BEGA VALLEY SHIRE COUNCIL

State of the environment report 2009 / 2010

A supplementary report

BVSC

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State of the Environment report 2009 / 2010
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Contents

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. State of the Environment Reporting remains the best available mechanism to review and evaluate Council's 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 have become more important in the community. Council's main efforts with respect the State of the Environment reporting regime remain with the regional SoE report that has been prepared in conjunction with the ACT Government and the Councils of the ACT Region. The last comprehensive SoE was produced in 2008 and the 2009 Supplementary Report was also produced at a regional level.

This 2009 / 2010 SoE report has been prepared in accordance with Section 428 of the Local Government Act 1993 and Clause 221 of the Local Government (General) Regulation 2005. The report covers the required theme areas and utilises indicators for air quality, ecological communities, fire, native species, pest plants, riparian condition, contaminated sites, discharges to waters, land degradation, landuse, surface water quality, drinking water quality, hazardous and solid waste, dumping, recycling, heritage, noise, and water use / demand management. These indicators have been identified from the comprehensive SoER's.

This SoE will be the last in the current format as future reports will need to reflect the changes required with the Integrated Reporting format adopted in NSW. It is likely that data collection across some of these indicators will need to be modified and improved and that data collection for new indicators may also be required. Improvements will be required to ensure that Council is in a strong position in regard how indicator information is collected and managed. This modification will be required to ensure that the monitoring and evaluation of indicator data will allow for meaningful reporting on the environmental objectives that are identified as part of the forthcoming Community Strategic Plan.

This supplementary report also highlights a number of 'snapshots' that depict particular areas and issues of interest to our community.

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. The 2000, 2004, 2008 and 2009 SoE Reports continued this process and will be used as Council's baseline for reporting into the future.

All reports since 2000 are available on Council's webpage.

www.begavalley.nsw.gov.au/Environment/Environment_Reports/Environment_Reports.htm

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 previous comprehensive SoE reports. 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	Pressure Indicators	Response Indicators
Water supply	Population growth	Material recycling and reuse
Drinking water quality	Solid waste	Water recycling and reuse
Population growth	Pest plant species	Controlling pest plants
Vegetation diversity	Hazardous waste	
Water use	Discharges to water	

Atmosphere

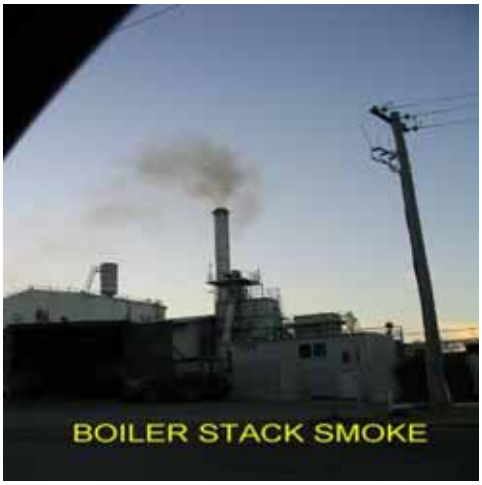
Air quality

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 usually 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 under 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 were discussed in the 2008 comprehensive SoE Report.



Assessment

Since the 2000 report air quality in the Shire has not generally been thought to have changed. Little specific information about air quality in the shire is known though there are obvious occasions where air quality may be impacted through activities such as road transport and preventative burning. Since the impact of bushfires in previous summers 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. Industrial sources remain relatively unchanged since the 2004 report and larger industries such as Bega Cheese remain regulated by the Department of Environment, Climate Change and Water.

Implications

It is likely that there is little impact on human health in the Shire owing to air quality but without data potential impacts 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.

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 SoE report.

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 SoE report. The emissions of greenhouse gases in the Shire are not measured though community awareness in the Shire has increased markedly.

Implications

The implications of climate change are enormous. Government involvement is required and has recently gathered momentum. Council's long term planning has moved to address this through risk management initiatives across its own operations and through reviews of planning controls.

