

ENVIRONMENT LEVY ANNUAL REPORT 2008/2009

EXECUTIVE SUMMARY

This report provides an overview of budget, implementation and expenditure progress of the Environment Levy for the 2008/09 financial year and more broadly reports on overall expenditure over the life of the Environment Levy. It also provides evaluation of Environment Levy funded projects against specific project based indicators.

Details are reported for the overall Environment Levy and are further broken down by program and project. The program levels being:

- Biodiversity Program
- Water Cycle Management Program
- Lagoon Conservation & Remediation Program
- Coastline Management Program
- Education for Sustainability Program
- Climate Change Program.

The 2008/09 Environment Levy (plus grants) opening revised budget was \$2,665,840. This figure incorporates \$1,216,051 of received income from 2007/08 carry forwards and \$1,449,790 in anticipated income in 2008/09. This figure is used for budgeting purposes only given that not all anticipated income is necessarily received during the period.

During 2008/09, Council expended \$859,175 of Environment Levy funds on Environment Levy Projects.

Based on received income minus expenditure, the total cash position of the Environment Levy at the end of 2008/09 was: \$1,389,783. This will be carried forward to 2009/10.

Expenditure over the past 12 years has generally been above the annual average Environment Levy injection, due to carry forwards and grant income. Overall expenditure reflects the Environment Levy criteria - priority areas, being urban bushland and water quality.

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1. Introduction

This report provides an overview of budget, implementation and expenditure progress of the Environment Levy for the 2008/09 financial year and reports more broadly on overall expenditure since the Environment Levy's inception. It also provides evaluation of specific Environment Levy funded projects against project based indicators.

The scope of this report for 2008/09 includes those projects that received 2008/09 Environment Levy allocations, projects still underway during 2008/09 that received Environment Levy allocations in previous years and grant funding (note: only grant funds associated with Environment Levy funded projects and therefore held with the Environment Levy are included in this report).

Details are reported for the overall Environment Levy and are further broken down by program and project. A Working Group of the Manly Community Environment Committee set the parameters for which each project is to be reported on, which is reflected in the template provided to all Levy project managers for reporting. These reports are provided in Sections 4 - 9 below, under the following program headings:

- Biodiversity Program
- Water Cycle Management Program
- Lagoon Conservation & Remediation Program
- Coastline Management Program
- Education for Sustainability Program
- Climate Change Program.

All projects funded under the Environment Levy are assessed against the following criteria:

- Priority issues are Urban Bushland and Water Quality.
- Selection of projects is to be consistent with the objectives of the Manly Sustainability Strategy.
- Emphasis on visible works with investigation, design, construction, supervision, linking monitoring and education with preference for upstream source and at-source management.
- Up to 10% of the levy revenue allocated to ongoing maintenance of new levy capital works projects annually.

2. 2008/09 Budget and Expenditure Summary

A detailed, audited, account of the Environment Levy activities for 2008/09 is provided in Appendix A – Statement of Funds. A brief summary is provided below.

The 2008/09 Environment Levy (plus associated grants) opening revised budget was \$2,665,840. This figure represents both received income (ie: cash values) and anticipated income (ie: non-cash values) and is therefore only useful for budgeting purposes as it does not represent the actual cash position of the Environment Levy during this period. It incorporates \$1,216,051 of received income from 2007/08 carry forwards and \$1,449,790 in anticipated income (including budgeted; grants, Environment Levy annual injection and interest).

During 2008/09, Council expended \$859,175 of Environment Levy funds on Environment Levy projects.

Based on received income minus expenditure, the total cash position of the Environment Levy at the end of 2008/09 was: \$1,389,783. This will be carried forward to 2009/10.

Table 1 below identifies current Environment Levy funded projects, their 2008/09 budgets, 2008/09 allocations and expenditure.

Table 1: Environment Levy Project Budgets, Allocations and Expenditure for the 2008/09 Financial Year

Project	TOTAL 08/09 BUDGET*	08/09 ALLOCATION	08/09 EXPENDITURE	Cash & Non- Cash VARIANCE
Bushland Restoration Program	\$200,000	\$180,000	\$182,592	\$17,408
Burnt Bridge Creek Corridor Restoration Program	\$75,000	\$66,000	\$58,099	\$16,901
Implementation of Little Penguin Recovery Program	\$30,000	\$17,000	\$14,905	\$15,095
Long-nosed Bandicoot Program	\$40,000	\$28,000	\$0	\$40,000
Biodiversity Conservation Strategy & Planning	\$35,000	\$0	\$323	\$34,677
Erosion & Sediment Control at Tania Park	\$25,000	\$0	\$0	\$25,000
Sustainable Water Resources and Water Savings Action Plan	\$100,000	\$64,000	\$27,963#	\$72,037#
Water Cycle Monitoring and Integrated Decision Support Tool	\$60,000	\$28,000	\$31,764	\$28,236
Water Cycle Management (0755 + 0002)	\$73,000	\$73,000	\$73,000	\$0
Groundwater & greywater re-use trial	\$44,000	\$44,000	\$412	\$43,588
GPT and Alternate Water Source Maintenance	\$52,000	\$49,000	\$37,704	\$14,296
Implementation of the Manly Lagoon and Catchment Integrated Management Strategy (742 + 924)	\$877,000	\$0	\$35,113	\$841,887
Preparation of LM Graham Masterplan	\$6,000	\$0	\$14	\$5,986
Manly Lagoon – Past, Present & Future	\$10,000	\$10,000	\$0	\$10,000
Coastal Environmental Projects & Clontarf/Bantry Bay Estuary Management Plan Implementation (0759 + 0002)	\$162,000	\$159,000	\$162,000	\$0
Coastal Hazard Remediation Stage 1	\$63,600	\$0	\$23,902	\$39,698
Coastal Hazard Remediation Stage 2	\$58,400	\$0	\$41,398	\$17,002
Manly Harbour CMP Implementation	\$63,740	\$0	\$0	\$63,740
Forty Baskets CMP/Landscape Masterplan implementation	\$42,500	\$0	\$32,130	\$10,370
Education for Sustainability Program (0967 + 0002)	\$100,000	\$100,000	\$60,902	\$39,098
Manly Ambassadors	\$6,000	\$1,000	\$1,366	\$4,634
Sustainable Catchments Education	\$15,000	\$15,000	\$0	\$15,000
Waste Education Trailer	\$15,000	\$0	\$0	\$15,000
Environmental History Museum	\$258,000	\$0	\$0	\$258,000
Manly Ocean Care Day 2008	\$18,000	\$18,000	\$11,362	\$6,638

Project	TOTAL 08/09 BUDGET*	08/09 ALLOCATION	08/09 EXPENDITURE	Cash & Non- Cash VARIANCE
MEC Cataloguing	\$2,600	\$0	\$0	\$2,600
Community Awareness of Environment Levy Projects	\$10,000	\$10,000	\$4,952	\$5,048
Climate Change Risk & Adaptation Project	\$74,000	\$0	\$59,276	\$14,724
Climate Change Icon Project	\$150,000	\$93,000	\$0	\$150,000
TOTAL	\$2,665,840		\$859,175	

^{*} As at start 08/09 year, includes both cash and non-cash funds.

Variance has not been totalled above as the variance amount includes both cash and non-cash figures (received funds and anticipated funds), so does not represent the cash position variance. The total variance differs from the cash variance largely due to rates not-collected, budgeted interest not realised and budgeted grants not received in actual cash.

[#] Includes \$880 expenditure that was journalled back to the account after the Statement of Funds was finalised. This will be rectified in 2009/10.

3. Environment Levy Budget and Expenditure Summary – Running Total

Figures 3.1 and 3.2 below provide a summary of overall Environment Levy expenditure since inception in 1997/98. Annual expenditure has generally been above the annual average Environment Levy injection, due to carry forwards and grant income. Overall expenditure reflects the Environment Levy criteria - priority areas, being urban bushland and water quality.

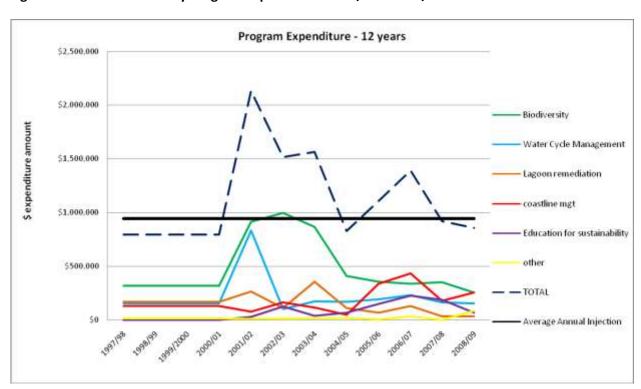
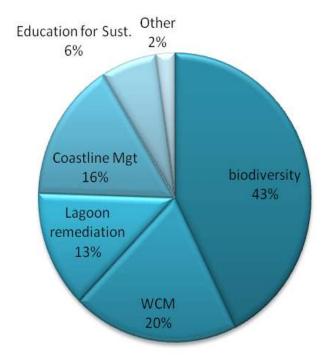


Figure 3.1: Environment Levy Program Expenditure: 1997/98 – 2008/09

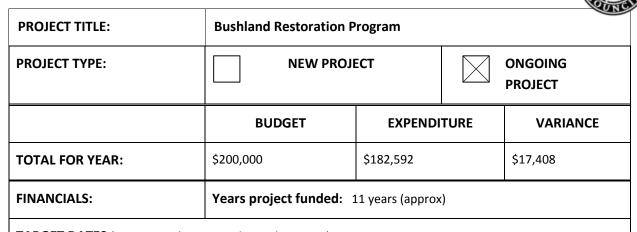
Figure 3.2: Environment Levy Program Expenditure: 1997/98 – 2008/09 Percentages



4. BIODIVERSITY PROGRAM

This section provides project specific reports relevant to the Biodiversity Program.

Environment Levy



TARGET DATES (commenced, estimated completion etc): Ongoing project.

BRIEF PROJECT DESCRIPTION:

This project was designed to protect and restore Council's bushland reserves. The primary focus of the project is to:

- undertake bush regeneration works
- protect and restore habitat values for flora and fauna species
- minimise soil erosion in bushland reserves
- protect bushland from the impact of stormwater runoff
- undertake bushfire fuel reduction works and burning for ecological restoration
- collect and propagate seed from local native species for revegetation works
- maintain walking tracks through bushland reserves
- rabbit control

OBJECTIVES of the project:	Result: were they achieved? explanation:		
To reinstate and protect native bushland vegetation communities by using current bushland restoration techniques	Yes, ongoing project has continued to reinstate and protect bushland. Several new areas have commenced restoration ensuring progress is made		
To reduce the prevalence of noxious weed species and their ability to spread	Yes, continued ongoing bush regeneration by Council staff and contractors has targeted noxious weeds.		
To improve flora and fauna habitat	Yes, ongoing bushland restoration has continued to improve the quality of bushland and habitat. There is increased sightings and evidence of fauna including Bandicoots and Echidna sightings. Residents have also reported increases in birdlife.		

To manage bushland areas to protect against the threat of bushfire	Yes, ongoing bushfire fuel reduction was undertaken during the reporting period.
To maintain aesthetics and provide quality open space for community use	Yes, ongoing bushland restoration is improving the aesthetics of the creek corridor.
INDICATORS for evaluation:	Statistic:
Bushland areas continue to be maintained in good condition	Increased extent of bushland restored
Bush regeneration continues to expand in each bushland reserve	Increased extent of bushland regeneration in the majority of sites under restoration. Contracted sites have either been increased in area, or works completed
Fuel loading is managed in bushland areas	Sites identified as having a bushfire risk have undergone fuel reduction works.
Walking tracks are maintained in a good safe condition	Walking tracks maintained on a weekly basis

Discussion: Council's Bush Regeneration staff and Bush Regeneration Contractors have continued improving the quality of bushland within Manly. Both staff and contractors have implemented a structured bush regeneration program with timing of visits sufficient to ensure weeds are targeted prior to seeding, and areas previously worked have been maintained. Council staff have also been undertaking routine inspections of walking tracks ensuring they are kept in a tidy and safe condition.

TBL ASSESSMENT:

This project is being undertaken with regards to the principles of triple bottom line reporting;

Environment: The aim of this program is to improve the environmental quality bushland within the Manly LGA. Environmental attributes being managed include native bushland, water quality, preventing the spread of weeds, managing gullies/watercourses and associated soil erosion issues, improving flora and fauna habitat etc

Social: This project has important social values. It is protecting and restoring bushland areas that are a community asset with recreational, scientific, and educational values.

Economic: This project has important economic values through the significant focus on weed control. Environmental and noxious weeds contribute a significant cost to society, impacting on human health, agricultural lands, urban areas, and the natural environment.

KEY OUTCOMES:

Bush regeneration contracts completed in September 2008 were extended to enable work momentum to
continue. This extension enabled the amount of each reserve under restoration to continue to expand, and
also enabled works to commence in new reserves.

The Manly Scenic Walkway contract comprised of 3 sites – Esplanade Park, Fisher Bay, and Tania Park. In 2008/09 financial year the works at Esplanade Park increased to incorporate an additional 481m² under restoration. The works at Fisher Bay were completed and handed over to Council's Bush Regeneration staff to maintain, and a new section near Ellery Punt Reserve commenced work under this contract. This site now sees an area of 3000m² under restoration. The work undertaken at Tania Park continued to be

maintained and additional 1,872m² of new area under restoration commenced.

The Seaforth Oval bushland restoration contract was also revised during the reporting period. Works commenced in a new section of bushland, and a section of works completed during the contract period was handed over to Council's bush regeneration staff for ongoing maintenance.

The Noxious Weeds Management Contract was also substantially revised during the reporting period due to the successful completion of works during the three year contract period. All of the sites managed under the contract are deemed to be completed and the sites are now at a manageable maintenance level. Council's staff have now take over this maintenance. New sites have now commenced under this extended contract to include Bantry Reserve, Woodland St Road Reserve, and Linkmead Avenue. This revision of works now sees an additional 4381m² of bushland undergoing noxious weed control and general site management.

This contracted bushland restoration works complements the restoration efforts undertaken by Council's Bush Regeneration staff working in the remainder of our bushland reserves to ensure that our reserves are well managed in a strategic manner.

- Environmental consultants completed a Red Crowned Toadlet Survey and Review of Environmental Factors
 to support Council's Bushfire fuel reduction program. The survey was undertaken at Wellings Reserve and
 Tania Park. These areas had previously been surveyed for the species in 2005. The survey indicated that the
 Red Crowned Toadlet population remains strong at Wellings Reserve demonstrating that our fuel reduction
 and ecological burning program in this reserve has been undertaken without impacting on the threatened
 species population.
 - The survey undertaken at Tania Park identified that Red Crowned Toadlets have now commenced colonizing the section of bushland that was burnt in 2006. This is encouraging and demonstrates that the small scale mosaic pattern of fuel reduction burning is having a positive effect on the species distribution.
- Council's three year contract with Harvest Seeds and Native Plants to propagate plants grown from local
 provenance seed was completed in 2008/09. During the final year of the contract 8,576 plants were
 planted. During the three years of the contract 32,492 native plants have been planted in the Manly LGA
 through Council revegetation works and native plants provided to local residents.
- Council's Rabbit control program was expanded in 2008/09. The Pindone baiting program continued at Seaforth Oval and Bantry Reserve. In response to community concerns about the extent of rabbit infestation at Little Manly Reserve and Shelly Beach these reserves were also added to the control program. Due to the presence of threatened species in these reserves control was undertaken by a combination of biological control and shooting. This combined approach has resulted in a significant reduction in rabbit abundance.
- Duffy's Forest Endangered Ecological Community restoration works commenced following the construction
 of a new access road into Seaforth Oval. Restoration works included undertaking soil translocation works to
 rehabilitate the old access road. Whilst it is early in the restoration process, regeneration from the
 translocated soil is encouraging with substantial native grasses, shrubs, and trees beginning to growing.
- During 2008/09 Council's contracted Arborist undertook substantial maintenance of trees within bushland
 reserves to ensure public safety. During the reporting period the reserves that tree maintenance has been
 undertaken includes the Manly Scenic Walkway, Heathcliff Reserve, Harbour View Reserve, Burnt Bridge
 Ck, Woodland St Road Reserve, Kangaroo Reserve, Munoora Road Reserve, Heaton Avenue, Seaforth Oval,
 and Wellings Reserve.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Management Plan 2007 2010: section 5.1 Environmental Protection.
- Sustainability Strategy (2006): Section 1.5, 1.6 & 1.7.
- Flora and Fauna of Manly Council's Bushland Reserves report

- The Burnt Bridge Creek Restoration Management Plan Action Plan (1998)
- Plan of Management for Seaforth Oval, Tania Park, and Keirle Park
- Little Manly and 40 Baskets Beach Coastline Management Plan
- Clontarf to Bantry Bay Estuary Management Plan.

STAFF INVOLVED:

Bushland Management Coordinator, Council Bush Regeneration Team, Bush Regeneration Contractors, Ecological consultants

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The last 12 months has seen a continuation and expansion of the bushland restoration works. The major successes over the year has seen three year bush regeneration contracts at MSW, Seaforth Oval, and Noxious weeds project expanded and substantially revised during the reporting period. These contracts have yielded excellent results, allowing sections to be handed over to Council for maintenance, and new areas to be targeted in this reporting period.

A Red Crowned Toadlet survey at Wellings Reserve and Tania Park has demonstrated that Council's fire management strategy and bush regeneration strategy has been implemented in a manner that has not impacted on the species, and has improved the environmental conditions for the species long term survival. Council's rabbit control program has continued to expand into new areas and utilising new techniques. This has resulted in a decrease in abundance, particularly at Little Manly Reserve Shelly Beach and Seaforth Oval. Bantry Reserve still remains problematic due to inadequate rabbit control undertaken on neighbouring property. Duffys Forest Endangered Ecological Community at Seaforth Oval has now been officially handed over to Council for long term management. A bushland restoration plan has been produced and implementation commenced. Council has committed to a 10 year restoration program to ensure this vegetation community is

Tree management in bushland reserves has been undertaken in numerous Council reserves to ensure public safety is managed.

Environment Levy

well managed.

