

## Memorandum of Understanding for Irrigation Drainage Management and Water Quality Annual Report for Year 4 – 2007/08

### 1.0 PURPOSE

The purpose of this report is to present a summary of the achievements of the Memorandum of Understanding for Irrigation Drainage Management and Water Quality (IDMOU) over the 2007/08 period.

### 2.0 BACKGROUND

The IDMOU was signed on 22 June 2004. This agreement details the irrigation drainage related roles and responsibilities of the signatory agencies (DSE, EPA, G-MW, North Central CMA and GB CMA) within the North Central and Goulburn-Broken CMA areas. The 2007/08 financial year represents the fourth year of IDMOU implementation.

### 3.0 OVERALL

Since the IDMOU was signed there has been an improved level of coordination, understanding and cooperation between the signatory agencies. This increased level of interaction and cooperation can be attributed to the IDMOU imparting a greater level of obligation and understanding as well as a shared common desire to achieve the underlying outcomes to be achieved by the IDMOU. These outcomes have a positive catchment and water quality impact.

The overall cost of implementing the IDMOU between 2004/05 and 2007/08 is estimated at \$1.027 M.

### 4.0 KEY MILESTONES ACHIEVED

#### Setting of Water Quality Targets

A major requirement of the IDMOU was to develop and trial the application of a process to enable water quality related targets to be set within receiving waterways and within irrigation drainage systems at their outfall point. This includes processes for setting monitoring requirements, and setting targets for the implementation of management actions within catchments. Significant progress has been made with respect to these requirements.

The application of the Rapid Resource Condition Decision Support System (RRC DSS) for the entire Broken Creek Catchment was completed and endorsed by the IDMOU Steering Committee in March 2008 and is now in the process of being adopted by the GB CMA.

The trial of the RRC DSS for Barr Creek Catchment was also completed.

A list of prioritised catchments for the application of RRC DSS in the Shepparton Irrigation Region (SIR) and the Loddon-Murray Irrigation Region were determined and are shown in **Attachment 1**.

The updated RMA DSS and RRC DSS targets agreed by the IDMOU Steering Committee are detailed in **Attachment 2**.

### **Setting of Management Action Targets**

The development of a process to set targets for the implementation of management actions within catchments to support the achievement of water quality outcomes was completed in 2005/06, and is referred to as the Rapid Management Action Decision Support System (RMA DSS).

Both the management action and resource condition target setting systems will facilitate the setting of Aspirational (i.e. 50 year), and shorter term (i.e. 5 year and 20-30 year) targets, and align with existing CMA data capture and planning processes.

The application of the Rapid Management Action Decision Support System (RMA DSS) for the entire Broken Creek Catchment was completed and endorsed by the IDMOU Steering Committee in March 2008.

The following 50 year (2055) Management Action Targets for the Broken Creek catchment were recommended from the application of the RMA DSS:

- Construction of an additional 1,000 ML capacity of farm irrigation reuse systems
- An additional 1,500 ML of low flow drainage diversion schemes
- An additional 2,200 ML of high flow drainage diversion schemes
- Diversion of drainage water to offline wetlands with a total capacity of 116 ML
- Construction of 2.8 km of inline wetlands.

The trial of the RMA DSS for Barr Creek Catchment was also completed.

### **Relationships between Management Action Implementation and Resource Condition Outcomes**

An integral component in the application of the RMA DSS is knowing the relationships between management action implementation and resource condition outcomes. These were developed in 2006 for both the SIR and the Loddon-Murray catchment.

A key output of the IDMOU implementation this financial year was the RMA DSS for the entire Broken Creek catchment.

### **Catchment and Asset Operation Plans**

The regional catchment and asset operation plan for the Shepparton Irrigation Region is currently being prepared. The plan will cover each of the Irrigation Areas in the Goulburn-Broken CMA area and be used as a reference for each of the catchment specific plans. This plan is being prepared in conjunction with the Barmah-Nathalia catchment and asset operation plan to ensure that the regional catchment and asset operation plan and catchment specific plans complement each other.

