

**BEGA VALLEY SHIRE
COUNCIL**

**State of Environment Report
2006/2007**

A supplementary report

30 June 2007



Bega Valley Shire Council

Zingel Place

PO Box 492

Bega NSW 2550

Phone (02) 6499 2222

Fax (02) 6499 2200

council@begavalley.nsw.gov.au

www.begavalley.nsw.gov.au

**State of the Environment Report 2006/2007 –
Supplementary Report**

30 June 2007

Contents

Introduction	1
Background	1
Indicators	1
Atmosphere	2
Air Quality	2
Background.....	2
Assessment	2
Implications.....	3
Recommendations.....	3
Climate and climate variability	3
Background.....	3
Assessment	3
Implications.....	3
Recommendations.....	4
Human Settlement	4
Community Well Being	4
Background.....	4
Assessment	4
Implications.....	5
Recommendations.....	5
Indicators	5
Infrastructure and Services	5
Background.....	5
Assessment	5
Implications.....	9
Recommendation	10
Biodiversity	11
Background.....	11
Assessment	11
Implications.....	13
Recommendations.....	14

Land **14**

Land Quality 14

- Background..... 14
- Assessment 15
- Implications 15
- Recommendations..... 15

Land use and Management **16**

Background..... 16

- Assessment 16
- Implications 16
- Recommendations..... 16

Water **16**

Water quality and use 16

- Background..... 16
- Assessment 17
- Implications 18
- Recommendations..... 19

Where to from now? **19**

Introduction

In line with the principles of ecologically sustainable development (E.S.D.) Council has a major role to play in the protection of the Shire's natural attributes for this and future generations. The Local Government Act 1993 includes specific provisions to ensure that all of Council's management planning and its activities encompass the principles of ESD. Council's charter in S.8 includes the duty, *"...to manage, develop, protect, restore, enhance and conserve the environment of the area for which it is responsible, in a manner that is consistent with and promotes the principles of ecologically sustainable development."*

State of the Environment Reporting remains the best available mechanism to review and evaluate Council's activities and work plans in relation to environmental management and ESD and to ensure that new goals are set for coming years.

This supplementary report meets the requirements of the Local Government Act 1993 and it also reflects the fact that environmental issues continue to become more important in the community.

Council's main efforts with respect the State of the Environment (SoE) reporting regime remain with the comprehensive regional SoE report that is prepared in conjunction with the ACT Government and the Councils of the ACT Region. The next comprehensive SoE report has commenced and is due for completion in November 2008.

The 2004 comprehensive SoE report was completed and released in 2005 and built upon the baseline comprehensive report that was completed in 2000.

This 2006/2007 supplementary SoE report provides "snapshots" of the condition of our local environment and outlines important changes in response to the impacts of human settlement. Both the 2000 and 2004 comprehensive SoE reports can be viewed on Council's website. [Click here to view SOE reports](#)

Background

The first formal assessment and reporting of environmental quality in the Shire occurred in 1993. State of Environment (SoE) reports have been completed annually, in accordance with the Local Government Act 1993, each year since.

In 1997 Council resolved to approach reporting on the state of our environment on a regional basis and the required comprehensive report was completed in conjunction with the Australian Capital Region in late 1997. The 2000 and 2004 comprehensive SoE Reports continued this process and will be used as Council's baseline for reporting into the future. Council has committed to the regional preparation of the comprehensive SoE in 2008.

All SoE Reports are completed in accordance with s 428 of the Local Government Act 1993 and Clause 219 of the Local Government (General) Regulation 2005.

Indicators

As required in Clause 223 of the Local Government (General) Regulation 2005 this supplementary report updates the trends able to be measured against the environmental indicators used in the 2004 comprehensive SoE report. If indicator changes have not

occurred or if data was not able to be accessed then they have not been included in this supplementary report. The indicators included are listed below.

Condition Indicators

Water Supply
Drinking water quality
Population growth
Vegetation Diversity
Water use

Pressure Indicators

Population Growth
Solid waste
Pest Plant Species
Hazardous Waste
Discharges to water

Response Indicators

Material Recycling & Reuse
Water recycling & Reuse
Controlling Pest Plants

Atmosphere

Air Quality

Background

Poor air quality affects us all. It can also have effects on most other living things, on ecosystems, on buildings and facilities as well as detracting from our enjoyment of our Shire.

Air quality is usually assessed by continuous or at least regular monitoring of various pollutants typically chosen because of their impact on health or because they contribute to the formation of other pollutants. Air quality monitoring is not conducted in the Bega Valley Shire. Motor vehicles are the main source of many air pollutants.