PROJECT TITLE:	Burnt Bridge Creek Corridor Restoration Program			
PROJECT TYPE:	NEW PROJECT ONGOING PROJECT			
FINANCIALS:	Years project funded: 12 years			
	BUDGET EXPENDITURE		VARIANCE	
TOTAL FOR YEAR:	\$75,000	\$58,099		\$16,901

TARGET DATES (commenced, estimated completion etc): Ongoing project

BRIEF PROJECT DESCRIPTION:

Undertake Burnt Bridge Creek restoration works including:

- Continue primary restoration of Stage 3 works from Burnt Bridge Ck Deviation Overpass to Condamine Street
- Removal of Noxious weeds as directed by the Noxious Weeds Act 1993
- Continued support and development of four Bushcare groups working along the creek
- Increase the educational value of the creek and promoting Council's commitment to the restoration of the Burnt Bridge Creek Catchment.
- Expand and improve the condition of remnant bushland, which will provide a carbon sink within the LGA.

OBJECTIVES of the project:	Results: were they achieved? Explanation:
To reinstate and protect native bushland vegetation communities by using current bushland restoration techniques	Yes, ongoing project has continued to reinstate and protect bushland. Several new areas have commenced restoration ensuring progress is made
To reduce the prevalence of noxious weed species and their ability to spread	Yes, continued ongoing bush regeneration by Council staff and contractors have targeted noxious weeds.
To improve flora and fauna habitat	Yes, ongoing bushland restoration has continued to improve the quality of bushland and habitat. There is increased sightings and evidence of fauna including Bandicoots and echidna sightings. Residents have also reported increases in birdlife.
To maintain aesthetics and provide quality open space for community use	Yes, ongoing bushland restoration is improving the aesthetics of the creek corridor
To undertake creek banks restoration works	Yes, ongoing revegetation works have continued to stabilize creek banks.

INDICATORS:

Indicator	Statistic
Bushland areas continue to be maintained in good condition	Increased extent of bushland restored
Bush regeneration work continues to expand along the creek corridor	Increased extent of bushland restored
The extent of stabilised creek banks increase annually	Increased extent of creek bank restored
Walking tracks are maintained in a good safe condition	Walking tracks maintained on a weekly basis

Discussion:

Council's Bush Regeneration Contractors have continued undertaking the primary restoration of bushland in the stage 3 section of Burnt Bridge Ck. Council's staff have also continued the maintenance of stages 1 and 2.

The contracted works remain heavily focused on the maintenance of areas restored during the current bush regeneration contract, and the contract previous to this. It is also focusing significant time on primary weed control in preparation for revegetation.

TBL ASSESSMENT:

This project is being undertaken with regards to the principles of triple bottom line reporting;

Environment: This aim of this program is to improve the environmental quality of the Burnt Bridge Ck corridor. Environmental attributes being managed include native bushland, water quality, preventing the spread of weeds, managing creek bank and soil erosion, improving flora and fauna habitat etc

Social: This project has important social values. It is restoring a degraded creek corridor into a scenic community asset with recreational, scientific, and educational values.

Economic: This project has important economic values through the significant focus on weed control. Environmental and noxious weeds contribute a significant cost to society, impacting on human health, agricultural lands, urban areas, and the natural environment.

KEY OUTCOMES:

- The Burnt Bridge Ck Bush regeneration contract completed in September 2008 was extended to enable work momentum to continue. This extension enabled the amount of each reserve under restoration to continue to expand, and also enabled works to commence in new sections of the creek corridor.
 - The contract comprised of 4 sites Hope St, Witches Glen, Balgowlah Rd West, and Pitt St sections of creek. In 2008/09 financial year the works at the Hope St section increased to incorporate an additional $800m^2$ under restoration. The area of works at the Witches Glen section was increased to include an additional $374m^2$ of riparian vegetation under restoration. The work undertaken at Balgowlah Road West continued to be maintained and additional $260m^2$ of new area commenced restoration. Substantial primary weed control commenced the restoration process at the Pitt St section with an area of $1,609m^2$ now under restoration.
- Coral tree removals continued during the reporting period. During the financial year, the stage 3 section of
 creek targeted was along the creek banks adjacent to the Balgowlah Golf Course. Approximately 8 large
 clumps of Coral trees were removed.
- Revegetation was undertaken at multiple locations along the creek corridor. During the reporting period 1,000 native plants were planted to assist stabilizing creek banks and improve the riparian vegetation condition.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Management Plan 2007 2010: section 5.1 Environmental Protection
- Sustainability Strategy (2006): Section 1.5, 1.6 & 1.7.
- The Burnt Bridge Creek Restoration Management Plan Action Plan (1998)

STAFF INVOLVED

Bushland Management Coordinator

Council Bush Regeneration Team

Various contractors

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

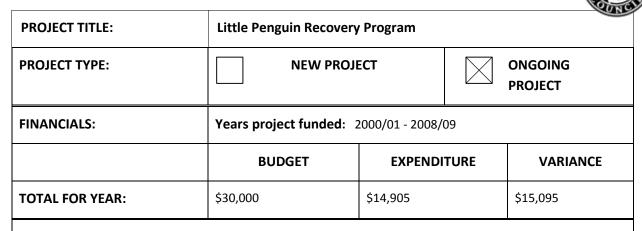
OVERALL EVALUATION AND CONCLUSION consider medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

This project has been ongoing for 12 years and has produced excellent results. The last 12 months has seen a continuation and expansion of the restoration works. The major successes over the reporting period has seen major weed control initiatives implemented, the removal of a large stand of Coral trees, and creek bank

revegetation. The three year bush regeneration contract that concluded during the previous reporting period was extended for another 12 months, and has yielded excellent results.

In 2008/09 Council was successful in securing nearly \$2Million of grant funding through the NSW Environment Trust Program to undertake an Integrated Restoration Project for Burnt Bridge Creek. This will include but not be limited to works that would otherwise come under this bid in the future. The grant funds will be spent over a period of 2 years and thus it is recommended that this bid be suspended for this period. This bid will need to be re-applied following that expenditure in order to maintain and progress further restoration works in this area.

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TARGET DATES (commenced, estimated completion etc):

Remaining funds intended to be expended during 2009/10

BRIEF PROJECT DESCRIPTION:

Council continued to participate, along with other stakeholders, in the Little Penguin Recovery Program during the 2008/09 Little Penguin breeding season.

Implementation of the Little Penguin Recovery Program is guided strategically by the adopted Little Penguin Recovery Plan but is flexible to meet seasonal requirements.

Projects and activities undertaken as part of this program have included; Recovery Team meetings, ongoing monitoring for the 08/09 breeding season, ranger patrols of key Little Penguin breeding areas, management of the Manly Wharf and Manly Pavilion / Federation Point breeding sites, training of Penguin Warden Volunteers, community education undertaken by the Wardens, review and conditioning of development applications within the Little Penguin habitat area, installation of nest boxes and micro-chipping of penguins to name a few.

EL Expenditure during 08/09 specifically included:

- Installation of permanent gated barriers and signage at Manly Wharf penguin breeding site.
- Funding of expert ecologist to monitor penguins at Federation Point during Manly Pavilion works.
- Implementation of agreed Recovery Team actions.

OBJECTIVES of the project:	Results: were they achieved? Explanation:
To inform and educate the community of the controls	Yes: education and regulation has been enhanced at
and conditions relating to protection of penguins and	the Manly Wharf site through the provision of the

their habitat, to encourage compliance and enforce	gated barriers.
regulations related to threatened species, emphasise	
the message and recruitment of the various penguin	
volunteer programs, and improve penguin habitat.	
INDICATORS:	
Indicator	Statistic
Gated barriers installed	Completed. Before and after photographic evidence recorded.
Feedback from the penguin wardens that the barriers	Positive feedback received in writing. One minor

addition requested for implementation in 09/10.

In summary the 2008/09 monitoring report (DECC) concludes that 2008/09 was a successful season particularly when compared to the natural variation of

return of breeding pairs to these sites.

Positive trend - seven fledglings from the Manly Wharf site were reported by the volunteer wardens. Also

Discussion: Expenditure on the Federation Point barriers is awaiting completion of the Manly Pavilion works as presently this area forms part of the construction site. This is likely to occur in 2009/10.

previous seasons.

TBL ASSESSMENT:

are effective.

Success of Penguin breeding season at Manly Wharf

Number of Little Penguins recorded - LGA

Social benefits of the project include education of the community and visitors about the endangered population of Little Penguins at Manly, which generates community and a sense of place.

Environmental benefits of the program include protection of the breeding Little Penguins at Manly Wharf and Federation Point/ Manly Pavilion breeding sites. The individuals form part of the endangered population.

Financial implications of the project include significant costs associated with specially designed barriers for the penguin protection. However, this is to compliment the cost-free service that the volunteer penguins wardens provide to the community and biodiversity in Manly.

KEY OUTCOMES:

- Penguin wardens equipped to educate the community about the Little Penguins and to help protect those penguins nesting at these breeding sites.
- Council meeting its legal obligations under Threatened Species Legislation.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Management Plan 2007 2010: Protection of threatened species habitat and populations. (PA 5.1.1)
- Manly Sustainability Strategy (2006): C 1.5.11 Implementation of Strategies outlined in the Endangered Population of Penguins at Manly Recovery Plan (NPWS)
- Little Penguin Recovery Plan (2000).

STAFF INVOLVED:

Sustainability Team Leader, Architect, Depot staff for construction, Rangers.

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

OVERALL EVALUATION AND CONCLUSION consider medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

DECC monitoring indicates that the Little Penguin Recovery Program is providing positive outcomes for the Little Penguin population. This is further supported through community feedback. It is recommended that this program continue with the annual allocations to be considered on an annual basis.

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PROJECT TITLE:	Long-nosed Bandicoot Recovery Program			
PROJECT TYPE:			ONGOING PROJECT	
FINANCIALS:	Years project funded: 2006/07, 2007/08, 2008/09			
	BUDGET	EXPENDI	TURE	VARIANCE
TOTAL FOR YEAR:	CF: \$12,000 2008/09: \$28,000	\$0		\$40,000

TARGET DATES (commenced, estimated completion etc): Funds will be added to 2009/10 funding to implement a community engagement, education, research and monitoring project.

BRIEF PROJECT DESCRIPTION:

This project concept has been developed through significant involvement in the recovery planning process for the Long-nosed Bandicoot. The project involves engaging a consultant ecologist, also experienced in community engagement, to prepare, implement and report on a community engagement project for the residential areas of 'Eastern Hill'. The project will educate residents about Long-nosed Bandicoots and how they can help protect them through appropriate property management and behaviour. It will also involve residents in the monitoring of Long-nosed Bandicoots in the residential areas providing much needed research data and also raising residents' awareness of this endangered population. The research data will be reported on in a scientific research paper and will be complimentary to existing data collected by the state Government in other areas of North Head.

The project will also include a review of the DCP provisions with respect to threatened species (in particular Long-nosed Bandicoots) and a review of the current Bandicoot conditions and management measures applied by Council to DAs.

OBJECTIVES of the project:	Result: were they achieved? explanation:
To meet a number of Council's responsibilities for;	Project yet to be commenced.
education, monitoring and research as required by	
the Draft Long-nosed Bandicoot Recovery Plan. Note:	

and the standard of the standa	
once this plan is adopted, it will be a legal requirement for the actions contained and assigned to Council to be implemented by Council.	
To develop, implement and report on a community; engagement, education, research and monitoring project with the overall outcome of assisting in the conservation of the Long-nosed Bandicoot population at North Head through the engagement, education and involvement of the community and rigorous scientific research and monitoring.	Project yet to be commenced.
To provide data to fill current gaps in determining the importance of the residential area to the conservation of the Long-nosed Bandicoot population.	Project yet to be commenced.
To be comparable with existing monitoring being undertaken by the Department of Environment and Climate Change (DECC) for the non-residential areas of North Head.	Project yet to be commenced.
To ensure the requirements of Council planning controls are appropriate to the scale of development proposed and to the recovery requirements of the Long-nosed Bandicoot population. Eg: whether the current requirement for submission of an assessment of significance is appropriate for all developments east of Ashburner Road.	Project yet to be commenced.
To identify additional measures that can be taken by Council, the community and property owners to support the ongoing conservation of the bandicoot population in the residential areas of North Head in the longer term.	Project yet to be commenced.
INDICATORS for evaluation:	Statistic:
Completion of a research paper identifying the relative importance of the residential areas to the recovery of the population	Project yet to be commenced.
Community up-take of and involvement in the project.	Project yet to be commenced.
Further indicators to be prepared by consultant ecologist at project inception.	Project yet to be commenced.
Discussion: Due to resourcing constraints this project h	as not yet commenced.

TBL ASSESSMENT:

Social benefits of the project include community building through their engagement with the project and others in their area. Community education is another social benefit.

Environmental benefits include further information to inform the recovery program and also better protection

for the Bandicoots within the residential areas as people learn how best to manage their properties.

Financial impacts are both costly (the cost of the project) and beneficial to the community. Positive financial implications may follow a review of Council's current requirements for threatened species assessments to accompany development applications and also a review of bandicoot conditions of consent – these are likely to more realistically reflect the requirements of Council and may save money for residents looking to lodge a DA.

KEY OUTCOMES:

Project not yet commenced. Anticipated outcomes include:

- Council meeting its legislative requirements under threatened species legislation and recovery program.
- Raised community awareness of the endangered population of Long-nosed Bandicoots at North Head, particularly for residents of 'Eastern Hill'.
- Research paper identifying how important the residential areas of 'Eastern Hill' are to the recovery of the population.
- Reviewed planning requirements for DAs in the threatened species areas.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Management Plan 2007-2010: Protection of threatened species habitat and populations. (PA 5.1.1)
- Manly Sustainability Strategy (2006): C1.5.7 The provision of consultants/specialised technical advice
 pertaining to biodiversity, threatened species, and geotechnical issues for assessment of development
 (Ongoing priority); and C1.7.12 Work with DEC to ensure protection of Manly's threatened species.
- <u>Long-nosed Bandicoot Recovery Program:</u> Council has responsibilities for research, monitoring, education and engagement under the draft Recovery Plan for the Endangered Population of Long-nosed bandicoots at North Head (October 2008).

STA			

Sustainability Team Leader

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No.

OVERALL EVALUATION AND CONCLUSION

Project yet to be commenced.

Environment Levy

				CONC
PROJECT TITLE:	Biodiversity Conservation Strategy & Planning			
PROJECT TYPE:			ONGOING PROJECT	
FINANCIALS:	Years project funded: 1 year			
	BUDGET	EXPENDI	TURE	VARIANCE
TOTAL FOR YEAR:	\$35,000 (Carry Forward)	\$323		\$34,677
TARGET DATES (commenced, estimated completion etc): This project has not been significantly				

commenced due to re-prioritisation of work. It is anticipated that it will be commenced in 2009/10.

BRIEF PROJECT DESCRIPTION:

The project involves the development of a Biodiversity Conservation Strategy for Manly LGA. The Strategy will involve the development of tools, management actions and planning guidelines to ensure the protection and sustainable management of flora, fauna, habitat, linkages and threatened species, as well as addressing threats to biodiversity. The Biodiversity Strategy will also pull together existing information and measures in place to manage biodiversity across Manly.

OBJECTIVES of the project:	Result: were they achieved? explanation:
To prepare a Biodiversity Conservation Strategy, including biodiversity mapping and identification of strategies and management actions aimed at maintaining and improving biodiversity within Manly.	Project not substantially commenced
INDICATORS for evaluation:	Statistic:
Completed Biodiversity Conservation Strategy adopted by Council.	Project not substantially commenced

Discussion:

Project not substantially commenced due to re-prioritisation of work and resourcing issues.

TBL ASSESSMENT:

Manly's Biodiversity has social, environmental and financial values. Through the development of Biodiversity Strategy for Manly, these values can be maintained and improved. While this will be at a financial and possibly a social cost, a TBL approach will be employed through the development of the plan to identify the most sustainable management actions and also through the implementation of the strategy.

KEY OUTCOMES:

- A Biodiversity Strategy for Manly, adopted by Council.
- Improved biodiversity management within Manly LGA.
- Identification of key biodiversity linkages within Manly and with adjacent areas.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly's Ethical Charter: Sustaining the environment We will act with care and caution towards the environment, protecting the biosphere, its biodiversity, and using its resources sustainably for present and future generations.
- Manly Management Plan (2007-2010): Key Initiatives for 2007 to 2010: Develop and implement Biodiversity Conservation Strategy
- Manly Sustainability Strategy (2006): C1.5.1 Complete a Biodiversity Strategy developed from the flora and fauna study including biodiversity mapping and implement actions identified. Includes actions to support Manly's threatened species, and Local Habitat Plans to encourage residents to support biodiversity; feral animal control including Indian Mynas. C1.5.2 Compile a comprehensive list and map the location of threatened species through the LGA, incorporate into GIS. C1.7.8 Develop strategies to address fauna "road kill" through the aforementioned Biodiversity Strategy.

STAFF INVOLVED: Sustainability Team Leader

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The project has not been substantially commenced due to resourcing issues.

Environment Levy

PROJECT TITLE:	Tania Park Erosion & Sediment Control – Stage 1			
PROJECT TYPE:	NEW PROJECT			ONGOING PROJECT
FINANCIALS:	Years project funded: 07/08 (Carried forward to 08/09)			
	BUDGET	EXPENDI	TURE	VARIANCE
TOTAL FOR YEAR:	\$25,000	\$0		\$25,000

TARGET DATES (commenced, estimated completion etc): Remaining funds will be expended in the first half of 2009/10

BRIEF PROJECT DESCRIPTION:

The project forms Stage 1 of planned erosion control improvement works for the Tania Park and Dobroyd Head area. The proposed works are in accordance with the adopted Tania Park Landscape Masterplan and are to address pedestrian erosion of the embankment (note vehicle erosion of the unformed car park below the embankment forms part of Stage 2 works).