Progression of these plans was slower than expected in 2007/08 due to:

- Delays in sourcing and providing data required to complete the plans
- Current drier climate and the reduced need and desire for these plans to be completed by the end of the 2007/08 financial year.

It is envisaged that the catchment and asset operation plan for the Shepparton Irrigation Region and the Barmah-Nathalia catchment and asset operation plan will be completed during the 2008/2009 financial year.

### **5.0 COMMITTEE MEETINGS HELD**

Two IDMOU Steering Committee meetings were held during the 2007/08 financial year (September 2007 and March 2008). A high level of commitment was shown by each agency with representatives from each agency in attendance.

These committee meetings have provided a successful communication forum to facilitate senior agency staff reaching agreement on irrigation drainage related issues. It is anticipated that these committee meetings will continue on a six-monthly basis.

### **6.0 2007/08 DELIVERY AGAINST IDMOU REQUIREMENTS**

A set of implementation targets were documented. Some of these implementation targets have since been revised due to:

- the priority of surface drainage related issues being reduced because of the drought and funding reductions
- limited resource availability within agencies
- delays in documenting the relationship between Management Action and Resource Condition outcomes
- delays in acquiring data
- significant repetition between the Catchment and Asset Operation Plans. As a result the contents of both plans having been integrated into a single Catchment and Asset Operation Plan which addresses the specific objectives of both plans, and
- NVIRP irrigation system modernisation and water savings implications.

Despite these constraints, items were still progressed in the 2007/08 financial year and are listed in **Attachment 3**, along with a summary of their implementation progress.

### **7.0 KEY MILESTONES FOR 2008/09**

The key milestones over the next 12 month period are to:

- continue to progressively set monitoring requirements using the decision process developed
- continue with the setting of irrigation drainage related water quality targets (RRC DSS) for receiving waterways and irrigation drains using the decision process developed, with the primary focus being the Barr Creek catchment in the Loddon-Murray Irrigation Region and the Deakin catchment in the SIR
- continue with the setting of targets for the implementation of management actions using the decision support system (RMA DSS), with the primary focus in 2008/09 being the Barr Creek catchment in the Loddon-Murray Irrigation Region and the Deakin catchment in the SIR
- finalise the Regional Catchment and Asset Operation Plan for the Goulburn-Broken CMA area
- finalise the Barmah-Nathalia Catchment and Asset Operation Plan

- initiate the development of the Regional Catchment and Asset Operation Plan for the North Central CMA area
- continue the development of Catchment specific C&AOPs in the Goulburn Broken CMA area
- ensure the CMA's adopt the decision processes and catchment and asset operation plans developed.

## 8.0 CONCLUSION

The IDMOU has been successful in providing a forum for senior agency representatives to more efficiently and effectively reach agreement on irrigation drainage related issues.

The implementation of the IDMOU has been progressing smoothly and facilitates a forum with the cooperation of all the signatory agencies.

Significant milestones have been achieved in the fourth year of implementation, including:

- documenting the assumed relationships between management action implementation and resource condition outcomes for the entire Broken Creek catchment in the Goulburn-Broken CMA area
- finalising the assumed relationships between management action implementation and resource condition outcomes for the trial of the Barr Creek catchment in the North Central CMA area
- finalising the Regional Catchment and Asset Operation Plan
- finalising the Barmah-Nathalia Catchment and Asset Operation Plan.

The key challenges over the next 12 month period are:

- resourcing issues relating to IDMOU implementation
- determining the impacts of water supply system modernisation and water savings initiatives (e.g. NVIRP) on IDMOU implementation
- acquiring data for DSS applications and the Catchment and Asset Operation Plans
- understanding drainage related climate change/variability impacts/requirements
- to take into account the implications from the Victorian Irrigation Drainage Program Review.

## ATTACHMENT 1

### Attachment 1: Prioritised catchment in the SIR and Loddon-Murray Irrigation Region

The Shepparton Irrigation Region's 24 sub-catchments (SIR) are grouped into 10 catchments, and the 11 Loddon-Murray Irrigation Region sub-catchments are grouped into 6 for the purpose of analysis under the IDMOU.

