Mary River
Aquatic Weed Strategy
2010 – 2014

Created June 2009
The Mary River Aquatic Weed Strategy has been prepared by Phil Moran, Noosa and District Landcare Group, under contract with the Burnett Mary Regional Group and for the Mary River Pest Management Group.

Mary River Pest Management Group Membership
Fraser Coast Regional Council
Gympie Regional Council
Sunshine Coast Regional Council
Burnett Mary Regional Group
Department of Employment, Economic Development and Innovation – Biosecurity Queensland
Mary River Catchment Coordinating Committee
Mary River Pest Management Group
National Aquatic Weed Management Group
Noosa and District Landcare Group
Seqwater
SunWater

Private landholders are also critical to the effectiveness of this strategy.

Abbreviations
Burnett Mary Regional Group (BMRG)
Department of Employment, Economic Development and Innovation - Biosecurity Queensland (BQ)
Fraser Coast Regional Council (FCRC)
Gympie Regional Council (GRC)
Mary River Catchment Coordinating Committee (MRCCC)
Mary River Pest Management Group (MRPMG)
National Aquatic Weed Management Group (NAWMG)
Noosa and District Landcare Group (NDLG)
Queensland Water Infrastructure (QWI)
Sunshine Coast Regional Council (SCRC)

Funded has been received through the Commonwealth Government’s Caring for our Country program.
EXECUTIVE SUMMARY

Aquatic weeds have serious impacts on freshwater ecosystems. They adversely affect the biodiversity and function of wetland and riparian ecosystems, water quality, recreation and amenity values of the Mary River and tributaries.

Environmental, social and economic costs of aquatic weed infestations are difficult to calculate but are recognised to be in the millions of dollars Australia wide. Once established, aquatic weeds are expensive and very difficult to manage. Eradication is often not possible. A recent example of expenditure on aquatic weed control is the measures taken to control the Salvinia outbreak in the Hawkesbury River with costs exceeding $1.8 million.

The Mary River rises in the Conondale Ranges. It travels 310 kilometres before reaching the Great Sandy Strait at River Heads near Hervey Bay. The river traverses the Regional Council areas of the Sunshine Coast, Gympie and Fraser Coast.

This plan has been funded by the Burnett Mary Regional Group (BMRG) and has involved stakeholders including SunWater, council staff, community groups, Biosecurity Queensland and private landholders.

It is important that the proven track record of working strategically and cooperatively to achieve control of aquatic weed species is maintained by all stakeholders. Coordination between all tiers of Government, water management bodies, community groups and the public is paramount in addressing aquatic weed issues in the catchment.

Awareness of aquatic weed issues has been addressed by BMRG, Seqwater, councils and community groups of the Mary River catchment which have held workshops on the identification and treatment of aquatic weeds. These workshops have been well attended and targeted council weed officers, natural area management staff and landowners. Biosecurity Officers from BQ have also been involved in these workshops and offer assistance to council staff and the public on an ongoing basis. The workshops targeted exotic species as well as easily confused native species. The workshops were not confined to the target species listed in this strategy.

By definition aquatic weeds occur in a very dynamic environment. Yearly mapping of the Mary River and tributaries has been vital to addressing aquatic weed control in a strategic manner. The aerial surveys (conducted with assistance from BMRG, council staff and BQ) have shown the effects and extent of control work and also the beneficial influence of flood events on reducing aquatic weed populations. The positive impact that seasonal flooding of the Mary River and tributaries has on controlling aquatic weed populations cannot be overstated. The flood rains of early 2009 flushed a large quantity of aquatic weeds (primarily the floating aquatics- Salvinia molesta, Eichhornia crassipes, and to a lesser extent, Pistia stratiotes) from the river system.
The results in the above photos are the outcome of the dedicated staff of the former Woocoo Shire Council in a planned weed eradication attack, combined with a series of major flood events. Funding bodies including regional bodies, SunWater, Seqwater, Queensland Water Infrastructure, State Government and Councils themselves need to be aware of the opportunity that these floods have presented.