Stage 1 will incorporate the following:

- 1. formalising three sets of pedestrian stairs, on the embankment between the car park area to the south east of the playing fields and the playing fields themselves. Planting of the embankment using locally endemic low growing species to improve biodiversity values, prevent further erosion and to improve amenity of the area and visual connection with the adjoining National Park. Views to be maintained.
- 2. Installation of six park bench seats (maintain existing due to attached plaques) at the top of the embankment, overlooking the National Park, with views to the Harbour.
- 3. Installation of an all access ramp also along the south eastern side of the playing fields to enable access to the park and views for prams, people with a disability and the elderly.

The access components of these works are supported by a grant from the NSW Government's Metropolitan Greenspace program.

OBJECTIVES of the project:	Were they achieved explanation
Preventing surface erosion and sediment run-off from	Project not yet completed.

Tania Park into adjacent National Park bushland and North Harbour Aquatic Reserve	
Improve access from the car parking area to the playing surface of Tania Park	Project not yet completed.
Extending existing vegetation along the oval boundary (adjacent embankment)	Project not yet completed.
Implementation of a short term priority action within Council's Tania Park Plan of Management and	Project not yet completed.
associated Landscape Masterplan	
INDICATORS for evaluation:	Statistic
	Statistic Not yet completed.
INDICATORS for evaluation:	

Discussion: Project to be completed in first half of 2009/10.

TBL ASSESSMENT:

The social benefits of this project will include improved access from the car park to the fields, particularly for people with a disability and the elderly. It will also improve connection with the adjacent National Park, which is a valuable social asset for recreation.

The environmental benefits of this project include erosion and sediment control to minimise disturbance and pollution downstream in the National Park and also in North Harbour.

A portion of the funds required to complete this project have been provided through the 07/08 Environment Levy. Council has also secured matching funds through the NSW Government's Metropolitan Greenspace Program. The financial cost of this project (which addresses at-source control of pollution) will be minimal compared to the clean-up and maintenance costs of the alternative approach of addressing downstream impacts (eg: sediment capture and clean-up downstream) and also compared to the environmental costs if this project were not undertaken.

KEY OUTCOMES:

Not yet completed. Anticipated outcomes include:

- Reduced silt and sediment run-off into the National Park
- Improved biodiversity values at Tania Park
- Improved connection between Tania Park and the National Park
- Improved access to Tania Park fields.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Management Plan 2007-2010: Sustainable planned, as opposed to 'ad hoc' development of Council
 controlled open space. Improved management of open space areas including the coast, estuaries and
 community land. (PA 5.1.2)
- Manly Sustainability Strategy (2006): The MSS contains the objective (C1) Recognise the intrinsic value of

Manly's geodiversity, biodiversity, and natural ecosystems, and protect and restore them. To achieve this objective the MSS identifies that: "Council, working with the community, commits to the following policies and ongoing programs: Preparation and implementation of Plans of Management for community lands and reserves."

• Tania Park Plan of Management (2004) & Tania Park Landscape Masterplan (2004)

STAFF INVOLVED:

Sustainability Team Leader, Open Space Coordinator, Architect & Depot staff for construction.

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

OVERALL EVALUATION AND CONCLUSION consider medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

N/A – project has not been completed.

5. Water Cycle Management Program

This section provides project specific reports relevant to the Water Cycle Management Program.

Environment Levy

PROJECT TITLE:	Sustainable Water Resources and Water Savings Action Plan Development			
PROJECT TYPE:			ONGOING PROJECT	
FINANCIALS:	Years project funded: Since 2004			
	BUDGET EXPENDITURE VARIANCE			VARIANCE
Carry forward	\$36,000			
2008/09 Allocation	\$64,000	Allocation held in reserve for works at Manly Swimming Pool to upgrade Water tanks. Works underway in late 2009 (2009/10 financial year).		
TOTAL FOR YEAR:	\$100,000	\$27,963 [#]		\$72,037 [#]

#Note - finance journalled \$880 back to this account after the Statement of Funds was issued - this will be rectified in 2009/10.

TARGET DATES (commenced, estimated completion etc):

Project is ongoing and essential.

Council is required by NSW legislation to complete a Water Savings Action Plan, with annual progress reports in water savings implementation submitted to the NSW Department of Environment and Climate Change, and the plan updated every four years.

Implementation of individual water savings measures is a decision of Council. These are now being implemented based on a ranking of payback period for water savings and cost-effectiveness.

BRIEF PROJECT DESCRIPTION:

Sustainable Water Resources

As a result of climate change and the water shortage crisis, Sydney Water restrictions have reduced Council's ability to maintain essential services including parks, ovals and garden irrigation in addition to waste and cleansing services. Simultaneously, available water resources in other elements of the water cycle including stormwater, roofwater, groundwater, grey water, and effluent remain prodigious. Other elements of the water

cycle are thus becoming seen as resources for re-use (rather than waste products) to live in a sustainable manner within available local water supply. There exists considerable synergies between Council objectives in supplementing restricted town-water supplies; and managing alternate water supplies. This is through the harvesting, treating, and on-use of stormwater, roofwater, groundwater, grey water, and effluent.

Water Savings Action Plan Development

Additionally, to combat the water shortage crisis, in 2005 the NSW Government passed legislation (Water Savings Order) requiring all local councils to prepare a mandatory Water Savings Action Plan to outline how it plans to cut town-water consumption, including reporting on the above local Sustainable Water Resources development.

This budget bid continues to fund the roll-out of water savings actions and alternate water source development in new sites in the Manly LGA, and compilation of actions into Manly's mandatory Water Savings Action Plan, with implementation based on a ranking of the payback period of water savings, and cost-effectiveness. These actions will further reduce drinking water consumption, save Council money, ensure compliance with Water restrictions and NSW Government legislation, and increase the sustainability of Manly.

OBJECTIVES of the project:	Result: were they achieved? explanation:
Implementation of sustainable water resourcing schemes (groundwater re-use, stormwater harvesting, rainwater tanks)	Yes – Ongoing
Completion of Council's First Water Saving Action Plan (2007/08 – 2012/13) and approval by the NSW Government, and implementation of savings measures	Yes – Plan completed and approved by the Minister for Climate Change, Water, and the Environment on 27 June 2008. Implementation underway of savings measures.
INDICATORS for evaluation:	Statistic:
Reduction in Council potable water consumption (KL/year)	Council Potable Water Consumption in 2007/08 was 79.2 million litres (55% lower than 2000/01 consumption; 17% of which of this reduction occurred in 2007/08). 2008/09 data was not available at time of preparing this report (released in October 2009).
Reduction in Council water bills	The reduction in potable water consumption between 2000/01 and 2007/08 represents a saving to Council on potable water bills of \$170,000/year ongoing.

Discussion:

The Sustainable Water Resources and development of the Water Savings Action Plan represent best practice water management in Australia by Manly Council. Council was been recognised in March 2008 in a Water Management audit conducted by Sydney Water, which ranked Council's water conservation and management capacity within Sydney's Top 7 Councils.

Council's Water Savings Action Plan 2007/08 – 2012/13 was written entirely in-house rather than by a consultancy. This provided substantial benefits including cost savings, streamlined allocation of internal responsibility, as well as institutional awareness of water savings opportunities amongst Council staff, and senior management. Council is now working to implement cost-effective savings measures within the Water Savings Action Plan on an ongoing basis.

TBL ASSESSMENT:

Environment: Development of sustainable alternate water sources and Water Savings Action Plan (WSAP) implementation reduces Council reliance on Sydney dam-supplies, and exposure to water restrictions. Use of local stormwater, groundwater, and rain water improves the extent to which Council lives within the local water cycle, and ensures year-round green parks and reserves not subject to water restrictions.

Financial: Development of sustainable alternate water supplies provides significant long term cost savings to Manly Council. Existing water savings have achieved reductions in potable water use of 55% and have secured cost savings in potable water bills of \$170,000/year ongoing. Additionally, many actions identified in Council's Water Savings Action Plan, have payback periods of less than 3 years.

Social: Development of sustainable alternate water sources and Water Savings Action Plan implementation ensure green parks and reserves year round, not subject to water restrictions. They also provide substantial opportunity to encourage community adoption of sustainable water management options.

KEY OUTCOMES:

Implementation of savings measures documented in Council's Water Savings Action Plan 2007/08 – 2012/13 was commenced, following plan completion at the end of the 2007/08 financial year.

Expenditure included:

- Irrigation system repairs for water savings
- Electrical and drilling work on new bores installed at Gilbert Park and Town Hall Lawn
- Procurement and Installation of stormwater flow monitoring equipment at LM Graham Reserve pipes for future stormwater harvesting
- Implementation of WSAPlan Savings measures at Manly Library, Fairlight, East Esplanade, Clontarf, Manly Cove, Manly Swim Centre, LM Graham Reserve, Ivanhoe Park, Fairlight Beach.
- Audit investigations of water usage at multiple facilities
- Groundwater annual licence fee payments to NSW Government (all bores)

Approximately \$65,000 was unspent and held in reserve for upgrade of tanks at Manly Pool that will improve pool plant operations, and reduce potable water consumption at the pool. This will be completed in late 2009.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Management Plan 2007 2010: 4.1.2 Drainage and Flooding, 4.1.3 Manly Lagoon Management,
 4.2.5 Land Information, Mapping, and Ownership, 4.4.6 Special Environmental Projects, 5.1.2 Beaches and Waterways, 5.1.3 Pollution Control Monitoring, 5.1.4 Conservation of Natural Resources
- Manly Sustainability Strategy (2006): C.1.1 Protecting our Water Cycle and Catchments program, C.2.1
 Water Cycle Management Program, D.1.1 Land Information Systems, F.1.2 Research and Development for Sustainability
- Integrated Catchment Management Strategy (2004)
- Manly Lagoon Estuary and Floodplain Management Plans (1998)
- On-site Stormwater Management Plan (2003)
- Sydney Harbour Catchment Blueprint (2003)
- Sydney Middle Harbour Stormwater Management Plan (1999); reviewed 2002
- Sydney Northern Beaches Stormwater Management Plan (1999)
- DEC: Managing Urban Stormwater (2004).
- Water Savings Order (NSW Government)
- 2006 Metropolitan Water Plan
- Sydney Water Restrictions (Level III)

STAFF INVOLVED:

Council's Catchments Project Officer (Primary), Council's Facilities Manager, Council's Parks Co-ordinator.

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The bid is an essential ongoing bid in the short, medium and long term, to achieve financial, environmental, and social benefits through alternate water sourcing and water savings given the importance of environmental sustainability and green parks and reserves to the Manly community.

Substantial achievements to date include a 55% reduction in Council's potable water consumption.

Existing Council sites to which sustainable alternate water resources (harvested stormwater, groundwater, or rainwater use) have already been implemented include:

Ivanhoe Park

- LM Grahams

Manly Swim Centre Gardens - West Esplanade

East Esplanade

- Clontarf Reserve

Mobile Irrigation Tankers

- Manly Ocean Beachfront

Manly Council Depot

Keirle Park

Seaforth Oval

Manly Corso

Cleansing and sweeping vehicles

Environment Levy

PROJECT TITLE:	Water Cycle Monitoring and Integrated Decision Support Tool			
PROJECT TYPE:			ONGOING PROJECT	
FINANCIALS:	Years project funded: Since 2004			
	BUDGET	EXPENDI	TURE	VARIANCE
Carry forward	\$32,000			
2008/09 Allocation	\$28,000			
TOTAL FOR YEAR:	\$60,000	\$31,764		\$28,236

TARGET DATES (commenced, estimated completion etc): Project is essential and ongoing

BRIEF PROJECT DESCRIPTION:

Council now has an integrated water quality and quantity monitoring program for understanding and managing Manly's water cycle to increase the extent to which Council operates sustainably within local water supplies and systems. This bid relates to funding for this key water quality and quantity monitoring program. Objectives

of the water cycle monitoring program in Manly are two fold:

- (1) The monitoring program informs management actions so past and present impacts on Manly's water cycle elements can be reversed, current impacts can be minimised, human health and environmental risks can be minimised, and all future land use and management decisions impacting on the water cycle can be informed by monitoring of water quality and quantity. Water cycle elements impacted through past and present actions include: groundwater (extraction and interception / quality decrease through contamination), stormwater (increase in volume and conveyance / decrease in quality), grey water (discharge into groundwater decreasing groundwater quality), sewage (ex-filtration into waterways), and Lagoon and floodplain (flooding / eutophication increase / quality decrease)
- (2) This monitoring program also assists in determining the most appropriate treatment and management practices to ensure that risks associated with the use of *alternate water sources* (such as groundwater, stormwater, roofwater, grey water, and effluent) for end-uses in public open spaces are controlled, minimised, and pollutant levels compliant with end-use purposes. Alternate water sources are currently used for a wide range of purposes in Manly including irrigation, cleansing, high pressure cleaning and other activities.

The monitoring program considers a host of pollutants, time and space, and quantitative and qualitative factors. The benefits derived from this program inform a wide variety of Council's activities, relating to both preservation of healthy waterways (environmental management) and alternate water sourcing and local re-use. The ongoing program seeks to incorporate all data to facilitate agreed upon objectives between organisations with a stake in the management of key waterways and alternate water sourcing projects.

OBJECTIVES of the project:	Result: were they achieved? explanation:
Installation and operation of water quality and quantity monitoring equipment for groundwater, stormwater, grey water, sewage, and Lagoon	Groundwater – Yes (ongoing)
	Stormwater – Carried forward (limited/ongoing)
Stormwater, grey water, sewage, and zagoon	Grey water – Awaiting potential systems
	Sewage – Yes (ongoing)
	Manly Lagoon – Carried forward (limited/ongoing)
Reporting on monitoring findings quarterly and at	Groundwater – Yes (ongoing)
relevant committees	Stormwater – Yes (ongoing)
	Grey water – Yes (ongoing)
	Sewage – Yes (ongoing)
	Manly Lagoon – Yes (ongoing)
Evaluate Council actions and adapt accordingly	Yes. New management policies continually adapted in
(considering seasonal valuations) – adaptive management	response to water quality responses
Incorporate data into common database and	Yes. Ongoing, and to be linked with Council
established triggers against relevant guidelines	organizational Geographical Information System
Re-assess monitoring framework and adapt	Yes. Ongoing
monitoring accordingly for best practice	
INDICATORS for evaluation:	Statistic:
Data collection, database systems establishment,	Data collection, database systems establishment,
communication, and integration into management	communication, and integration into management

procedures and systems, ongoing improvement	procedures and systems, ongoing improvement

Discussion:

The following aspects of the program were implemented in the 2008/09 year:

- Bores / Groundwater: Improved monitoring regimes, systems, and equipment established for monitoring of Council's irrigation bores to ensure sustainable usage from each site.
- Sewage ex-filtration: an improved wet weather and dry weather sewage ex-filtration program encompassing a greater monitoring capacity was established.

For the following aspects of the program, some components were carried forward to the following year, resulting in reduced expenditure:

- Stormwater: It was anticipated to purchase a suite of stormwater automated sampling stations, to
 monitor stormwater from prioritized pollutant load generating catchments, to continue six years of
 stormwater monitoring which has previously used stormwater sampling stations sponsored by a
 University. However, during the 2007/08 year, existing sampling stations and external laboratory
 resources were instead utilised, resulting in reduced expenditure.
- Manly Lagoon: Real Time Monitoring System Installation: A joint partnership between Manly and
 Warringah Council's was anticipated to result in agreement to purchase and install real-time
 monitoring probes within Manly Lagoon at strategic points to measure Lagoon responses to catchment
 conditions. Procurement of this equipment has been deferred in favour of a water quality monitoring
 program to be implemented in association with the Rehabilitation works at Sites 1&2.

TBL ASSESSMENT:

Environment: The water monitoring program informs the environmental condition of Manly's waterways and water re-use schemes in response to strategic decision making and ongoing pressures from urban development. As such, it is an essential tool in environmental restoration and management.

Financial: The water monitoring program is structured to maximise the cost benefit of water quality monitoring through maximising the extent to which sample analysis is conducted internally by trained Council officers (for example through use of specialised water quality probes and sample storage), rather than outsourcing these costs. The program ensures the safe operation of water re-use schemes (alternate water sourcing) which contribute to substantial Council cost savings in potable water use.

Social: The water monitoring program ensures the safe environmental operation of re-use schemes and tracks environmental improvement in waterways in response to strategic decision making.

KEY OUTCOMES:

In the 2008/09 fianncial year:

- Dry weather sewer leak investigation program was undertaken in Manly Lagoon and Ocean and Harbour Beaches in partnership with UTS to improve waterway conditions
- Locations of all Council potable Sydney Water meters were photographed and GPS coordinates recorded
- Monitoring and data collection of alternate water sourcing projects was improved and data centralised
- Monitoring of stormwater harvesting flows in pipe network at LM Graham reserve undertaken
- CCTV investigation of stormwater pipes was undertaken to aid flow estimation
- New stormwater monitoring equipment was purchased
- Water sampling and testing conducted

- Manly Lagoon desktop report commissioned
- New water sampling, laboratory, and storage equipment purchased

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Management Plan 2007 2010: 4.1.2 Drainage and Flooding, 4.1.3 Manly Lagoon Management,
 4.2.5 Land Information, Mapping, and Ownership, 4.4.6 Special Environmental Projects, 5.1.2 Beaches and Waterways, 5.1.3 Pollution Control Monitoring, 5.1.4 Conservation of Natural Resources
- Manly Sustainability Strategy (2006): C.1.1 Protecting our Water Cycle and Catchments program, C.2.1
 Water Cycle Management Program, D.1.1 Land Information Systems, F.1.2 Research and Development
 for Sustainability
- Integrated Catchment Management Strategy (2004)
- Manly Lagoon Estuary and Floodplain Management Plans (1998)
- On-site Stormwater Management Plan (2003)
- Sydney Harbour Catchment Blueprint (2003)
- Sydney Middle Harbour Stormwater Management Plan (1999); reviewed 2002
- Sydney Northern Beaches Stormwater Management Plan (1999)
- DEC: Managing Urban Stormwater (2004).

STAFF INVOLVED:

Council's Catchments Project Officer

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No.

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The bid is an essential ongoing bid in the short, medium and long term, given the importance of water to the Manly community.

Without the water cycle monitoring program, there exists a significant risk to groundwater sources, surface waters, and pollution of waterways from current urban activities in the Manly LGA.

