



**Shoalhaven River**

**Estuary Management Plan**

**Implementation Strategy**

# Highest priority actions

Refer Sections 7 to 10 of Natural Resources Management Plan

Action ID	Action	Responsible organisation	Which other organisations are involved?	Why is this action important?	Linked to other actions?	Investment required	Possible sources of funds
7.1	Ensure that CMA staff and Board members are aware of priorities in the Shoalhaven Estuary Management Plan and their relative importance in the region. CMA recognises the Estuary Management Plan as the central strategic document for the health of the estuary.	SRCMA	Council Estuary Management Officer.	See <b>Table 7.1</b>	See <b>Table 12.3</b>	No additional funds required.	Within role of Council's natural resource management staff.. CMA Estuary and Costal Lakes Incentives Program and other funding programs become available to implement the Estuary Management Plan through SRCMA involvement in the implementation of the Plan
7.3	Council, DWE, SCA, DECC and CMA continue to work together on relevant and practical EII parameters for the Shoalhaven and other south coast waterways.	SRCMA and SRCMA funded project officer (supervised by DECC)	Council, DECC, DPI.	See <b>Table 7.1</b>	See <b>Table 12.3</b>	Salary and related costs for DECC Project Officer (allow \$90,000). The CMA Estuary assessment and Benchmarking project has a budget of \$140,000 (NHT funds) to be used across priority estuaries in the Southern Rivers Region.	DECC/CMA budget (derived from NHT funds), plus supporting tasks within the role of existing DECC, SRCMA, DPI and Council staff (in kind contributions).

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved?</b>	<b>Why is this action important?</b>	<b>Linked to other actions?</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
7.5	Implementation of estuary management actions is consistently reported in Council's annual report, SCA annual report and CMA annual report	Council Estuary Management Officer, SCA and SRCMA staff		See <b>Table 7.1</b>	See <b>Table 12.3</b>	No additional funds required.	Within role of existing staff at relevant organisations.
7.8	Review Environmental protection zonings in the Shoalhaven LEP and DCP requirements to ensure that they reflect significant estuary values (particularly Aboriginal heritage, biodiversity) and threats (e.g. coastal inundation).	Council Planning Manager	DoP	See <b>Tables 7.1 and 10.5</b>	See <b>Table 12.3</b>	No additional funds required (note that a full review/update of the Shoalhaven LEP will be needed to make it consistent with current planning orders). The recommended changes will be incorporated into the compulsory review of the LEP over the next three years.	Within the role of existing planning staff at Council and DoP.
7.9	Develop protocols for communication (with relevant stakeholders) about works that may affect estuary health to ensure minimal risk of impact on sensitive estuary users or values.	Council Estuary Management Officer	Council Media Manager, Oyster growers, Shoalhaven Water, DECC.	See <b>Tables 7.1 and 10.4</b>	See <b>Table 12.3</b>	Existing resources. No additional funds required.	Within the role of existing staff at Council.

Action ID	Action	Responsible organisation	Which other organisations are involved?	Why is this action important?	Linked to other actions?	Investment required	Possible sources of funds
8.1	SCA conducts suitable hydrological and ecological studies to refine understanding of the potential long term impacts of harvesting additional medium flows. The results of these studies should be made available to Council, DECC, DWE, SRCMA, oyster growers and the SNRFMC.	SCA	CMA, Shoalhaven Water, Oyster growers, Council, DECC, DWE.	See <b>Table 8.1</b>	See <b>Table 12.3</b>	Some of these scientific studies are underway as part of the environmental assessment for modifications to the Shoalhaven Scheme. Allow up to \$150,000.	SCA budget for Shoalhaven Scheme.
8.3	Complete floodplain management plan and implement priority recommendations.	Council	DECC	See <b>Table 8.1</b>	See Action 8.4.	No further budget required to complete the Floodplain Management Plan. The Plan will set out investment required to implement its key recommendations.	Council and DECC. Commonwealth Emergency Management funds. Floodplain Management Program (DECC) for implementation.
8.4	Review the entrance management policy for Shoalhaven Heads at regular intervals, and link to appropriate minimum floor levels for any future development, including taking into account the effects of sea level rise on 1%AEP flood events (floor levels are set by the Floodplan Risk Management Plan). (See SCC Policy POL05/49, affirmed	Council	DECC	See <b>Table 8.2</b>	See Action 8.3	In progress, not additional funds required.	Within role of existing Council staff.

Action ID	Action	Responsible organisation	Which other organisations are involved?	Why is this action important?	Linked to other actions?	Investment required	Possible sources of funds
	September 2005)						
8.11	Investigate methods to improve tidal ventilation past structures such as floodgates, particularly when tidal flows to high value floodplain wetlands (estuarine) have been affected. See also <b>Table 9.1</b> – re habitat management in floodplain wetlands). <b>Section 8.2.2</b> has details of potential priorities.	DPI	Landholders, DECC, Council, SRCMA	See <b>Tables 8.2</b> and <b>8.3</b>	See <b>Table 12.3</b>	Likely to require a Project Officer, covering a wider area than the Shoalhaven estuary and floodplain. CMA Revive Southern Wetlands Project has \$450,000 NHT funds over three years. The Shoalhaven floodplain wetlands are not a priority under this program.	Future NHT funds. DPI conservation programs, potentially linked to acid sulfate management programs (see Actions 9.7/9.24 and 9.25). CMA “Bring Back the Fish” Program.
8.13	Fence riverbanks to exclude cattle access/trampling and destruction of riparian vegetation, focusing on specific locations in the lower estuary (between Pig Island and Numbaa Island).	Landholders by voluntary agreement and co-operation	SRCMA, community Landcare or Rivercare groups. DECC	See <b>Tables 8.4, 9.2</b> and <b>9.3</b>	See <b>Table 12.1</b>	SRCMA Funds allocated to programs that involve riverbank fencing and revegetation (amongst other activities) total more than \$2 million. However, only selected sites are in the Shoalhaven estuary area.	Three SRCMA programs provide potential sources of funds: Estuary and Coastal Lakes Incentives Program; Shoalhaven/Illawarra Dairy Industry Partnership; and River Recovery – Shoalhaven/Illawarra.
8.17	Identify and assess any	DECC	DPI, landholders	See <b>Tables 8.4</b> and	See <b>Table</b>	Likely to be the	Possibly DECC, as the