Currently the Mary River and tributaries contain low levels of aquatic weeds due to recent flushing. Consequently, a better opportunity has not presented itself for many years to undertake strategic control to keep these aquatic weeds from increasing to previously high levels. Every dollar spent now will save thousands having to be spent in the future.

Early detection of aquatic weeds is considered a crucial part of this strategy. Council staff, Seqwater and community members have been trained in identification of aquatic weed species and are now in a position to recognise these weeds early. Training has also extended to volunteers within the Waterwatch networks managed by the Noosa and District Landcare Group and the Mary River Catchment Coordinating Committee. This has provided additional networks that are able to observe and report on aquatic weed infestation levels.

Ongoing consultation with the Pet Industry Association of Australia via the National Aquatic Weed Management Group has led to information being relayed to members of the aquarium industry on responsible handling of aquatic plants.
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INTRODUCTION

The Mary River catchment covers an area of 9,595 square kilometres. It encompasses the Sunshine Coast, Gympie and Fraser Coast Regional Councils, and is home to over 100,000 people. The Mary River rises in the Conondale Ranges and empties into the Great Sandy Strait at River Heads near Hervey Bay, covering a distance of 310 kilometres from headwaters to mouth.

Aquatic weeds pose a serious threat to our waterways and impoundments. They have economic, social and environmental effects on our waterways. Some of these effects include:

- Increased cost of water treatment
- Clogged irrigation channels and pumping equipment
- Depleted oxygen and light levels in the water which reduce fish stocks; impacts on endangered species such as Mary River Cod and out competes native aquatic vegetation, leading to an aquatic monoculture.
- Altering the ecosystem of a water body leading to changes in fauna, particularly birds.
- Interfering with recreational activities such as boating, fishing and tourism.
- Posing severe risk of drowning to livestock and humans.
- Increased mosquito breeding habitat
- Damage to moorings and boats particularly during flood times.
- Difficult, or impossible to eradicate

1.1 Target Species

<table>
<thead>
<tr>
<th>Botanical name</th>
<th>Common name</th>
<th>Declaration*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternanthera philoxeroides</td>
<td>Alligator Weed</td>
<td>Class 1</td>
</tr>
<tr>
<td>Cabomba caroliniana</td>
<td>Cabomba</td>
<td>Class 2</td>
</tr>
<tr>
<td>Eichhornia crassipes</td>
<td>Water Hyacinth</td>
<td>Class 2</td>
</tr>
<tr>
<td>Hygrophila costata</td>
<td>Glush Weed</td>
<td>Class 1</td>
</tr>
<tr>
<td>Hymenachne amplexicaulis</td>
<td>Olive Hymenachne</td>
<td>Class 2</td>
</tr>
<tr>
<td>Pistia stratiotes</td>
<td>Water Lettuce</td>
<td>Class 2</td>
</tr>
<tr>
<td>Salvinia molesta</td>
<td>Salvinia</td>
<td>Class 2</td>
</tr>
<tr>
<td>Egeria densa</td>
<td>Dense water weed</td>
<td>Not declared in Qld</td>
</tr>
</tbody>
</table>

*See Appendix A for the definition of plant declarations.

The BQ website - Invasive Plants and Animals, is an excellent source of information for these and other plant species (http://www.dpi.qld.gov.au/cps/rde/dpi/xsl/4790_ENA_HTML.htm)
2. LOCATION

This plan encompasses the geographical area covered by the Mary River and its tributaries, which includes the Sunshine Coast, Gympie and Fraser Coast Regional Council areas.

Figure 3. Mary River Catchment Area (Map courtesy of BMRG).
3. LEGISLATION


4. MISSION STATEMENT

To control and manage aquatic weeds in the Mary River Catchment, while improving and creating environmental, social and economic benefits.