Further, without regular alternate water sourcing monitoring, unmanaged risks from Council's numerous alternate water sourcing programs could make such cost saving programs unviable.

Further, without water cycle monitoring there exists the possibility of poor allocation of funds and lack of benefit from water cycle treatment interventions through management actions remaining independent from demonstrated on-ground outcomes. Little evaluation will occur of Council's progress towards ecosystem health and primary contact guidelines.

Environment Levy

PROJECT TITLE:	Water Cycle Management Team Leader			
PROJECT TYPE:	NEW PROJECT		ONGOING PROJECT	
FINANCIALS:	Years project funded: Since 2004			
	BUDGET	EXPENDI	TURE	VARIANCE

2008/09 Allocation	\$73,000		
TOTAL FOR YEAR:	\$73,000	\$73,000	\$0

TARGET DATES (commenced, estimated completion etc): Ongoing

BRIEF PROJECT DESCRIPTION:

The Water Cycle Management Team Leader seeks to coordinate the WCM team to manage elements of the water cycle in Manly Council to achieve an economically and environmentally sustainable supply of water, protect the values of groundwater, catchment, floodplain, and Lagoon waterways, and ensure effective and environmentally guided sewerage and wastewater disposal. The WCMTL arose to meet this need.

OBJECTIVES of the project:	Result: were they achieved? explanation:		
structural and non-structural stormwater pollutant treatment interventions for waterway health;	Yes. Ongoing maintenance and cleaning of 24 GPT.		
major SewerFix programs (Sydney Water) to reduce the incidence of sewer overflows in the Manly Lagoon catchment and broader LGA;	Yes and ongoing. Liaise with Sydney Water and SewerFix Alliance to reduce incidence of sewer overflows.		
implementation of the Integrated Catchment Management Strategy and water cycle management aspects in the Manly Sustainability Strategy and Management Plan;	Yes and ongoing. Developed Burnt Bridge Creek Restoration program consisted of 6 catchment management and water cycle management components.		
leak auditing and water wastage minimisation;	Yes and ongoing. Detailed monitoring of water usage of council facilities and identify water leaks using EDC Online, and GIS tools.		
development and implementation of Council's mandatory Water Savings Action Plan and water conservation activities;	Yes. Water Savings Action Plan completed. Water conservation activities have been implemented.		
alternate water source development in Manly for a sustainable water supply, including harvesting and reuse of groundwater, storm water, roof water, grey water, and effluent;	Yes and ongoing. Design stormwater harvesting system for Balgowlah Golf Course. Manage the Effluent Re-use project.		
environmental water quality and quantity monitoring, licensing, risk minimisation, and management action.	Yes and ongoing. Ongoing monitoring water quality and quantity of stormwater, rainwater and bore water.		
Coordination of team and grant application	Yes and ongoing. Successfully attracted in excess of \$4million in external grant funds to date.		

INDICATORS for evaluation:	Statistic:		
Reduction in water consumption and water rates (\$), through water conservation and alternate water sourcing actions	Achieve 55% reduction of potable water consumption.		
Reduction in stormwater pollution into waterways	Remove 79 tonnes of pollution from waterways.		
Reduction in sewage ex-filtration into waterways	Completed Dry Weather Sampling Program for all beaches to investigate sewer leaks to recreational areas.		
Refinement in co-ordination of integrated monitoring and assessment frameworks	Undertake Sustainable Ground Water Management Program which includes monitoring water quality and installing usage meters to monitor bore water extraction.		
Reduction in flood re-occurrence and asset (stormwater pipe) replacement cost	Concept design multi-purpose water cycle features for LM Graham Reserve to reduce flood risk and achieve alternate water sourcing. Review the NSW Floodplain Risk and Council's Flood policies.		
Maintenance of service delivery under water restrictions where water is required through alternate water sourcing	Monitor water quality and extraction quantity on all Council's stormwater and groundwater harvesting/ extraction sources. Save more than 30 ML potable water.		
Additional external resources (grant and levy funds) available to implement water cycle management works	Develop Burnt Bridge Creek Restoration program (successfully attracted \$2M Urban Sustainability Program funding, 2009).		
Successful implementation of major projects including Lagoon remediation, water recycling	Manly Lagoon rehabilitation works at Sites 1&2 to occur in 2009/10 financial year.		

Discussion:

- Stormwater management within Manly receives the targeted and proactive attention to achieve community values of health for Manly's waterways (Stormwater Management Plans, 1999).
- Sewage ex-filtration within the Manly Lagoon catchment and Manly LGA will receive necessary attention, to achieve values of health for Manly's Waterways
- With alternate water sourcing in times of water restrictions and critical water supplies, Council's ovals and
 parklands will be prevented from deteriorating and posing an erosion and sedimentation and OHS risk.
 Moreover, the cost of maintaining and replacing turf and aging and faulty infrastructure will continue to
 burgeon. [Existing projects also cannot continue without monitoring quality and quantity parameters for
 environmental health / risk and human health compliance of alternate water sources by WCMTL.]
- Current major projects for Manly Lagoon and floodplain for which grant funds (\$690,000) have been received; and for North Head Effluent Re-use for which grant funds (\$1.6million) have been awarded will adequately be completed with sufficient staff resources at Council to proceed.
- With on-ground WCM demonstration projects to develop Council's understanding of pollutant prevention and sustainable water re-use / on-use, Manly community and Council acceptance of innovative and integrated projects will not be limited.

TBL ASSESSMENT:

Environment: Water cycle Management aims to protect the values of groundwater, catchment, floodplain, and

Lagoon waterways, and ensure effective and environmentally guided sewerage and wastewater disposal. The works aims to achieve a sustainable environment.

Financial: Current major projects for Manly Lagoon and floodplain for which grant funds (\$690,000) have been received; and for North Head Effluent Re-use for which grant funds (\$1.6million) have been awarded will adequately be completed with sufficient staff resources at Council to proceed. Council achieve 55% reduction of potable water consumption, equivalent to \$170,000 a year.

Social: Stormwater management within Manly receives the targeted and proactive attention to achieve community values of health for Manly's waterways.

KEY OUTCOMES:

- 100% of the bid goes to the salary of the Water Cycle Management Team leader
- Manage the Water Cycle Management Team and projects
- Manage all issues relating catchment management, floodplain risk management, water cycle management, alternate water sourcing and Sewer leak Reduction
- Develop Burnt Bridge Creek Restoration program (with 6 integrated water cycle management components, which attracted \$2M Urban Sustainability Program grant)
- Develop Sustainable Ground Water Management Program
- Develop Dry Weather Sampling Program for all beaches and Manly Lagoon
- Develop Water Saving Action Plan
- Achieve 55% reduction of potable water consumption

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Management Plan 2007 2010: 4.1.2 Drainage and Flooding, 4.1.3 Manly Lagoon Management,
 4.2.5 Land Information, Mapping, and Ownership, 4.4.6 Special Environmental Projects, 5.1.2 Beaches and Waterways, 5.1.3 Pollution Control Monitoring, 5.1.4 Conservation of Natural Resources
- Manly Sustainability Strategy (2006): C.1.1 Protecting our Water Cycle and Catchments program, C.2.1
 Water Cycle Management Program, D.1.1 Land Information Systems, F.1.2 Research and Development for Sustainability
- Integrated Catchment Management Strategy (2004)
- Manly Lagoon Estuary and Floodplain Management Plans (1998)
- On-site Stormwater Management Plan (2003)
- Sydney Harbour Catchment Blueprint (2003)
- Sydney Middle Harbour Stormwater Management Plan (1999); reviewed 2002
- Sydney Northern Beaches Stormwater Management Plan (1999)
- <u>DEC: Managing Urban Stormwater (2004).</u>
- Water Savings Order (NSW Government)

STAFF INVOLVED: WCM team leader - supported by WCM team.

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No.

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The Water Cycle Management Team Leader seeks to manage elements of the water cycle in Manly Council to achieve an economically and environmentally sustainable supply of water, protect the values of groundwater, catchment, floodplain, and Lagoon waterways, and ensure effective and environmentally guided sewerage and wastewater disposal. The WCMTL arose to meet this need. This bid will be continued.

Environment Levy

PROJECT TITLE:	Sustainable Groundwater Management and Managed Aquifer Recharge Study			
PROJECT TYPE:	NEW PROJECT		ONGOING PROJECT	
FINANCIALS:	Years project funded: 2008/09 only.			
	BUDGET	EXPENDITURE		VARIANCE
Carry forward	\$0			
2008/09 Allocation	\$44,000	- Project anticipated to commence in 2009/10 financial year.		
TOTAL FOR YEAR:	\$44,000	\$412		\$43,588

TARGET DATES (commenced, estimated completion etc): Ongoing

BRIEF PROJECT DESCRIPTION:

Groundwater is an extremely valuable water resource to Manly Council. Many properties in the Manly LGA are also extracting groundwater for residential irrigation purposes. It is currently used by Council as an irrigation water source for most of Council's open spaces and public reserves in place of drinking water, including:

- Ivanhoe Park
- LM Graham Reserve
- West Esplanade
- Clontarf Reserve
- Manly Ocean Beachfront Reserve
- East Esplanade
- Manly Swim Centre Gardens
- Town Hall Lawn
- Gilbert Park
- Mobile irrigation tanker vehicles throughout the LGA.
 (Total groundwater abstraction, approximately 250,000 L/week).

This contributes directly to Council cost savings in excess of \$100,000 per annum based on the price of drinking water (\$500,000 over five years). These cost savings are expected to increase by 145% in the next two years, given the projected increase in the price of drinking water from \$1.33/thousand litres to \$1.96/thousand litres in 2009/10 (SWC IPART NSW Pricing Submission S07/11797).

However, groundwater is a fragile resource, and over-extraction of Groundwater resources can result in decline in the quality and quantity of groundwater and loss of resource, in addition to possible environmental harm, through mechanisms such as seawater intrusion. To date, Council's groundwater usage has been guided by project and site specific environmental investigations, rather than a strategic understanding of LGA wide

aquifer capacities, yields, aquifer connectivity, and key resource and recharge locations. At present in particular, aquifer catchments, total aquifer recharge, and safe extraction limits, are unknown.

This environment levy allocation will fund an LGA wide study of existing groundwater resources (quality and quantity), safe yields, and to identify strategic locations and management frameworks for current and future groundwater management, and utilisation in place of drinking water for irrigation.

Undertaking a groundwater study of this type is recommended by Council's Climate Change Working Group (10 October 2007 meeting), and is also a medium priority management action recommended for immediate implementation in Council's Clontarf / Bantry Bay Estuary Management Plan (WQ Action 4.1).

Additionally, it is expected that long-term groundwater use will require aquifer flow balance through strategic (managed) aquifer recharge (M.A.R.). The study funded through this budget bid would also seek to identify suitable locations for future M.A.R. projects, such as natural increased aquifer infiltration, percolation, and replenishment, using existing sources including catchment rainwater for long-term sustainable use.

OBJECTIVES of the project:

Specifically, the proposed study will inform:

- Annual natural recharge to Manly's aquifers
- Safe extraction limits from Council's individual aquifers and bores
- Assessment of existing impacts of abstraction (including Community extraction)
- Total LGA wide aquifer resources
- Strategic locations for future abstraction
- Strategic locations for Managed Aquifer Recharge (M.A.R.)

The information provided from the study will be beneficial for the following programs within Council:

- Sustainable Groundwater Extraction and Management (Natural Resources)
- Open Space / Public Reserve Irrigation under water restrictions (Parks and Gardens)
- Total Catchment Management (Natural Resources)
- Protection of Waterway and Environmental Health (Natural Resources)

Result: were they achieved? explanation:

- Project anticipated to commence in 2009/10 financial year.
- In 2008/09 1% of project funds were expended on a Council internal staff groundwater management training course in preparation for the study.

INDICATORS for evaluation:

- Identification of aquifer catchments
- Identification of annual aquifer recharge
- Identification of total groundwater extraction (council and community)
- Identification of safe sustainable and critical level of extraction
- Assess salinity and acidity levels of abstracted groundwater
- Identification of strategic locations for Managed Aquifer Recharge

Statistic:

Project anticipated to commence in 2009/10 financial year.

Discussion:

Ramifications if not completed:

Potential collapse or decline of Council's groundwater resources due to mismanagement or misunderstanding in the future would require the re-instatement of previous high drinking water use, and associated cost to Council (in excess of \$100,000 per year) in the absence of a replacement water source. Prior to development of extraction schemes for Groundwater, at all of Council's primary open spaces and reserves, Council previously paid \$100,000 more a year in irrigation water rates to service these locations (2001 compared with 2006, Source: Sydney Water). Collapse or decline of Council's groundwater resources may also result in environmental harm, including modification to groundwater dependent ecosystems and soil conditions.

Further, turf loss and turf replacement costs at Council's ovals when irrigation water is restricted would be expected, at typical cost of between \$30,000 - \$50,000 per oval per year (Source: Parks Co-ordinator).

TBL ASSESSMENT:

Environment: The project will aim to protect the values of groundwater, to ensure effective and environmentally guided management.

Financial: The project will continue to maintain historic low uses of potable water use by Council and associated cost savings.

Social: The project will maintain beneficial alternate water source irrigation of public playing and sporting fields, reserves, and parks.

KEY OUTCOMES:

- In 2008/09 1% of project funds were expended on a Council internal staff groundwater management training course.
- The remainder of the bid will be dedicated to the Groundwater project
- Project anticipated to commence in 2009/10 financial year.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Management Plan 2007 2010: 4.1.2 Drainage and Flooding, 4.1.3 Manly Lagoon Management,
 4.2.5 Land Information, Mapping, and Ownership, 4.4.6 Special Environmental Projects, 5.1.2 Beaches and Waterways, 5.1.3 Pollution Control Monitoring, 5.1.4 Conservation of Natural Resources
- Manly Sustainability Strategy (2006): C.1.1 Protecting our Water Cycle and Catchments program, C.2.1
 Water Cycle Management Program, D.1.1 Land Information Systems, F.1.2 Research and Development
 for Sustainability
- Integrated Catchment Management Strategy (2004)
- On-site Stormwater Management Plan (2003)
- Water Savings Action Plan 2008/09 2012/13
- Clontarf / Bantry Bay Estuary Management Plan (EMP)
- Sydney Harbour Catchment Blueprint (2003)
- Sydney Middle Harbour Stormwater Management Plan (1999); reviewed 2002
- Sydney Northern Beaches Stormwater Management Plan (1999)
- DEC: Managing Urban Stormwater (2004).

STAFF INVOLVED:

Council's Catchments Project Officer

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

This project will fund a LGA wide study of existing groundwater resources (quality and quantity), safe yields, and to identify strategic locations and management frameworks for current and future groundwater management and utilisation in place of drinking water for irrigation.

Undertaking a groundwater study of this type is recommended by Council's Climate Change Working Group (10 October 2007 meeting), and is also a medium priority management action recommended for immediate implementation in Council's Clontarf / Bantry Bay Estuary Management Plan (WQ Action 4.1).

The project is expected to commence in the 2009/10 financial year.

Environment Levy

PROJECT TITLE:	GPTs and Alternate Water Source Maintenance			
PROJECT TYPE:	NEW PROJECT			ONGOING PROJECT
FINANCIALS:	Years project funded: Since 2003			
	BUDGET	EXPENDI	TURE	VARIANCE
Carry forward	\$3,000			
2008/09 Allocation	\$49,000			
TOTAL FOR YEAR:	\$52,000	\$37,704		\$14,296

TARGET DATES (commenced, estimated completion etc): Ongoing

Project is ongoing and essential. Council resolution allows up to 10% of the Environment Levy to be allocated to maintenance annually (\$94,600)

BRIEF PROJECT DESCRIPTION:

GPTs maintenance: Scientific research conducted in Manly has demonstrated Council's GPT, litter boom, and litter net maintenance program to prevent approximately 110,000 kg of sediment and gross litter, more than 700 kg of concentrated nutrients (TN and TP), and more than 80 kg of Zinc and other metals derived from catchment land uses annually from entering Manly's waterways, including Burnt Bridge Creek and Manly Lagoon. This prevents up to 2.4 tonnes of resultant algal growth in these waterways, and substantial environmental damage from sedimentation, eutrophication, and acute and chronic toxicity. This program funds

the maintenance of these pollutant prevention activities.

Alternate water source maintenance: The uptake of sustainable alternate water sources (harvesting and re-use of stormwater, groundwater, grey water, rainwater, and effluent; capital works funded through another environment levy program) has contributed to Manly Council reducing its town-water consumption by 55% between 2000/01-2007/08; the preservation of green open spaces (irrigation unrestricted by Sydney Water restrictions); and the establishment of an increasingly water-wise community. Alternate water sources are now used for a wide host of functions including irrigation of much of Manly's open spaces, in street sweeping vehicles, in mobile irrigation tankers, in high pressure cleaning of public spaces, and a host of other functions. Ongoing operational and maintenance costs of these programs, including periodic maintenance, de-sludging, replacement, repair, and upgrade, to maintain system integrity and the achievements described, of pumps, tanks, connection points, housing, and electrical connections associated with these programs, require maintenance funds. Such maintenance funds for existing capital programs are drawn from this levy bid.

OBJECTIVES of the project:	Result: were they achieved? explanation:
Prevention of stormwater pollution to waterways by maintaining Gross Pollutant Traps (GPTs)	Yes - Ongoing
Maintenance of alternate water source systems (stormwater, groundwater, and rainwater reuse systems)	Yes – Ongoing
INDICATORS for evaluation:	Statistic:
Volume of pollutant prevented from entering waterways	79 tonnes captured/prevented in 2008/09 year. 4 units were not performing to full capacity in 2008/09.
Alternate water source systems maintained	Systems maintained, providing ongoing substantial potable water savings and financial savings in potable

Discussion:

GPTs maintenance: The cleansing/maintenance contractor responsible for cleansing works associated with all GPTs provides an annual report for all Council GPTs, detailing load removed, issues with each device, and other performance aspects. Figures are recorded for GPT performance, and monitoring and inspections regularly undertaken to ensure the best performance of each individual GPT is achieved.

Alternate water source maintenance: All alternate water sourcing projects continue to operate within standard conditions as a result of periodic ongoing maintainance in repair or replacement of pumps, tanks, and other works.