Recommendations

- Complete coastal hazard studies for the Shire.
- Finalise the baseline study of Council's energy and fuel consumption through the Planet Footprint Project.

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.

Assessment

ABS Regional Population Growth statistics based on the 2006 Census show that the resident population in the Shire (2009) is 33,481. This is an increase of 380 from 2008 and an increase of 1004 since the 2006 Census (population in 2006 – 32,477).

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 SoE report also has very detailed discussion of the baseline indicators relevant to this issue.
www.begavalley.nsw.gov.au/Environment/Environment_Reports/Environment_Reports.htm

Implications

Population growth remains one of the main drivers in regard impact on the environment. One of the most obvious areas where the pressure of population growth is evident is in the provision of infrastructure and other servises.

Indicators

Refer to the 2000 and 2004 SoE report.

Infrastructure and services

Background

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

Assessment

Water Supply and Sewerage Management:

Water supply stabilised during this reporting period was varied and with the continuing dry period the trigger for water restrictions was reached in December 2009 in the southern part of the Shire with Yellow Pinch Dam reaching below 65%. Water restriction remained in place for 82 days. Combined dam fullness for Yellow Pinch Dam and Ben Boyd is shown below.

BVSC 2009 / 2010 - Dam Fullness (%) – Ben Boyd and Yellow Pinch Dams (combined)											
July	Aug	Sept	October	November	December	January	February	March	April	May	June
79.66	78.40	76.56	74.66	72.83	70.01	66.14	73.65	81.94	81.58	80.08	83.39

Drinking water quality provided in the reticulated supplies for the reporting period remained of an excellent quality. 509 separate microbiological samples were taken to determine water quality and 100% met the Australian Drinking Water Guideline requirements. 38 chemical samples were collected for analysis across the supply network and all except for iron and aluminium met the criteria 100% of the time. 5 results for iron and 2 results for aluminium marginally exceeded the relevant guideline though for aesthetic criteria.

Works on addressing the water supply issues in the southern part of the Shire commenced in early 2010 with the construction of the Bega to Yellow Pinch Water Transfer Pipeline.

The main objectives of this project are:

- To improve the water supply security of the existing Tantawangalo-Kiah water supply system that supplies water to the urban areas in the south of the Bega Valley Shire including Candelo, Wolumla, Merimbula, Tura Beach, Pambula, Pambula Beach and Eden.
- To lessen extraction of water from Tantawangalo Creek and the Kiah Borefield during low stream flows by connecting a new source of water to the system with capacity to extract water during higher, less environmentally sensitive stream flows at Bega. Wolumla, Merimbula, Tura Beach, Pambula, Pambula Beach and Eden.
- To enhance operational flexibility in the supply of water from the sources and dams to customers.

Further information regarding the project will be included in the next State of Environment Report and can also be found at the following link.

http://www.begavalley.nsw.gov.au/Environment/Water_Sewerage/bega-yellow_pipeline/pipeline.htm

On-site Sewage Management:

The positive impact on the on-site sewage management program through the Bega Valley Sewerage project has continued during this reporting period. There were 5,246 current approvals to operate an OSM system in the Shire at the end of this reporting period. 872 properties have now been removed from the program as result of the small village sewerage schemes, 4% (37) were still to connect as at 30 June 2010.

Since the introduction of critical-risk category in 2008 the breakdown by risk category is: 71% (3,769) low-risk, 22% (1,123) high-risk and 7% (354) critical-risk. Just 3% (169) of OSM systems were identified as requiring some form of repair or replacement over the last two years. Of these, seven systems are likely to lead to legal enforcement to get the works undertaken.

The bulk of works required related to absorption trench replacement as a result of either damage by vehicles/stock or that they had simply passed their use by date. (Life expectancy of absorption trenches varies depending of many factors including amount of usage, soil type and characteristics of effluent being disposed).

The other main area of repair is defective or non existent irrigation systems and lack of servicing of aerated wastewater treatment (AWT) systems. NSW Health advises that this is consistent with the experience of other councils in the southern area of NSW.