Action ID	Action	Responsible organisation	Which other organisations are involved?	Why is this action important?	Linked to other actions?	Investment required	Possible sources of funds
	<p>alternative communities/habitat that can be conserved to maintain equivalent values to Comerong Island in the estuary. See also <b>Section 8.5</b> in relation to this approach to habitat threatened by sea level rise.</p> <p>Negotiate conservation agreements by agreement for suitable offset habitat areas.</p>			<b>9.3</b>	<b>12.1</b>	<p>role of a project officer, with responsibility extending beyond the Shoalhaven estuary area.</p> <p>This strategic conservation management action is not the focus of any existing SRCMA programs.</p> <p>A Project Officer for one year would require investment in the order of \$80,000.</p>	manager of significant areas of high conservation value estuary and floodplain wetlands.
8.18	<p>Include area and health of endangered ecological communities and habitat suitable for migratory waders in Ecological Integrity Index, so that ecological risks associated with retreat of banks at Comerong Island are monitored.</p>	SRCMA	Council, DECC, DPI,.	See <b>Tables 8.4 and 9.3</b>	See <b>Table 12.1</b>	<p>Existing resources. See Action 7.3 re project officer to refine EII through the estuary benchmarking program.</p>	
8.19	<p>Replant reed beds and/or mangrove along toe of banks where wind waves contribute significantly to erosion processes.</p>	SRCMA and/or landholders by voluntary agreement	DECC, community Landcare or Rivercare groups	See <b>Tables 8.3, 8.4 and 9.2, 9.3</b>	See <b>Table 12.3</b>	<p>Two SRCMA programs include relevant actions. River Recovery and Estuary and Coastal Lakes Incentives programs both</p>	<p>SRCMA River Recovery and Estuary ad Coastal Lakes Incentives programs have a total of \$1.9 million in funds for works in the southern rivers region.</p>

Action ID	Action	Responsible organisation	Which other organisations are involved?	Why is this action important?	Linked to other actions?	Investment required	Possible sources of funds
						include funds for bank stabilisation and replanting works.	
8.22	Construct groynes or other structures to maintain recreational foreshore – beach and shallow near shore with low current velocities	Council	DECC, DPI, NSW Lands, recreational waterway users.	See <b>Tables 8.2 and 8.4</b>	See <b>Table 10.3</b> re enhancement of Greenwell Point reserve.	Webb McKeown 2003 indicate a budget of approximately \$250,000 for shoreline protection works at Greenwell Point.	Council, Estuary Management Program (DECC).
8.28	Protect fringing reed beds or mangroves along the banks of the upper estuary. This may involve: <ul style="list-style-type: none"> <li>fencing of high banks of pocket floodplains to exclude cattle (and provision of offstream watering points for cattle); and</li> <li>encouraging replanting of reed beds in the river where they have been previously degraded by grazing.</li> </ul>	Landholders by agreement	DPI, Council, DECC, DPI	See <b>Tables 8.5, 9.2 and 9.3</b>	See <b>Table 12.1</b>	See also Actions 8.12 and 8.18	The SRCMA River recovery, Dairy Industry Partnership and Estuary and Coastal lakes Incentives programs all include relevant actions such as off river stock watering points, stock management along creeks/estuary, fencing etc. Also Estuary Management Program (DECC) for public land projects.
8.33	Include information about sea level change in Council's SoE or similar regular reporting.	Council		See <b>Table 8.6</b>	See <b>Table 12.1</b>	No additional investment is required.	Within the responsibilities of existing Council natural resources management staff. The SRCMA estuary assessment and benchmarking program may contribute relevant

Action ID	Action	Responsible organisation	Which other organisations are involved?	Why is this action important?	Linked to other actions?	Investment required	Possible sources of funds
							information.
8.34	Remove priority barriers to fish passage in the upper reaches of the estuary and estuarine tributaries to allow ongoing fish access to migrating habitat as sea level rises. This reason for managing structures such as floodgates and culverts is separate to the justification for removing floodgates lower in the system (for habitat restoration rather than migration)..	DPI	SRCMA, landholders, Council	See <b>Tables 8.6 and 9.2</b>	See <b>Table 12.1</b>	Cost depends on specific requirements for each site, and the need for detailed local consultation about changes to hydrology.	Possible future SRCMA program funding (Bring Back the Fish Program); DPI special funding for highest priority sites; potential for contributions from the commercial and recreational fishing industries.
8.39	Prepare climate change risk reduction guidelines for oyster industry, focusing on potential storminess and more frequent high temperature days.	Oyster industry, DPI		See <b>Tables 8.6 and 10.4</b>	See <b>Table 10.4 – Sustainable aquaculture strategy</b>	Allow \$25000. Consultation with oyster growers will be critical for practicality and to encourage adoption.	DPI through Oyster Industry programs.
9.1	Implement Brundee Swamp and Saltwater Swamp Plan of Management in relation to habitat protection.	DECC	Landholders, Council, SRCMA	See <b>Tables 9.2 and 9.3</b>	See <b>Table 12.1</b>	Existing resources; Allow \$100,000 as an indicative cost for highest priority actions.	The CMA Revive Southern Wetlands project could provide funds for these wetlands in the future, but they are not currently priorities in that program. Direct DECC funding is an option. Success would require a partnership with adjoining land owners.
9.2	Minimise vehicle access to floodplain wetland areas,	DECC, landholders		See <b>Table 9.3</b>	See <b>Tables 9.3 and 12.1</b>	Different costs to address the	As above.



Action ID	Action	Responsible organisation	Which other organisations are involved?	Why is this action important?	Linked to other actions?	Investment required	Possible sources of funds
	particularly those in existing Nature Reserves. See also <b>Action 9.5.</b>	by voluntary agreement				issues at each site. Allow \$50,000 as an initial investment for highest priority actions.	
9.4	Landholders adjacent to floodplain wetland reserves consider voluntary conservation measures for remnant habitat areas, to improve continuity	Landholders, DECC, SRCMA	Council	See <b>Tables 9.1 and 9.3</b>	See <b>Tables 9.3 and 12.1</b>	Initial investment would fund a project officer to refine the concept and identify/negotiate properties/landholders where voluntary conservation is a viable option. Indicative allowance for project officer and planning/extension tasks is \$120,000.	SRCMA Estuary and coastal lakes Incentives Program and River Recovery Program both refer to conservation agreements with landholders. The Dairy Industry Partnership program also refers to measures to improve environmental management on dairy farms. Existing SRCMA programs are providing training and planning support for landholders in relation to conservation management benefits and practice.
9.5	By co-operation between landowners, ensure that stock are excluded from Nature Reserves by suitable fencing.	Landholders, DECC, CMA	DPI	See <b>Table 9.1</b>	See <b>Tables 9.1 and 12.1</b>	Depends on type of fencing agreed between stakeholders.	SRCMA programs as above.
9.11	Develop voluntary conservation agreements with floodplain land owners to set aside riparian land for habitat restoration, see <b>Sections 9.3.1, 9.3.2 and 9.3.3 and Table 9.3.</b>	DECC, landholders	Council, SRCMA	See <b>Table 9.2</b>	See <b>Tables 9.2, 9.3 and 12.1</b>	Ongoing task for project officer across the SRCMA area, with support from existing	As above, several SRCMA programs include development of voluntary conservation agreements where high conservation values exist on private