Also considered with air quality is the global issue of ozone depletion in the upper atmosphere. Ozone depletion results in increased amounts of ultra violet A and B radiation reaching ground level. National and international controls are relevant to this aspect and will be discussed in a regional context in more detail in the 2008 comprehensive SoE Report.

Assessment

Since the 2000 comprehensive report air quality in the Shire has not generally been thought to have changed. Little specific information about air quality in the shire is though known. There are obvious occasions where air quality may be impacted through activities such as road transport, bushfires and preventative burning. Since the impact of bushfires in the recent summer periods there has been a significant move towards vegetation



management with respect fires and this has led to an increase in control burns. Similarly air quality is likely to be worse in urban areas of the Shire owing to the use of solid fuel heaters and more concentrated traffic though data is not available. Industrial sources have thought to be relatively unchanged since the 2004 comprehensive report and larger industries

such as Bega Cheese remain regulated by the DECC.

Other industries remain the responsibility of Council. Late in the reporting period the NSW Government introduced the Local Government Air Quality Toolkit to assist Councils in managing local air quality.

Implications

It is likely that there is little impact on human health in the Shire owing to air quality but without data any potential implications remain difficult to assess.

Recommendations

- Educate and involve the community in understanding the importance of maintaining air quality.
- Continue to control and regulate the use of solid fuel heaters and the burning of vegetation particularly in urban areas of the Shire.
- Explore the introduction a ban on the burning of refuse in the urban areas of the Shire.

Climate and climate variability

Background

Any change in climate and its variability is a potentially serious issue for regional and national economies particularly those with reliance on the agricultural sector, itself reliant on climate for continued profitability. In addition to natural climate variability is the issue of human induced climate change now known as the enhanced greenhouse effect. This is discussed in greater detail in the 2004 SoER.

Australia has a high reliance on fossil fuels for the production of energy and for transport. Any requirement to reduce this dependence will be a very considerable challenge. Town design and architecture are important aspects in conditioning a reduction in fossil fuel use.

Assessment

Climate change is now a reality. The natural variability associated with climate in this part of the world via La Nina and El Nino is discussed in the 2004 SoER. The emissions of greenhouse gases in the Shire are not measured though community awareness in the Shire has increased markedly. The Clean Energy for Eternity initiative continues to work towards an increased awareness of the issue.

Implications

The implications of climate change are enormous. Government involvement is required and has recently gathered some momentum. Council's long term planning will need to recognise this and address the issues across the whole of its own operations in terms of reactive responses. Longer term adaptive responses will need to be developed and implemented as scientific knowledge improves and should be included in corporate and town planning controls. Early policy development in regard adaptive responses possible for Council commenced during this reporting period.

Recommendations

- Continue to work towards Milestones 2 and 3 in the Cities for Climate Protection (CCP) program and investigate options for reducing greenhouse emissions.
- Ensure CCP activities and milestones receive adequate resources to progress at a reasonable rate.

Human Settlement

Community Well Being

Background

The quality of life of people in the Bega Valley Shire, or their well being, is as much a result of the quality of our natural environment as of social and economic factors. Air quality, water quality, biodiversity, pest plants and animals, access to open space and bushland for recreation, and access to estuaries, lakes and beaches for recreation are but a few examples of how much the natural environment affects us.

Social and economic factors are important too. We have come to expect a certain standard of service provision as key to our well being, such as education, health, housing and many more. The well being of the community provides a basis for growth and development. The way in which we interact socially, at work or conducting business will have a significant impact on the nature of settlement and on the state of environment resulting from settlement.

Living in the Bega Valley Shire is generally a quiet and peaceful experience. Due to a lack of large industry industrial noise is not typically an issue and Council records indicate that largely community concerns with noise relate to domestic sources especially barking dogs. Data on the number of complaints about barking dogs during this reporting period is unfortunately not available though anecdotally there does not appear to have been an increase in the number of complaints.

Assessment

The 2006 Census reports the population of the Shire as 31,060. This is an increase of 615 from the 2001 census. Growth has been steady in the Shire for many years.

Council has contributed considerable resources to social planning and this process has established a considerable amount to the discussion of the impact on the environment of human settlement. The 2000 SoER also has very detailed discussion of the baseline indicators relevant to this issue.

Noise exposure does not appear to have become an issue with respect human settlement during this reporting period. As such the need for ambient acoustic studies has not increased. Although population growth and demand for residential lands continued to grow during the reporting period noise issues particularly where residential lands adjoin other non residential uses have been able to be managed using regulatory tools. The impact of noise as community noise levels increase with population will need to be closely monitored to ensure they do not impact on the community's health and enjoyment.

Implications

Council staff will continue to respond to all complaints concerning noise and will ensure legislative requirements are implemented as required. In terms of the development assessment process for proposed developments staff apply appropriate regulatory conditions as necessary.