The majority of home owners and operators have been willing to readily comply with the advice or directions they have been given and there is a general acceptance in the community that the regulation of OSM is in the best interests of all.

Compared to the previous report, the majority of the sites that failed inspection are now low-risk, whereas previously the majority had the potential to provide the greatest risk to our environment. 81% (137) of current upgrades are now low-risk sites with 12% (20) on high-risk sites and 7% (12) on critical-risk sites.

The program has increased the community's awareness of the need to maintain and operate OSM systems to improve environmental health outcomes. The results over the reporting period indicate a significant decline in systems that fail to meet operational requirements of the legislation.

In 2008 Council resolved to introduce a rates based administration charge. This charge of $20 is levied on an annual basis to all properties that have OSM systems. These funds are utilised to offset the cost of administration. The funding and ongoing implementation of the OSM program has been delivering improved public health and environmental outcomes.

Solid Waste Management:

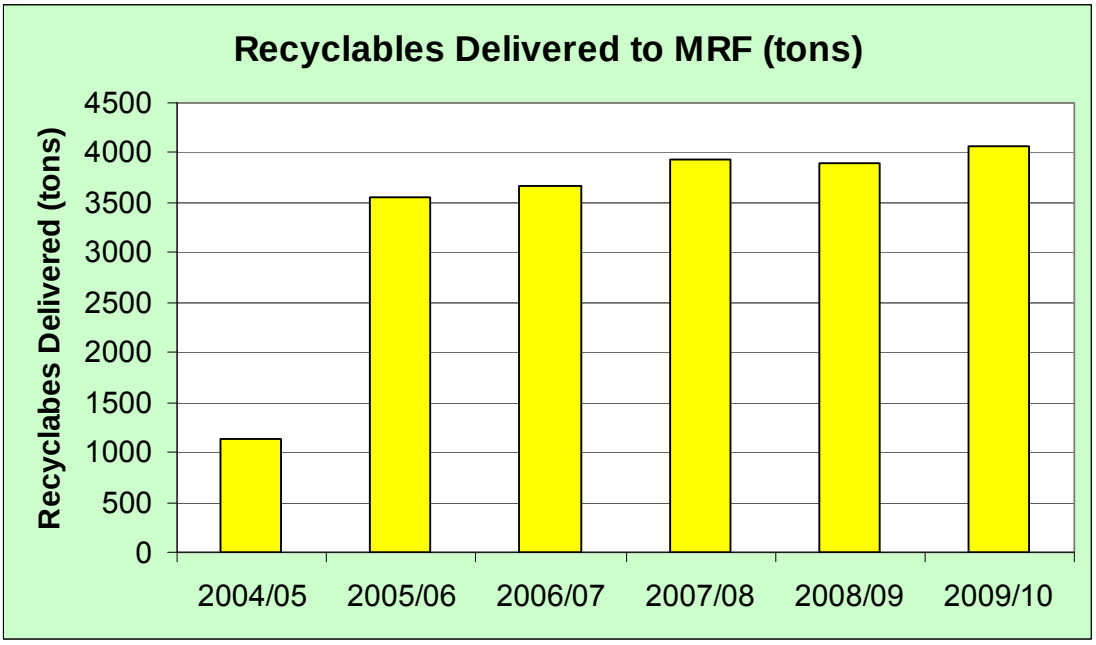
Waste management continued to be well resourced during the reporting period and steady progress on the implementation of the 2020 Vision on Waste occurred.

The following tables detail the available date regarding waste management in the Shire for the reporting period and also allow for some comparison with previous years. Previous State of Environment report also provide additional details regarding waste management data and trends.

Waste to landfill (tonnes)					
	2004-05	**2005-06**	**2006-07**	**2007-08**	**2009-10**
Commercial & industrial	192.75	8852.6	2557	4180	4152
Building & demolition	4747	Included above	1600	1726	1378
Domestic collection	1165	5147.4	8812	15766	13976
Private delivery	Not available	Inc above	Inc above	Inc above	Inc above
- Total household*	1165	5147.4	8812	15766	13976
Total	**6104.75**	**13,999.60**	**12,969.00**	**21,672**	**19505**

(*domestic collection plus private delivery)

The below table details recyclables that have been delivered to the Materials recovery Facility in Moruya. For the current reporting period over 4,000 tonnes were diverted from landfills for recycling. This is the highest mass recorded for Bega Valley Shire Council since recycling commenced.