5. OBJECTIVES

The aim of this strategy is to reduce the impacts of aquatic weeds on water quality, biodiversity and productivity through the following objectives:

5.1 To identify and monitor aquatic weed infestations in the Mary River and tributaries

5.2 To prioritise areas for strategic control of aquatic weeds within the Mary River and tributaries

5.3 To implement rapid response for new found aquatic weeds (infestations and species)

5.4 To increase the awareness and skills of stakeholder staff, volunteers and landholders on the impacts of aquatic weeds, and how to identify and report aquatic weed infestations

5.5 To encourage community ownership of the aquatic weed problem

5.6 To conduct monitoring and evaluation of the strategy (effectiveness of control strategies, rapid response, awareness raising activities).

6. MANAGEMENT PRINCIPLES

An integrated approach to controlling aquatic weeds (particularly *S. molesta*, and *E. crassipes*) in the Mary River and its tributaries is required for effective long-term control. Continuing to raise awareness amongst council Weed Officers and riparian landowners will also assist to increase knowledge of aquatic weeds and current treatment methods.

6.1 Contain the infestation

Containing new or small infestations is essential, as they have the ability to invade areas clear of weeds.

6.2 Identify the source of the infestation

Identify the sources of the infestation. Always start management of the aquatic weeds from the most upstream infestation. Ensure that tributaries, farm dams and nearby garden ponds are checked - as these can be the source of an infestation.
6.3 **Consider seasonal implications for the timing of control methods**
Seasonal changes and growth rates equally affect control methods.
- Physical removal is best implemented in the cooler months, as this is generally a time of slow growth.
- Herbicide treatments should start as early as possible in the growth season (early spring). If herbicide treatment is started during peak growth time this may have little impact on a rapidly expanding infestation.
- Biological control agents should be released as early as possible during the growth season.

6.4 **Infestations should be mapped to record changes**
The infestations should be mapped quarterly or annually as funding and resources allow.

6.5 **Assess priority and available resources**
High priority for eradication effort should be given to small or new infestations in catchments especially if they are relatively weed free. Management around ecologically sensitive areas should be encouraged.

6.7 **Allow for ongoing control and follow-up**
Ongoing control and follow-up will be required for all infestations. Sites will require regular monitoring, as there is a chance of re-infestation even if it appears that the aquatic weed is eradicated. This is particularly pertinent following flood events.

6.8 **Control treatments need to be monitored to establish their effectiveness**
Photographic/GPS reference points should be used (when available) to help record the condition of the infestation pre and post control techniques. Photographic records should be combined with other documentation such as control techniques/treatments implemented, where and when. This will also help to understand what gains are being made at sites when re-visiting them.

6.9 **Nutrient sources should be identified**
Nutrient levels can occur from a number of sources:
- Septic systems and grey water runoff
- Storm-water drains
- Intensive livestock handling or feeding areas
- Cropping and agriculture
- Erosion of cultivated land
- Erosion of recently excavated land
- Urban sewage outflows
- Industrial waste
6.10 Early detection surveys should be carried out regularly

High-risk areas need to be identified so that early detection surveys can be implemented. It is essential to investigate these areas to help ensure that any “new” species coming into the area can be eradicated as soon as possible. These areas should be surveyed in spring and summer, and after seasonal rain.

High-risk areas include:
• Ponded or slow-moving permanent water bodies.
• Areas known to receive high nutrient loads from surrounding land uses:
  - Agriculture
  - Horticulture
  - Industrial land
• Waterways near residential areas
• Bridge crossings
• Below dam spillways
• Campsites
• Waterways beside parks and
• Boat ramps

6.11 Aquatic weed vectors and hygiene

Potential vectors for the spread of aquatic weeds may include:
• Boats, boat trailers and recreational water craft
• Deliberate plantings by aquarium plant enthusiasts
• Eel trapping equipment/fishing nets
• Dumping of aquarium or fishpond plants
• Water movement through irrigation channels
• Irrigation equipment
• Water movement during floods
• Slashers
• Livestock (cattle, horses etc)
• Earth moving equipment
• Wildlife
• Contaminated landscaping supplies (mulch, soil, gravel)
• Incorrect disposal mechanically or physically removed weeds
• Mistakenly growing weeds as a garden vegetable (e.g. alligator weed)