Other indicators with respect human settlements can be located in the social plan and 2004 and 2000 SoER's.

Recommendations

[Refer to the social plan for further information.](#)

Indicators

[Refer to the 2000 and 2004 SoER](#)

Infrastructure and Services

Background

There have been considerable changes to many of the services and infrastructure provided by Council during the 2006 2007 period. The areas involved are Water Supply and Sewage Management, Solid Waste Management, and On-site Sewage Management (OSM).

Assessment

Water Supply and Sewerage Management:

Water supply was comparatively stable during this reporting period though there were 73 days of Level 2 water restrictions for the Upper Tantawanglo system (5% population served) only. During 2005 2006 there were no water restrictions the Shire though it needs be noted that the average volumes in Council's water storages increased 5% from 2005 / 2006 to 2006 / 2007.



of
in
to
by

Dam fullness across all supply dams actually increased to 91% from the comparative high of 86% for the 2005 / 2006 period.

[\(Please refer to the 2004 SoER for further details.\)](#)

Drinking water quality provided in the reticulated supplies remained of an excellent quality. During the reporting period 476 separate microbiological samples were taken to determine water quality throughout Council's water supplies and all 100% met the health criteria for E coli. Sampling for chemical analysis occurred throughout the systems on 46 occasions with all samples meeting the relevant health standards.



Bega Valley Sewerage Program:

The Bega Valley Sewerage Program (BVSP) made substantial progress with the delivery of the new sewerage schemes and upgrades to existing sewerage systems.

In 2006/07, an extra 350 properties have been provided with a sewerage service as the Wolumla and Candelo schemes have been brought online. Kalaru sewerage scheme is well advanced with the collection system complete and the sewage treatment plant close to completion. The Kalaru finalisation is only awaiting delivery of the reclaimed water re-use facilities. The new facilities for Wallaga Lake have commenced and will be completed during the next reporting year.

Physical works to expand capacity and upgrade sewage treatment quality for Bega and Bermagui are also well advanced. Both upgrades will be operational by the end of 2007 with only minor works to be completed in 2008. Reclaimed water system improvements at both these sites are not likely to be complete until early in 2008.

Scope definition of planned works at Merimbula to expand and improve the reclaimed water re-use arrangements is complete and design development is underway. Works are expected to be complete next reporting year.

Options development for upgrading disinfection arrangements at Eden sewage treatment plant have commenced and works are expected to be completed during the next reporting period.

On-site Sewage Management:

On site sewage management has been positively impacted by the progress made with the Bega Valley Sewerage project. The number of premises on septic systems has reduced with connection to sewer of residents at Wolumla and Candelo.

During the reporting period inspections of OSM's were conducted by Council Environmental Health Officers on a risk based basis in accordance with DCP No.5 'On-

site Sewage Management'. The number of registered OSM's in the Shire has increased since last year but largely due to improved record keeping. At 30 June 2007 there were 6876 OSM's registered in the Shire. With the connection to sewerage schemes that has occurred and will continue during the next reporting period, this number will reduce. A review of the DCP and Council's policy in regard OSM is planned for late 2007.



Solid Waste Management:

Waste management continued to be well resourced and as such implementation of the 2020 Vision on Waste proceeded well during the reporting period. 12,824 tonnes of waste were collected and disposed of to landfills across the Shire. The area available for landfill purposes did not change from 2005 2006 and remains at 13.1 hectares across Bermagui, Eden, and Merimbula.



The kerbside recycling contract continued to result in increased recycling participation and volumes. In 2006 / 2007 3,659T of recyclables were collected up from 3,556.74 tonnes of recyclables in the previous year. In terms of the crate system that ceased in 2004 this represents an almost tripling of the mass collected. Contamination was estimated by staff as low. In addition recyclable drop offs at Council's recycling depots resulted in 28,100 litres of oil (up from 11,000 litres in 2005 / 2006), 2391 tonnes of garden

organics, and 241 tonnes of scrap steel being diverted from landfill.

The expanded garden organics collection program was well utilized also with low contamination levels and resulted in an increased volume being reused and diverted from landfill.

Bega Valley Shire Council's popular free annual Hazardous Waste Collection was held in August 2006. The service allows residents to dispose of many items including pesticides, fungicides, weed killers, paints and varnishes, fuels, oils, pool chemicals, household cleaners, solvents, acids and alkalis, medicines, poisons, syringes, batteries and domestic gas cylinders.

The collection sites were located at Eden, Saturday August 5 2006, 8am to 2.30pm, Pambula, Sunday August 6, from 8am to 2.30pm, and Bega, Saturday August 12, 8am to 2.30pm. Although the service is provided free for domestic quantities fees do apply for commercial customers disposing of more than 20 litres or 20 kilograms of materials.