Action ID	Action	Responsible organisation	Which other organisations are involved?	Why is this action important?	Linked to other actions?	Investment required	Possible sources of funds
	Property Vegetation Plans, formalised by agreements between the CMA and land owners are an alternative agreement by which land which is being managed for vegetation/habitat recovery can be recognised on a medium to long term basis (see <b>Section 9.3.2</b> ).					DECC staff. Allow an indicative investment of \$100,000.	property. May provide some benefit to landowners by reducing land rates
9.12	Provide incentives for farmers to install off river water supplies for cattle and fence river banks to minimise cattle access to the riparian zone.	DECC, SRCMA	Landholders, Council	See <b>Table 9.2</b>	See <b>Tables 9.3 and 12.1</b>	Incentives are not designed to cover the full cost of establishing off river watering, but to encourage investment and changes to management by landholders. As an example, the Dairy Industry Partnership has \$175,000 plus in kind contributions from land owners for a range of projects including improved stock management along creeks and rivers.	SRCMA Estuary and Coastal Incentive Program; Shoalhaven/Illawarra Dairy Industry Partnership; Council; DPI. The River Recovery Program for Shoalhaven/Illawarra includes a target of at least 25 off stream watering points, plus fencing and planting of the riparian zone.

Action ID	Action	Responsible organisation	Which other organisations are involved?	Why is this action important?	Linked to other actions?	Investment required	Possible sources of funds
9.13	Provide incentives for farmers to replant/regenerate native species on unconsolidated alluvial banks (leave active point bars for ongoing sediment transport in the estuary). Focus on sections which are relatively stable (i.e. not affected by severe flood erosion, tidal current scour or wind wave erosion). See also <b>Table 9.3</b> and <b>Section 9.3.1, 9.3.2</b> and <b>9.3.3</b> .	DECC, SRCMA	Landholders, Council	See <b>Tables 8.4, 8.5</b> and <b>9.2</b>	See <b>Tables 8.4, 9.2, 9.3</b> and <b>12.1</b>	As for Action 9.12, funds have been allocated for the SRCMA region.  Allow an indicative figure of \$200,000 for the Shoalhaven.	As for Action 9.12, funds are available for the region through the SRCMA River Recovery, Estuary and Coastal Lakes Incentives and Dairy Industry Partnership programs. These total more than \$2 million across the SRCMA area.  The Coastal Weed Management program (\$445,000 across the region) may also contribute where EEC sae involved.
9.14	Continue to support riparian projects for reinstatement of reed beds and mangroves in the lower estuary, and reedbeds adjacent to floodplain pockets in the upper estuary.	SRCMA	DECC	See <b>Tables 9.2</b> and <b>10.6</b>	See <b>Table 12.1</b>	Existing resources; A current SRCMA project with a budget of \$19,000 is an example of this action. Allow a further \$50,000 from SRCMA programs over five years.	As for Action 9.9.
9.15	Consider the preparation of a Boating Management Plan. The plan could refer to boating impacts on: <ul style="list-style-type: none"> <li>• Bank stability</li> <li>• Riparian vegetation</li> <li>• Noise</li> </ul>	NSW Maritime Authority	Waterway users	See <b>Tables 8.5, 9.2, 9.3</b> and <b>10.3</b>	See <b>Table 10.3</b> re Boating Management Plan	Investment is required for consultation with waterway users, signage and other information. Allow an indicative budget	NSW Maritime Authority funds for the implementation of the Shoalhaven Estuary Boating Management Plan.

Action ID	Action	Responsible organisation	Which other organisations are involved?	Why is this action important?	Linked to other actions?	Investment required	Possible sources of funds
						of \$90,000, plus the commitment of existing Maritime Authority staff. This investment will also contribute to other actions.	
9.23	Exclude cattle and cultivation from EEC along Regatta Creek (Swamp oak floodplain forest). Negotiate a conservation agreement and/or Property Vegetation Plan with the landholder(s).	Landholders by voluntary agreement	DECC, DPI, SRCMA	See <b>Table 9.3</b>	See <b>Tables 9.2, 9.3 and 12.1</b>	Remnant EECs will be a high priority for investment in voluntary conservation measures. Incentives should be provided to effected landowners	SRCMA programs as for Actions 9.8, 9.9 and 9.10.
9.24	Exclude cattle and cultivation from EEC (Swamp oak floodplain forest) in Saltpan Swamp. Also address drainage and ASS issued in this wetland. Negotiate a conservation agreement (under <i>NPW Act</i> and/or <i>Threatened Species Conservation Act 1995/Native Vegetation Act 2003</i> for the EEC and a buffer area, with the landholder(s).	Landholders	DECC, DPI, SRCMA	See <b>Table 9.3</b>	See <b>Tables 9.3 and 12.1</b>	As above.	In addition to the River Recovery, Revive Southern Wetlands, Estuary and Coastal Lakes Incentives and Dairy Partnership programs, the acid Sulfate Soils Program may be relevant here.
9.25	Negotiate <u>voluntary</u> conservation agreement(s)	DECC, landholders	Council, SRCMA	See <b>Table 9.3</b>	See <b>Tables 9.3 and 12.1</b>	See Actions 9.4 and 9.8. Initial	Voluntary conservation is a target of River Recovery

Action ID	Action	Responsible organisation	Which other organisations are involved?	Why is this action important?	Linked to other actions?	Investment required	Possible sources of funds
	with landholders in relation to the EEC in Numbaa Swamp (River Flat Eucalypt forest on coastal floodplain).					investment will be in a project officer to raise landholder awareness and refine the concept of voluntary conservation with land holders (including property management planning assistance etc). Landholder engagement is critical.	and Estuary and Coastal Lakes Incentives programs.
10.4	Discuss with Aboriginal community leaders and existing representatives in catchment management planning/implementation, incentives or assistance needed to facilitate participation of Aboriginal community representatives in the SNRFMC.	Council, Aboriginal community	DECC, SRCMA	See <b>Table 10.1</b>	See <b>Table 12.1</b>	Existing resources; Less than \$10,000 for initial consultation and up to \$100,000 for projects that provide direct opportunities for Aboriginal community participation. Options include field days with Aboriginal community groups, projects	Department of Aboriginal Affairs, Council funds, SRCMA programs (e.g. Community Support Program).  The SRCMA has \$264,000 allocated to an Aboriginal Community Support Officer for the Illawarra and Shoalhaven.