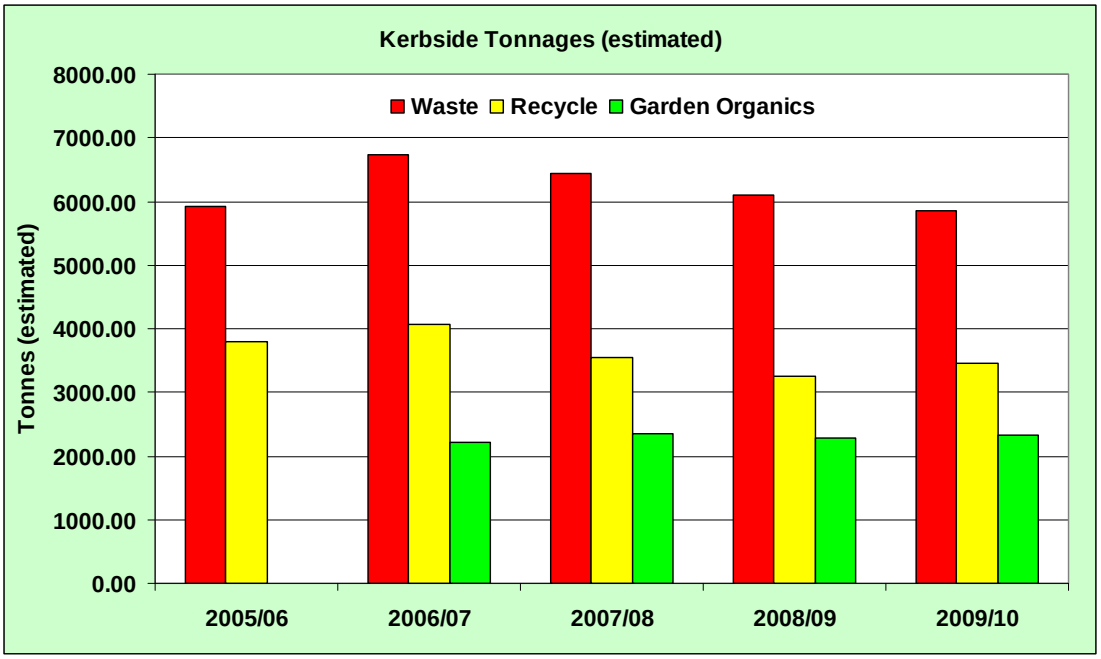


The below table provides data on resource recovery by type or waste stream in tonnes. Trends are unfortunately hard to detect due to the inconsistent data collection though it is very apparent that garden organic collection continues to grow and have a large positive impact on the volume of material being disposed of at landfill.

Resource recovery by type / stream, tonnes

<table>
<tr><th></th><th>2004-05</th><th>2005-06</th><th>2006-07</th><th>2007-08</th><th>2009-10</th></tr>
<tr><td>Paper</td><td rowspan="8">Data is not available for this reporting year owing to change in waste management.</td><td colspan="3" rowspan="5">Please contact Council’s Waste Management Section for this data. It relates to the changed kerbside collection contract (2005 onwards)</td><td>15644 T</td></tr>
<tr><td>Glass</td><td>1709 T</td></tr>
<tr><td>Plastic</td><td>295 T</td></tr>
<tr><td>Liquid paper board</td><td>Not available</td></tr>
<tr><td>Aluminium</td><td>56 T</td></tr>
<tr><td>Steel cans</td><td>125 T</td></tr>
<tr><td>Garden waste/compost</td><td>2190</td><td>2214.9</td><td>2294</td><td>3,135 T</td></tr>
<tr><td>Demolition</td><td></td><td></td><td></td><td>Not available</td></tr>
<tr><td>Metals (ferrous)</td><td>1408T</td><td>800T</td><td>Not available</td><td>500T</td><td>796.25 T</td></tr>
<tr><td>Cooking oil and fat</td><td colspan="3" rowspan="7">Data is not available for these reporting years owing to change in waste management data recording.</td><td></td><td>Not available</td></tr>
<tr><td>Clothing</td><td></td><td>Not available</td></tr>
<tr><td>Salvage and reuse</td><td>2.5T</td><td>243.64 T</td></tr>
<tr><td>Motor oil</td><td>3000L</td><td>8.08 T</td></tr>
<tr><td>Tyres, (Unit)</td><td>243</td><td>Not available</td></tr>
<tr><td>Acid Lead Batteries, (tonnes)</td><td>1.0T</td><td>Not available</td></tr>
</table>