Supplementary Report

Bega Shire Household Chemical Collection 2006

Waste No	Waste Type	Weight kg	%
1	Acid	22.8	0.27
2	Alkali	2.75	0.03
3	Arsenic	3.75	0.04
4	Asbestos	0.5	0.01
5	Automotive products	491.7	5.75
6	Batt - lead acid	3634	42.49
7	Batt – nicad	3.25	0.04
8	Batt – Nihyd	0	0.00
9	Batt – Normal	47.25	0.55
10	Cyanide	0	0.00
11	Fire Ext – halon	2.1	0.02
12	Fire Ext – other	0	0.00
13	Flares/Ammunition	0.2	0.00
14	Fluorescent tubes	0	0.00
15	Gas Cylinder - propane	332	3.88
16	Gas Cylinder - other	181.5	2.12
17	General household chemicals	313.1	3.66
18	Halogenated Solvents	45.45	0.53
19	Heavy Metals	0	0.00
20	Hydrocarbons and fuels	0	0.00
21	Inert liquids	0	0.00
22	Inert solid	521.1	6.09
23	Smoke detectors	0	0.00
24	Oil (>61°C)	1064.33	12.45
25	Organoperoxides	0	0.00
26	Oxidising agents	0.25	0.00
27	Paint - water	742.13	8.68
28	Paint – Oil	410.85	4.80
29	Paint – metal	0	0.00
30	Paint – other	1.95	0.02
31	PCB material	0	0.00
32	Pesticide - general liquid	144.63	1.69
33	Pesticide - general solid	15.25	0.18

Bega Shire Household Chemical Collection 2006

Waste No	Waste Type	Weight kg	%
34	Pesticide - organochlorine liquid	10.88	0.13
35	Pesticide - organochlorine solid	4	0.05
36	Reactives	2	0.02
37	Toxics	13.4	0.16
38	Pharmaceuticals	6.3	0.07
39	Photographic chemicals	26.4	0.31
40	Unknown liquid	447.39	5.23
41	Unknown solid	17.75	0.21
42	Aerosols	32.5	0.38
43	Other	10.5	0.12
	Total	8551.96	

Note: Figures for each centre were not collected. The 2005 / 2006 total was 12,140kgs.

All materials collected were disposed of at approved facilities outside of the Shire.

Implications

Strategic Business Plans remain current for both Water and Sewerage management. Reserves for both water and sewer main replacement programs remain sound and investigations to reduce stormwater in-flows to the reticulated sewerage schemes continued through 2006/2007.

The Sewer Project will continue to have a very large positive environmental impact with the connection to sewer of approximately 800 dwellings occurring during the reporting period.

Drinking water quality provided by Council remains at a very high quality.



During the reporting period there were 83 unlicensed sewer discharges (down from 143 in 2005/2006). These discharges are typically associated with wet weather events and minor blockages such as surcharging manholes. All the discharges were investigated and major events were reported to the Department of Environment and Conservation as required. Remedial action including increased video surveillance of sewer mains and the like were also implemented. The protocol for responses to

these discharges was implemented in each instance.

The volume discharged to receiving waters in the reporting period was 1343 ML and includes ocean discharges at Bermagui, Eden and Merimbula, as well as river and exfiltration to groundwater.



The volume of wastewater reused in the reporting period was 620 ML and included reuse on golf courses, dairy farms, and showgrounds. The increased reuse of treated effluent was largely as a consequence of the Cobargo, Candelo and Wolumla sewerage schemes.

The OSM program provides an effective mechanism to ensure OSM systems

operate in accordance with health and environmental performance standards. During the reporting period 191 new on-site sewage systems were approved and constructed and 119 existing systems were ordered to undertake improvements. Council's Policy in regard on-site sewage management will be reviewed in the next reporting period.

The disposal of waste to landfill has reduced owing to the kerbside recyclables collection. Mulch produced from this resource is very popular. Whilst waste collection and recycling has also progressed more information on the volume of waste produced per capita is required to ensure sustainable management. In addition as full cost recovery remains a valid goal in managing waste, the costs of controlling and regulating a growing waste dumping problem need also to be recovered. With tip fees increasing the incidence of dumping in reserves particularly adjacent to Council's transfer stations and landfills has increased and as well as having cost implications is also causing environmental concerns with regard litter, contamination and weed spread.

The development of a central waste facility progressed during the reporting period. This facility is part of the overall strategy by the Council to reduce the volume of waste disposal within the Shire. Such a central resource to accept waste from areas within the Shire is critical as current landfill sites are filling rapidly and need to be closed in the near future. Fifteen locations for a new landfill site were investigated and the Wanatta Lane site at Wolumla was selected as the most suitable site for the proposed development. The existing landfill operations at Eden, Merimbula and Bermagui will be closed and converted into resource recovery waste transfer stations once the central waste facility has commenced operation.