Of these 16 defined catchments, it is proposed that the RRC DSS and RMA DSS be applied to only those that have Surface Water Management Systems (SWMS) with Primary (Public) drains. Priority will then be placed on those catchments that have a significant number of Primary SWMS. The proposed program is outlined in **Table 1A** and **Table 1B** for the SIR and Loddon-Murray Irrigation Region respectively.

**Table 1A: Prioritised catchment in the SIR**

| Priority | Catchment            | Comment  |
|----------|----------------------|--|
| 1        | (B) – Broken Creek   | - Trial of Rapid Management Action DSS completed on Lower Broken Creek Catchment<br>- Trial of Rapid Resource Condition DSS completed on Lower Broken Creek Catchment (2005/06)<br>- Rapid Resource Condition DSS completed<br>- Rapid Management Action DSS completed |
| 2        | (E) - Deakin         | - Rapid Resource Condition DSS proposed  |
| 3        | (I) – Mid Goulburn   |  |
| 4        | (A) – Strathmerton   |  |
| 5        | (F) - Lockington     |  |
| 6        | (C) – Broken River   |  |
| 7        | (H) – Lower Goulburn |  |
| 8        | (G) - Campaspe       |  |
| 9        | (D) – Upper Goulburn | - some formal drainage, no PSWMS proposed  |
| 10       | (J) – Kaarimba       | - no formal drainage at present, no PSWMS proposed   |

**Table 1B: Prioritised catchment in the Loddon-Murray Irrigation Region**

| Priority | Catchment        | Comment   |
|----------|------------------|---|
| 1        | (D) – Barr Creek | - Trial of Rapid Resource Condition DSS completed<br>- Trial of Rapid Management Action DSS completed |
| 2        | (E) - Pyramid    |   |
| 3        | (A) – Swan Hill  | - Tyntynder area  |
| 4        | (F) – Loddon     | - No formal drainage  |
| 5        | (B) - Koondrook  | - No formal drainage  |
| 6        | (C) - Gunbower   | - No formal drainage  |

Note: PSWMS – Primary Surface Water Management System

## ATTACHMENT 2

### Attachment 2: RMA DSS and RRC DSS Targets

SUMMARY – RESOURCE CONDITION TARGETS

Northern Irrigation Region – Primary Monitoring Site – Resource Condition targets

| Priority Number                        | IDMOU Defined Drainage Catchment |                              | Decision Support System Status |      | KPI Primary Site Resource Condition Targets |                      |      |                       |                       |
|--|----------------------------------|------------------------------|--------------------------------|------|---|----------------------|------|-----------------------|-----------------------|
|  | Catchment Name                   | Rapid Resource Condition DSS | Rapid Management Action DSS    | Year | Concentration (mg/L)                        |                      | Year | Load (t/yr)           |                       |
|  |                                  |                              |                                |      | Current                                     | Aspirational (50 yr) |      | Current               | Aspirational (50 yr)  |
| <b>Shepparton Irrigation Region</b>    |                                  |                              |                                |      |   |                      |      |                       |                       |
| 1                                      | B Broken Creek                   | Completed                    | Complete                       | 2005 | TP: 0.41<br>SS: 35                          | TP: 0.21<br>SS: 35   | 2005 | TP: 28.4<br>SS: 2,220 | TP: 16.3<br>SS: 2,220 |
| 2                                      | E Deakin                         | Not Commenced                | Not Commenced                  |      |   |                      |      |                       |                       |
| 3                                      | I Goulburn – Mid                 | Not Commenced                | Not Commenced                  |      |   |                      |      |                       |                       |
| 4                                      | C Broken River                   | Not Commenced                | Not Commenced                  |      |   |                      |      |                       |                       |
| 5                                      | H Goulburn – Lower               | Not Commenced                | Not Commenced                  |      |   |                      |      |                       |                       |
| 6                                      | G Campaspe                       | Not Commenced                | Not Commenced                  |      |   |                      |      |                       |                       |
| 7                                      | D Goulburn – Upper               | Not Commenced                | Not Commenced                  |      |   |                      |      |                       |                       |
| 8                                      | J Kaarimba                       | Not Commenced                | Not Commenced                  |      |   |                      |      |                       |                       |
| 9                                      | A Strathmerton                   | Not Commenced                | Not Commenced                  |      |   |                      |      |                       |                       |
| 10                                     | F Lockington                     | Not Commenced                | Not Commenced                  |      |   |                      |      |                       |                       |
| <b>Loddon–Murray Irrigation Region</b> |                                  |                              |                                |      |   |                      |      |                       |                       |
| 1                                      | D Barr Creek                     | Trial Completed              | Trial Completed                | 2005 | TP: 0.77                                    | TP: 0.04             | 2005 | TP: 38                | TP: 3                 |
| 2                                      | E Pyramid – Calivil              | Not Commenced                | Not Commenced                  |      |   |                      |      |                       |                       |
| 3                                      | A Swan Hill                      | Not Commenced                | Not Commenced                  |      |   |                      |      |                       |                       |
| 4                                      | B Koondrook – Benjeroop          | Not Commenced                | Not Commenced                  |      |   |                      |      |                       |                       |
| 5                                      | F Loddon                         | Not Commenced                | Not Commenced                  |      |   |                      |      |                       |                       |
| 6                                      | C Gunbower Island                | Not Commenced                | Not Commenced                  |      |   |                      |      |                       |                       |