The below table shows kerbside waste, recycling and garden organic tonnages. These figures are estimates based on collection volumes as there are still no weighbridges at the BVSC landfills.



Household chemicals were again collected during the reporting period at Bega, Bermagui, and Pambula. The table below provides details. All chemicals collected were disposed of at DECCW approved facilities outside of the Shire.

Household Chemical Collection 2009 / 2010

Waste No	Waste Type	Bermagui Net Wt (Kg)	Pambula Net Wt (Kg)	Bega Net Wt (Kg)
1	Acid	9.9	77	46
2	Alkali	2	22.2	33.3
3	Arsenic	0	1.5	1
4	Asbestos			
5	Automotive products	23.5	64	29
6	Batt - lead acid	939	1217	1074.5
7	Batt - nicad	3	2.4	1.6
8	Batt - Nihyd	1.75	1.75	1.75
9	Batt - Normal	7	19.25	16.25

10	Cyanide			
11	Fire Ext - halon	2.5		15.5
12	Fire Ext - other	107.1	13	
13	Flares/Ammunition	2.75	7.3	3.7
14	Fluorescent tubes	1.5	22.5	10.5
15	Gas Cylinder - propane	215.7	218	218
16	Gas Cylinder - other	0		1.5
17	General household chemicals	31.5	25.5	58.5
18	Halogenated Solvents	0	3.1	2.4
19	Heavy Metals	36.5	131.25	6.25
20	Hydrocarbons and fuels	60.69	233.04	58.26
21	Inert liquids			
22	Inert solid	76.8	78	249
23	Smoke detectors	0.5	7.2	1.8
24	Oil (>61°C)	372.87	797.71	906.49
25	Organoperoxides	0.25	1	
26	Oxidising agents	2.25	7.5	4
27	Paint - water	272.96	1764.87	675.23
28	Paint - Oil	602.55	1015.75	667.05
29	Paint - metal	10.5		5
30	Paint - other		6.65	2.85
31	PCB material			
32	Pesticide - general liquid	17.55	42.75	214.05
33	Pesticide - general solid	10	23.4	50.6
34	Pesticide - organochlorine liquid	0	12.5	15.5
35	Pesticide - organochlorine solid			1.5
36	Reactives	0.5	0.5	63.5
37	Toxics	19.2	18.8	28.2
38	Pharmaceuticals	5.5	19.4	15.6

39	Photographic chemicals	6.6	60	
40	Unknown Liquid	137.58	47.15	137.95
41	Unknown Solid	0	1.2	4.8
42	Aerosols	22	26.75	47.25
43	Other			
Total		**3002.0**	**5989.92**	**4668.38**
	TOTAL CHEMICALS (kg)	13,660.3		

Dumping of waste in the Shire continues though data collection on this aspect of waste management remains a problem as previously reported. There were only 40 reports of dumping during the reporting period with 62.5% occurring adjacent to Council Waste Management facilities.

Implications

Strategic Business Plans remain current for both Water and Sewerage management. The Sewer Project will continue to have a very large positive environmental impact. Drinking water quality provided by Council remains at an excellent.

During the reporting period there were 117 unlicensed sewer discharges. These discharges are typically associated with wet weather events and minor blockages such as surcharging manholes. It has not been possible to estimate the volume involved however. All the discharges were investigated and major events were reported to the Department of Environment, Climate Change and Water as required.

