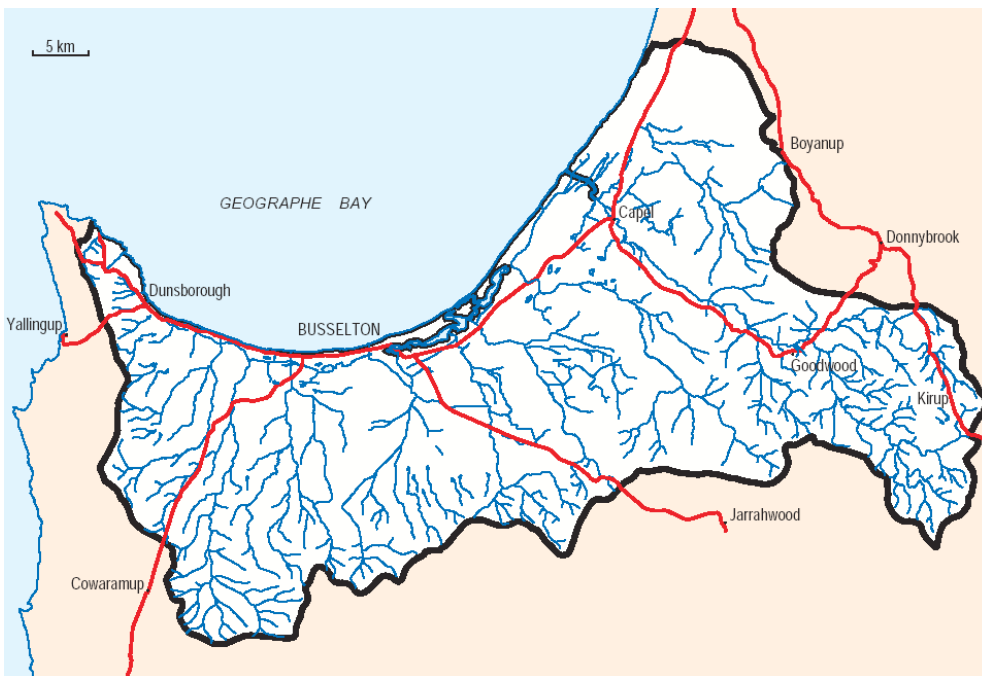




GeoCatch

# GeoCatch Report to the Community 2007-2008



#### GeoCatch's charter is:

*"To work with the community and management agencies to manage the catchment of Geographe Bay and its marine environment so that natural systems, people and their activities co-exist in a healthy, productive and sustainable way."*

#### GeoCatch aims to:

- Provide a voice to the community,
- Build a shared vision,
- Develop understanding of catchment processes,
- Actively participate in caring for the catchment,
- Contribute towards a visible improvement in the health of the catchment.

This Report provides an overview of GeoCatch's key achievements and projects during 2007-2008.

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3. RAPs and Biodiversity Hotspot projects
4. Weed and Feral Management and CCI
5. Drainage/Waterways and Lower Vasse River Cleanup projects
6. Healthy Wetlands project and Ribbons of Blue
7. Water Monitoring/Modelling and Urban Drainage project
8. Community involvement

# The Geographe Catchment – At a Glance

- Approx. 250km from Perth, bound by the Whicher Scarp, Darling Range and Leeuwin-Naturaliste Ridge.
- Catchment area of approx. 2000km<sup>2</sup> extending from Gelorup in the north, to Kirup, and across to Cape Naturaliste in the west, with 70km of picturesque coastline.
- 7 major rivers - Capel, Sabina, Abba, Ludlow, Vasse, Carburnup, Buayanyup. A series of watercourses drain into the Geographe Bay via Toby Inlet. Other natural and artificial waterways dissect the landscape.
- Approximately 37% remnant vegetation cover (26% on public land); two vegetation communities have less than 10% of their original extent remaining and 13 have less than 30% of their original extent remaining.
- Extensive coastal wetlands including the Vasse-Wonnerup Ramsar-listed wetlands.
- Population of approximately 28,000. Population growth rate amongst highest in country.
- Area included in an international and a national biodiversity hotspot.
- Includes Busselton & Capel Shires and a portion of the Shires of Augusta-Margaret River & Donnybrook-Balingup.
- Approx. 63% of the land is classed as rural. The main agricultural-related industries include: dairy farming; grazing; timber production; viticulture; horticulture and tourism.
- Approximately 21 Declared Rare Flora and 21 fauna species endangered or priority listed.
- Seagrass meadows are the 2<sup>nd</sup> most extensive in Western Australia.