Good hygiene practices need to compliment the control treatments to prevent spreading aquatic weeds through boats, machinery and equipment used for the removal of weeds. All equipment (boat hulls, propellers, trailers, harvesters, and other vehicles) should be thoroughly washed down before leaving the site.
6.12 Understanding the ecological impact of aquatic weeds

Continue to monitor the effect on physical-chemical water quality parameters essential to aquatic life, such as the Mary River Cod, within large rafts of aquatic weeds such as hyacinth. Investigations of dissolved oxygen levels within the water column beneath large rafts of hyacinth have shown to be extremely anoxic. Preliminary monitoring of dissolved oxygen levels and water-flow has shown strong correlations which may be useful for understanding the optimal timing of chemical control of aquatic weeds. This knowledge will be useful to minimise further degradation of key water quality parameters such as dissolved oxygen, during low river flow spells. Particular attention needs to taken to ensure there are no negative impacts on the habitats and species within the Mary system which have been identified in the EPBC Act.

7. CONTROL OPTIONS

An integrated approach helps to achieve successful management of aquatic weeds, as this puts the most stress on the target species. This approach includes a combination of mechanical, biological, and chemical control methods. The chosen methods must complement one another and not counter-act the effect of each control method.

It is important to assess the highest priority areas. There are several prioritisation methods which can be used, including the matrix shown below.

Figure 5 Matrix for prioritising waterweed control

<table>
<thead>
<tr>
<th>Increasing risk of infestation</th>
<th>Limited community access to stream</th>
<th>Moderate community access (bridge crossings, parks, boat ramps) and use of streams</th>
<th>High community access to and use of waterway (bridge crossings, parks, boat ramps, irrigation pumps, recreation areas)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increasing risk of establishment</td>
<td>Fast flowing, few if any ponded areas</td>
<td>Low priority</td>
<td>Low priority</td>
</tr>
<tr>
<td></td>
<td>Slow moving and ponded streams. Moderately degraded streams</td>
<td>Low priority</td>
<td>Medium priority</td>
</tr>
<tr>
<td></td>
<td>Highly degraded streams</td>
<td>Medium priority</td>
<td>High priority</td>
</tr>
<tr>
<td></td>
<td>High nutrient loads</td>
<td>Medium priority</td>
<td>High priority</td>
</tr>
<tr>
<td></td>
<td>Slow moving or ponded</td>
<td>Low priority</td>
<td>Medium priority</td>
</tr>
</tbody>
</table>
7.1 **Compliance**

Where control of aquatic weeds is performed by local government, they will determine when the responsibility will be given to the landholder to undertake their obligations as per the *Land Protection (Pest and Stock Routes Management) Act 2002*. Councils have specific requirements under their Local Government Area Pest Management Plans for compliance of aquatic weeds.

7.2 **Biological controls**

The salvinia weevil (*Cyrtobagous salviniae*) is the only successful biological control agent for salvinia in Australia. The salvinia weevil is a small dark sub-aquatic weevil 2-3 mm long. The weevil will not eradicate salvinia infestations; however they are able to reduce an infestation to very low levels. Once the infestations are reduced, salvinia will be found mainly growing along the edges or in shaded areas of the watercourse, with the majority of open water left salvinia free.

Bio-control agents are also available for water hyacinth (*Eichhornia crassipes*) and water lettuce (*Pistia stratiotes*), however the result of their use is variable. The closest rearing facility is operated by the Brisbane City Council.

7.3 **Containment booms**

Booms can be used to:

- Contain sections of aquatic weeds in one area
- Separate areas that have had different control treatments
- Keep areas aquatic weed free
- Separate and protect biological control agents release sites from disturbances and other control treatments
- Allow for monitoring of treatment effectiveness
- Prevent downstream spread
- Allow for early detection of new infestations.