TBL ASSESSMENT:

Environment: The Gross Pollutant Trap (GPT) program reduces wet weather stormwater pollution to waterways, improving environmental quality.

Maintenance of existing capital alternate water source systems ensures reduction in use of Sydney dam supplies for use of non-potable purposes, including use of local stormwater, groundwater, and rainwater sources to live within the local water cycle.

Financial: The GPT program is cost effective and reduces the need for more costly down-stream waterway rehabilitation and dredging activities (for example of Manly Lagoon sands), through upstream pollution capture and control.

Maintenance of alternate water sourcing systems ensures annual potable water savings of in excess of \$170,000/year on Sydney Water rates through substitution of potable water with alternate supplies.

Social: The GPT program improves water quality and social amenity in Manly's numerous waterways. Maintenance of alternate water source systems ensures green ovals and reserves for social use, and irrigation not subject to water restrictions.

KEY OUTCOMES:

- **GPT maintenance** during the period undertaken 79 tonnes captured in 2008/09 year. (4 units were not performing to full capacity in 2008/09).
- Maintenance of alternate water sourcing undertaken, and minor monitoring work for both programs

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Management Plan 2007 2010: 4.1.2 Drainage and Flooding, 4.1.3 Manly Lagoon Management,
 4.2.5 Land Information, Mapping, and Ownership, 4.4.6 Special Environmental Projects, 5.1.2 Beaches and Waterways, 5.1.3 Pollution Control Monitoring, 5.1.4 Conservation of Natural Resources
- Manly Sustainability Strategy (2006): C.1.1 Protecting our Water Cycle and Catchments program, C.2.1
 Water Cycle Management Program, D.1.1 Land Information Systems, F.1.2 Research and Development for Sustainability
- Integrated Catchment Management Strategy (2004)
- Manly Lagoon Estuary and Floodplain Management Plans (1998)
- Sydney Harbour Catchment Blueprint (2003)
- Sydney Middle Harbour Stormwater Management Plan (1999); reviewed 2002
- Sydney Northern Beaches Stormwater Management Plan (1999)
- DEC: Managing Urban Stormwater (2004).

STAFF INVOLVED:

Council's Catchments Project Officer

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The bid is an essential ongoing bid in the short, medium and long term, to maintain existing capital projects and achieve environmental, financial, and social benefits in water quality and alternate water sourcing for the Manly community.

In total there exist 16 GPTs, 4 booms, and 5 net devices. If existing GPTs (and litter booms and nets) are not maintained, results will include the anaerobic decomposition of current stored loads, the conveyance of all future pollutant loads (see above for annual loads in kg) directly into waterways as all GPTs will fill and additional loads will by-pass the traps (including onto Manly Ocean Beach via the Steinton St Pipe, Burnt Bridge Creek and Manly Lagoon), with modification to the hydraulic conductivity of Council's stormwater conveyance system also possible due to blockages. This will contribute to the degradation of Manly's waterways.

If existing alternate water sources are not maintained, this will result in periodic pump/tank/system failure, dramatically reducing available water supplies for irrigation of much of Manly's open spaces, water available to street sweeping and high pressure cleaning, and a host of other functions, until maintenance / repair funds do

become available. Water volumes available for these end-users would revert back to higher town-water volumes used prior to alternate water source development. It will also result in sludge and pollutant build up in tanks, threatening water quality, and limiting capacity for Council to commit to taking on any new alternate water sourcing projects. It would contribute to the dieback of Manly's green spaces, and also increased cost to Council (up to \$170,000 / year ongoing greater, based on previous potable-water volumes used in 2000/01). To-date the degree of GPT cleaning has been constrained by the allocated funding. It is recommended that to meet future demands the value of the bid be increased in future years (within the 10% annual maintenance vote agreed for the Environment Levy). This will be reflected in the value of future bids and it is recommended that the bid requests be met in full.

6. Lagoon Conservation & Remediation Program

This section provides project specific reports relevant to the Lagoon Conservation & Remediation Program.

Environment Levy

PROJECT TITLE:	Implementation of the Manly Lagoon and Catchment Integrated Catchment Management Strategy & Manly Lagoon Rehabilitation Works (Emergent)			
PROJECT TYPE:	NEW PROJECT		ONGOING PROJECT	
FINANCIALS:	Years project funded: 2007/08			
	BUDGET	EXPENDI	TURE	VARIANCE
Carry Forward (includes DECC grant fund and Env Levy funds):	\$877,000		10 financial	ites 1&2 dredging to year (Estimated
2008/09 Allocation:	\$0	\$35,113		
TOTAL FOR YEAR:	\$877,000	\$35,113		\$841,887

TARGET DATES (commenced, estimated completion etc): Ongoing program subject to ongoing partnership with Warringah Council and continued availability of DECC Estuary Management Fund. In 2008/09 year relevant Statement of Environmental Effect (SEE) Assessment Documentation was continued. The full project is expended to be undertaken in 2009/10 (estimated project total of \$1.1 million).

BRIEF PROJECT DESCRIPTION:

Implementation of the Manly Lagoon Rehabilitation Works in line with those identified in the Manly Lagoon Floodplain Management Plan and Manly Lagoon Estuary Management Plan and implementation of high priority actions outlined in the Manly Lagoon & Catchment Integrated Catchment Management Strategy.

Grant funding to the amount of \$240,000, \$350,000 and \$100,000 (total \$690,000) has been received under the Department of Natural Resources' Estuary Management Program (now Department of Environment, Climate Change, and Water) for the implementation of the Manly Lagoon Rehabilitation Works and priority actions outlined in the Manly Lagoon & Catchment Integrated Catchment Management Strategy (2004).

Accumulated funds will be allocated for use principally with dredging and rehabilitation works at 'Sites 1 and 2'

(so called) in Manly Lagoon.

Matching total funding must be provided by Manly and Warringah Councils in a ratio of 50% (NSW Govt): 25% (MC): 25% (WC). Manly and Warringah Council's total matching funding is thus \$345,000 each.

The Sites 1 and 2 projects will be managed by Manly Council with works completed in the 2009/10 financial year, and all funds expended.

OBJECTIVES of the project:	Result: were they achieved? explanation:
Implementation of the Manly Lagoon Rehabilitation Works sites 1and 2 (see also below discussion)	ongoing
INDICATORS for evaluation:	Statistic:
Benefits of the project as specified in the ICMS and Statement of Environmental Effects, such as: Improve water quality Reduce flooding	Funds held in reserve for Sites 1&2 dredging to occur in 2009/10 financial year (Estimated project total \$1.1 million).
 Improve tidal exchange between the lagoon and ocean; Remove restrictions to fish passage; 	
 Avoid continued sand migration upstream smothering aquatic vegetation. 	

Discussion:

Guided by the NSW Government's Estuary Management Manual 1990, and Floodplain Management Manual, which outlines a structured management process leading to the adoption and implementation of such local Management Plan, Council continues to implement high priority projects outlined in the ML&C ICMS and the Manly Lagoon Rehabilitation works.

Implementation of the Manly Lagoon Rehabilitation Works will:

- Improve water quality
- Reduce flooding
- Improve tidal exchange between the lagoon and ocean;
- Remove restrictions to fish passage;
- Avoid continued sand migration upstream smothering aquatic vegetation.

Specific other actions outlined in the ML&C ICMS for implementation include but are not limited to the following:

- Targeted education & regulation
- Monitoring & evaluation
- Catchment Cleansing
- At-source prevention measures
- Gross pollutant interception & rain water tank installation
- In stream dredging and remedial works for removal of contaminated sediment from Manly Lagoon

These actions will be the subject of future Manly Lagoon environment levy bid applications.

TBL ASSESSMENT:

Environmental: Implementation of the Manly Lagoon Rehabilitation Works will:

- Improve water quality
- Reduce flooding
- Improve tidal exchange between the lagoon and ocean;
- Remove restrictions to fish passage;
- Avoid continued sand migration upstream smothering aquatic vegetation.

Financial: Grant funding to the amount of \$240,000, \$350,000 and \$100,000 has been received under the Department of Natural Resources' Estuary Management Program for the implementation of the Manly Lagoon Rehabilitation Works and priority actions outlined in the Manly Lagoon & Catchment Integrated Catchment Management Strategy (2004).

Funds sort under Levy funding are required to match the NSW Government contribution. Given the Warringah Council and NSW Government Contributions, the project represents good investment and value for money.

Social: The members of Manly Lagoon Catchment Consultative Committee meet quarterly to consult the progress of Manly Rehabilitation Works. Community representatives have expressed their views strongly on the progress Manly Rehabilitation Works. It is anticipated that the Manly and Warringah communities would welcome to see considerable improvements to the Lagoon environment.

KEY OUTCOMES:

- Continued project planning and environmental assessment preparation has been undertaken during 08/09
- Funds held in reserve for Sites 1&2 dredging to occur in 2009/10 financial year. (With DECCW and Warringah contribution, estimated project total value of \$1.1 million).

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Management Plan 2007 2010: 4.1.2 Drainage and Flooding, 4.1.3 Manly Lagoon Management,
 4.2.5 Land Information, Mapping, and Ownership, 4.4.6 Special Environmental Projects, 5.1.2 Beaches and
 Waterways, 5.1.3 Pollution Control Monitoring, 5.1.4 Conservation of Natural Resources
- Manly Sustainability Strategy (2006): C.1.1 Protecting our Water Cycle and Catchments program, C.2.1
 Water Cycle Management Program, D.1.1 Land Information Systems, F.1.2 Research and Development for Sustainability
- Integrated Catchment Management Strategy (2004)
- Manly Lagoon Estuary and Floodplain Management Plans (1998)
- On-site Stormwater Management Plan (2003)
- Sydney Northern Beaches Stormwater Management Plan (1999)
- DEC: Managing Urban Stormwater (2004).

STAFF INVOLVED:

Water cycle management team

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

At the advice of DNR (now DECCW), Council is to undertake the implementation of Estuary and Floodplain Plans in order to satisfy best management practice, to meet statutory obligations and to secure future funding.

Ongoing implementation of these adopted Plans in partnership with Warringah Council will provide Council, community and stakeholders with a balance that satisfies community and user group needs within the study

Sites, while satisfying Council obligations.

By undertaking these works at **Sites 1 and 2** Council is complying with the Estuary and Floodplain Management Program and meeting partnership agreements with Warringah Council.

Future Env Levy bid applications will seek to secure further funding to implement other designated actions in the Estuary and Floodplain Management Plans.

This bid will be continued.

	Г			VON C
PROJECT TITLE:	Open Space Planning & Management – LM Graham			
PROJECT TYPE:	NEW PROJECT			ONGOING PROJECT
FINANCIALS:	Years project funded	: 2006/07 & 20	07/08	
	BUDGET	EXPEN	DITURE	VARIANCE
TOTAL FOR YEAR:	\$6,000	\$14		\$5,986
TARGET DATES (commenced, eshalf of 2009/10.	stimated completion e	cc): Funds antici	pated to be ex	spended during first
BRIEF PROJECT DESCRIPTION:				
Development of a Masterplan for LM Graham Reserve to provide a strategic approach to planning, management and upgrades of this community facility. Including extensive community consultation, Council community committee to provide input, staff involvement, completion of historical search and environmental constraints report.				
The Masterplan will identify a prioritised list of actions required to effectively manage and improve the reserve and improve connection with the Swim Centre and Roundhouse Childcare facilities.				
OBJECTIVES of the project: Result: were they achieved? explanation:			explanation:	
To develop a sustainable long-term strategy for the reserve that is consexisting Plan of Management, curre and will meet existing and future of with respect to this area.	e that is consistent with the ement, current best practice and future community needs			
INDICATORS for evaluation:		atistic:		
LM Graham Masterplan adopted by Council		Project has not been completed		

Discussion:

The Masterplan is in draft form, although amendments required due to decision to re-design the swim centre and expand the Roundhouse. Project completion is therefore anticipated during 2009/10.

TBL ASSESSMENT:

A TBL assessment has been undertaken to inform the preparation of the Masterplan, which will consider all social, environmental and financial aspects and implications. The Masterplan will aim to address social and environmental consideration in a cost-effective way.

KEY OUTCOMES:

Adopted LM Graham Landscape Masterplan ready for active implementation (subject to funding).

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Management Plan 2007-2010: Sustainable planned, as opposed to 'ad hoc' development of Council
 controlled open space. Improved management of open space areas including the coast, estuaries and
 community land. (PA 5.1.2)
- Manly Sustainability Strategy (2006): The MSS contains the objective (C1) Recognise the intrinsic value of
 Manly's geodiversity, biodiversity, and natural ecosystems, and protect and restore them. To achieve this
 objective the MSS identifies that: "Council, working with the community, commits to the following policies
 and ongoing programs: Preparation and implementation of Plans of Management for community lands and
 reserves."
- <u>LM Graham Plan of Management (1996):</u> Identified throughout the document that a Masterplan should be produced.

STAFF INVOLVED:

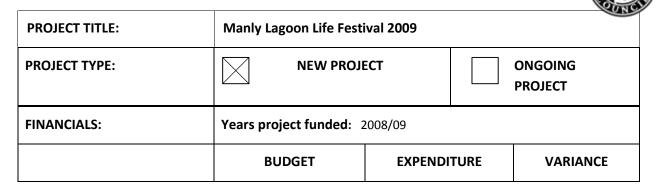
Sustainability Team Leader, Architect & variety of staff involved in the project team.

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The project is progressing although slower than anticipated due to late decision to re-design a new swim centre and also to prepare designs for an expanded Roundhouse. It is anticipated to be completed during 2009/10.



TOTAL FOR YEAR:	\$10,000	\$0	\$10,000
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TARGET DATES (commenced, estimated completion etc): June – August 23 2009

BRIEF PROJECT DESCRIPTION:

This long overdue event is to provide a Forum to update the residents and community on the implementation of the Integrated Catchment Strategy 2004 (ICMS) for Manly Lagoon and improvements to the Lagoon was recommended in the Minutes of the Manly Lagoon Committee in 2005.

The (ICMS) for Manly Lagoon requires Council to report its progress on the Lagoon to the community through an annual community Forum. This event will provide focus for the first of such forums on the shores of Manly Lagoon on a Sunday 23 August 2009, from 11.00am to 4pm. The event's activities and programs will be of interest to all of the community including children of all age groups, their parents, local businesses, sporting groups etc.

OBJECTIVES of the project:	Result:
To present a Forum to update the community on the implementation of the ICMS and improvements to the Lagoon as recommended in the minutes of the Manly Lagoon Committee in 2005.	Event scheduled for next reporting year (23 August 2009)
Recognise the achievements of past community champions and inspire a new generation of champions to support Councils restoration and remediation programs.	Event scheduled for next reporting year (23 August 2009)
An entertaining and informative event which will become a catalyst for future community support.	Event scheduled for next reporting year (23 August 2009)
Enable locals to network with other like-minded people.	Event scheduled for next reporting year (23 August 2009)
Raise awareness of other community actions groups existing for their participation.	Event scheduled for next reporting year (23 August 2009)
Educate the residents and community of progress and activities associated with the varied facets of Lagoon's protection and rehabilitation.	Event scheduled for next reporting year (23 August 2009)
Showcase all the different programs that Manly and Warringah Council have undertaken to educate the community.	Event scheduled for next reporting year (23 August 2009)
Raise awareness of local environmental issues and impacts.	Event scheduled for next reporting year (23 August 2009)
Bring community together in a relaxed manner in which locals can co-create ways to make positive changes in their lives that will have a flow on effect in the community.	Event scheduled for next reporting year (23 August 2009)

Empower children and adults to raise awareness of environmental issues relating to the lagoon	Event scheduled for next reporting year (23 August 2009)
INDICATORS for evaluation:	Statistic:
Qualitative evaluations will be conducted through surveys and provide indications of participant satisfaction	Event scheduled for next reporting year (23 August 2009)
By quality of exhibitors, actions groups and associations participating in the event	Event scheduled for next reporting year (23 August 2009)
Audience attendance for attractions, exhibitions and activities	Event scheduled for next reporting year (23 August 2009)

TBL ASSESSMENT: including identification of relevant UN Sustainable Cities Principles; Manly Sustainable Strategy:

Social: The event will be designed to build community and strengthen community networks, awareness raising, empowerment, social change and support. It will appeal to a broad cross-section of the community. The festival will also be aimed at contributing to a greater sense of place and increasing community values of the area.

Environmental: the event will be designed to raise community awareness of environmental issues associated with the Manly Lagoon area and Council's environmental programs to address these. It will also aim to foster/build community support and effect change in behaviour in order that the community take further ownership of protecting the Lagoon environments.

Financial: The cost of running the event is considered minor compared to the ongoing cost of environmental degradation of Manly Lagoon. It is considered that this event, as part of an integrated and holistic management approach will assist with alleviating environmental impacts to the Lagoon over time.

KEY OUTCOMES:

Event to be held 23 August 2009

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- The Integrated Catchment Management Strategy 2004 (ICMS) which requires Council to report progress to the Community through an annual community forum.
- A joint event in conjunction with Warringah Council as supported by the Manly Lagoon Catchment Coordinating Committee (reference minutes:13 March 2008)

STAFF INVOLVED: All MEC staff, other from CPS for Council forum

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

OVERALL EVALUATION AND CONCLUSION

Event is planned for August 2009

7. COASTLINE MANAGEMENT PROGRAM

This section provides project specific reports relevant to the Coastline Management Program.

Environment Levy

PROJECT TITLE:	Coastal Environmental	Projects		
PROJECT TYPE:	NEW PROJECT			ONGOING PROJECT
FINANCIALS:	Years project funded: 2003/04 - 2008/09			
	BUDGET	EXPENDI	TURE	VARIANCE
TOTAL FOR YEAR:	\$162,000	\$162,000		\$0

TARGET DATES (commenced, estimated completion etc): ongoing

BRIEF PROJECT DESCRIPTION:

Council has elected to develop Coastline Management Plans (CMP's) for the Manly Cove and North Harbour study areas and Estuary Management Plans (EMPs) in response to legislative requirements/community issues and in accordance with current best practice for the management of coastal and estuary foreshores. This work follows on from the successful development and ongoing implementation of the Cabbage Tree Bay, Little Manly and Forty Baskets CMPs and Clontarf/Bantry Bay EMP. Further, the Manly Ocean Beach CMP and Emergency Action Plan were adopted by Council during February 2008 with grant funding already acquired to assist with implementation.