## Members 2007-2008

Mr Robin Flowers	Acting Chairperson
Mr Barry Oates	Community Representative
Mr Bernie Masters	Community Representative
Mr Pete Malavisi	Community Representative
Mr Gilbert Stokman	Community Representative
Ms Sandra Manley	Shire of Capel
Ms Bethwyn Hastie	Shire of Busselton
Ms Bev Thurlow	Department of Water
Ms Heather Percy	Department of Agriculture and Food
Mr Dale Putland	Department of Planning & Infrastructure
Mr John Carter	Department of Environment and Conservation

### Resigned

Ms Beryle Morgan	Chairperson
Mr Hal Scott	Community representative
Mr Michael Scott	Community representative

## Partners

- Department of Water.
- Departments of Agriculture and Food, Environment and Conservation, Planning & Infrastructure; South West Catchments Council; Cape to Cape Catchments Group and other sub-regional groups; Water Corporation and Western Dairy Inc.
- Shires of Busselton, Capel, Augusta-Margaret River and Donnybrook-Balingup.
- School students and primary and secondary schools
- Cultural heritage groups.
- Capel, Vasse-Wonnerup, Sussex and Yallingup Landcare Conservation District Committees, Toby Inlet Catchment Group, Dunsborough Coast and Landcare and other NRM groups.
- Business, industry and developers.
- Environmental groups, including the Busselton-Dunsborough Environment Centre .
- Geographe Community Landcare Nursery.
- Tertiary institutions and graduates; research, development and extension organizations.
- Busselton-Dunsborough Volunteers centre.
- Volunteers.
- Wider community.

### GeoCatch Network Centre

72 Duchess St BUSSELTON WA 6280

Tel: (08) 9781 0111 Fax: (08) 9754 4335 Web-site: [www.geocatch.asn.au](http://www.geocatch.asn.au) Email: [geocatch@water.wa.gov.au](mailto:geocatch@water.wa.gov.au)

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## River Action Planning and Implementation Project (RAPs)

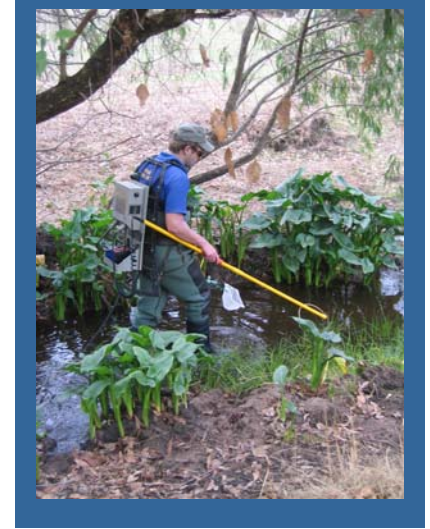
**Project officer: Gemma Mincherton**

### Project aims

- 1) Improve and protect water quality and biodiversity in the catchment's waterways and receiving estuarine and marine environments,
- 2) Implement best practice river restoration techniques with landholders and the community, and
- 3) Build landholder and community capacity to better manage waterways.

### Project achievements

- 1) Partnerships with community groups and support for landholders undertaking river restoration;
- 2) Electrofishing project undertaken with Murdoch University in Jingarmup Brook to reduce feral fish numbers;
- 3) 11 ha of revegetation undertaken using local riparian species and 4 kms of riparian fencing completed;
- 4) Wild Walk along the Buayanyup River very popular and
- 5) Great momentum and commitment from the Residents of Eagle Bay Association in caring for their patch.