7.4 **Herbicide**

To achieve the greatest benefit of herbicide use they need to be used as part of an integrated management strategy. It is extremely important that the right chemicals are used for the appropriate task and to follow the labels as instructed. BQ Biosecurity Officers will be able to advise if off label permits are available in certain situations.

Herbicides are more effective when applied at the onset of the warmer months, when aquatic weeds are actively growing. When applying herbicides near riverbanks and next to waterways it is essential that extreme care be taken in order to apply herbicide legally, efficiently and safely. Care must also be used as frogs and other fauna can be sensitive to herbicide sprays and other chemical additives such as surfactants.

It is a requirement under the *Agricultural Chemicals Distribution Control Act 1966* (ACDC Act) to keep comprehensive records of all herbicide applications.
7.5 Cultural
Cultural control methods can be used to suppress weed growth by limiting access to available nutrients, moisture and sunlight. This can be achieved through encouragement of revegetation of native species next to creeks and water bodies.

7.6 Mechanical and physical removal
Mechanical removal is best utilised in extensive infestations. This method can be used on attached, submerged or floating aquatic weed species. A harvester is best used in deeper water that has limited surface barriers (standing dead timber) and sub-surface barriers (logs, large rocks) which can make harvesting problematic.

If the infestation is small or plant numbers are low it is feasible to use physical methods to remove aquatic weed species. Although time consuming it is the best option for this situation.

8. EDUCATION AND AWARENESS
The most effective action that can be taken to control and prevent the spread of aquatic weeds is to raise awareness of issues relating to aquatic weeds in the community. In this way people are more likely to:

- Be aware of and understand the significance of aquatic weed species
- Not engage in behaviour that contributes to the spread of aquatic weeds
- Participate in activities to control aquatic weeds, where practicable

There are a number of options available to raise awareness of aquatic weed issues, such as:

- Awareness programs at rural and horticultural shows and field days
- Environmental education events
- Providing published information on particular pests
- Giving advice to landholders on aquatic weed and property management issues
- Holding community educational activities
- Raising awareness in the local nursery industry, and particularly weekend markets regarding aquatic weeds
- Involving students at local schools relating to aquatic weeds and their environment
- Providing aquatic plant identification training days
- Articles in local papers, newsletters
- TV and radio sessions where possible
- Websites

The first crucial step to effective aquatic weed control is to ensure that the community can correctly identify and recognise an aquatic weed.
9. **EARLY DETECTION**

Early detection and rapid response are the most strategic and cost effective form of aquatic weed management. Early detection of aquatic weeds increases the likelihood of successful containment or eradication and reduces costs by treating the incursion when it is small, not widely distributed and not well established. Failure to detect aquatic weed incursions early severely limits our ability to implement effective control actions.

A pro forma such as the example Aquatic Weed Record Data Sheet (Appendix B) can be used as a first response to any new sightings of aquatic weeds. The pro forma could potentially be filled out online and submitted electronically to the regional council weeds officer.

10. **AQUATIC WEEDS AREA RISK ASSESSMENT AND SURVEY**

The objective of the Aquatic Weed Area Risk Assessment and Survey is to identify and regularly inspect sites where aquatic weeds may occur or be introduced within a catchment or management area. The Assessment and Survey Guidelines were developed by the NAWMG, in conjunction with NDLG, SCRC and MRCCC.

The Aquatic Weed Area Risk Assessment & Survey is a systematic approach to enable the:
- early detection of aquatic weeds, which facilitates immediate treatment, increases the likelihood of successful containment or eradication and reduces long term costs;
- identification of both aquatic weed incursions and potential aquatic weed incursion sites;
- prioritisation of aquatic weed threats and the necessary management actions to address these.