The OSM program provides an effective mechanism to ensure OSM systems operate in accordance with health and environmental performance standards. Approximately 3% of premises inspected during this reporting period were required to augment their OSM systems.

The disposal of waste to landfill has reduced owing to the kerbside recyclables collection and the increase in kerbside garden organics collection. Mulch produced from this resource is popular though there appears to have been an increase in dumping of garden organics in the Shire. This also has the potential to impact on weed management with garden escapees establishing in areas of Council's reserve holdings.

Household chemical collections were well supported during the reporting period and continue to reduce the mass of unwanted chemicals being disposed of to landfill.

Whilst waste collection and recycling has progressed more information on the volume of waste produced per capita is required to ensure sustainable management. Data on dumping reported in the Shire is of concern owing to the extent of dumping around and adjacent to Council waste management facilities. 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.

Recommendations

- 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.
- Expand waste minimisation education and awareness programs to include changing community member's consumption behaviour.
- Continue to provide household hazardous chemical collections across the Shire on at least an annual basis.

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.

The long-term survival of biodiversity - i.e. native species and ecological communities - depends on effective protection and management which are based on reliable data. High quality research and monitoring, supported by appropriate legislation to enable resource allocation for the preparation and implementation of protection and recovery plans, is fundamental to the conservation of biodiversity.

Effective protection and management of threatened species and ecological communities is essential to their long-term survival. Changes in landuse, 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.

Assessment

Progress towards better management and understanding of biodiversity conservation in Bega Valley Shire continued during the reporting period. Projects using incentive programs for freehold land continued under the Southern Rivers Catchment Management Authority's Voluntary Biological Diversity Conservation Strategy and the Bega Cheese Environmental Management System Project. Council is actively involved in these projects and provides significant grant funded expertise through the Vegetation Recovery Project.

Weed management continues to consume resources and weeds remain a large threat to the protection of biodiversity. Weeds have emerged in areas where they have not been previously found including an outbreak of Chilean Needle Grass north of Bega. African lovegrass has been found in areas where it has not previously been found and Serrated Tussock has increased it's coverage in the Shire by an estimated 250 hectares in rare and isolated infestations. This has been assisted firstly by the prevailing dry conditions and has been exacerbated by the break in the wetaher and the great increase in seed germination.

Bitou Bush (Chrysanthemoides monilifera), blackberry and Broom species infestations have remained steady.

Fireweed infestations have continued to increase rapidly across the Shire especially towards the end of the reporting condition with very favourable conditions for seed germination. 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. Newly infested areas are significant despite having relatively low-density infestations. They are cause for concern as current management practices make control of Fireweed difficult once it becomes established.

Implications

The emergence of weeds across the Shire during this reporting period has the potential to have a significant impact on productive agricultural lands as well as biodiversity. Council weeds officers continue to regulate noxious weeds on Council lands and roadways as well as on private property though funding provided through Industry and Investment NSW is being targeted at a regional level to more strongly focus on new weeds and emerging weeds that are at a rare and isolated density.

Council's weed management activities include the following initiatives:

- Property inspections
- Issue of Weed Control Notices

- Roadside weed management
- Community education programs
- Noxious Weed Declarations
- Community advice and information

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 is responsive though funding changes with Industry and Investment NSW will mean that funding for endemic or large scale weeds infestations will be difficult to secure. Continued work with the Noxious Weeds Advisory Group and partnership with the Southern Rivers Catchment management Authority and the Southern Council's Group will more than previously be critical to success

Recommendations

- Increase resources for biodiversity assessment and protection activities.
- Continue to resource the biodiversity education program for staff.
- Develop and implement a Threatened Species Guide for staff and the wider community including the development industry.
- Investigate the integration of Council's weed management functions with a wider, more holistic, vegetation management approach and explore efficiencies that this may lead to.
- Resource the mapping and identification of all pest plant distribution and control areas.
- Continue to explore options for the better management of Fireweed including further advocacy 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 landuses 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 landuse, or simply not developing some areas of land identified as having a high risk of developing dryland salinity for instance.