*Electrofishing in Jingarmup Brook..*

## Biodiversity Hotspot project

**Project officer: John McKinney**

### Project aims



*The Threatened Western Ringtail Possum (Pseudocheirus occidentalis).*

- 1) The protection of threatened flora, fauna and/or ecological communities,
- 2) The protection of priority vegetation complexes, that are complexes with less than 30% of the original extent remaining, or less than 30% in a protected status, or is the habitat for a threatened species,
- 3) The protection of the Vasse-Wonnerup Ramsar wetland system and other significant wetlands,
- 4) The support of community groups in the management of public reserves, and
- 5) The creation of strategic wildlife corridors to enhance the protection of threatened species and maintain the viability of priority vegetation complexes.

### Project achievements

- 1) 96 ha of priority vegetation complexes protected through fencing in the last year;
- 2) 120 ha of weed control in priority remnant vegetation complexes;
- 3) 90 ha of on-going feral animal control on priority reserves;
- 4) 20 ha of dieback control;
- 5) 11 ha of revegetation of priority vegetation complexes, Western Ringtail Possum habitat and Baudin's Cockatoo habitat;
- 6) Site visits and technical advice to 43 landholders/managers;
- 7) Six Community workshops, training sessions and tree planting activities involving over 300 people within the last year;
- 8) Continuation of the Peppies for Possums project, highlighting the significance of the Western Ringtail Possum and protecting and enhancing its habitat; and
- 9) Support to the Shires of Capel, Busselton and Augusta-Margaret River for the continued and improved management of biodiversity values through local government mechanisms.

## Weed and Feral Management

**Project officer: Mandy Polley**

### Project aims

- 1) Protect flora and fauna in the Busselton-Augusta National Biodiversity Hotspot from introduced plants and animals,
- 2) Deliver a coordinated and targeted approach to weed and feral animal control in the Geographe to Capes project area,
- 3) Reduce or maintain the level of weed and feral animal populations,
- 4) Increase the capacity of the community to identify, control and manage weeds and feral animals, and
- 5) Increase participation in weed and feral animal control and management.



*Dolichos pea infestation on the Vasse River.*

### Project achievements

- 1) Over 3000 ha of land baited for foxes in the Geographe catchment;
- 2) Publication of the fox trapping fact sheet to assist landholders with small rural properties;
- 3) Over 50 ha of weed control on priority reserves and targeted 'alert weeds' such as Dolichos pea and *Juncus acutus* (sharp rush);
- 4) The second Geo-Capes Weed Forum held in conjunction with the Cape to Cape Catchments Group; and
- 5) Arum lily and weed equipment training workshop for landholders.

## Vasse-Geographe Coastal Catchments Initiative

**Project officer: Kirrily White**

### Project aims

To develop a water quality improvement plan (WQIP) for the Vasse-Wonnerup Estuary catchment and the wider catchment of Geographe Bay. The plan will respond to predictive water quality modelling information and established targets for the receiving water bodies as well as information about cost effectiveness of nutrient management practices.

### Project achievements

- 1) Completion of a desk top study of the ecological values of the Geographe waterways has been completed;
- 2) Identification of environmental values and water quality issues for the Vasse Wonnerup Wetlands, Geographe Bay and Geographe waterways;
- 3) Identification of current and predicted future nutrient loads for each sub-catchment, giving consideration to future land use and climate change scenarios;
- 4) Identification of water quality objectives and nutrient load targets for each sub-catchment;
- 5) Development of management recommendations to achieve the nutrient load targets using computer based decision support tools;
- 6) Development of a costed implementation plan based on a cost benefit analysis of achievable management scenarios.



*The seagrass meadows of Geographe Bay.*

## Drainage/Waterways

**Project officer: Martin Pritchard**

### Project aims

To improve water quality in the waterways and internationally-listed Ramsar wetlands of the Vasse-Wonnerup catchment through improved management of drains and waterways. Improvement will be achieved by best management practices including fencing of drains and creeks, revegetation of drains and creeks, stock crossings and re-engineering drains to strip nutrients.