The Environment Levy supported two positions of the Coastal Management Team during 07/08. The Team is responsible for planning and implementation of CMPs and EMPs. An overview of the main tasks undertaken for the period to June 2009 and specific responsibilities is provided as follows:

- Manly Cove CMP Development (Coastal TL)
- Implementation of Manly Cove CMP (Coastal TL)
- North Harbour CMP Development (Estuary MO)
- Implementation of Manly Ocean Beach CMP/EAP (Coastal TL)
- Implementation of Clontarf/Bantry Bay EMP (Estuary MO)
- Implementation of Cabbage Tree Bay Management Plan (Coastal TL)
- Implementation of Little Manly Cove CMP (Coastal TL)
- Implementation of Forty Baskets CMP (Coastal TL)

^{*}Note: re-allocated to cover on-costs accounted in a separate account – these funds therefore represent expenditure.

- Development of Dinghy Storage program in key locations across the Manly LGA (Coastal TL & Estuary MO)
- Remediation and monitoring of Coastal hazards and climate change (Coastal TL)
- Boat ramps, foreshore pools & swimming Enclosures (Coastal TL & Estuary MO)
- Technical support (Coastal TL & Estuary MO)
- Grant / budget administration (Coastal TL & Estuary MO)
- Representation on Committees (Coastal TL & Estuary MO)

EL Expenditure during 08/09 specifically included:

- Salary cost to Coastal Management Team Leader
- Salary cost to Estuary Management Officer

OBJECTIVES of the project:	Result: were they achieved? explanation:
To promote the protection and rehabilitation of the coastal zone environment through facilitating the development of the remaining Coastline Management Plans.	Yes, although ensuring a balance between human interaction and use of Manly's foreshores with the natural environment is always a challenge. The development of CMP/EMPs and technical advice provided by the Coastal management Team provides a mix of planning, education, compliance and on the ground improvements for natural coastal and estuarine ecological environments.
To guide and carry out the implementation of the Little Manly, Forty Baskets and Cabbage Tree Bay, Manly Ocean Beach Coastline Management Plans, and Clontarf/Bantry Bay Estuary Management Plans associated with coastal zone management as they are adopted by Council.	Yes. Staged implementation of the adopted CMPs and EMPs continue in line with budget availability and identified community need. Notable works include remediation of coastal hazard sites, mangrove plantation and drafting of Cabbage Tree Bay Aquatic Reserve Management Plan.
To guide the development of the Manly Cove and North Harbour CMPs.	Yes. Manly Cove and North Harbour CMPs continue to be developed with considerable progress made during the 2008/09 year. North Harbour Coastline Management Study was finalised and endorsed (February 2009).
INDICATORS for evaluation:	Statistic:
Remediation measures for coastal hazards	3 sites completed, increased protection of property and life from coastal hazards/processes
Mangroves area extended	500 seedlings transplanted
Development of North Harbour CMP	North Harbour Coastline Management Study finalised

Discussion: The CMPs are intended to provide a strategic plan for each study area with a long-term time frame of 10-20 years (with appropriate revisions). Implementation of the CMP's will involve considerable expenditure and therefore implementation must have regard to resource availability and to other priorities of Council and the other agencies identified in the Action Plan.

These documents assist Council in ensuring holistic management for the specific areas which address interconnected, aquatic & terrestrial management issues. Considerable progress has been made toward the

improved management of coastal and estuarine environments through the development of the Cabbage Tree Bay (2000), Little Manly (2004), Forty Baskets (2004), Manly Ocean Beach CMPs (2008) and Clontarf/Bantry Bay EMP (2008). Further, councils coastal management planning ensures that important statutory obligations are appropriately met.

The development of the Manly Cove and North Harbour Coastline Management Plans is currently underway with anticipated completion during 2009/10.

TBL ASSESSMENT:

Social: The program improves safety for users of the coastal and estuary foreshores. It has positive improvements on social aspects such as of community wellbeing, community involvement, heritage, education and minor implications on equity & diversity, health, safety and governance. There are also opportunities for community participation in implementation as well as monitoring.

Environment: The program supports a comprehensive study of coastal processes and risks, has significant positive implications on environmental aspects such as biodiversity, land integrity, proposes extension and management of aquatic reserves.

Financial: The program is cost effective and reduces risks to human and property through remediation measures to coastal hazards and thus offers financial benefits. The strategic approach of the CMP/EMP development and implementation, through community involvement, ensures that community funds are spent on priority projects identified in consultation with the community.

KEY OUTCOMES:

- North Harbour Coastline Management Study finalised and endorsed.
- · Preliminary draft of the North Harbour CMP completed
- · Cabbage Tree Bay Aquatic Reserve Management Plan drafted
- Sediment Processes and Foreshore Stability Study of Clontarf area completed.
- North Harbour Aquatic Reserve Extension Proposal submitted to DECCW.
- Coastal hazards eliminated/reduced at three sites
- Manly Cove East Access Improvement Project completed
- 500 mangrove seedlings planted at Fisher Bay
- · Little Manly Beach nominated for Award in 2008 Keep Australia Beautiful Clean Beach Challenge
- · Council to formally pursue the declaration of Manly Ocean Beach as a National Surfing Reserve.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Management Plan 2008-11
- Manly Sustainability Strategy 2006
- · Manly Ocean Beach Coastline Management Plan
- Manly Ocean Beach Emergency Action Plan 2008
- Clontarf/Bantry Bay Estuary Management Plan 2008
- Sydney Regional Environmental Plan Sydney Harbour Catchments 2005

STAFF INVOLVED:

Coastal Management Team Leader and Estuary Management Officer

Various other staff from most sections of Council play a role in the development and implementation of Coastal/Estuarine Management Plans.

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The bid is an essential ongoing bid in the short, medium and long term, to maintain existing capital projects and achieve environmental, financial, and social benefits in coastal, marine and estuarine management for coastal Manly.

The program has been highly successful in achieving a number of milestones, restoring ecosystem through planting of mangrove seedlings, finalising sediment processes and foreshore stability study resulting into options addressing siltation at Clontarf Swimming enclosure, reducing/eliminating coastal hazards at three sites, developing management plans for North Harbour and Cabbage Tree Bay Aquatic Reserve, completing Manly Cove East Access Improvement, proposing extension of the North Harbour Aquatic Reserve and initiating efforts to get recognition of the Manly Surfing Reserve.

This bid will be continued.

Environment Levy

PROJECT TITLE:	Coastal Hazard Remedi	ation Stage 1		
PROJECT TYPE:	NEW PROJECT			ONGOING PROJECT
FINANCIALS:	Years project funded: 2006-07			
	BUDGET	EXPENDI	TURE	VARIANCE
TOTAL FOR YEAR:	\$63,600	\$23,902		\$39,698

TARGET DATES (commenced, estimated completion etc):

Stage 1 works completed June 2009. Expenditure of grant funds achieved during the 2008/09 fiscal year.

BRIEF PROJECT DESCRIPTION:

During 2003-04 Manly Council commissioned consultants to undertake Coastline Hazard Definition Studies (CHDS) for the foreshore of Forty Baskets, Little Manly, Manly Ocean Beach and Cabbage Tree Bay and Davis Marina to Manly Point.

The Studies defined the coastline hazards associated with the study areas, including an assessment of beach erosion, shoreline recession, sand drift, coastal inundation, stormwater erosion, slope and cliff instability and climate change. The CHDS's also detailed the relevant coastal processes within each area that contribute to the above mentioned hazards, provided detailed management options and listed further assessments that were required to further define and mitigate potential hazards.

Council is responsible for the mitigation of risks identified on public lands and is remediating identified hazards in a staged approach based on the level of risk posed.

Funding for this project has been acquired under the 2004/05 under Natural Disaster Mitigation Program.

On completion of Stabilisation Works on undercuts at Delwood & Fairlight Beaches, the focus is on rockfall stabilization at three sites on Marine Parade during 2008/09.

OBJECTIVES of the project:	Result: were they achieved? explanation:
To ensure any protective works minimise impact upon beach amenity and access, and where practical improve existing amenity and access	Yes, Further works designed and implemented at three sites on Marine Parade.
To take into account the potential for future climate change to affect the magnitude of coastline hazards	Yes, it is expected that rock fall from coastal cliffs will increase due to the impact of climate change. Rockfall stabilization works at three Marine Parade sites will reduce/eliminate coastal hazards.
To reduce to an acceptable level, the risk to property and risk to life as a result of slope and cliff instability.	Yes, rockfall stabilization works at three Marine Parade sites will reduce/eliminate the risk to property and risk to life. Marine Parade is intensively used by people.
INDICATORS for evaluation:	Statistic:
Number of high risk coastal hazards remediated	Three high risk rock fall sites remediated

Discussion:

The success of this project will be measured through minimising the risk to property and risk to life. Works have been implemented at Fairlight and Delwood Beaches during 2008/09 and continued at three high risk rock fall sites on Marine Parade, effectively improving the level of risk posed by sandstone undercuts to an acceptable level.

TBL ASSESSMENT:

Social: The project improves safety for users of the coastal and estuary foreshores, have positive implications on social aspects such as community wellbeing, community involvement and, ensure social needs of the community and offer significant social benefits.

Environment: Works undertaken take into account environmental issues such as habitat value and geoheritage conservation.

Financial: Remediation of coastal hazards and subsequent removal of public risk reduces likelihood of future costs associated with damage to property and/or loss of life.

KEY OUTCOMES:

Reduction of risk to life and/or property at sites 17, 18 and 22 on Marine Parade.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Ocean Beach & Cabbage Tree Bay Coastline Hazard Definition Study May 2003
- Manly Sustainability Strategy 2006
- Manly Ocean Beach Coastline Management Plan 2008

STAFF INVOLVED:

Coastal Management Team Leader, Risk Manager, Engineers, Precinct Coordinator

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

Council is strategically approaching the removal of risk in public areas in a staged approach based on the level of risk posed by identified coastal hazards.

The project is fully successful with completion of works at three sites on Marine Parade.

Funds have been fully expended. Grant is acquitted with funding body. Funds identified as variance are from Stage 2 grant funds and it is recommended that these be transferred back to Stage 2 account (25033.0933) for expenditure on stage 2 projects.

Environment Levy

PROJECT TITLE:	Coastal Hazard Remediation Stage 2			
PROJECT TYPE:	NEW PROJE	ECT		ONGOING PROJECT
FINANCIALS:	Years project funded: 2	2006-07		
	BUDGET	EXPENDI	TURE	VARIANCE
TOTAL FOR YEAR:	\$58,400	\$41,398		\$17,002

TARGET DATES (commenced, estimated completion etc):

Remaining funds intended to be expended during 2009/10. Works to be completed by June 2010.

BRIEF PROJECT DESCRIPTION:

During 2003-04 Manly Council commissioned consultants to undertake Coastline Hazard Definition Studies (CHDS) for the foreshore of Forty Baskets, Little Manly, Manly Ocean Beach and Cabbage Tree Bay and Davis Marina to Manly Point.

The Studies defined the coastline hazards associated with the study areas, including an assessment of beach erosion, shoreline recession, sand drift, coastal inundation, stormwater erosion, slope and cliff instability and climate change. The CHDS's also detailed the relevant coastal processes within each area that contribute to the above mentioned hazards, provided detailed management options and listed further assessments that were required to further define and mitigate potential hazards.

Council is responsible for the mitigation of risk identified on public lands and is remediating identified hazards in a staged approach based on the level of risk posed.

Funding for this project has been acquired under the 2005/06 under Natural Disaster Mitigation Program.

The focus is on completion of rockfall stabilization works at three sites on Marine Parade during 2008/09 and prioritisation of works at further sites.

OBJECTIVES of the project:	Result: were they achieved? explanation:
To ensure any protective works minimise impact upon beach amenity and access, and where practical improve existing amenity and access	Yes, Works completed at three sites on Marine Parade.
To take into account the potential for future climate change to affect the magnitude of coastline hazards	Yes, it is expected that rock fall from coastal cliffs will increase due to the impact of climate change. Rockfall stabilization works at three Marine Parade sites will reduce/eliminate coastal hazards
To reduce to an acceptable level, the risk to property and risk to life as a result of slope and cliff instability.	Yes, rockfall stabilization works at three Marine Parade sites will reduce/eliminate the risk to property and risk to life. Marine Parade is intensively used by people.
INDICATORS for evaluation:	Statistic:
Number of high risk coastal hazards remediated	Three high risk rock fall sites remediated

Discussion:

The success of this project will be measured through minimising the risk to property and risk to life. Works have been implemented at Fairlight and Delwood Beaches during 2008/09 and continued at three high risk rock fall sites on Marine Parade, effectively improving the level of risk posed by sandstone undercuts to an acceptable level.

TBL ASSESSMENT:

Social: The project improves safety for users of the coastal and estuary foreshores, have positive implications on social aspects such as of community wellbeing, community involvement and, ensure social needs of the community and offer significant social benefits.

Environment: Works undertaken take into account environmental issues such as habitat value and geoheritage conservation.

Financial: Remediation of coastal hazards and subsequent removal of public risk reduces likelihood of future costs associated with damage to property and/or loss of life.

KEY OUTCOMES:

- Reduction of risk to life and/or property at sites 17, 18 and 22 on Marine Parade
- Identification and assessment of hazard site at Cathedral Rock

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Ocean Beach & Cabbage Tree Bay Coastline Hazard Definition Study May 2003
- Manly Sustainability Strategy 2006

• Manly Ocean Beach Coastline Management Plan 2008

STAFF INVOLVED:

Coastal Management Team Leader, Risk Manager, Engineers, Precinct Coordinator

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

Council is strategically approaching the removal of risk in public areas in a staged approach based on the level of risk posed by identified coastal hazards.

The project saw completion of works at three sites on Marine Parade.

Remaining funds intended to be expended during 2009/10.

PROJECT TITLE:	Harbour Foreshores CMP Implementation				
PROJECT TYPE:	NEW F	PROJE	ЕСТ		ONGOING PROJECT
FINANCIALS:	Year project funde	e d : 20	006-07		
	BUDGET		EXPENDI	TURE	VARIANCE
TOTAL FOR YEAR:	\$63,740		\$0		\$63,740
TARGET DATES (commenced, es				eted by Jun	e 2010.
Expenditure is for the implementat North Harbour Coastline Managem Plans are currently being finalised s A number of works identified for in	nent Plans. As the North specific projects will be	h Harl	oour and Manly	Cove Coastl	line Management
OBJECTIVES of the project:	DBJECTIVES of the project: Result: were they achieved? explanation:			xplanation:	
Implement actions from identified Harbour based CMPs. Yes partially, as no works were implemented due to non-availability of matching funds. However, a number of works identified for implementation.			s. However, a		
INDICATORS for evaluation:		Statio	stic.		

Further implementation of Harbour CMPs and	N/A
associated Landscape Masterplans	
Discussion:	
Identified works will be implemented when matching fu	nds are available in 2009/10.
TBL ASSESSMENT: N/A	
KEY OUTCOMES: N/A	
POLICY REFERENCES (e.g. plans of management, reco	very plans, strategies etc include references):
Little Manly Coastline Management Plan	
 Little Manly Landscape Masterplan 	
 Forty Baskets Coastline Management Plan 	
 Forty Baskets Landscape Masterplan 	

STAFF INVOLVED:

Coastal Management Team Leader

• Sustainability Strategy 2006

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

Clontarf/Bantry Bay Estuary Management Plan 2008

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

Specific works planned to be implemented during 2009/10 include:

- Preparation of North Harbour Reserve Landscape Masterplan
- Preparation of Sandy Bay Landscape Masterplan
- Design of Ellery's Punt Erosion Protection Works
- Geodiversity Assessment & Management Study for Manly LGA

				Ques
PROJECT TITLE:	Forty Baskets CMP/Lan	dscape Maste	rplan Impl	ementation
PROJECT TYPE:	NEW PROJI	ECT		ONGOING PROJECT
FINANCIALS:	Years project funded: 2	2004-05		
	BUDGET	EXPENDI	TURE	VARIANCE
TOTAL FOR YEAR:	\$42,500	\$32,129		\$10,371
TARGET DATES (commenced, es	stimated completion etc):			
No works planned for 2009/10.				

BRIEF PROJECT DESCRIPTION:

Environment levy funding was used to match external grant funding to assist Council in revitalising Forty Baskets Reserve for the enjoyment and safety of residents and visitors to Manly. Works undertaken since this bid was initially funded include:

- Extension of the existing asphalt footpath
- New soft fall surfacing beneath existing swing
- New picnic table furniture and concrete surrounds
- New BBQ and concrete surround
- Pedestrian access ramp to Forty Baskets Beach
- New beach shower
- New in-ground boardwalk connection along eroded coastal path
- Improved vehicle access ramp to beach
- Provision of dinghy storage facilities will consolidate and visually improve existing storage.

During the 2008/09 financial year improvements to the toilet and access facilities were completed. No further works are planned at this stage.

OBJECTIVES of the project:	Result: were they achieved? explanation:
Implement Landscape improvements within Forty Baskets Reserve	Works commenced in Autumn 2006 with all works completed in December 2008.
INDICATORS for evaluation:	Statistic:
Implementation of Landscape Masterplan	Project 100% implemented

Discussion:

Adoption of the Forty Baskets CMP and Landscape Masterplan confirmed community acceptance of planned works for Forty Baskets Reserve. Additional consultation was required for design and location of dinghy storage facilities. Remaining funding was allocated to improved access to the toilet facility.

TBL ASSESSMENT:

Social – The works were developed through identification of community needs, environmental constraints/opportunities and to improve Council operations. The completion of works saw significant improvements to the way Forty Baskets Reserve is utilised by the range of user groups. Of particular note are the improvements to access for users of the Manly Scenic Walkway who are now able to safely move through the Reserve and access the beach itself.

Environmental – improved path networks were designed to minimise erosion within Forty Baskets Reserve and the back beach environment. The introduction of improved dinghy storage facilities has led to a safer environment for users of the area, minimised erosion and uncontrolled access while retaining the visual character so valued by the community. Construction of an interpretive panel serves to educate users of the Reserve on historical and environmental information.