The Aquatic Weed Area Risk Assessment and Survey is available by emailing your request to: admin@noosalandcare.org.
11. **ACTION PLAN**

11.1 **OBJECTIVE: To identify and monitor aquatic weed infestations in the Mary River catchment.**

<table>
<thead>
<tr>
<th>Action</th>
<th>Responsibility</th>
<th>Timing</th>
<th>Performance Indicators</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Encourage a whole of catchment response through participation from all councils, Seqwater and SunWater</td>
<td>All councils Seqwater SunWater</td>
<td>2010-ongoing</td>
<td>All councils, Seqwater and SunWater are contributing information and resources to reduce the impacts of aquatic weeds.</td>
<td>High</td>
</tr>
<tr>
<td>Creation of a central database for input and viewing by approved members.</td>
<td>BMRG BQ All councils</td>
<td>2010-ongoing</td>
<td>Database and networking program is developed and functioning to allow networking, data input and viewing.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Individual councils record and sharing data.</td>
<td>All councils</td>
<td>2010-ongoing</td>
<td>Up to date data records created and shared Information readily available Maps generated and shared</td>
<td>High</td>
</tr>
<tr>
<td>Monitor existing and potential sites on a regular basis.</td>
<td>All councils Seqwater SunWater</td>
<td>2010-ongoing</td>
<td>Each year records collated and mapped of the extent of marginal and isolated infestations.</td>
<td>High</td>
</tr>
</tbody>
</table>
11.2 **OBJECTIVE:** To prioritise areas for strategic control of aquatic weeds within creeks and rivers in the Mary River catchment.

<table>
<thead>
<tr>
<th>Action</th>
<th>Responsibility</th>
<th>Timing</th>
<th>Performance Indicators</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement a whole of catchment control program for aquatic weeds, with priority given to upstream and small infestations.</td>
<td>All councils BMRG BQ MRPMG Seqwater SunWater</td>
<td>2010-ongoing</td>
<td>Control program undertaken in Upper Mary followed by control in Lower Mary tributaries.</td>
<td>High</td>
</tr>
<tr>
<td>Conduct regular inspections of waterways and off creek dams, impoundments and water holes, where possible.</td>
<td>All councils Seqwater SunWater</td>
<td>2010-ongoing</td>
<td>Inspections undertaken to identify strategic areas for control activities.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Produce maps of species and densities of aquatic weeds and areas of nil infestation from data to enable prioritisation on a whole of catchment scale to occur.</td>
<td>All councils BMRG BQ Seqwater SunWater,</td>
<td>2010-ongoing</td>
<td>Maps of aquatic weed infestation within catchment produced creating a better understanding of the weed issue.</td>
<td>Moderate</td>
</tr>
</tbody>
</table>
11.3 **OBJECTIVE: To implement rapid response for new found aquatic weed outbreaks.**

<table>
<thead>
<tr>
<th>Action</th>
<th>Responsibility</th>
<th>Timing</th>
<th>Performance Indicators</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manually remove isolated plants and small infestations.</td>
<td>All councils BQ MRCCC Landowners NDLG</td>
<td>As they occur</td>
<td>Weeds removed and disposed of in an appropriate manner.</td>
<td>High</td>
</tr>
<tr>
<td>Coordinate actions between local government areas.</td>
<td>All Councils BMRG BQ MRPMG</td>
<td>2010-ongoing</td>
<td>Knowledge and information gathered and shared in an effective manner.</td>
<td>High</td>
</tr>
<tr>
<td>Ensure that all control machinery is adequately maintained and is ready for use.</td>
<td>All Councils</td>
<td>2010 - Ongoing</td>
<td>Control machinery can be utilised the moment it is required.</td>
<td>High</td>
</tr>
<tr>
<td>Support bio-control facilities.</td>
<td>All Councils</td>
<td>2010 - Ongoing</td>
<td>The facilities are fully operational and have adequate stock to meet demands.</td>
<td>High</td>
</tr>
</tbody>
</table>
11.4 **OBJECTIVE:** To promote and increase the awareness and skills of stakeholder staff, volunteers and landholders on the impacts of aquatic weeds, and how to identify and report infestations.