- Notes: (i) TP concentrations are rounded to 2 decimal places and TP Loads are rounded to the nearest whole number  
(ii) Suspended solids concentrations and loads are rounded to the nearest whole number.

SUMMARY – MANAGEMENT ACTION TARGETS

Northern Irrigation Region – Management Action Targets based on the Rapid Management Action Decision Support System

| Management Action*                      | Irrigation reuse system (ML) |                     | Offline Wetland (ML) |                     | Regional Drainage Diversion (high flow) (ML) |                     | Regional Drainage Diversion (low flow) (ML) |                     | Inline Wetland (km) |                     | Reduction in Channel Leaks and Outfalls |                     |
|---|------------------------------|---------------------|----------------------|---------------------|--|---------------------|---|---------------------|---------------------|---------------------|---|---------------------|
|   | Current Status               | Aspirational Target | Current Status       | Aspirational Target | Current Status                               | Aspirational Target | Current Status                              | Aspirational Target | Current Status      | Aspirational Target | Current Status                          | Aspirational Target |
| Year                                    | 2005                         | 2055                | 2005                 | 2055                | 2005   | 2055                | 2005  | 2055                | 2005                | 2055                | 2005                                    | 2055                |
| <b>IDMOU Defined Drainage Catchment</b> |                              |                     |                      |                     |  |                     |   |                     |                     |                     |   |                     |
| <b>Shepparton Irrigation Region</b>     |                              |                     |                      |                     |  |                     |   |                     |                     |                     |   |                     |
| B – Broken Creek                        | 4,977                        | 5,479               | 1,030                | 1,146               | 4,094  | 6,294               | 13,948                                      | 15,448              | 0.6                 | 3.4                 | 0.6                                     | 3.4                 |
| E – Deakin                              | DSS not commenced            |                     | DSS not commenced    |                     | DSS not commenced                            |                     | DSS not commenced                           |                     | DSS not commenced   |                     | DSS not commenced                       |                     |
| I – Goulburn – Mid                      | DSS not commenced            |                     | DSS not commenced    |                     | DSS not commenced                            |                     | DSS not commenced                           |                     | DSS not commenced   |                     | DSS not commenced                       |                     |
| C – Broken River                        | DSS not commenced            |                     | DSS not commenced    |                     | DSS not commenced                            |                     | DSS not commenced                           |                     | DSS not commenced   |                     | DSS not commenced                       |                     |
| H – Goulburn – Lower                    | DSS not commenced            |                     | DSS not commenced    |                     | DSS not commenced                            |                     | DSS not commenced                           |                     | DSS not commenced   |                     | DSS not commenced                       |                     |
| G – Campaspe                            | DSS not commenced            |                     | DSS not commenced    |                     | DSS not commenced                            |                     | DSS not commenced                           |                     | DSS not commenced   |                     | DSS not commenced                       |                     |
| D – Goulburn – Upper                    | DSS not commenced            |                     | DSS not commenced    |                     | DSS not commenced                            |                     | DSS not commenced                           |                     | DSS not commenced   |                     | DSS not commenced                       |                     |
| J – Kaarimba                            | DSS not commenced            |                     | DSS not commenced    |                     | DSS not commenced                            |                     | DSS not commenced                           |                     | DSS not commenced   |                     | DSS not commenced                       |                     |
| A – Strathmerton                        | DSS not commenced            |                     | DSS not commenced    |                     | DSS not commenced                            |                     | DSS not commenced                           |                     | DSS not commenced   |                     | DSS not commenced                       |                     |
| F – Lockington                          | DSS not commenced            |                     | DSS not commenced    |                     | DSS not commenced                            |                     | DSS not commenced                           |                     | DSS not commenced   |                     | DSS not commenced                       |                     |