Action ID	Action	Responsible organisation	Which other organisations are involved?	Why is this action important?	Linked to other actions?	Investment required	Possible sources of funds
						involving Aboriginal lands or Aboriginal people; possible transport assistance, additional support or training in Committee processes so that representatives feel more comfortable with the planning process.	
10.13	Improve boat launching facilities at Greenwell Point Ramp and adjacent reserve.	Council	DECC, NSW Maritime Authority, NSW Lands Department	See <b>Table 10.3</b>	See <b>Tables 10.3</b> and <b>12.1</b>	See Webb McKeown 2003. They estimate \$350,000 for upgrade of boat launching facilities at Greenwell Point.	NSW Maritime Authority, Recreational Fishing Authority, NSW Department of Lands, Council, Estuary Management Program (DECC)
10.24	Protect oyster growing areas from water quality impacts (see draft NSW Oyster Industry Sustainable Aquaculture Strategy 2006): <ul style="list-style-type: none"> <li>• Liaise with landholders to fence riparian zones by voluntary agreement with landholders to exclude cattle from the waterway near oyster growing areas;</li> <li>• restore riparian vegetation</li> </ul>	DPI, landholders, Shoalhaven Water	Oyster growers	See <b>Table 10.4</b>	See <b>Tables 10.4</b> (Sustainable aquaculture strategy) and <b>12.1</b>	Riparian zone management actions are consistent with the SRCMA River Recovery, Estuary and Coastal lakes Incentives and Dairy Industry Partnership programs. These	SRCMA programs will address many issues in rural areas. DPI programs – already part funding of the Dairy Industry Partnership, but could be supplemented by additional funding to implement the Oyster Industry Sustainable Aquaculture Strategy.

Action ID	Action	Responsible organisation	Which other organisations are involved?	Why is this action important?	Linked to other actions?	Investment required	Possible sources of funds
	<p>to filter agricultural runoff to the estuary and to provide a buffer between residential subdivision and oyster production areas;</p> <ul style="list-style-type: none"> <li>• minimise overflows or other discharges from sewage systems (storm events or maintenance); and</li> <li>• Where cost effective, install water treatment systems, such as constructed wetlands on drains to the estuary from urban land, caravan parks etc in proximity to oyster production leases.</li> <li>• Investigate alternative investment opportunities for the preparation of a Clean Waters Model for the Shoalhaven</li> <li>• Audit diffuse Stormwater sources</li> <li>• Monitor on site sewerage treatment systems</li> </ul>	<p>Council</p> <p>Council</p> <p>Council</p>	<p>Landholders</p>			<p>three programs have total investment of over \$2 million for the region. The have targets for riparian fencing and establishment of off stream water supply.</p> <p>The Dairy Industry Partnership also provides for nutrient/sediment controls (which are likely also to reduce bacterial contamination of the estuary).</p> <p>No current SRCMA programs focus on runoff from urban areas, or improved STP/reticulation system performance. Potential investment to better manage overflows/leaks from the reticulation</p>	<p>Council and State government investment in sewage reticulation and treatment.</p> <p>Private land developer and Council investment in stormwater management.</p> <p>Shoalhaven Water Divident may be able to fund preparation of a clean water s model</p>

Action ID	Action	Responsible organisation	Which other organisations are involved?	Why is this action important?	Linked to other actions?	Investment required	Possible sources of funds
						system in the most sensitive areas is likely to be in the order of \$500,000.	
10.41	Ensure SRCMA representative maintains involvement in the SNRFMC, so that information about the activities and views of the SNRFMC is transmitted to the Catchment Management Authority.	SRCMA	Council, SNRFMC	See <b>Tables 7.1 and 10.6</b>	See <b>Tables 7.1, 10.6 and 12.1</b>	No additional investment required.	Within the responsibility of existing Council and SRCMA staff. There is also some overlap of community representation.

## 1.1 SCHEDULE OF MODERATE PRIORITY ACTIONS

**Table 12.3** summarises the responsibilities for implementation of moderate priority actions in the estuary.

**Table 12.3 - Implementation of Moderate Priority Actions**

Action ID	Action	Responsible organisation	Which other organisations are involved	Why is this action important	Linked to other actions?	Investment required	Possible sources of funds
8.2	SCA contributes to long term monitoring of estuary health (EII), particularly in relation to salinity and ecological issues (see <b>Section 7.1.1</b> ).	SCA	SRCMA	See <b>Tables 7.1 and 8.2</b>	See <b>Tables 7.1, 8.1 and 12.1</b>	Existing resources.	SCA programs



**Table 12.3 - Implementation of Moderate Priority Actions (cont)**

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved</b>	<b>Why is this action important</b>	<b>Linked to other actions?</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
8.6	Prepare community information about the dynamic nature of the lower Shoalhaven estuary and the impacts of historic channel modification on estuary dynamics.	SRCMA	DECC	See <b>Table 8.3</b>	See <b>Table 10.3</b> . May be useful as part of interpretative signage in foreshore reserves in the lower estuary.	Allow approximately \$20,000 for preparation and basic design (not construction or large run printing)	SRCMA – possibly as part of benchmarking project or community support.
8.8	Prepare and communicate emergency response plan for low lying areas of Shoalhaven Heads Village as part of the Floodplain Management Plan and Entrance Management Strategy.	Council	DECC	See <b>Table 8.2</b> .	See <b>Table 8.2</b> .	Allow approximately \$40,000. Detailed scope is dependent on the final floodplain management plan.	Floodplain Management Program (DECC); Commonwealth disaster management funds.
8.10	Consider dredging shoals if there is a risk to safe navigation that cannot be managed by the use of navigational aids	NSW Maritime Authority	Council, waterway users, DPI, DECC, Department of Lands.	See <b>Table 8.2</b> .	See <b>Tables 8.2</b> and <b>10.3</b> .	Budget depends on the extent of shoaling and sediment placement options. Likely to cost \$200,000 when dredging is necessary.	DECC, NSW Lands, NSW Maritime Authority, Council.

**Table 12.3 - Implementation of Moderate Priority Actions (cont)**

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved</b>	<b>Why is this action important</b>	<b>Linked to other actions?</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
8.14	Fence off riparian zones. Where fencing is considered appropriate, provide incentives for land holders to encourage investment (for instance through assistance with property management plans, loans and voluntary conservation agreements). Alternatively, where fencing is considered appropriate, require riparian zones fencing as a condition of all future development approvals and/or water licence renewals (if water is extracted for agricultural purposes). (see also <b>Sections 9.2 and 9.3</b> )	SRCMA	Council, DECC, landholders	See <b>Tables 8.4, 9.2 and 9.3</b>	See <b>Table 12.1.</b>	SRCMA programs have budgets of more than \$2 million and include allowance for fencing of approximately 100km of riverbank in the CMA area, together with other riparian zone management actions.	SRCMA River Recovery, Estuary and Coastal Lakes Incentives and Dairy Industry Partnerships programs.
8.15	Ensure that Consider zoning of riverbank (outside existing urban areas) is zoned Rural or Open Space or Environment Protection, with intensive development of high hazard sections excluded.	Council	DoP, landholders, DECC	See <b>Table 8.4</b>	See <b>Tables 8.4 and 12.1.</b>	No additional cost; Incorporate into compulsory LEP review over next three years, plus associated consultation with landowners	Council, DoP