### Project achievements

- 1) The project has agreement with landholders to:
  - Erect 6.1km of fencing on the Ludlow River;
  - Erect 7km of fencing on the Sabina River and the Woddidup Creek;
  - Erect 4.7km of fencing on the Vasse River;
  - Erect 1km of fencing on a drain flowing into the Sabina River;
  - Erect 2km of fencing on a drain flowing into the Abba River;
  - Erect 0.7km of fencing on a drain flowing into the Vasse River;
  - Plant 35,000 local native plants in drains and waterways;
  - Stabilise 50 metres of streambank;
  - Re-contour 600 metres of drain; and
  - Install 5 stock/machinery crossings.
- 2) A comprehensive water quality monitoring programme has been collecting data on drainage best management practices(BMP) prior to works commencing. A \$30,000 grant from SWCC was obtained to undertake post works monitoring this year and a further \$30,000 grant has been obtained from DoW to undertake further monitoring of the BMP's next year (2009).



*Drainage revegetation project.*

## Lower Vasse River Clean Up Program

### Project aims

The project is built upon previous works undertaken through the Lower Vasse River (LVR) Cleanup Program to improve water quality and ecological values of the LVR through establishing and maintaining riparian and in-stream vegetation and by undertaking nutrient reduction trials

**Project officer: Veronica Piper**

### Project achievements

- 1) Murdoch University honours student completed a continuation of the 2006 Aquatic plant (Macrophyte) trial in upper reaches of the LVR;
- 2) Feral goldfish eradication, survey and ongoing research;
- 3) Infill planting along the Isaac street reserve;
- 4) Development of a draft Lower Vasse River "Frequently answered Question" flyer; and
- 5) Research project report into quantifying the amount of nutrient uptake from the Reed rafts in conjunction with Murdoch University and Green Iguana.



*Reed rafts found in the Lower Vasse River.*

## Healthy Wetlands Project

Project officer: Lisa Massey



Wetland fencing at John Forrest's property.

### Project aims

To improve water quality and wetland health by:

- reducing nutrient and sediment movement into the Vasse-Wonnerup wetlands, estuary and Geographe Bay, and
- improving the ecological condition of wetlands connected to those contained on the current Ramsar and Directory of Important Wetlands lists.

GeoCatch achieves these aims by increasing community awareness of wetland values and their importance; and providing technical advice and financial assistance to encourage landholders to undertake on-ground works in priority wetland areas.

### Project achievements

- 1) Selection of sites for on ground works based on DEC prioritisation, wetland conservation status, habitat value, landowner interest and threat of degradation.
- 2) Awareness-raising for wetland landholders through local media and postcard mail-outs.
- 3) On-ground works have been implemented on six private sites and three public sites, comprising 2 km fencing, 11 ha weed control and 7.85 ha revegetation. Over 1.5 ha of *Typha orientalis* and water lily have also been controlled.
- 4) A workshop for landholders interested in wetland management and rehabilitation held in June 2008.

## Ribbons of Blue/Waterwatch WA

### Project aims

- 1) Increasing community awareness of water quality issues,
- 2) Providing school and community educational opportunities,
- 3) Encouraging and supporting collaborative local action projects,
- 4) Encouraging and supporting water quality monitoring, and
- 5) Maintaining networks and partnerships.

### Project achievements

- 1) Provided professional development opportunities for teachers and NRM officer;
- 2) Provided advice and technical support for monitoring and education programs to schools and community groups;
- 3) Created displays for Capelfest focussing on urban landcare and water quality testing;
- 4) Provided curriculum support material for teachers in the Region;
- 5) Supported river restoration for landcare professionals and the community;
- 6) Coordinated the macroinvertebrate environmental art project; and
- 7) Supported local on-ground rehabilitation projects.

Project officer: Jen Mitchell



'Dreams of the Stream' environmental art project for Seaweek

## Water monitoring and modelling

**Project Aim**

**Project officer: Veronica Piper**

GeoCatch undertakes monitoring of waterways within the catchment to monitor water quality data, which will be used in models to predict 'nutrient hotspots' in the catchment.