SUMMARY – MANAGEMENT ACTION TARGETS

| Management Action*                       | Irrigation reuse system (ML) |                     | Offline Wetland (ML) |                     | Regional Drainage Diversion (high flow) (ML) |                     | Regional Drainage Diversion (low flow) (ML) |                     | Inline Wetland (km) |                     | Reduction in Channel Leaks and Outfalls |                     |
|--|------------------------------|---------------------|----------------------|---------------------|--|---------------------|---|---------------------|---------------------|---------------------|---|---------------------|
|  | Current Status               | Aspirational Target | Current Status       | Aspirational Target | Current Status                               | Aspirational Target | Current Status                              | Aspirational Target | Current Status      | Aspirational Target | Current Status                          | Aspirational Target |
| Year                                     | 2005                         | 2055                | 2005                 | 2055                | 2005   | 2055                | 2005  | 2055                | 2005                | 2055                | 2005                                    | 2055                |
| <b>IDMOU Defined Drainage Catchment</b>  |                              |                     |                      |                     |  |                     |   |                     |                     |                     |   |                     |
| <b>Loddon – Murray Irrigation Region</b> |                              |                     |                      |                     |  |                     |   |                     |                     |                     |   |                     |
| D – Barr Creek                           | DSS not commenced            |                     | DSS not commenced    |                     | DSS not commenced                            |                     | DSS not commenced                           |                     | DSS not commenced   |                     | DSS not commenced                       |                     |
| E – Pyramid – Calivil                    | DSS not commenced            |                     | DSS not commenced    |                     | DSS not commenced                            |                     | DSS not commenced                           |                     | DSS not commenced   |                     | DSS not commenced                       |                     |
| A – Swan Hill                            | DSS not commenced            |                     | DSS not commenced    |                     | DSS not commenced                            |                     | DSS not commenced                           |                     | DSS not commenced   |                     | DSS not commenced                       |                     |
| B – Koondrook – Benjeroop                | DSS not commenced            |                     | DSS not commenced    |                     | DSS not commenced                            |                     | DSS not commenced                           |                     | DSS not commenced   |                     | DSS not commenced                       |                     |
| F – Loddon                               | DSS not commenced            |                     | DSS not commenced    |                     | DSS not commenced                            |                     | DSS not commenced                           |                     | DSS not commenced   |                     | DSS not commenced                       |                     |
| C– Gunbower Island                       | DSS not commenced            |                     | DSS not commenced    |                     | DSS not commenced                            |                     | DSS not commenced                           |                     | DSS not commenced   |                     | DSS not commenced                       |                     |

\* Management actions only listed where targets have been developed. Other possible management actions are:

- Nutrient Reduction Reuse System (NRRS)
- Laser Assisted Land forming
- Conversion of Flood Irrigation to Sprinkler Irrigation
- Conversion of Furrow to Micro Irrigation
- Automation of Farm Channels
- Soil Testing
- Nutrient Application Management program
- Planting Salt Tolerant Species
- Terminal Wetland
- WWTP and Industry outfalls (reduction of outfall quantity / quality)
- Fencing of Regional Drains and Streams
- Whole Farm Plans
- Construction of Farm Drains
- Conversion of Farm channels to pipe and Riser
- On farm Irrigation Scheduling
- Grading Farm Tracks away from drainage system
- Planting Buffer Strips
- Fencing Out Highly Saline Clay Soils
- Inline Wetland
- Automation of G–MW Supply Channel Systems
- New Surface Water Management Implementation
- Sediment Trap/Enhanced Diversions (km)

## ATTACHMENT 3

### Attachment 3: Progress Against Original Work Program in IDMOU

|                                     | IDMOU Implementation Action  | Timing                     |                            | Progress (%) | Prime Responsibility | Other Parties Involved |
|-------------------------------------|--|----------------------------|----------------------------|--------------|----------------------|------------------------|
|                                     |  | Original                   | Current                    |              |                      |                        |
| <b>General Issues</b>               |  |                            |                            |              |                      |                        |
| 1                                   | Management, review and ensuring delivery of actions required under this Memorandum   | Ongoing                    | Ongoing                    |              | DSE                  | ALL                    |
| 2                                   | Development of detailed guidelines for reviews and reporting processes based on DSE principles   | Dec 2004                   | Dec 2008                   | 100%         | CMA Completed        | G-MW & DSE             |
|                                     |  | Dec 2004                   | Dec 2008                   | 50%          | EPA                  | G-MW & DSE             |
| 3                                   | Develop and advise each Party of the detail of existing water quality incident reporting and management procedures and systems for SWMS Receiving Waterways        | Aug 2004                   | Completed                  | 100%         | ALL                  | ALL                    |
| 4                                   | Develop and advise each Party of the detail of new water quality incident reporting and management procedures and systems for SWMS Receiving Waterways             | June 2006 and then ongoing | June 2006 and then ongoing | Ongoing      | ALL                  | ALL                    |
| 5                                   | Document assumed cause and effect relationships between Resource Condition outcomes and Management Actions   | Oct 2004                   | Completed April 2007       | 100%         | CMA                  | G-MW                   |
| <b>Short Term Interim Processes</b> |  |                            |                            |              |                      |                        |
| 6a                                  | Development of initial rapid decision support system for setting monitoring requirement guidelines (stations, parameters, type and analysis)                       | Jan 2005                   | Completed                  | 100%         | DSE                  | EPA/<br>G-MW/<br>CMA   |
| 6b                                  | Setting of monitoring requirements using initial rapid decision support system<br>(Two highest priority catchments)  | May 2005                   | Dec 2010                   | 10%          | CMA                  | EPA/<br>G-MW/<br>DSE   |
|                                     | (All catchments)   |                            | Dec 2012                   |              |                      |                        |
| 7a                                  | Development of initial rapid appraisal risk based system for Resource Condition KPI target setting guidelines  | Mar 2005                   | Completed                  | 100%         | DSE                  | EPA/<br>G-MW/<br>CMA   |
| 7b                                  | Setting of Resource Condition KPI targets using initial rapid appraisal process and current regional water quality strategies<br>(Two highest priority catchments) | July 2005                  | Dec 2010                   | 6%           | CMA                  | EPA/<br>G-MW           |
|                                     | (All catchments)   |                            | Dec 2012                   |              |                      |                        |
| 8a                                  | Development of initial rapid decision support systems and guidelines for PI Management Action target setting   | Oct 2005                   | Completed Dec 2006         | 100%         | DSE                  | EPA/<br>G-MW/<br>CMA   |