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 baseline 2000, 2004 and 2008 SoE reports two major land uses in Bega Valley Shire are timber production and bio-diversity 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 and 2008 comprehensive SoE reports.

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.

Land contamination remains relatively unchanged since the 2008 report. Works on the investigation and remediation of the BP and Mobil sites at Eden, as well as a number of ex-service station sites commenced during this reporting period.

Acid sulphate soils remain unchanged from previous reports.

Implications

The implications of sedimentation and erosion, acid sulphate soils, and land contamination remain of concern. Changes since the 2004 and 2008 SoE reports have not been substantial though a review of Council's Soil and Water Management Policy was commenced during the reporting period.

Recommendations

- Review the Erosion and Sediment Control Policy and develop and implement a new Policy and Guidelines based on the, "NSW Soils and Construction - Managing Urban Stormwater", Volume 1 & 2 (the Blue Book).(DECCW 2004 & 2008)

Land use and management

Background

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

Resolving conflicts over landuse 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

Development of the comprehensive Local Environment Plan and Development Control Plan have continued throughout the reporting period. It is likely the new plans will be exhibited during early 2012 and impacts will be reported in the next State of Environment Report.

There have not been substantial changes to the heritage registers since the 2008 report. Funding for heritage works also remained relatively unchanged since that report.

Implications

A better understanding of the balance between landuse constraints and current landuse practices in the Shire is required especially in the coastal zone where development pressures are growing rapidly.

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 landuse 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

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 very clearly.

Estuary management now includes plans in place or in development for 6 estuaries in the Shire. Work on the development of an estuary management plan for Pambula Lake commenced during the reporting period. The Estuary Management Plan for the bega River was not able to be progressed during the last reporting period though it will be finalised during 2012.

Treated effluent re-use continued to be a key option for effluent from Council's Sewerage Treatment Plants. 759 mega litres (ML) of treated effluent was used on local golf courses and farms during this reporting period. Further information on re-use strategies will be reported in the next SoE report when re-use agreements and contracts have been finalised.

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 a very high standard.

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. Council staff though do undertake significant water quality monitoring particularly in respect of understanding the impacts of r-use schemes and also in response to community concerns or complaints.

The implications of poor management of our estuaries can be significant. The role of Council's Coastal Planning and Management Committee, which was established during this reporting period, will become critical. This Committee has representatives of all relevant State agencies as well as community and industry groups. Council's efforts in regard estuary management have been strengthened during the reporting period and this has seen grant successes in regard coastal hazard assessment, estuary entrance management planning and coastal vegetation rehabilitation projects. The Coastal hazard assessment project has in particular large implication in regard the sustainable management of the coastal areas in the Shire.

Recommendations

- 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?

Council, as part of the Australian Capital Region (ACR), has utilised experiences with the preceding 4 comprehensive SoE reports to develop a possible direction for future environmental reporting as part of the integrated reporting requirements. The following steps towards sustainability were developed with the ACR group of Council's in late 2009 and early 2010.

Sustainability Steps, Themes and Indicators

In the *Sustainability Steps*, six themes, three driving forces and 32 specific environmental indicators were identified for the local councils in the ACR (see Table below). Driving forces, such as population growth, landuse change, and climate variability, influence overall levels of production and consumption, which in turn exert pressures on the environment. The 32 indicators variously address environmental condition (or state), key pressures, and responses.

These *Sustainability Steps*, and especially the themes and indicators presented below are likely to be applicable to future state of environment reporting though Council and the community may varying emphasis to the themes or indicators during the community strategic planning process.

