent most storm surges from flooding low-lying land adjacent to the estuaries and Busselton

The Water Corporation currently manages the surge barriers according to guidelines developed in 1990. This project will review and update the guidelines with new information from trials/investigations and input from community consultation with surrounding landholders, key stakeholders and the broader community. An updated operating guideline for the surge barriers will be developed as an outcome of this project.

The Vasse Wonnerup Wetlands Partnership will lead this project in partnership with the Water Corporation.

#### **Project: Long term vesting**

The Vasse Wonnerup Wetlands are covered by a range of tenure including private land, small reserve and conservation areas and unallocated areas. Of the wetlands area, 1 115 hectares are Ramsar listed. Historically there have been a number of organisations involved in the management of the wetlands; however as most of the wetland body is on unallocated Crown Land, the overall responsibility for managing the wetlands has been unclear.

Through the Vasse Taskforce the Vasse Wonnerup Wetlands Partnership has been appointed the interim managers for the Vasse Wonnerup Wetlands. With the settlement of Native Title Claims in the South West Region there is now the opportunity to explore the options for transfer of vesting of unallocated Crown Land into Conservation Estate. This project will develop and implement a process for transfer of vesting into Conservation estate, subject to settlement of Native Title Claims that would allow future coordination of management of the wetlands to be undertaken by the Department of Parks and Wildlife.

The Department of Parks and Wildlife will lead this project.

#### **Project: Science and Monitoring**

Future management of the Vasse Wonnerup wetlands will need to be informed by enhanced knowledge and understanding of the system. The Ecological Character Description developed in 2007 identified significant knowledge gaps in understanding the ecological character of the wetlands. Since that time substantial monitoring and research has been undertaken on the wetlands to fill these gaps, however knowledge gaps remain that are considered critical to making informed management decisions.

This project will evaluate recent monitoring and research projects and expand the current monitoring and research program to fill identified knowledge gaps to support the development of a management plan for the wetlands and update the operation of surge barriers. This project will also coordinate science investigations across various organisations and universities to synthesize findings into reports for the Vasse Taskforce and community. This project is complemented by research funded by the South west Catchments Council. A science advisory group has been established to support this project.

The Vasse Wonnerup Wetlands Partnership will lead this project with support from research organisations.

#### **Project: Operational plan**

The Vasse Wonnerup wetlands are managed for multiple purposes including waterbird habitat, flood and storm surge mitigation, visual amenity and prevention of fish kills by a number of state and local agencies. Without an overarching management plan there is a real risk that managing the system for one objective may have a detrimental effect on another.

This project will develop an operational plan for the wetlands to guide how the wetlands will be managed in the future. Community input into the establishment of management objectives for the wetlands and future management actions will be an integral part to the development of the plan. To achieve this the project will develop a community consultation and collaboration program that balances the perspectives of different stakeholders and seeks to represent the general community to establish a realistic long-term vision for the wetlands.

The Department of Parks and Wildlife will lead this project in collaboration with the Vasse Wonnerup Wetlands Partnership.

#### Project: Vasse surge barrier water quality actions

Major fish death events have been recorded at the Vasse surge barriers due to poor water quality or low dissolved oxygen levels. The tools available to respond to declining fish health is limited due to fixed infrastructure and availability of equipment. Over the 2013/14 and 2014/15 summer the Vasse Wonnerup Wetlands Partnership trialled a number of options to improve water quality and promote fish health including increasing seawater inflow into the estuary, and using a pump to circulate and aerate water near the barriers.

This project will trial new equipment (eg oxygen diffuser) to improve oxygen levels for fish at critical periods. The project will also investigate the feasibility of removing organic sediments from the channel in front of the surge barrier to improve water quality. Findings from this project will be used to update the Fish Kill Mitigation and Response Plan and enhance management capacity to promote fish survival.

The Vasse Wonnerup Wetlands Partnership will lead this project with technical support from the Department of Water.

## **Key Action Area: Work Together**

The Action area – work together is about developing and maintaining strong working partnerships between government, Natural Resource Management organisations, community and industry. Central to this is effective communication, collaboration and engagement to ensure stakeholders have easy access to current and new information, the opportunity to contribute to decision making processes and are working towards a common objective.