**Table 12.3 - Implementation of Moderate Priority Actions (cont)**

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved</b>	<b>Why is this action important</b>	<b>Linked to other actions?</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
8.16	Identify any reach where monitoring of erosion near existing development/services should be conducted so that bank retreat (and associated impacts on infrastructure or built assets) can be effectively planned.	SRCMA, Council	Shoalhaven Water	See <b>Table 8.4</b>	See <b>Tables 8.4</b> and <b>12.1</b> .	No additional funds required at this time.	If funds are required in the future, possible sources are Council/Shoalhaven Water, CMA and state government infrastructure managers.
8.31	Maintain structural controls on some sections of river bank.	Council	DECC, NSW Lands Department, NSW Maritime Authority	See <b>Table 8.5</b> .	See <b>Tables 8.4, 8.5</b> and <b>10.3</b> .	Refers largely to the Nowra/Bomaderry foreshore reserves, Greenwell Point and possibly Shoalhaven Heads. Cost depends on design, materials (availability and transport), length of bank, etc. Allow up to \$500,000 over five years. (note that works for Greenwell Point are also costed as separate items).	Council, DECC, NSW Lands Department.

**Table 12.3 - Implementation of Moderate Priority Actions (cont)**

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved</b>	<b>Why is this action important</b>	<b>Linked to other actions?</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
8.36	Review zoning of land that may be affected by tidal or storm inundation if sea level rises and ensure appropriate planning controls are in place. Council is preparing a new LEP over the next three years. New zones should reflect the risk of flooding.	Council	DoP, DECC	See <b>Table 8.6.</b>	See <b>Table 8.6</b> Review of LEP is also discussed in <b>Tables 7.1 and 9.3.</b>	Existing resources; Within overall review/update of LEP	Council, DoP
9.7	Continue to implement ASS controls in Broughton Creek Hotspot area.	DWE	DPI, Council, landholders	See <b>Table 9.1.</b>	See <b>Section 11.8.</b>		
9.9	Include detailed assessment of habitat impacts in all assessments of proposed bank protection or flood mitigation structures (require as part of a DCP or guideline for land zoned 1, 6 or 7)	Council	DoP, DECC, Department of Lands	See <b>Table 9.1.</b>	Likely to be considered as part of overall review of planning instruments for LGA.	Within budget for review/update of LEP and DCP	Council, DoP
9.10	Prepare guidelines for sea walls and jetty designs for private waterfront properties – appropriate locations, materials and designs to minimise habitat and biodiversity impacts of construction. These should be reviewed when improved information about sea level rise and storminess become available, to ensure that risks are adequately addressed.	SRCMA Lands Dept	Council, DECC, DPI, NSW Lands Department	See <b>Table 9.1</b>	Minimise construction of new foreshore structures (Action 10.25)	Allow approximately \$40,000. Similar guidelines have been prepared for other estuaries, but would need to be tailored to specific shoreline processes in the Shoalhaven.	SRCMA Community support Program, Council, DECC, NSW Lands Department.

**Table 12.3 - Implementation of Moderate Priority Actions (cont)**

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved</b>	<b>Why is this action important</b>	<b>Linked to other actions?</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
9.19	Maintain regular mapping of aquatic habitat in the Shoalhaven River estuary (at 5-10 year intervals). This mapping should also indicate the extent of shoals that are valued habitat for migratory wader species.	SRCMA	DPI, NSW Maritime Authority, DECC Council	See <b>Table 9.3</b>	See <b>Tables 7.1</b> and <b>12.1</b> .	Allow approximately \$150,000 for each mapping and interpretation campaign	Possibly SRCMA Monitoring and evaluation program, DPI funds.
9.20	<u>Encourage</u> land holders with saltmarsh communities on their property to enter voluntary conservation agreements providing for long term conservation management of the community.	DECC	DPI, Council, Landholders	See <b>Table 9.3</b>	See <b>Tables 8.4, 9.3</b> and <b>12.1</b> .	Within role of existing project officers and community support/liaison officers.	Within SRCMA River Recovery, and Estuary and Coastal Lakes Incentives programs.
9.21	Where saltmarsh communities are located on Crown Land, Plans of Management should refer to conservation management practices and minimise grazing access.	NSW Lands Department	DECC	See <b>Table 9.3</b>	As above	Existing resources; Part of overall Plan of Management preparation for these sites; budget requirement depends on other issues to be addressed by the plans of Management, and whether a Plan already exists for the affected land parcels.	Department of Lands; Council (where it has care and control).

**Table 12.3 - Implementation of Moderate Priority Actions (cont)**

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved</b>	<b>Why is this action important</b>	<b>Linked to other actions?</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
9.22	Consider zoning of floodplain wetland areas to appropriate environment protection zones, as relevant.  Council is preparing a new LEP by 2009 as required by the NSW Government. New zones applied to the floodplain should consider environmental values.	Council	DoP	See <b>Table 9.3</b>	See Actions relating to protection of EECs.	Existing resources.  No additional investment above that required for full review and update of the Shoalhaven LEP	Council, DoP.
9.29	Continue to implement actions to control ASS risks in the Broughton Creek catchment (see also 9.7)	DWE	DPI, Council, SRCMA, landholders	See <b>Table 9.4</b>	See <b>Section 11.8</b> and <b>Table 9.4</b>	The CMA ASS program has a budget of \$150,000	SRCMA Acid Sulfate Soil Program
9.30	Implement the recommendations of the SCC (2006) review of ASS on the Crookhaven River floodplain	SRCMA	Council, landholders, DPI, DWE	See <b>Table 9.4</b> .	See <b>Section 11.7</b> and <b>Table 9.4</b>	As above	SRCMA Acid Sulfate Soil Program
9.31	Continue to seek effluent reuse opportunities for flows from wastewater treatment plants and industrial processing plants	Industry and Council	Private industry, DECC, DPI, landholders	See <b>Table 9.4</b> .	Potentially linked to management of water levels in floodplain wetlands and incentives for farmers to manage wetlands and riparian zone differently.	Variable investment to implement new reuse measures. Assume approximately \$60,000 for feasibility assessments.	Council, private sector

**Table 12.3 - Implementation of Moderate Priority Actions (cont)**

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved</b>	<b>Why is this action important</b>	<b>Linked to other actions?</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
9.33	Require best practice management of urban stormwater for all new residential, commercial and industrial estates that drain to the estuary.	Council	Development industry, DoP	See <b>Table 9.4</b>		No significant additional funds for Council, but may increase the costs of new subdivisions for developers and land buyers.	
10.1	Include protection of Aboriginal cultural heritage values as an objective of 7 zoning in the Shoalhaven LEP	Council	DECC, DoP	See <b>Table 10.1.</b>	See <b>Table 10.1.</b>	No additional funds required	Within existing Council staff responsibilities.
10.2	Provide opportunities for Aboriginal community involvement in the design and maintenance of foreshore reserve areas, such as at Nowra, Greenwell Point and Crookhaven Heads. This involvement could include public art, information boards that describe the cultural heritage of the estuary, and horticultural or other landscaping/maintenance tasks.	Council	DECC, NSW Lands Department	See <b>Table 10.1.</b>	See <b>Table 10.1</b>	Will depend on specific landscaping and community information projects; should not significantly increase costs for projects where landscaping/information were already included, other than for consultation and negotiation.	Council, NSW Lands Department, SRCMA Community Support Program.
10.6	Restore riparian vegetation along the floodplain pockets in the upper estuary to maintain scenic amenity (see also <b>Table 9.2</b> for habitat and bank stability benefits)	Landholders	SRCMA, DPI, DECC	See <b>Table 10.2</b>	See <b>Tables 8.5, 9.2, 9.3 and 12.1</b>		Included in River Recovery Program (SRCMA).