|                                  | IDMOU Implementation Action  | Timing                  |                         | Progress (%) | Prime Responsibility | Other Parties Involved |
|----------------------------------|--|-------------------------|-------------------------|--------------|----------------------|------------------------|
|                                  |  | Original                | Current                 |              |                      |                        |
| 8b                               | Setting of Management Action PI targets using initial rapid decision support guidelines<br>(Two highest priority catchments)   | Jan 2006                | Dec 2010                | 0%           | CMA                  | EPA/<br>G-MW           |
|                                  | (All catchments)   |                         | Dec 2012                |              |                      |                        |
| 9                                | Monitoring will be upgraded such that it is adequate to meet support and measure the KPI targets in <b>Clause 7.3.1 (8)</b> of the IDMOU   | June 2006               | Dec 2013                | 0%           | CMA &<br>G-MW        | CMA                    |
| <b>Long Term Final Processes</b> |  |                         |                         |              |                      |                        |
| 10a                              | Development of detailed decision support system for setting monitoring requirement guidelines (stations, parameters, type and analysis)  | Dec 2006                | No longer required      | 0%           | DSE                  | EPA/<br>G-MW/<br>CMA   |
| 10b                              | Setting of monitoring requirement guidelines using detailed decision support system  | May 2006                | No longer required      | 0%           | DSE                  | EPA/<br>G-MW/<br>CMA   |
| 11                               | Monitoring will be further upgraded in the NCCMA such that it is adequate to meet the KPI targets in <b>Clause 7.3.1 (9)</b> of the IDMOU  | June 2009               | June 2012               | 0%           | CMA &<br>G-MW        | CMA                    |
| 12a                              | Developing longer term detailed risk assessment processes and decision support system and guidelines for Resource Condition KPI target setting   | Dec 2005                | No longer required      | 0%           | DSE                  | EPA/<br>G-MW/<br>CMA   |
| 12b                              | Set Resource Condition KPI targets using the longer term detailed risk assessment processes and Decision Support Systems   | Feb 2007                | No longer required      | 0%           | CMA                  | EPA/<br>G-MW           |
| 13a                              | Developing longer term detailed decision support systems for PI Management Action target setting   | June 2006               | No longer required      | 0%           | DSE                  | EPA/<br>G-MW/<br>CMA   |
| 13b                              | Set PI Management Action targets using longer term detailed decision support systems   | June 2007               | No longer required      | 0%           | CMA                  | EPA/<br>G-MW           |
| 14                               | Developing Surface Water Management System Catchment and Asset Operation Plan for whole of CMA region scale as specified in <b>Clause 10.3.1. (3)</b> and <b>Clause 10.3.2. (4)</b> of the IDMOU | Jan 2005                | Oct 2008                | 90%          | GB CMA               | *G-MW                  |
|                                  |  | Jan 2005                | Dec 2010                | 0%           | NC CMA               | *G-MW                  |
| 15                               | Developing Surface Water Management System Catchment Operation Plans for Planning Catchments to achieve target coverage as specified in <b>Clause 10.3.1. (4)</b> of the IDMOU                   | Progressively 2005-2009 | Progressively 2005-2015 | 0%           | CMA                  | *G-MW                  |
|                                  | Development of Catchment and Asset Operation Plan for Stanhope Drain   | -                       | Completed June 2007     | 100%         | G-MW/<br>GB CMA      | -                      |
|                                  | Development of Catchment and Asset Operation Plan for Barmah-Nathalia  | -                       | Mar 2009                | 75%          | G-MW                 |                        |
|                                  | Development of Draft Catchment and Asset Operation Plan for Benwell Drain  | -                       | Dec 2010                | 0%           | G-MW                 | -                      |

|    | IDMOU Implementation Action   | Timing                  |                    | Progress (%) | Prime Responsibility | Other Parties Involved |
|----|---|-------------------------|--------------------|--------------|----------------------|------------------------|
|    |   | Original                | Current            |              |                      |                        |
| 16 | Where appropriate developing Surface Water Management System Asset Operation Plans for each G-MW Water Service Committee area as specified in <b>Clause 10.3.2.(5)</b> of the IDMOU | June 2009               | No longer required | 0%           | CMA & G-MW           | -                      |
| 17 | Developing Surface Water Management System Asset Operation Plans at a Planning Catchment scale to achieve targets coverage as specified in <b>Clause 10.3.2.(6)</b> of the IDMOU    | Progressively 2006-2009 | No longer required | 0%           | CMA & G-MW           | G-MW/<br>CMA           |