Recommendation

- Employ a Water Demand Management Officer and develop and implement a sustainable Water Demand Management Strategy.
- Continue to minimise overflows from the sewerage system especially during wet weather events and particularly close to sensitive or high risk areas such as oyster producing estuaries.
- Continue to protect and deliver optimum quality reticulated drinking water.
- Continue to implement the 2020 Vision on Waste.
- Adequately resource staff to effectively manage the growing waste dumping problem.

- Provide incentives such as pricing policy change in green or garden organics waste management to ensure that such wastes can be delivered free of charge to Councils waste facilities. Any loss of income should be recovered by setting a commercial charge for buy back of the mulched materials.
- Expand waste minimisation education and awareness programs to include changing community member's consumption behaviour.
- Continue the progressive upgrading of Councils' unsewered public amenities.
- Review DCP 5 to ensure that the risk management approach to the management of on-site sewage management systems is best practice.

Biodiversity

Background

Fundamental to the concept of biological diversity (biodiversity) is the number and variety of individual species and of the ecological circumstances in which they live. Changes in the number and / or abundance of species, and changes to different ecosystems, are the most obvious factors that warn of possible changes in biodiversity.



There are many benefits in the protection of biodiversity. As well as the intrinsic values biodiversity has indirect and direct economic value through clean air and water, tourism, agricultural productivity, water cycle management and scenic values.

Changes in land use, loss of habitat, increased numbers of pest animals and plants (or even new introductions), tourism and recreation, are all threats that can impact on biodiversity.

Appropriate conservation legislation, together with the preparation and implementation of protection and recovery plans, is fundamental to threatened species management. Fortunately such legislation is in place. What is needed are the resources for appropriate research and monitoring to prepare the necessary action plans and to implement them. Council has little impact on these issues at a regional or state level but is able to have direct positive impact on the local level by ensuring that it resources it's threatened species assessment responsibilities to an effective level.

Assessment

Progress towards better management and understanding of biodiversity conservation in Bega Valley Shire continued during the 2006/ 2007 reporting period. Projects to improve mapping of vegetation continued through the Department of Environment and Heritage, and the suite of incentive programs for freehold land continued under the Southern Rivers Catchment Management Authority's Voluntary Biological Diversity Conservation Strategy. This included roles in the Vegetation Recovery project and the Bega Environmental Management Systems project.

The reporting period saw further changes to the Native Vegetation Act 2003 and Threatened Species Act 2004 which included significant changes in the way applications for clearing of native vegetation and proposals potentially impacting threatened species

were assessed. The changes were aimed at bringing threatened species legislation in line with native vegetation legislation. The key changes were:

- in urban and coastal areas – the integration of biodiversity into strategic land-use planning, improvements to the development assessment process, and the accreditation of flora and fauna consultants
- in rural areas – threatened species conservation embedded within native vegetation protection and incentives for landholders
- the listing of threatened species maintained as a scientific process and based on defined criteria
- transparent prioritisation of recovery and threat abatement actions
- upgraded enforcement and compliance provisions
- expert advisory councils to advise the Minister for the Environment on social, economic and biodiversity implications.

Weed management: Weed management continues to consume resources and weeds remain a large threat to the protection of biodiversity. The impacts of climate change in this area alone may well be very significant.

Bitou Bush (*Chrysanthemoides monilifera*) decreased in area by a further 50 hectares; Cape Broom (*Genista monspessulana*) decreased in area by 10 hectares; and densities of Serrated Tussock (*Nassella trichotoma*) continue to be reduced while the area was further reduced by a further 10% over the reporting period. It must be noted that while the area by which it has been reduced is small, those areas where it was previously categorised as a Core infestation (>35% ground cover) have been reduced to approximately 250 hectares from over 1000 hectares in the early 1990s.

Fireweed (*Senecio madagascariensis*) continues to spread rapidly, with areas infested increasing by a further 15% in the past 12 months. Where previously found, Fireweed densities have significantly increased with many areas having dense infestations of over 35% of vegetation cover during the current reporting period. Previously unaffected areas now have scattered and medium level (up to 25% ground cover) infestations. Fireweed will increase in density in these areas as current management practices are limited in their effectiveness at controlling the spread of this weed and land manager adoption of new management techniques is slow.



The spread of African Lovegrass (*Eragrostis curvula*) is a result of poor seasons and low ground cover. Isolated infestations are found in many areas previously free of the weed and it is estimated there has been an increase of 5% in areas affected during the current reporting period. Poor seasons, resulting in low ground cover in heavily grazed paddocks, have promoted the spread of African lovegrass. While much is classed as rare and isolated and effective management programs at

this level have a high chance of successful control, continuing poor seasons will result in further spread.