**Table 12.3 - Implementation of Moderate Priority Actions (cont)**

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved</b>	<b>Why is this action important</b>	<b>Linked to other actions?</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
10.8	Prepare community information about the history of Berrys Canal and its continued morphological adjustment (see also <b>Table 8.2</b> ).	CMA	DECC, Council Media Manager	See <b>Tables 8.2</b> and <b>10.2</b> .		Allow up to \$20,000 (not including major print runs of signage).	SRCMA Community Support Program, Estuary Management Program (DECC).
10.10	Improve public access for unpowered vessels (passive recreation) in the upper estuary (i.e. identify where vehicle access is available on public river frontage land).	Council, NSW Lands Department	Waterway users, land holders, NSW Maritime Authority	See <b>Table 10.3</b> .	See <b>Tables 10.3</b> and <b>12.1</b>	Allow \$25,000 for further investigations and feasibility studies. Installation of facilities on this land (roads, toilets etc) could require in the order of \$150,000.	Lands Department, Council; Recreational Fishing Fund.
10.11	Identify public foreshore land along the river bank and potential water based access points and/or low key camping.	Council, NSW Lands Department	NSW Maritime Authority, waterway users	See <b>Table 10.3</b> .	As above.	As above. Costs are associated with construction of jetties/ramps for small craft.	Lands Department, Council.



**Table 12.3 - Implementation of Moderate Priority Actions (cont)**

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved</b>	<b>Why is this action important</b>	<b>Linked to other actions?</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
10.12	Further develop Greys Beach Reserve as an Icon Park for the City (landscaping and visitor facilities) (see also <b>Table 10.5</b> ).	Council	Reserve users, Aboriginal community, NSW Maritime Authority.	See <b>Table 10.3</b> .	See <b>Tables 10.3</b> and <b>12.1</b>	Greys Beach is a major recreational resource for the city and for visitors. Access is currently constrained, and there are pedestrian safety issues. Concept designs have been prepared for access upgrades. Allow up to \$250,000 for detailed design and construction of vehicle and pedestrian access.	NSW Lands Department, Council.
10.15	Provide temporary berthing for visiting vessels (recreational) at the old Greenwell Point Wharf (Anzac Park).	NSW Maritime	Council	See <b>Table 10.3</b> .	See other actions identified in Web McKeown 2003 in <b>Table 10.3</b>	Webb McKeown suggest approximately \$75,000 to upgrade this wharf.	NSW Maritime Authority, NSW Lands Department (Minor Ports Program?), Council.
10.16	Improve public facilities at Cabbage Tree Reserve.	Council	NSW Maritime Authority, waterway users.	See <b>Table 10.3</b> .	Linked to other actions about recreational access and facilities in the upper estuary.	Allow in the order of \$50,000 initially.	Council, NSW Lands Department.

**Table 12.3 - Implementation of Moderate Priority Actions (cont)**

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved</b>	<b>Why is this action important</b>	<b>Linked to other actions?</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
10.17	Landscape Crookhaven Heads/Orient Point ramp and reserve area and ensure facilities meet both local and visitor needs.	Council, NSW Lands Department	Waterway users, Aboriginal community	See <b>Table 10.3</b> .	Actions relating to Greenwell Point (See <b>Table 10.3</b> ); actions relating to maintenance of Crookhaven Heads training walls and occasional dredging to maintain safe navigation. Also Action 10.2 re Aboriginal participation in the work.	Allow \$150,000	Council, Lands Department, possibly SRCMA Community Support Program (Aboriginal community partnerships).
10.18	Enhance connectivity of Nowra CBD to river bank.	Council		See <b>Table 10.3</b> .	See <b>Tables 8.5</b> and <b>10.3</b>	Allow in the order of \$150,000.	Council and local Tourism organisations.
10.20	Prepare education material for waterway users about shallow water/rocks issues, particularly at low water/flow conditions. Focus distribution through ski clubs and the ski park.	NSW Maritime Authority	Waterway user groups	See <b>Table 10.3</b> .	See Actions re boating management in the upper estuary, with overall strategy to be included in the Boating Management Plan ( <b>Section 10.3</b> )	Allow \$25,000, if materials needed. Face to face awareness raising activities would be within the responsibility of existing Maritime Authority personnel.	NSW Maritime Authority.
10.21	Upgrade facilities for Nowra sailing club	Nowra Sailing club	Council	See <b>Table 10.3</b> .	See <b>Section 11.2</b> and <b>Table 10.3</b>	Allow up to \$50,000.	Council, sailing club.

**Table 12.3: Implementation of Moderate Priority Actions (cont.)**

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved</b>	<b>Why is this action important</b>	<b>Linked to other actions?</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
10.25	Manage recreational boating in and around oyster harvest leases. To be addressed in consultation between DPI (sustainable Aquaculture Strategy and NSW Maritime (Boating Management Plan).	DPI	NSW Maritime Authority, oyster growers, waterway users	See <b>Table 10.4</b> .	See <b>Tables 10.3</b> and <b>12.1</b>	Should be incorporated into the Boating Management Plan for the Shoalhaven River Estuary (no additional investment required for the planning component). Changes to boating access in parts of the estuary will require further consultation, awareness raising activities and regulatory activity. Whilst these are mostly within the responsibility of existing DPI or Maritime Authority staff, allow up to \$20,000 for additional consultation.	DPI
10.30	Amend the Shoalhaven LEP or other suitable planning instruments to include reference to the value of the oyster industry in the estuary and to require consideration of oyster aquaculture areas in development applications.	Council	DPI, DoP, oyster growers	See <b>Table 10.4</b>	See other actions associated with sustainable aquaculture strategy.	Within overall scope of review and update of Shoalhaven LEP. No additional investment required.	Council, DoP
10.34	Consider the potential for mosquito transmitted diseases in land use planning decision.–	Council	NSW Health	See <b>Table 10.5</b> .	See Actions 10.37, 10.38 ( <b>Table 10.5</b> ).	Included in broad planning activities, no additional investment required.	DoP