Economic – Project costs associated with the implementation of works were supplemented by 50% through the successful acquisition of external grant funding. Expenditure improved Forty Baskets Reserve's facilities and visual character, subsequently encouraging utilisation of the location. Improvements to the eroded path network minimised the risk to users of the Manly Scenic Walkway as well as damage to Council vehicles. Visitor numbers have increased as a result of the works as has revenue raised through leases of kiosk and dinghy

storage facilities.

KEY OUTCOMES:

Implementation of toilet block and associated access.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- Manly Sustainability Strategy 2006
- Forty Baskets Coastline Management Plan 2004
- Forty Baskets Landscape Masterplan 2004
- Manly Scenic Walkway Plan of Management
- Manly Council Access DCP

STAFF INVOLVED:

Coastal Management Team Leader, Landscape Architect, Parks Coordinator, Leases & Licenses staff, Precinct Coordinator

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The project has been implemented 100%. The Forty Baskets Landscape Masterplan balances community values, user expectations and recreational activities with the important environmental and cultural heritage values of the Reserve.

Remaining funds will not be required and it is recommended these be re-allocated to implementation of another CMP/EMP.

8. Education for Sustainability Program

This section provides project specific reports relevant to the Education for Sustainability Program.

Environment Levy

PROJECT TITLE:	Education for Sustainability Program (EfS)			
PROJECT TYPE:	NEW PROJI	ЕСТ		ONGOING PROJECT
FINANCIALS:	Years project funded: 2	2004-present		
	BUDGET	EXPENDI	TURE	VARIANCE
TOTAL FOR YEAR:	\$100,000	\$60,902		\$39,098

TARGET DATES: Ongoing program

BRIEF PROJECT DESCRIPTION:

Council's Education for Sustainability (EfS) program is directed by the *Manly Education for Sustainability Strategy 2003* and consists of a series of sustainability education initiatives that will assist Manly in moving towards a sustainable society. The program includes the following initiatives:

• OOSH (Out of School Hours) Environmental Education Program

A series of environmental initiatives were undertaken with school children during Manly Council's before and after school care and holiday programs. Initiatives included catchment education, Manly Lagoon tours, Recycling Olympics, waste-to-art, Earth Hour and ecological footprint workshops.

Schools Education for Sustainability and Grants

A comprehensive schools and pre-schools EfS program has been running for several years. Initiatives included Manly Lagoon tours, Earth Hour, Schools Tree Planting Day, and catchment education. A review of all schools programs will be undertaken next financial year to develop new workshops and sessions that meet the goals of EfS. New programs will engage students in develop school audits to help schools complete their School Environmental Management Plans (SEMP).

The Sustainable Schools Grant Program was revised at the end of the 08/09 period, offering schools and preschools a chance to receive up to \$2,000 to put towards EfS projects. From 09/10 Schools will no longer need to complete a SEMP to apply.

Community Education for Sustainability

Green Up Your Life! – developed during 2008/2009, is a new community EfS program encompassing community workshops and events that aims to encourage and inspire the community to adopt positive environmental behavior in an effort to help combat climate change. Implementation will occur next

financial year.

• Manly Sustainability Fair

Integrated within the Food and Wine Festival this year, the Sustainability Fair invited people to learn about sustainable ways to live while enjoying food and entertainment in a fun, exciting atmosphere. 'Green Up Your Life!' – was this year's theme, tying in with the new workshop program (to be implemented in 2009/2010) and sending out the message that sustainability can and needs to be incorporated into all areas of people's lives. Over two days, thousands of people enjoyed an extensive range of exhibits and workshops, sustainable lifestyle, shopping, gardening and building. Tours of a local sustainable house ran twice daily, in addition to recycled art workshops for kids.

Staff Education for Sustainability

Throughout this year, Staff have been engaged through Sustainability Tips, promotion of EfS events and workshops and through various other programs. For example a breakfast was organised for 'Walk to Work Day' and 'Ride to Work Day' in October 2008, with prizes being given out as incentives and rewards for environmentally responsible behavior.

OBJECTIVES of the project:	Result: were they achieved? explanation:
Provide business sector, schools, community and council staff with the information necessary to enable them to make decisions that contribute to a sustainable Manly, including:	
To develop, organise and evaluate various key EfS programs	EfS programs were developed, implemented and evaluated for all four target audience groups. This included preschool to secondary students, local businesses, the community and staff. See above for specific programs. A more holistic approach is being adopted for the next financial year across all sectors.
To better inform the community about sustainability and promote positive behavioural change	Community engagement was a key focus under this program. All initiatives were successful in better informing the community about sustainability and as a result, behavioral changes were identified. Some positive environmental behavioral changes include: • More sustainable waste management practices, including an increase in the uptake of compost bins. • More positive survey results from community at events • Positive committee feedback • Increased event and workshop registration and participation numbers.
To target key issues within the community and within Council through EfS programs	Key issues (as identified in the <i>Manly Education for Sustainability Strategy 2003</i>) were incorporated into all EfS programs and included: • Sustainability and climate change (energy, water, waste).

	 Biodiversity conservation and protection (land, aquatic, biodiversity and noise) Aboriginal/non-aboriginal heritage
Adopt multi-disciplinary approaches for sustainability	EfS initiatives 2008/2009 adopted the a range of approaches including: New and previously established sustainability-related special events and days Community workshops (children and adults) School lessons Guided tours Surveys Personal communication with schools, business', staff and the community Informative emails Web page updates Reports
To contribute to, and address actions from Council management plans and strategies	This program contributed to a number of different Council reports and management plans including review of the Manly Sustainability Strategy, State of the Environment Report, Report to the Community. Actions in the Manly Sustainability Strategy and Manly Education for Sustainability Strategy have been addressed through EfS initiatives. See above for more details.
INDICATORS for evaluation:	Statistic:
To help to ensure initiatives are valid in achieving identified goals, indicators include, but are not limited to: • Survey results from community events and evaluation forms. • Community attitudes and values (recorded during community consultation and surveys) • Event and workshop registration numbers • Established partnerships with the community, local businesses, staff and schools. • 'Who Cares about the Environment' survey • Improvements to natural areas following program delivery • Committee feedback • Specific issue behavioral change in each target group following a specific EfS program.	Qualitative and quantitative data from all evaluations has been recorded. This includes results from surveys and evaluations forms that clearly identify positive feedback and areas for improvement.

Discussion: The EfS Program continues to be a great success within all sectors of the community. Ongoing evaluation ensures that all initiatives meet current identified needs within the community and Manly Council.

Evaluation of 2008/2009 initiatives demonstrates the success of this program in helping Manly work towards a sustainable future.

TBL ASSESSMENT:

The Education for Sustainability Program is directed by Manly's 'Education for Sustainability Strategy (2006)', and consists of a series of environmental education projects that will assist Manly move toward a sustainable society (Manly Sustainable Strategy, 2006; Education for Sustainability Strategy, 2003). It ensures Manly Council takes a holistic and integrated approach to environmental education and builds on the success of past education initiatives.

Education is recognised as a key component in achieving a sustainable future and "it is widely agreed that education is the most effective means that society possesses for confronting the challenges of the future" (UNESCO, 1997). The EfS program enables education to be managed holistically and to be integrated throughout all sections of council.

KEY OUTCOMES:

Schools and OOSH sessions

- 325 children participated in OOSH programs.
- Approximately 2,900 children within 30 different groups participated in school EfS programs
- A new Sustainable Schools Grant Application form, Information Guide and booklet with sample
 projects have been developed to assist schools in taking advantage of the grants. As a sign of a
 successful review, four schools have applied for this grant in 2008/2009. Monies will be granted in
 the following financial year.

Sustainability Fair and other community events

 Over 600 people were surveyed at the CEP tent about their knowledge, attitudes and beliefs about sustainability and climate change and asking how Manly Council could help them to make their lives more sustainable. New 'Green Up Your Life!' Sustainable Living Workshops themes were decided upon based on the identified needs from the community.

Sustainable Business Awards completed

Community workshops developed

Special staff days and programs completed

POLICY REFERENCES

Manly Councils Management Plan

Education for Sustainability Strategy, 2003

Manly Sustainability Strategy, 2006

National Action Plan – Environmental Education for a Sustainable Future

Learning for Sustainability: NSW Environmental Education Plan 2007-10.

STAFF INVOLVED:

Education for Sustainability Project Officer & other CEP staff, as necessary.

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

OVERALL EVALUATION AND CONCLUSION

Through its initiatives, the Education for Sustainability Program has been evaluated to be successful in helping Manly work towards a sustainable future. As a result it is recommended that this bid continue, with the program being flexible to build on the success of previous programs and evolve with community needs and

expectations.

Some specific recommendations for next year include the need to adopt a more holistic approach to staff sustainability education. The CEP will look into running EfS workshops for staff as well as a Sustainability Training and Induction program for new and existing staff.

In order to overcome challenges, such as making sure programs achieve their goals, all initiatives must be evaluated through planning, implementation and final stages of any program. Opportunities exist to coordinate a collaborative approach that addresses current issues for Manly by promoting initiatives that target schools, community, businesses and staff simultaneously. The way forward is to ensure that Manly Council continues to take a holistic and integrated approach to education for sustainability and build on the success of previous projects and programs.

Environment Levy

PROJECT TITLE:	Manly Ambassadors			
PROJECT TYPE:	NEW PROJE	ECT		ONGOING PROJECT
FINANCIALS:	Years project funded: 2	007/08, 2008/09)	
	BUDGET	EXPENDI	TURE	VARIANCE
TOTAL FOR YEAR:	\$6,000	\$1,366		\$4,634

TARGET DATES (commenced, estimated completion etc): Ongoing.

BRIEF PROJECT DESCRIPTION:

Manly Ambassadors is a volunteer program aimed at engaging the community through education to encourage residents to play an active role in the conservation, preservation and promotion of our natural environment. Engaging and empowering residents to take pride in their local area aims to encourage resident feedback, participation and community involvement. Participants are invited to a series of training opportunities addressing some of Manly's most crucial environmental issues incorporating train the trainer skills to further enhance this community education program. Training opportunities include but are not limited to Penguin Aware, Seahorse Awareness, waste management, stormwater management (Seachange), native flora and fauna protection, bushland importance, protection of areas such as Cabbage Tree Bay and North Head, catchment management, fair trade, climate change, and water efficiency.

Ambassadors compliment and are integrated into various Council programs which will encourage greater accessibility and increased integration of relevant community organisations, for example, the proposed Manly community garden. A feedback mechanism will be in place to evaluate participant satisfaction and workability, evaluation will be conducted after each training session.

DBJECTIVES of the project:	Result: were they achieved? explanation:
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To increase community participation through education for sustainability	The 2008 induction in June attracted 18 new community members increasing the number of Manly Ambassadors to 93.
To increase environmental awareness within the Manly Community	The Ambassador's were all inducted on information pertaining to the environment and sustainability.
To increase respect for the Manly environment to protect it for future generations.	Ambassadors were provided with a deeper knowledge of environmental issues as they are related to the unique environment that Manly is generates a greater respect.
INDICATORS for avaluations	A
INDICATORS for evaluation:	Statistic:
Application/nomination process	Statistic: We have 93 Manly Ambassadors.
Application/nomination process	We have 93 Manly Ambassadors. Training needs were asked to be identified in the

Discussion: The objective of Manly Ambassadors is to involve residents within the local community through promoting sustainability within education. By engaging our residents we are providing information about coastal living practices, encouraging Ambassadors to promote sustainable living initiatives to their social networks, friends, family, neighbours and visitors. This is a bottom up community education program that will enable residents within the Manly community to be more environmentally aware and to conserve the Manly environment for future generations.

TBL ASSESSMENT:

Social: Community Participation is the key to a successful education strategy and this will be further enhanced by the principles of volunteerism. The program provides educational opportunities as well as strengthening community cohesion, social wellbeing and trust through facilitating community involvement and volunteering. Promotion of broader environmental awareness empowers individuals to make informed choices and creates a greater sense of belonging, ownership and responsibility towards their local area.

Environmental: The focus of the program is on sustainability and environmental education. In training the ambassadors it is expected that changes in their actions and attitudes would have flow on effects to others in the community, resulting in broader environmental education and action.

Financial: While the program costs Council money, Council also benefits financial from the positive results of the program such as increased social cohesion, volunteer hours etc.

KEY OUTCOMES:

The program has generated a network of well-informed residents throughout the local area (93 people) and they are now increasing the presence of community involvement which is integral to building strong and healthy communities. Flora and fauna protection, as well as sustainable living and minimising ecological footprints are central to the topics covered throughout the Ambassadors education and training, with the diverse ecosystems that surround Manly used to exemplify and promote the importance of and need for

sustainable living. The continuation of this program to engage volunteers will continue to improve upon and ensure a liveable and involved Manly, however its approach is in need of revision.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

- 1. Manly Sustainability Strategy, 2006 (various actions)
- 2. Education for Sustainability Strategy, 2006 (various actions)
- 3. Manly Local Air Quality and Greenhouse Action Plan 2001 (various actions)
- 4. Northern Beaches Stormwater Management Plan, 1999 (various actions)
- 5. Integrated Catchment Management Strategy Manly & Warringah, 2003 (various actions)

The Manly Ambassadors program also addresses actions form various state, national and international plans which include;

- 1. Agenda 21 Chapter 36: 'Promoting Education, Public Awareness and Training
- 2. National Action Plan Environmental Education for a Sustainable Future 2000

Learning for Sustainability; NSW Environment Education Plan 2007 - 10

STAFF INVOLVED:

Community Volunteer Coordinator

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No.

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The Manly Ambassadors program is a great opportunity for the community as a means to engage while furthering knowledge on environmental and sustainable issues relating to Manly's unique natural environment. The community members whom the program attracts are all passionate about Manly and its local environment and are enthusiastic to learn more and be advocates of the training they are provided.

However, while participants are keen to attend the initial induction session and to learn, they are not as keen to play the 'honorary ranger' role which is where the Ambassador's program stemmed from. This part of the role provides them with a badge to identify them as a 'Manly Ambassador' and the ability to amicably correct environmentally detrimental public behaviour or to report it to Manly Council via the CRM system.

Therefore, my recommendation for the continuation of this program would be to separate the workshops, seminars and activities from the Manly Ambassadors program and for them to be integrated instead into the Sustainable Living Workshops that the Community & Environmental Partnerships team will be offering from September 2009.

The Manly Ambassador's Role should be maintained, however simplified and kept more closely aligned to its earlier 'Honorary Ranger' form.

PROJECT TITLE:	Sustainability Catchments Education	
PROJECT TYPE:	NEW PROJECT	ONGOING PROJECT

FINANCIALS:	Years project funded: 2008/09			
	BUDGET EXPENDITURE VARIANCE			
TOTAL FOR YEAR:	\$15,000	\$0	\$15,000	

TARGET DATES (commenced, estimated completion etc): Subject to availability of staff resources.

BRIEF PROJECT DESCRIPTION:

The Sustainability Catchments Education program was initiated to address issues of catchment health, specifically water pollution, in the Manly Catchment and especially the Burnt Bridge Creek area. The program was intended to support the range of existing catchment education programs and the dredging of the Manly Lagoon project.

OBJECTIVES of the project:	Result: were they achieved? explanation:
To address issues of catchment health, including water pollution, in the Manly LGA.	Project not commenced.
INDICATORS for evaluation:	Statistic:
TBD	TBD

Discussion: Initial planning was done at the start of 08/09. No detailed planning has been undertaken to develop this program further. Program is awaiting the allocation of staff resources in order for it to be implemented.

TBL ASSESSMENT: TBD

KEY OUTCOMES:

N/A – Project not yet commenced.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references): TBD

STAFF INVOLVED: CEP team.

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

Yes. Initial bid was for \$25,000. The \$10,000 has been used for other catchment education programs, namely the Manly Lagoon Festival – which is reported on in a separate report.

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

The Sustainability Catchments Education program has only reached initial stages of planning and no money has been used from this bid as of yet. It is recommended that this bid continue in order to achieve educational and environmental goals of sustainability catchment education in achieving a healthy catchment in Manly.

Environment Levy

				Ques C
PROJECT TITLE:	Waste Education Trailer			
PROJECT TYPE:			ONGOING PROJECT	
FINANCIALS:	Years project funded:			
	BUDGET	EXPENDI	TURE	VARIANCE
TOTAL FOR YEAR:	\$15,000	\$0.00		\$15,000
TARGET DATES (commenced, estimated completion etc): Project has not been implemented and will no longer continue.				
BRIEF PROJECT DESCRIPTION:				
A tool to assist the Waste Education Team in the efficient and professional delivery of waste minimisation and management messages. The Waste Education Trailer was to be designed to be versatile, with removable panels to ensure messages promoted on the trailer can be altered to fit in with specific occasions including visits to schools, unit blocks, Ocean Care Day and Manly's Food and Wine Festival and Sustainability Fair.				
Discussion: A decision was made to not implement the project.				
OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or				

impacts. Will this bid be continued? Opportunities and Challenges.

Planning commenced to re-fit the existing bushland trailer with this new waste education trailer, as a way to use existing resources.

It has been decided that this project will not be implemented and will no longer continue. It is recommended that these funds be re-allocated to another education project such as the community garden.

PROJECT TITLE:	Environmental History Museum and Teaching Laboratory			
PROJECT TYPE:	NEW PROJECT			ONGOING PROJECT
FINANCIALS:	Years project funded: 2007-present			
	BUDGET	EXPENDI	TURE	VARIANCE
TOTAL FOR YEAR:	\$258,000	\$0.00		\$258,000

TARGET DATES: Project will not be implemented.

BRIEF PROJECT DESCRIPTION:

Manly is representative of many urban Australian communities, all of which face environmental issues, and sharing stories through Manly's eyes will demonstrate the heritage that these communities have and extend knowledge of how the issues have been addressed.

The Environmental History Museum (EHM) would creatively highlight key moments in the region's environmental and indigenous history in an interactive manner. Items to be displayed will be identified from a community participation and research process, guided by the Themes and Sub-Themes of this Interpretation Plan. With the EHM located on proximity to very large numbers of visitors, Manly is well placed to communicate environmental stories to a national audience.