The extent of Chilean needlegrass (*Nassella neesiana*) infestations, found on several properties in a small area of the Shire, has been reduced to approximately 8 hectares, following on-going control programs which include pasture rehabilitation, education and close liaison with affected landholders.

Blue Hound's Tongue (*Cynoglossum creticum*) was identified in the Towamba River Valley some years ago and a program, commenced in spring 2005, involving all affected landholders is proving effective. Known infestations, all within 100 metres of the river over a distance of nine kilometres, have been controlled each season resulting in a significant reduction in densities and extent. A long term program to ensure all emerging seedlings are fully controlled will eradicate this weed this Weed of National Significance.

Implications

The resignation and subsequent cut from Council's structure of Council's Threatened Species officer during this reporting period will have an impact on the ability of Council to undertake its responsibilities under the legislation. Undoubtedly additional costs in the review of studies, with respect threatened species particularly, will need to be passed on to proponents. Development assessment staff will need to be resourced to access training in this regard to also ensure the impact is minimized.

Two species that occur in the Shire were added to Schedule 2 of the Threatened Species Conservation Act: *Pomaderris Bodalla* (a plant) and *Callocephalon fimbriatum* (Gang-gang Cockatoo). Two vegetation types that occur in the Shire were listed as Endangered Ecological Communities under Schedule 2 of the Act. They are themada grassland on seacliffs and coastal headlands, and bangalay sand forest.

Changes to the Threatened Species Conservation Act 1995 mean that Recovery Plans are no longer required to be produced. Instead, the recovery and threat abatement actions are listed under a Priority Actions Statement, which was exhibited as a draft during the reporting period. Assessment of impact in the development assessment process has a much greater role in examining the likely local impact.



The Department of Environment and Heritage provide a database of recovery and threat abatement actions that is searchable by actions, geographic region, threatened species and key threatening processes. There are a total of 277 priority actions applicable to the Bega Valley Shire and they are grouped into 20 recovery strategies. (Pied Oystercatcher - Photo by S. Carless)

During the reporting period approximately 258 hectares of freehold land was included in contracts of various sorts under the SRCMA VBDC strategy to be managed for conservation outcomes.

Bega Valley Shire Council has identified nine priority weeds within the shire. Infestations of five of these species have increased in area within the shire during the current reporting period despite increased funding and management planning. Many of these have the potential to adversely impact on primary productivity and conservation values of native

vegetation communities. St John's Wort (*Hypericum perforatum*), Paterson's Curse (*Echium* spp) and Fireweed (*Senecio madagascariensis*) are also poisonous to livestock.

Weed Management in the Shire has become much more effective following the development of the Bega Valley Shire Weeds Strategy in a series of NHT-funded community workshops held in 2001 to 2002 and an emphasis on education and awareness programs. This is in the face of the continuing cut in grant funds from the NSW government to assist Council in the management of noxious weeds. Council weeds officers and representatives of other land management agencies are working more closely in developing and undertaking effective programs. Development of this work continues.

Recommendations

- Resource the biodiversity and threatened species education and training program for staff and the wider community especially the development industry.
- Continue to identify and map all pest plant distribution and control areas.
- Advocate for increased funding and research into control mechanisms for fireweed.

Land

Land Quality

Background

Healthy land is needed to sustainably support a range of important land uses such as agriculture, urban development, waste disposal or transport infrastructure. For this reason, land quality, or the extent to which the soil resource is free from depletion or degradation, is of concern to many communities.

Ideally, land quality would be assessed in this report on the basis of fundamental soil properties which reflect the condition of the soil, and the actual and likely extent of degradation such as soil erosion and dryland salinity. Factors such as the occurrence of known contaminated sites or the detrimental effects of landfill are also considered.



Declines in land quality can often be remediated once the problem and its causes have been identified. This may mean applying lime or fertilisers, restricting areas to stock access, revegetating some agricultural catchments, imposing erosion control measures in urban development areas, changing to a more appropriate land use, or simply not developing some areas of land identified as having a high risk of developing dryland salinity.

Although they are difficult to map, soil properties such as the nutrient status and structural condition are important. Declining amounts of soil nutrients after continued harvesting can cause serious declines in the production of basic resources such as food if soil nutrients are not replaced. Similarly, the ability of plants to grow is much reduced in soils compacted by traffic, farm and construction machinery. There are also impacts on soil biota, and the way in which soils

transfer water - leading to increased amounts of runoff following rainfall. Land reshaping for urban development is an important cause of a decline in land quality in urban areas.