**Table 12.3 - Implementation of Moderate Priority Actions (cont)**

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved</b>	<b>Why is this action important</b>	<b>Linked to other actions?</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
10.35	Consider an appropriate environment protection zoning, to discourage further development of flood prone areas. Note that these zonings will be reviewed during the preparation of the new Shoalhaven LEP, which will be completed by 2009.	Council	DoP	See <b>Table 10.5</b> .	See actions relating to review and upgrade of Shoalhaven LEP in <b>Sections 7, 8 and 9</b>	No additional investment required beyond commitments for the overall LEP process.	Council.
10.36	Consider focussing urban development/expansion on non flood prone lands which do not drain directly to the estuary.	Council	DoP, land holders	See <b>Table 10.5</b> .	See actions relating to review and upgrade of Shoalhaven LEP.	Within Regional Strategy process and council LEP review; no additional investment required.	DoP, Council

## 1.2 SCHEDULE OF ONGOING ACTIONS

Table 12.4 summarises responsibility for actions which are already being implemented and should continue.

**Table 12.4 - Continuation of Ongoing Actions**

Action ID	Action	Responsible organisation	Which other organisations are involved	Why is this action important	Related actions	Investment required	Possible sources of funds
7.4	An agreed suite in EII indicators is monitored at appropriate intervals in a joint agency/Council program and the results are reported and interpreted to community members and oyster growers..	SRCMA	DWE, Council, DPI, DECC	See <b>Table 7.1</b>	See <b>Tables 7.1</b> and <b>12.1</b>	Existig resources. Budget required will depend on the outcome of Action 7.3 – in relation to a suite of indicators and frequesncy of monitoring/review events.	DECC Programs, SCRMA programs. DPI, DWE and Council
7.2	Council continues to co-ordinate community participation in implementing management actions for the estuary through the Shoalhaven Natural Resources and Floodplain Management Committee.  Council ensures wide representation of community interests in estuary management on this committee and designs meetings to provide opportunities for effective feedback on issues.	Council	DECC various State agencies and community representatives on the Committee.	See <b>Table 7.1.</b>	See <b>Tables 7.1</b> and <b>12.1.</b>	No additional investment required.	Within responsibilities of existing Council and ag ency staff.
7.6	Council and estuary users (such as oyster growers) continue to be represented in SCA sponsored discussion of planning for, and implementation of, environmental flow management in the	Council, SCA	Community and industry representatives	See <b>Table 7.1.</b>	See <b>Table 7.1.</b>	No additional investment required.	Any ongoing costs to be the responsibility of SCA.

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	Shoalhaven system.						
7.7	Council and agency GIS systems are regularly updated with the best available environmental information (e.g. EECs, estuary health data), through streamlined data licence or data sharing agreements.	SRCMA	DECC, Council	See <b>Table 7.1.</b>	See <b>Tables 7.1 and 9.1.</b>	No additional investment required beyond the ongoing responsibilities of Council and agency natural resources and GIS staff.	Council, SRCMA

**Table 12.4 - Continuation of Ongoing Actions (cont)**

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved</b>	<b>Why is this action important</b>	<b>Related actions</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
8.7	Maintain the integrity of the training wall at Crookhaven Heads, to provide a safe navigation channel for recreational vessels and commercial fishing vessels.	Department of Lands	DECC, NSW Maritime Authority	See <b>Table 8.3</b>	See <b>Table 8.2</b>	Maintenance of rock structure anticipated at intervals, depending on storm events. Investment will be variable, depending on the maintenance required.	NSW government (Department of Commerce), Minor Ports Program and NSW Maritime Authority.
8.9	Maintain regular surveillance of shoals inside Crookhaven Heads and install channel markers as necessary to ensure the safe channel is clearly marked. Mark shoals on new editions of boating maps. Liaise with local boating groups about the installation of channel markers.  Similarly, shoals in the upper estuary should be monitored in relation to safe boating issues, channel markers installed in high usage areas, and maps marked/amended as necessary.	NSW Maritime Authority	Water user groups, DECC	See <b>Table 8.2.</b>	See <b>Table 8.2 and 10.3</b>	Requires regular hydrosurvey/bathymetry, plus interpretation and communication of new shoal patterns. Allow for hydrosurvey at two year intervals, allow an indicative \$50,000 on each occasion. Liaison costs to be within the responsibility of existing NSW Maritime Authority staff.  If dredging is required, further investment in the approval and licensing process will be necessary, plus negotiation of sand emplacement.	DECC survey programs, NSW Maritime Authority personnel, dredging contractors.

**Table 12.4: Continuation of Ongoing Actions (cont.)**

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved</b>	<b>Why is this action important</b>	<b>Related actions</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
8.20	Manage sediment load at depositional sites in the estuary, to reduce impetus for migration of the thalweg – e.g. by dredging accreted areas at Pig Island and Numbaa Island. Maintain records of all sand removed from the system. DA with Council for Terara Sands to place dredge spoil on Pig Island. Dredged sand could potentially be used for work elsewhere in the estuary – e.g. along eroding banks or to build up shoals for waders.	Council	NSW Lands Department, DECC, NSW Maritime Authority	See <b>Table 8.4.</b>	See Actions relating to the protection and revegetation of estuary banks in <b>Tables 9.2 and 12.1.</b>	Requires monitoring of shoaling around these islands by hydrosurvey/aerial photography; negotiation of dredging approvals and licences when sediment removal is required.  Allow \$40,000 for each survey and analysis. Costs for dredging approvals to be met by the dredging contractor.	Estuary management Program (DECC), Council, dredging contractors; NSW Maritime Authority, DPI.
8.23	Monitor the condition and location of banks at regular intervals (e.g. approximately five years), by aerial photograph analysis supported by some ground-truthing of features such as undercutting and health or riparian vegetation.	SRCMA (part of EII)	DECC	See <b>Table 8.4.</b>	See <b>Tables 7.1 and 8.4</b>	Cost for this task may be part of broader EII monitoring; if aerial photography were required only for this purpose, allow \$10,000 for the air photos.	Potentially SRCMA Regional Monitoring and Evaluation Program.
8.35	Monitor and report the effects of sea level change on the extent of shoals used by migratory waders/shorebirds and the numbers of birds using the shoals on an annual basis.	SRCMA (part of EII)	DECC	See <b>Table 8.6.</b>	See Actions 7.3, 7.4, 8.32.	Investment will depend on structure of EII and extent of knowledge about how sea level rise (as measured locally/regionally) affects sedimentary patterns in the estuary.	Potentially part of SRCMA Regional Monitoring and Evaluation Program, plus other state agency programs on effects of sea level rise in NSW.