Discussion: Project was not implemented and will no longer continue.

KEY OUTCOMES:

Project will not be implemented.

STAFF INVOLVED: CEP

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

Significant work has gone into the research, development and lodgment of a Development Application for the Manly Environmental History Museum. To date the program has involved in house staff, external contractors and specialists all contributing their knowledge and skills to the development of the Museum.

During this year, it was decided that the project will not be implemented and no longer continue.

				W N C
PROJECT TITLE:	Manly Ocean Care Day			
PROJECT TYPE:	NEW PROJE	ECT		ON GOING PROJECT
FINANCIALS:	Years project funded: 5 years			
	BUDGET	EXPENDI	TURE	VARIANCE
TOTAL FOR YEAR:	\$18,000	\$11,363		\$6,638 (secured sponsor)
TARGET DATES (commenced, estimated completion etc.): 1/10/08 – 8/12/08				

BRIEF PROJECT DESCRIPTION:

Manly Ocean Care Day Festival is an annual event co-ordinated by the Manly Environment Centre. The festival is a fun, interactive all-inclusive community event which aims to raise awareness of the range of environmental issues we face today. Most importantly it aims to provide information to people, empowering them to take action and make lifestyle choices which will create positive outcomes for themselves, the wider community (locally and globally) and reduce the impacts on our aquatic environments and bushland areas.

Each year Ocean Care Day focuses on celebrating the appropriate international years ie: 2008 was the international year of the Reef. Other activities included 60 stall holders including green groups, eco-living, community groups, children's activities, talks and films, art tent, Aboriginal heritage information, live music, other cultural group involvement, sporting activities - Manly Yacht Club Ocean Care Day Race.

OBJECTIVES of the project:	Result: were they achieved? explanation:
Manly Council to showcase their environmental services policies, workshops and activities via the MEC and other branches. To include a program of activities to educate the local community and visitors to Manly about the importance of the ocean and our marine environment.	Yes . Raised the awareness of Manly Councils role via the MEC and other branches, in providing a high quality event for the local community along with the increased awareness of the 'Reef in our Backyard' – Cabbage Tree Bay and environmental issues we face.
Raise awareness of local issues and impacts	Yes, there was a significant increase in community stallholders promoting to a large audience
Provides up-to-date information from experts	A significant increase in the variety of stall holders providing the latest information.
Increase database of interested locals & volunteers	Yes, increase in both areas to promote ongoing program of talks and events.
INDICATORS for evaluation:	Statistic:
International 'Year of the Reef'- Number of attendees	Raised awareness of the 'Reef in our Backyard' – Cabbage Tree Bay – Approx 10,00 attended the event. DVDs on local marine species by Ecodivers.
Talks & Films – attendance	4 talks & films held at MLSC - well attended
Eco exhibits	Significant increase in number of stallholders, therefore increase in formation distribution – 60 stands
Art Exhibition – participant numbers	Increase in the variety and number of local artists attending - 22.
Children's Activities	Exhibition of the 500 children's entries in the Cabbage Tree Bay colouring in competition. Maori Cultural group and Aboriginal Heritage Office ran kids activities.
Penguin Plaza	Raised awareness of Manly's Little Penguin through Taronga Zoo's Project Penguin

Native Plant Giveaway	Increased awareness of native plants via plant	
	giveaway program	
Sporting Activity	Manly Yacht Club race day well attended	

Discussion: Major focus of the event was raising the awareness of Cabbage Tree Bay as part of the International Year of the Reef to link with DECC's First Management Plan of an Aquatic Reserve; promoting education of our marine environment to local schools via a colouring competition and promote community not-for-profit organisations and eco- exhibitors. Everything on the land ends up in the water.

TBL ASSESSMENT:

All of the activities in this event are provided free of charge, ie: exhibits, advisory services, music, artworks, children's activities etc.

KEY OUTCOMES:

Increased awareness in Manly's 'Reef in our Backyard' – Cabbage Tree Bay via posters, flyers and other media. Increase in awareness of Manly's marine environment. Increase in awareness of MEC before and after the event. Increased education of local marine and environmental issues.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references): Manly Council Management Plan, Sustainability Strategy, Recovery Plans of Manly's Little Penguins and Long nosed Bandicoots, all of Manly's Coastal Plans including: Cabbage Tree Bay, Little Manly and Forty Baskets.

STAFF INVOLVED:

MEC branch, CEP branch, Bushland Management, Rangers, Aboriginal Heritage Office

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

Yes. As our event coincided with a new campaign, we were able to negotiate major Government sponsor for design of artwork for brochures and poster as well as printing. This meant we came in significantly under budget.

OVERALL EVALUATION AND CONCLUSION: Consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

This was the 15th consecutive Ocean Care Day. Each year features are added to coincide with the international year theme and synchronise with priority education programs.

The success of this event can be measured not only by the increasing attendance but by the significant increase in contributions from artists and musicians and volunteers as well as the numbers of exhibitors. All of these elements reflect the growing interest and awareness of the ocean and Manly's marine environment. The range and level of community involvement in this event is extremely high.

It is recommended that this bid be continued.

PROJECT TITLE:	MEC Cataloguing				
PROJECT TYPE:	NEW PROJECT		ONGOING PROJECT		
FINANCIALS:	Years project fund	ded: 2	2007		
	BUDGET		EXPENDI	TURE	VARIANCE
TOTAL FOR YEAR:	\$2,600		\$0		\$2,600
TARGET DATES (commenced, e.	stimated completio	n etc):	December 2009)	
BRIEF PROJECT DESCRIPTION:					
Cataloguing of Manly Environment	Centre resources to e	enable	listing on the Sh	orelink cata	alogue.
OBJECTIVES of the project:	Result: were they achieved? explanation:		xplanation:		
Improved access to MEC Resources	Project not yet commenced.				
INDICATORS for evaluation:	Statistic:				
TBD	TBD				
Discussion: Completion of this project is delayed as MEC has to find new premises which might affect the system design.					
TBL ASSESSMENT: TBD					
KEY OUTCOMES:					
Project not yet commenced. Expected outcome - online access to MEC resources through SHORELINK				SHORELINK	
POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):					
Sustainability strategy					
STAFF INVOLVED: MEC					
DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No					
	OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or			ong term prospects or	
·	mpacts. Will this bid be continued? Opportunities and Challenges.				
Project not yet commenced.					

					QUNG
PROJECT TITLE:	Community Awareness of Environment Levy Projects			ojects	
PROJECT TYPE:	NEW I	PROJI	ЕСТ		ONGOING PROJECT
FINANCIALS:	Years project fund	Years project funded: Ongoing			
	BUDGET		EXPENDI	TURE	VARIANCE
TOTAL FOR YEAR:	\$10,000		\$4,952		\$5,048
TARGET DATES (commenced, e.	stimated completion	n etc):	Annual commu	nity newsle	tter completed.
BRIEF PROJECT DESCRIPTION:					
A community newsletter (printed in the Manly Daily – full page) to inform and to promote the positive work of Levy projects to all members of the community to ensure continued support for the Levy. Undertaken at the request of the Environment Committee. This has been an ongoing levy funded initiative.					•
OBJECTIVES of the project:	Result: were they achieved? explanation:		explanation:		
To promote the positive work of Le members of the community to ens support for the Levy.					ed with no negative
INDICATORS for evaluation:		Statis	stic:		
Newsletter printed in Daily		News	letter printed		
Response regarding community satisfaction No responses					
TBL ASSESSMENT: The minor financial expense incurred ensures that the community are kept informed about the outcomes of their Levy payments. In turn this would maintain community support for the Environment Levy to continue resulting in further social and environmental gains.					
KEY OUTCOMES:					
Dissemination of information concerning Environment Levy Projects to inform the community.					
POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references): Corporate Plan 5.1.1				eferences):	
STAFF INVOLVED: Natural Resou	rces Branch Manager				
DOES BID DEVIATE FROM ORIG	INAL BID? EXPLAIN:	: No			
OVERALL EVALUATION AND CONCLUSION Failure to communicate may lose support for the Levy. Bid to be continued.					

9. Climate Change Program

This section provides project specific reports relevant to the Climate Change Program.

Environment Levy

PROJECT TITLE:	Climate Change Impacts & Risk Management (CCIRM)				
PROJECT TYPE:	NEW PROJECT			ONGOING PROJECT	
FINANCIALS:	Years project funded: 2007/08				
	BUDGET	EXPENDI	TURE	VARIANCE	
TOTAL FOR YEAR:	\$74,000 (includes \$48,997 grant funding through the Federal Government's Local Adaptation Pathways Program)	\$59,276		\$14,724	

TARGET DATES (commenced, estimated completion etc): The project is anticipated to be completed by November 2009.

BRIEF PROJECT DESCRIPTION:

The Climate Change Risk Management and Adaptation (CCRMA) Project is a two stage project which has allowed Council to undertake a comprehensive assessment of climate risks to Manly Local Government Area (LGA) and subsequent determination of adaptation actions to treat identified climate change risks. The Project will take Manly Council from a general awareness and 'ad hoc' approach to climate change adaptation to a more comprehensive and systematic approach that will be integrated into Council's Management Plan and budget bidding processes.

The CCRMA Project ('the Project') is comprised of two complementary stages to achieve climate change risk management and adaptation action objectives, these stages include:

- Stage I The Risk Management Process to identify and evaluate risks; and
- **Stage II** Development of an Adaptation Action Plan to treat climate risks with an aim to implement 'win-win' and 'no-regrets' actions.

This project has received additional funding under the Department of Climate Change's (DCC) Local Adaptation Pathways Program (LAPP).

OBJECTIVES of the project:	Result: were they achieved? explanation:
Identify and evaluate climate change	YES:
risks for the Manly LGA	Climate change risks have been identified and evaluated for the Manly

	LGA. Separate Council staff and community/stakeholder climate change risk workshops were held and a comprehensive risks assessment conducted following the process outlined in the Australian Government's publication "Climate Change Impacts & Risk Management: A Guide for Business and Government." Outcomes were integrated into a Draft Climate Change Risk Assessment for Manly LGA.
Develop and implement a climate change adaptation action plan for Manly LGA	80% developed, Specific implementation not yet commenced A prioritised draft climate change adaptation action plan has been developed for Manly under the LAPP process This is still to be finalised.
INDICATORS for evaluation:	Statistic:
Climate change risks assessment process completed	Comprehensive Climate Change Risk Assessment Report produced with risks matrices prepared for service delivery areas in Council.
Increased understanding of climate risks and identification of actions and necessary works required to treat risks.	Draft Adaptation Action Plan produced clearly identifying preferred and priority actions. 17 Council staff and 14 stakeholders participated in risk and adaptation workshops (increased understanding of climate change risks and necessary adaptation actions).

Discussion: The Draft Adaptation Action Plan integrates outcomes from the community/stakeholder and Council staff adaptation workshops and relevant adaptation actions identified in *Change Actions for Manly LGA> 2008 to 2038* (Cardno, 2008); *Systems Approach to Regional Climate Change Adaptation Strategies in Metropolises*" (Sydney Coastal Council Group, 2008), Council's submission to the "Senate Inquiry into Climate Change and Environmental Impacts on Coastal Communities" (2007).

TBL ASSESSMENT:

Environment:

Manly's coastal environment is highly susceptible to impacts of climate change, particularly sea level rise, increased frequency and intensity of storms, storm surge and increased temperatures. This project has identified a number of high and extreme climate change risks to the natural environment as a result of anticipated climate change impacts such as beach erosion, saltwater intrusion into freshwater ecosystems, increased sewer overflows and increased erosion and siltation of Manly Lagoon and other waterways. Adaptation actions have been determined and to treat identified risks, and a prioritised and a Draft Adaptation Action Plan developed. This Plan provides Council with a strategic tool to direct resources to address these climate change risks, in order to protect and preserve the natural environment, and enhance to capacity of the environment to adapt to climate change impacts.

Financial:

The above mentioned impacts of climate change will have significant financial implications for Council and the community. This project has identified a number of high and extreme risks resulting from the above mentioned climate change impacts which will have significant financial implications for Council and the community. These include damage or destruction of Manly's low lying public and private coastal infrastructure, flooding of low

lying areas including the CBD (reduced operation of businesses) and loss of beach amenity threatening the tourist based economy. The costs of inaction in the long term, far outweigh the cost of taking early action to address these climate change risks. This project has produced a prioritised Plan to address such risks in a strategic manner. Staged implementation of the Adaptation Action Plan will have significant economic benefits for Council and the community over the next 50 years.

Social:

The impacts of climate change will have significant social ramifications for the Manly community. Identified risks include increased heat stress to the young and elderly, loss of low lying open space and recreational areas, and increased demand on emergency services. The Draft Adaptation Action Plan provides a strategic framework to treat such risks and thus staged implementation will have positive social impacts for the Council and community.

KEY OUTCOMES:

Completion of comprehensive climate change risk assessment for Manly LGA

Development of Draft adaptation action plan for Manly LGA with community/stakeholder and Council staff involvement.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

Manly Council Management Plan (2008-2010): 5.1.1 Environment Program & 6.2.6 Risk Management. *Manly Sustainability Strategy*:

- *C1.3.8:* Incorporate latest climate change information into management decisions including consideration of a strategy to address sea level rise. Consider possible impacts on the underground aspects of development.
- C2.4.1: Implement best-practice risk management through Coastal Plans of Management.
- C2.4.2: Subject to review by Council's Climate Change Working Group, review the possible social, economic and environmental impacts of climate change on Manly and ensure there are planning or management responses in place to address them by undertaking an assessment through the Australian Greenhouse Office's Climate Change Impacts & Risk Management. A Guide for Business and Government. Integrate recommendations into the review process of the Local Air Quality and Greenhouse Action Plan. Consider alternative power sources in this review.
- C2.4.3: Continue to develop a comprehensive understanding of natural hazards affecting Manly's environment.
- C2.4.8: Monitor scientific debate and interpret with the assistance of Council's Scientific Advisory Panel. C1.3.8

STAFF INVOLVED:

Environmental Planner, Risk Manager and numerous staff Council-wide were involved in the provision of information and workshops.

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN: No

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts.

The implementation of this project will continue, subject to funding, over the short, medium and long term in accordance with the Final Adaptation Action Plan. The Draft Adaptation Action Plan needs to be reviewed and considered in light of Council's proposed climate change mitigation approach, currently being developed

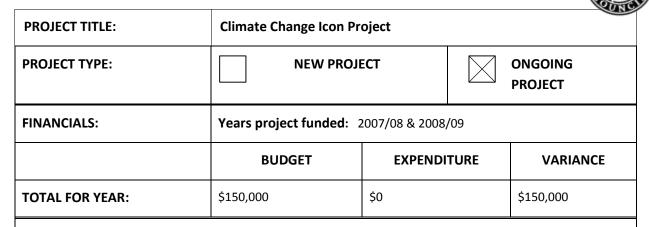
through preparation of a Carbon Management Plan for Council. Council intends to closely align its mitigation and adaptation responses to ensure that the most appropriate priorities are implemented with win-win and best cost:benefit outcomes for the environment and the community. Following which, Council's aligned mitigation and adaptation approach will be integrated into Council's Management Plan and budget bidding processes. Priority measures can then be funded and implemented.

Through this project, a comprehensive climate change risk assessment and risk treatment process has been undertaken, building on outcomes of previous climate change studies in Manly LGA. Key staff responsible for service delivery areas likely to be impacted from climate change have been involved in the process together with key external stakeholders and members of the Sustainability and Climate Change Committee, increasing the understanding of climate change risks and appropriate adaptation measures.

Once finalised the Draft Adaptation Action Plan will provide a strategic framework to direct Council resources to address identified climate change risks. Staged implementation will have significant positive environmental, economic and social outcomes for Council and the community.

Anticipated challenges for the completion of this project include seeking sufficient funding to implement actions. However, as this project has been undertaken under the LAPP Program, it is hoped that the Federal Government will provide future funding for implementation of outcomes from this Program.

Environment Levy



TARGET DATES (commenced, estimated completion etc): Project has not yet commenced. Project scoped to erect solar PV on Town Hall roof, however GM now intends to use funds for energy efficient street lighting project. Project awaiting further direction.

BRIEF PROJECT DESCRIPTION:

This project relates to a specific Council Resolution (Planning & Strategy Committee, 12 May 2008: Item for Brief Mention Report No. 8):

- That Council supports a \$150,000 budget allocation within this year's environment levy for an icon climate change project.
- That this \$150,000 be a one-off allocation for this year only, pending the Climate Change levy poll in September.
- That staff bring to the next Environment Committee meeting:

- a) a recommendation of existing levy projects to the amount of \$150,000 to be deleted and/or deferred from this year's levy
- b) a proposal for an icon project(s) focused on greenhouse reduction technologies and energy efficiency.

Further scoping to be determined through consultation with the relevant Council community committee.

OBJECTIVES of the project:	Result: were they achieved? explanation:
A program that achieves real greenhouse savings for Council and community that also encourages the community to act on similar initiatives.	Project not commenced.
Further objectives to be determined through consultation with the relevant Council community committee.	N/A – at this stage.
INDICATORS for evaluation:	Statistic:
To be determined following scoping of the project.	N/A – at this stage.

Discussion: N/A – at this stage as project has not commenced. Awaiting further direction from GM.

TBL ASSESSMENT:

A TBL assessment will be undertaken as part of the scoping process for this project, pending further direction from the GM.

KEY OUTCOMES:

To be determined in consultation with the relevant Council community committee.

POLICY REFERENCES (e.g. plans of management, recovery plans, strategies etc include references):

Council resolution (Planning & Strategy Committee, 12 May 2008: Item for Brief Mention Report No. 8).

STAFF INVOLVED:

To be determined

DOES BID DEVIATE FROM ORIGINAL BID? EXPLAIN:

No bid submitted as this was a Council resolution instructing direct allocation of funds.

OVERALL EVALUATION AND CONCLUSION consider success of the project, medium/long term prospects or impacts. Will this bid be continued? Opportunities and Challenges.

Project not yet commenced.

Appendix A

Environment Levy Statement of Funds

(for period 1 July 2008 to 30 June 2009)