Erosion and salinity can be of equal concern to urban areas due to the threat to road and building infrastructure. Further problems arise from rivers and lakes silting up as a result of sediment washed off construction sites and stream banks, and the generation of dust from soils that have had their surface structure destroyed.

Assessment

Lands managed by the National Parks and Wildlife Service and N.S.W. State Forests are covered by Management Plans within those agencies. Relatively unchanged since the 2004 SoER two major land uses in Bega Valley Shire are timber production and biodiversity conservation comprising approximately 33% and 38% respectively of the Shire. Of the remaining land approximately 22% is used for agricultural purposes. Further data on this issue can be found in the 2004 comprehensive SoER.

Sedimentation and erosion continues to be a serious environmental problem in the Shire. Although complaints regarding erosion and soil loss are still not able to reported, anecdotally the number of complaints received has grown. Council works in sealing gravel roads in catchments such Wonboyn Lake and in undertaking sediment studies in the Curalo catchment continued through this reporting period.



as

Land contamination remains relatively unchanged since the 2004 report though Council and the DECC have received advice concerning the ex Bega Municipality Gasworks site in Upper Street Bega. This site is potentially contaminated like the 50 other approximate ex municipal gasworks sites in NSW. Council sold this site to the current owner in 1986 and issues regarding studies to investigate its status as a contaminated site will be explored during the next reporting period.

Works on the remediation of the large Mobil site in Eden continued through this reporting period and are likely to be completed in early 2008.

Implications

The implications of sedimentation and erosion, acid sulphate soils, and land contamination remain of concern. Changes since the 2004 SoE have not been able to be measured accurately owing to resource constraints. As such further information should be obtained by referring to the 2004 SoER. Issues with respect the ex Bega Municipality Gasworks site will be reported at length in the 2008 Comprehensive SoE Report.

Recommendations

- Review Council's Erosion and Sediment Control Policy and develop and implement a new Policy based on the "NSW Soils and Construction- Managing Urban Stormwater Vol. 1" (the Blue Book).
- Review Council's Contaminated Land Management Policy to ensure it reflects the requirements of the Contaminated Land Management Act.

Land use and Management

Background

Using and managing land sustainably is fundamental to maintaining an acceptable quality of life. However past land use and land management practices and competition for land as the population grows have resulted in a legacy of lands that now have some land use limitations due to development or varying levels of degradation.

Resolving conflicts over land use is likely to become more of an issue as population growth increases demand for land for housing in otherwise high productivity farmlands, water supply catchments, lands of high conservation value, or previously contaminated lands.

The concept of best management practice is not new, but the actual practices that constitute best management change as our knowledge improves. We do know, now, for example, that managing vegetation cover effectively is an important step in caring for our land as well as native species and ecosystems, whether that cover is native forests, woodlands or agricultural crops and pastures.

Assessment

Land use changes are not likely to be significant until such time as the issues associated with the comprehensive Local Environment Plan (CLEP) are resolved. This work is progressing with many supporting studies being completed by planning consultants for Council and will see completion in late 2008.

There have been no changes to the heritage registers since the last report though this may also change when the CLEP is completed. Funding for heritage works also remained relatively unchanged since the last report also with \$30,000.00 being expended.

Implications

Council requires a much better understanding of the balance between land use constraints and current land use practices in the Shire but especially in the coastal zone where development pressures are growing rapidly.

Recommendations

- Undertake an analysis of the importance of land uses and constraints in the Shire.

Water

Water quality and use

Background

The quality of our water directly affects the quality of our lives. We all depend on clean water for drinking, recreation, industry, and fish and wildlife habitat. Maintaining the health and lifestyle of the region depends on the preservation of our wetlands, waterways, oceans and estuaries. Any interpretation of water quality must take into account the intended use, or uses, of that water.

Water quality is affected by a range of activities in the catchment. Inappropriate land use can add sediment or other contaminants to groundwater and surface water; use of the water itself can concentrate pollutants or other substances in the water; runoff from urban and rural catchments can bring large quantities of unwanted substances into waterways if not properly treated.

Water is a scarce resource. It must be used wisely so that enough water is available for everyone. Supply must be adequate for conserving aquatic ecosystems, human use including recreation and consumption, and for production purposes such as aquaculture and agriculture.

Assessment

It would appear that the waterways in the Shire remain in generally good condition, particularly when compared to other coastal regions, but protection of our waterways should remain a priority. There have been very few changes in the state of our aquatic environment since the original 1997 comprehensive report. The natural flow of water in our environment does not often match the demand for water by human settlement. The water cycle is intricately linked and so demand or water quantity pressures can readily place pressures on water quality. The record drought of recent reporting periods demonstrated this in a most extreme manner.