**Table 12.4 - Continuation of Ongoing Actions (cont)**

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved</b>	<b>Why is this action important</b>	<b>Related actions</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
8.40	Maintain records of algal and phytoplankton blooms in the estuary, as possible indicators of changing water chemistry.	SRCMA (as part of EII)	Council, DPI, oyster growers.	See <b>Table 8.6.</b>	See Actions 7.3, 7.4.	Investment will be part of implementation of EII.	Potentially part of SRCMA Regional Monitoring and Evaluation Program.
9.26	Consider offset value of all voluntary conservation management on coastal floodplain – to provide incentive for landholders to manage EECs for conservation rather than agriculture.	DECC	Land holders, SRCMA, land developers.	See <b>Table 9.3.</b>	See Actions 9.4, 9.8, 9.19, 9.20, 9.21.	Cannot be predicted at this stage, as investment will depend on how the State offset policy is refined and implemented.	Potential for land acquisition as conservation offsets for development.
9.32	Include salinity in EII indicators for the Shoalhaven river estuary	SRCMA (as part of EII)	Council, DWE, DECC, DPI	See <b>Tables 7.1 and 9.4.</b>	See <b>Tables 7.1 and 12.1</b>	Depends on the final format of the EII and how it is implemented.	SRCMA and other agencies are likely to contribute funds and/or on the ground action in kind.
10.3	Complete a comprehensive Aboriginal Cultural Heritage Study for the Council area, which will place estuarine values in their overall landscape context. Review the Estuary Management Plan in the light of the Aboriginal Cultural Heritage Study when it is complete, and modify Aboriginal heritage actions as necessary.	DECC	DECC, Aboriginal community, NSW Heritage Office, SRCMA	See <b>Table 10.1</b>	See <b>Table 10.1</b>	Studies under the Comprehensive Coastal Assessment have contributed to this outcome. Allow a further \$50,000 to complete a Study/Plan for the City.	Council, with support from NSW Heritage Office.

**Table 12.4 - Continuation of Ongoing Actions (cont)**

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved</b>	<b>Why is this action important</b>	<b>Related actions</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
10.27	Review partnership arrangements for funding of water quality testing in the estuary (Council, DPI and oyster growers)	Council	SRCMA, oyster growers, DPI	See <b>Table 10.4.</b>	See <b>Table 10.4</b>	Within responsibilities of existing Council and State agency staff, oyster growers.	Ongoing staffing at Council and Oyster Growers Association
10.28	Ensure that oyster growers continue to be represented on the SNRFMC	Council	Community groups	See <b>Table 10.4.</b>	See <b>Table 10.4</b>	No additional investment required.	Within existing responsibilities of Oyster Growers and Council officers.
10.29	Ensure that activities within oyster leases (e.g. waste stockpiles) do not encroach on adjoining Crown land that is managed for community benefit.	Oyster growers	DPI, NSW Lands Department, Council, DECC.	See <b>Table 10.4.</b>	As above.	May require audits of site management and improvement plans where there are waste management issues. Fencing and remediation may be required. Allow in the order of \$60,000.	Agency and Council regulatory staff, investment by oyster growers in best practice.
10.32	Encourage and maintain co-operation between DECC and floodplain land managers about management of fire, feral animals, weeds and access to Nature Reserves.	DECC	Land holders, SRCMA	See <b>Table 10.4.</b>	See <b>Tables 7.1, 9.2, 9.3 and 12.1</b>	Largely within the responsibility of existing DECC field personnel.	DECC, landholders
10.39	Maintain support for the SNRFMC and other locality based natural resource management committees that provide advice to Council.	Council	Community groups, SRCMA, DECC	See <b>Tables 7.1 and 10.6</b>	See Table 7.1	As for Action 7.2 (within existing responsibilities of Council staff).	As for Action 7.2.

**Table 12.4 - Continuation of Ongoing Actions (cont)**

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved</b>	<b>Why is this action important</b>	<b>Related actions</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
10.41	Consistent, regular representation of government agencies and authorities (including the SRCMA) at SRNRFMC meetings and active participation in the implementation of the Estuary Management Plan (see also <b>Table 7.1</b> ).	SRCMA	Council	See <b>Tables 7.1</b> and <b>10.6</b> .	As for Action 7.1.	As for Action 7.1.	As for Action 7.1.
10.42	Provide ongoing quality information to residents about the health of the estuary and the sustainability of management. Utilise local media with stories about estuary management actions, involvement opportunities and interpretation of monitoring results. Priority community information programs should include: <ul style="list-style-type: none"> <li>• managing the riparian zone – restoring habitat whilst maintaining productivity;</li> <li>• bank erosion and channel change in the Shoalhaven estuary; and</li> <li>• floodplain wetland habitats – why they are important.</li> </ul>	Council (Media Manager)	SRCMA, DPI, DECC, DWE, NSW Maritime Authority	See <b>Table 10.6</b> .	See Action 7.5 and multiple actions requiring awareness and communication activities.	Anticipated to be within the responsibility of Council’s Media Manager and Natural Resources personnel, with support from media/community liaison personnel in specific State agencies.  No additional investment required.	Estuary Management Program (DECC); Council and State agencies. Potentially SRCMA Community Support Program to disseminate information.

**Table 12.4 - Continuation of Ongoing Actions (cont)**

<b>Action ID</b>	<b>Action</b>	<b>Responsible organisation</b>	<b>Which other organisations are involved</b>	<b>Why is this action important</b>	<b>Related actions</b>	<b>Investment required</b>	<b>Possible sources of funds</b>
10.43	Report progress in estuary management in Council's Annual Report.	Council		See Action 7.5.	See Action 7.5.	Existing resources; See Action 7.5.	See Action 7.5.
10.44	Support community involvement in the management of local foreshore and wetland reserves.	SRCMA	Council, DECC, NSW Lands Department	See <b>Table 10.6</b>	See <b>Tables 9.1</b> and <b>12.1</b>	Investment in capacity building and provision of materials for projects with in kind community contributions. SRCMA Community Support Program has \$628,000 for the entire SRCMA area for tasks that include these actions.	SRCMA, also DECC
10.45	Involve residents in qualitative monitoring of estuary condition, including photographic records of bank stability and revegetation programs.	CMA	DECC, Council	See <b>Table 10.6.</b>	As above, see also Action 7.2 and <b>Table 10.6</b>	Minimal investment required – potentially provision of an email accessed database for submitting photos and other observations.	Could be included in SRCMA Community Support Program.

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## Abbreviations

CMA	Catchment Management Authority
SCA	Sydney Catchment Authority
DECC	Department Environment and Climate Change
EII	Ecological Integrity Index
LEP	Local Environment Plan
DCP	Development Control Plan
DOP	Department of Planning
SRCMA	Southern Rivers Catchment Management Authority
NHT	National Heritage Trust
DPI	Department Primary Industries
DWE	Department of Water and Energy