<table>
<thead>
<tr>
<th>Action</th>
<th>Responsibility</th>
<th>Timing</th>
<th>Performance Indicators</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual volunteer/landholder training program, also soft exposure and education enacted.</td>
<td>All councils BMRG BQ MRCCC NDLG Seqwater, SunWater Other community groups</td>
<td>2010-ongoing</td>
<td>Field days, information displays, training workshops, letterbox drops, identification flyers, brochures. Information and media exposure conducted.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Research up to date aquatic weed management processes and the latest technologies.</td>
<td>All councils BQ BMRG NAWMG, Seqwater, SunWater QWI</td>
<td>Ongoing</td>
<td>Latest technology utilised and best weed management practices enacted.</td>
<td>High</td>
</tr>
<tr>
<td>Conduct training for council staff to capitalise on passive surveillance opportunities.</td>
<td>All councils BMRG MRCCC Consultants</td>
<td>Agreed timing if funding available</td>
<td>Training sessions conducted for staff members from all councils.</td>
<td>High</td>
</tr>
<tr>
<td>Encourage permanent information signage at major recreational water bodies</td>
<td>SunWater, Seqwater All councils</td>
<td>2010 - ongoing</td>
<td>Signs designed and erected at major water recreation areas.</td>
<td>Moderate</td>
</tr>
</tbody>
</table>
11.5 **OBJECTIVE:** To encourage community ownership of the aquatic weed problem.

<table>
<thead>
<tr>
<th>Action</th>
<th>Responsibility</th>
<th>Timing</th>
<th>Performance Indicators</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engage community groups, schools and landholders (rural and urban) to participate in surveillance and reporting.</td>
<td>All councils BMRG MRCCC NDLG and other community groups</td>
<td>2010-ongoing</td>
<td>Number of community groups, schools and landholders undertaking monitoring.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Provide information on aquatic weeds and their control to the public, landholders and other stakeholders.</td>
<td>All councils BMRG BQ NAWMG</td>
<td>2010-ongoing</td>
<td>Information developed, updated and distributed.</td>
<td>High</td>
</tr>
<tr>
<td>Utilise compliance laws when necessary.</td>
<td>Regional Councils</td>
<td>2010 - Ongoing</td>
<td>Increased community participation and observance of the Act.</td>
<td>High</td>
</tr>
<tr>
<td>Approach schools to include the impacts of aquatic weeds within their curriculum.</td>
<td>All councils BMRG community groups</td>
<td>Agreed action if funding available</td>
<td>Participation from schools.</td>
<td>Moderate</td>
</tr>
</tbody>
</table>
### 11.6 OBJECTIVE: To conduct monitoring and evaluation of the Mary River Catchment Aquatic Weed Management Program

<table>
<thead>
<tr>
<th>Action</th>
<th>Responsibility</th>
<th>Timing</th>
<th>Performance Indicators</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continue MRPMG meetings to monitor the extent of infestations.</td>
<td>All councils BMRG BQ MRPMG community groups</td>
<td>2010 – ongoing</td>
<td>Records of meetings kept, follow-up of any issues pursued.</td>
<td>High</td>
</tr>
<tr>
<td>Undertake strategy reviews for stakeholders in a timely and appropriate manner.</td>
<td>All councils BMRG BQ MRCCC NDLG</td>
<td>2010 -ongoing</td>
<td>Reviews undertaken.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Use information gathered to continually improve the project.</td>
<td>All councils BMRG BQ MRCCC NDLG</td>
<td>2010-ongoing</td>
<td>Information has been acted on where required.</td>
<td>Moderate</td>
</tr>
</tbody>
</table>
APPENDIX

A  Declared Plants of Queensland Fact Sheet

B  Aquatic Record Data Sheet


**Fact Sheet**

**Invasive plants and animals**

**Declared plants of Queensland**

**What is a declared plant?**

Pest plants targeted for control under state legislation are species that have, or could have, serious economic, environmental, or social impacts. Pest plant management legislation aims to help protect Queensland’s economy, biodiversity and people’s lifestyles by:

- Preventing the introduction and establishment of new pest plants in Queensland
- Preventing the spread of established pest plants into new areas
- Reducing the extent of existing infestations where feasible.