Estuary management now includes plans in place or in development for 5 estuaries in the Shire. Work on the development of an estuary management plan for the Bega River estuary at Tathra continues and will be completed in 2008. In addition the Department of Natural Resources (now DECC) pilot study to establish a sustainability assessment model for coastal lakes has (including Merimbula and Back Lakes) will be finalized in 2008.

Estuary management works undertaken in 2006 2007 are detailed below.



Estuary	Plan Completed	Current Status	2006/7 Projects
Wallaga Lake	2000	Implementation / Review	Sealing of foreshore access, erosion control and seagrass protection projects

Estuary	Plan Completed	Current Status	2006/7 Projects
Bermagui River	n/a	n/a	Foreshore Stabilisation Project along 200m stretch of northern foreshore
Bega River	n/a	Draft Plan Completed	Mogareeka Foreshore bank stabilisation works
Merimbula & Back Lakes	1997	Implementation	Saltmarsh / foreshore protection project, along 250m of Merimbula Lake northern foreshore
Lake Curalo	2001	Implementation	Completed sediment source and control study by the ANU
Wonboyn Lake	2003	Implementation	Sealing of Foreshore carpark and steep gravel roads has greatly reduced sediment inputs to lake and subsequently improved water quality
Wapengo Lake	n/a	n/a	Council is member of Wapengo catchment project steering group with SRCMA, FSC landcare Rapid Catchment Appraisal report has been produced identifying sites requiring on ground works Riparian revegetation projects have commenced Foreshore gravel road causeway has been stabilized and sealed Catchment Officer has been appointed 1day per week
Wallaga Catchment	n/a	n/a	Council is member of Wallaga catchment 'Land to Lake' steering group with SRCMA., FSC Landcare Catchment reports have been produced Community consultation phase Catchment Officer has been appointed 2day per week

Treated effluent re-use continued to be a key option for effluent from the Bega, Tathra, Bermagui, Eden and Merimbula Sewerage Treatment Plants. 620 mega litres of treated effluent was used on local golf courses, showgrounds and farms during this reporting period. Further information on re-use strategies that have changed as a consequence of the Bega Valley Sewerage Project will be reported in the 2008 comprehensive SoE.

Implications

Council undertakes water monitoring for statutory reasons and also usually only in response to incidents or complaints. Summer time beach watch monitoring at a number of popular swimming beaches is also undertaken annually. Results are of a very high standard.

Macro algae continued in this period to be an issue with Merimbula Bay and particularly Pambula Beach. The algae returns to the Bay each spring / summer period and dependent upon the prevailing winds accumulates in varying states of decay in and around the popular swimming areas. Although testing by independent experts has identified the algae as being native and non toxic it is nonetheless very visually displeasing and at times very odorous. The cause of the algae is not known though it is known that similar outbreaks occur along the NSW coastline. Typical sources of nutrient that may lead to algal proliferation include ocean upwelling, stormwater runoff, local contributions such as creek and river discharges as well as any discharges of treated effluent.

Much catchment work involves the jurisdictions of a number of Authorities and so continued involvement with the Southern Rivers Catchment Management Authority remains important. Valuable grant funding remains a key in the effective management of our water resources and efforts to secure this funding need to be greatly increased.

The implications of poor management of our estuaries can be significant. As such, continued work in the development of estuary process studies and estuary management plans is critical. This is important and also needs to be supported by broader coastal planning and management strategies to be sustainable. Funding of actions within the estuary management plans needs to be at least maintained if not increased.

Recommendations

- To complete and adopt the Bega River Estuary Management plan and to fund it's staged implementation.
- To continue and improve coastal and estuarine management processes within Council ensuring the procurement of optimum grant funds from agencies and government sources.
- To explore the implementation of the recommendations of the Final Report of the South East Water Quality project as it relates to future water quality monitoring.
- To continue working closely with the Southern Rivers Catchment Management Authority to achieve a cooperative approach to aquatic ecosystem management.
- To ensure Estuary Management Plans become incorporated into Council's core business and so ensure an adequate level of resources for implementation.

Where to from now?

The SoE 2000 and 2004 Comprehensive Reports detail the condition of our environment. This Supplementary 2007 SoE Report briefly assesses the state of our environment for the period in terms of air, land, water, biodiversity and human settlement. It relies strongly though on indicator information contained in the 2004 baseline report and as such this report should be referred to for more detailed information. Not all indicators from the comprehensive reports are included in the supplementary report.

The recommendations or objectives to be achieved in this report will be put forward in the Management Plan process for implementation where resources are available.

The approval of the Environmental Levy in 2005 as an ongoing permanent revenue stream for environmental management projects has delivered a means to advance the many initiatives recommended in this and future SoE reports. This important tool needs to

be developed and used to the maximum extent possible to support and implement environmental management and improvement initiatives.