#### **Project: Revitalising Geographe Waterways Communications**

Strong local community concerns about water quality problems in Geographe waterways were instrumental in instigating an independent review by Government and the launch of the Revitalising Geographe Waterways program. A key role of the Vasse Taskforce is to report to the community on the progress and outcomes of the program. In this project a comprehensive communications plan will be developed to ensure the broader community and key stakeholders, including Taskforce partners, are kept informed of progress of key initiatives and information on the water assets. Various media will be used to support the communication of Revitalising Geographe Waterways including the development of a Revitalising Geographe Waterways including the development of a Revitalising Geographe Waterways website, the GeoCatch and Vasse Taskforce partner webpages, traditional print media, social media and community and stakeholder briefings. The Revitalising Geographe Waterways website will provide a central storage point for all project related documents (e.g. research reports, monitoring data, meeting updates etc), which will be available to the broader community.

GeoCatch will lead this project.

#### **Project: Community Engagement and Collaboration**

A critical component in implementing the Revitalising Geographe Waterways program is to facilitate community opportunities to input and influence the future management of the Geographe waterways. This project will develop a robust community consultation program that balances the perspectives of different stakeholders and seeks to represent the general community to establish a realistic long-term vision and management objectives for the key water assets. By undertaking a comprehensive consultation program, the community will be engaged, educated and motivated, which will be a critical factor in the long-term success of the program.

GeoCatch will lead and coordinate industry and community collaboration in partnership with the interim asset managers for key waterways.

## **Key Action Area: Sustaining Momentum**

The Action area – sustaining momentum is about developing a long-term business framework post the Revitalising Geographe Waterways to ensure that momentum gained in developing partnerships, improving water quality and the management of water assets is sustained into the future.

#### **Project: Future Funding Options**

Professor Hart suggested that approximately \$30 million over ten years was needed for the enhanced management of the water related assets. Vasse Taskforce partner, City of Busselton, has requested an evaluation of mechanisms available to identify ongoing funding options.

This project will investigate funding options available to continue to support water quality improvement actions including market based mechanisms, levies, local tourism and rate charges and industry contributions. The options will be evaluated in consultation with Vasse Taskforce, community, government agencies, and industry. A final report will be provided to the Vasse Taskforce in mid-2017 and include recommendations for a long term funding model(s).

This project will be led by the Vasse Taskforce.

#### **Project: Long Term Governance**

The Geographe community has raised concerns of a perceived lack of a coordinated management approach and responsible lead agency for key water assets in the Geographe Catchment. In response, the Minister for Water formed the Vasse Taskforce and appointed interim water asset managers for the duration of the Revitalising Geographe Waterways program. Through this project, the long term governance arrangements will be negotiated and a permanent asset manager(s) will be appointed for each water asset. This project will also ensure that the new water asset managers have the appropriate confidence, skills, knowledge and tools to manage the water asset.

This project will be led by the Vasse Taskforce.

#### **Project: Optimising planning tools**

The Geographe Catchment and the Busselton and Capel local government areas is one of the most liveable areas in Western Australia and an important agricultural precinct, particularly for the dairy industry which has approximately 25% of WA dairies located in this area. Strong urban growth and agricultural intensification is expected to continue into the future and it is important that new and expanded developments build on the work of the Revitalising Geographe Waterways program to consider and minimise future impacts of nutrients on water quality. This project will investigate how planning mechanisms and instruments can be updated or better used to assist in minimising impacts of future development on water quality.

The project will be led by the City of Busselton in partnership with the Department of Water, Department of Planning, and local government authorities.

The project will be funded partly by Vasse Taskforce partner contributions, and additional funding has been provided through the Royalties for Regions business case.

#### Project: Update of the Water Quality Improvement Model

The Vasse Wonnerup Wetlands and Geographe Bay water quality improvement plan (March 2010) has guided management actions to improve water quality in the Geographe catchment over the last five years. Using the results from the five year evaluation and new modelling work by the Department of Water, the WQIP catchment model will be updated to include new land use coverage, development footprints and improved agricultural best management practices.

This project will be led by the Department of Water and funded through the Royalties for Regions business case.