Declaration under the *Land Protection (Pest and Stock Route Management) Act 2002* imposes a legal responsibility for control by all landowners on land under their management. This includes all landowning state agencies. Large landowning state agencies are also required to develop and implement pest management plans.

Other than the above requirements, declaration does not mean that management of declared species becomes the responsibility of the state, although the state may engage in supplemental publicity and awareness activities, research, coordination of control activities, or assistance with some pests in strategic areas.

The Australian Quarantine and Inspection Service (AQIS) of Agriculture, Forestry, Fisheries Australia (AFFA) has complementary legislation to restrict the importation of potential weeds not yet found in Australia. All plant nurseries and individuals should ensure they have an up-to-date list of declared plants of Queensland and prohibited plants in Australia.

Declared plants are listed under three different categories.

**Categories**

**Class 1**

A Class 1 pest is one that has the potential to become a very serious pest in Queensland in the future. We need to prevent the import, possession and sale of these species so that they can’t escape to become pests. All landholders are required by law to keep their land free of Class 1 pests. It is a serious offence to introduce, keep or sell Class 1 pests without a permit.

**Class 2**

A Class 2 pest is one that has already spread over substantial areas of Queensland, but its impact is so serious that we need to try and control it and avoid further spread onto properties that are still free of the pest. By law, all landholders must try to keep their land free of Class 2 pests and it is an offence to keep or sell these pests without a permit.

**Class 3**

A Class 3 pest is one that is commonly established in parts of Queensland but its control by landowners is not deemed to be warranted unless the plant is impacting, or has the potential to impact, on a nearby environmentally sensitive area (e.g. a national park). It is an offence to sell, introduce or release a Class 3 pest.

Species not declared under the *Land Protection (Pest and Stock Route Management) Act* may still be declared at a local government level under local laws.

**Reporting Class 1 plants**

Please report the sale or presence of any Class 1 plants to your local Department of Primary Industries and Fisheries Officer. Phone 13 25 23 to be connected to your nearest centre. Prompt action by everyone will protect our agricultural industries, natural resources and the environment from further destruction by introduced plants.

A maximum penalty of $50,000 applies to the introduction of any Class 1 plant.

**Declared plants list**

Plants in Queensland that are declared under the *Land Protection (Pest and Stock Route Management) Act 2002* are listed alphabetically on the following page. Categories apply to the entire State unless otherwise specified.
Aquatic Weed Record Data Sheet

<table>
<thead>
<tr>
<th>Officers name:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation:</td>
<td></td>
</tr>
</tbody>
</table>

**Site Details**

<table>
<thead>
<tr>
<th>Water Body:</th>
<th>Location:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Latitude/Easting:</th>
<th>Longitude/Northing*:</th>
<th>Length of water body surveyed (m):</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Waterway description: (Please circle)</th>
<th>Creek</th>
<th>Lagoon</th>
<th>River</th>
<th>Farm dam</th>
<th>Water storage dam</th>
<th>Wetland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site facilities/structures: (Boat ramp, bridge, recreational park, jetty etc):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Width (approx):</th>
<th>Depth (approx):</th>
<th>Substrate:</th>
<th>Flow:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photo available:</td>
<td>GPS Data:</td>
<td>Longitude and Latitude:</td>
<td></td>
</tr>
</tbody>
</table>

**Waterweed**

<table>
<thead>
<tr>
<th>Species:</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Habitat:</th>
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</table>

<table>
<thead>
<tr>
<th>Area (m²):</th>
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</table>

<table>
<thead>
<tr>
<th>Percent Cover:</th>
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</table>

<table>
<thead>
<tr>
<th>Growth stage:</th>
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</table>

<table>
<thead>
<tr>
<th>Treatments:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Comments:</th>
</tr>
</thead>
</table>