Sustainability Steps SoE framework

Driving Forces	
Population **Landuse Change** **Weather and Climate**	
Environmental Themes and Indicators	
1. Water Management **1a. Water Resources and Demand** 1.1 Water availability and supply (including groundwater) 1.2 Water demand 1.3 Drinking water quality 1.4 Demand management responses **1.b Water Quality** 1.5 Discharge to waters 1.6 Surface water quality 1.7 Algal blooms (if applicable) 1.8 Riparian vegetation 1.9 Managing water quality	**2. Resource Consumption and Management** 2.1 Energy use 2.2 Energy efficiency 2.3 Solid waste generation 2.4 Waste management 2.5 Greenhouse gas emissions 2.6 Transport infrastructure (physical)
3. Climate Adaptation 3.1 Climate preparedness and adaptation	**4. Land Resources** 4.1 Land capability

responses	4.2 Land degradation 4.3 Potential for land erosion 4.4 Land management responses
5. Biodiversity (including Vegetation) Management) 5.1 Native species 5.2 Vegetation extent 5.3 Pest plant control 5.4 Pest animal control 5.5 Fire management 5.6 Conservation management responses	**6. Our Community** 6.1 Engagement and events 6.2 Environmental attitudes 6.3 Heritage management 6.4 Air quality (if applicable) 6.5 Noise (if applicable) 6.6 Transport accessibility

It is recommended that the *Sustainability Steps* be used by Council to inform engagement with local communities on future SoE reporting during the development of the new Community Strategic Plans.

Guidance on SoE Implementation

A common challenge with SoE reporting is how best to use a SoE report and the information in it to maximise the overall investment in SoE reporting. At times, SoE reporting is undertaken as a stand-alone process where reports are completed and distributed, but there is limited direct impact or influence on internal systems and decision-making. However, as SoE reporting identifies key environmental problems and the effectiveness of responses, SoE reporting should be strongly linked into overall local council planning, management and reporting.

There is considerable potential to integrate SoE reporting into many local council functions and activities including:

- Strategic and operational planning – an anticipated outcome of the NSW planning and reporting reform, is a more integrated planning and reporting system. For this to occur, there will need to be clear linkages between environmental objectives in the new Community Strategic Plans, and environmental themes and indicators as reported in the SoE section of future Annual Reports.
- Long term financial planning and annual budgeting – key SoE themes and indicators, and critical environmental areas can be considered during long term financial planning and annual budgeting processes. SoE information can also be considered in future capital works, operational and project funding and decision-making.
- Project and program design, implementation and review – key SoE themes and indicators can be used to assist with prioritising and designing environmental projects and programs. If a SoE report highlights that there is under or over investment in an environmental problem, then priorities can be revised and projects or programs redesigned.
- Risk management frameworks – there is potential to integrate environmental risks identified through the SoE reporting process into broader risk management systems. This could help ensure that environmental risks are considered beyond the SoE reporting process, and that all areas of council will assess and address these risks in a methodical manner along with other risks.
- Decision-making, monitoring and reporting processes – key SoE themes and indicators could be incorporated into council decision-making processes.

Depending on the current format of council papers, an additional section could be added to consider SoE implications in relevant council papers and decisions.

- Environmental education programs – information in the SoE report could be used to support environmental education programs and initiatives, for example, by using SoE summaries and snapshots as the basis for establishing or building on local school and community environmental education programs. There is also potential to partner with existing education initiatives, such as the Australian Sustainable Schools Initiative (AuSSI) national program.
- Media and communications – opportunities to use SoE reports to enhance media and communications include holding briefings and information sessions for Councillors, staff and the community when a SoE report is released and at regular intervals, and promoting the release of a SoE report through local media including in local newspapers and radio stations – potentially with a regular timeslot or a monthly feature. (From: ACR Sustainability Steps - A Pathway to State of the Environment Reporting", 2009)

A planned approach for using a SoE report is good practice. Council will benefit from preparing a short SoE action plan identifying three to four key actions to be completed through the next year. Progress against this action plan could then be reviewed at the end of each period, and to plan the following years actions.

It is recommended that this approach be taken into the Community Strategic Planning process.

The approval of the Environmental Levy in 2005 as an ongoing permanent and restricted 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 initiatives. This is especially important in areas where the Environment Levy can be used to leverage Grant funds.

It is recommended that Environmental Levy Policy and guideline documents be developed and implemented.