### Project Achievements

The program involves GeoCatch undertaking monitoring of 20 sites spread through the Geographe Catchment. The monitoring data is then analysed and used to calibrate for modelling the catchment. This monitoring has been undertaken since February 2006.

Information on nutrient loads and concentrations, pH, salinity and other parameters is being collected as part of the sampling. This information is being built into the Coastal Catchments Initiative on Water Quality Improvement for Geographe Bay.

*Sampling at Ludlow River.*

## Urban Drainage

**Project officer: Veronica Piper**

### Project aims

- 1) To significantly reduce nutrients and other pollutants entering the Lower Vasse River (LVR) via urban and industrial drains,
- 2) Implement a Cleaner Production project within the Busselton LIA that will work one on one with the businesses to improve their environmental performance and impact on waterways,
- 3) Raise community awareness of the importance of nutrient and other pollutants entering the system via groundwater and stormwater systems, and
- 4) Collect baseline data via a water quality monitoring program to see what is entering the LVR through urban drains and to test the effectiveness of any best management practices implemented through the project.

### Project achievements

- 1) Developed a water quality monitoring programme for collection of baseline data prior to installation of Best Management Practices (BMPs) within drains in the LIA;
- 2) Developed three BMPs and retrofitting for drains, including the new rain-gardens in the LIA
- 3) Held an awareness-raising 'Great Gardens' workshop with 96 participants;
- 4) Developed a pilot Cleaner Production program, working with local businesses to adopt better stormwater management practices to be implemented within the LIA in Busselton; and
- 5) Improving community awareness on urban water quality issues with articles in local newspapers.



*Participants at the Great Gardens workshop.*

## Community Involvement: Busselton and Capel

**Project officers: Mandy Polley (Busselton) and Rae McPherson (Capel)**

### Project aims

- 1) Provide technical support to community and landholders in delivery of NRM projects,
- 2) Assist with preparation of community NRM funding applications,
- 3) Raise awareness in the local community of priority local NRM issues,
- 4) Provide coordination support to local NRM groups to manage their projects and business efficiently, and
- 5) Assist local landholders to develop property plans and respond to key NRM issues on private properties.

### Project achievements: Busselton

- 1) Coordination of the quarterly GeoCatch newsletter the Network News and the monthly GeoCatch Up column;
- 2) Assisting the Shire of Busselton implement their Environment Strategy, including the launch of the NatureVerge program, rollout of the Shire's Community Environment Grants and coordinating rehabilitation on Shire reserves;
- 3) Coordination of the annual Report to Community;
- 4) Assisted community groups and private landholders with funding applications for NRM projects, technical advice and support at meetings and for on-ground projects;
- 5) Information stalls of GeoCatch activities at public events including the Seniors Expo; and
- 6) Coordination of the GeoCatch Community Planting day at Willow Grove, planting nearly 500 native plants with the local community.



*Planting at the NatureVerge demonstration site.*



*Local residents planting at Willow Grove.*

### Project achievements: Capel

- 1) Coordination of the quarterly water quality monitoring program to test landholder dams, creeks, bores and tanks.
- 2) Coordination of the comprehensive testing of Shire urban stormwater outflows;
- 3) Coordination of the Capelfest and Balingup Small Farm Field Day Environment Tents;
- 4) Assisted community groups and private landholders with funding applications for NRM projects;
- 5) Presentations for non-NRM community groups on NRM topics, including urban landcare, climate change, nesting boxes and weed control;
- 6) Information stalls at public events including Boyanup Farmers Market, Gelorup Markets;
- 7) Production of a Gravel Pit Rehabilitation DVD;
- 8) Coordination of landcare workshops in conjunction with the Department of Agriculture and Food, including Organic and Biodynamic Farming and Property Planning; and
- 9) Overseeing the development and production of 9,000 copies of the Capel Native Urban Planting Guide and planning for the Spurr Rd Demonstration Western Australian native urban garden.



*Rae McPherson and a CVA team.*

