

GOVERNMENT RESPONSE

INDEPENDENT REVIEW OF THE ENVIRONMENTAL ASPECTS OF NORTHERN VICTORIA'S SURFACE DRAINAGE PROGRAMS IN IRRIGATION AREAS

The community today is demanding improved environmental management and the protection of environmental assets, such as our rivers and wetlands.

At the same time our irrigation farmers are continuing to strive to manage their land to its capacity learning from past irrigation practices, that we have to protect our land and manage water to prevent loss of habitat and native vegetation and continue to improve water quality.

Victoria's irrigation community now support these goals because it also means that for this important sector, to continue to improve productivity and growth in high value agriculture, it must continue to improve the management of Victoria's water resources.

Victoria's surface drainage program is just one part of this process that Victoria's irrigation communities are managing in partnership with the Government to reduce waterlogging and salinisation and through improved water use efficiency to protect our key environmental features.

As part of the reporting process to Governments the Department of Natural Resources and Environment (NRE) engaged the environmental consultancy firm, Nolan-ITU, to conduct an independent review of the environmental aspects of the surface water drainage programs in Northern Victoria.

The review was overseen by a steering committee convened by the Murray-Darling Basin Commission (MDBC) and included representatives from the: Australian Conservation Foundation; North Central and Goulburn-Broken Catchment Management Authorities; EPA; Goulburn-Murray Water; Environment Australia; AFFA; Department of Land and Water Conservation NSW; and the Department of Natural Resources and Environment.

I would like to thank the steering committee for ensuring a rigorous and independent review.

The Victorian Government is pleased that this review has found that many aspects of the Northern Victoria surface water drainage programs are performing at a high level, in regard to practices and approaches being taken to achieve improved outcomes for the environment on which agriculture depends.

Examples of this include:

- ☐ Environmental assessments are undertaken according to strict guidelines for new surface water drains;
- ☐ Wetlands and remnant vegetation is protected and enhanced by re-establishing appropriate wetting regimes;
- ☐ Cultural and Heritage assessments are an integral part of the program;
- ☐ Wetland management plans are developed for all key wetlands;
- ☐ Surface water drainage is recycled to reduce impacts to downstream waterways;
- ☐ Wetlands are being established to reduce nutrient loads and sediment;
- ☐ Improved drain surveillance is monitoring the effectiveness of the drainage diversion plans; and
- ☐ Drain design, construction, and many operational practices are 'best practices' compared to elsewhere in Australia and overseas.

This demonstrates that the surface water drainage programs have a culture of innovation and continual improvement.

These findings also reflect the cooperative and inclusive approaches in which this program operates, and to the hard work, commitment and skills of many individual landholders and Government agency staff over a long period of time.

Government notes the independent reviewer's conclusion that the current drainage programs are now providing tangible environmental benefits, examples of which were highlighted in the review.

However, Government believes that it is too early to predict the extent of these environmental benefits. The challenge is for NRE, the CMAs, G-MW, the EPA, and the catchment communities to work in partnership to capitalise on this potential.

It is also important that monitoring and reporting programs continue to improve to monitor the progress towards these outcomes and this is discussed in the Government's Response to the independent reviewer's recommendations.

Government also agrees that there are opportunities to further improve the catchment health outcomes from implementing the surface water drainage programs. These are also discussed in the Government's Response to the independent reviewer's recommendations.

I look forward to monitoring the progress of improved surface water management in the Catchment Management Authorities' Annual Reports.

Sherryl Garbutt MP

Minister for Environment and Conservation

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GOVERNMENT RESPONSE TO THE INDEPENDENT REVIEWER'S RECOMMENDATIONS

Below is the Government's response to the independent reviewer's key recommendation's outlined in his Summary Report and Executive Summary.

RECOMMENDATION 1

Government agrees that drainage strategies must be integrated with the regional water quality, farm, and bio-diversity strategies to provide a holistic water management strategy. NRE is currently working with the Goulburn-Broken and North Central Catchment Management Authorities to ensure that their revised drainage strategies are consistent with a surface water management approach.

Action

No specific action is required to implement this recommendation. NRE is already working closely with the CMAs and G-MW to ensure that the drainage programs are fully integrated.

RECOMMENDATION 2

This recommendation includes two options to improving the accountability arrangements for implementing drainage:

- Licensing drains.
- Operating agreements between key Government agencies.

LICENSING DRAINS

Government agrees that accountability arrangements for the drainage programs need to be strengthened and that licensing mechanisms may provide guidance in developing these arrangements.

However, Government considers that it would not be appropriate to license irrigation drains at this time. None-the-less, there are elements of licenses such as clearly defined roles and responsibilities, target setting, monitoring and reporting, which should be incorporated into future arrangements to improve the accountability of Victoria's drainage programs.

It is Government policy for a cooperative and partnership approach to catchment management. Government therefore endorses the development of an operating agreement between the EPA, NRE, G-MW, and the CMAs to clarify respective roles and responsibilities, processes to set pollution reduction targets for drains, to set priorities, arrangements to apply sanctions if proved necessary, and to establish accountability and annual reporting arrangements.

Details of an operating agreement arrangement is described below.

OPERATING AGREEMENT

Government supports an operating agreement between the EPA, NRE, G-MW, and the CMAs to strengthen accountability, and to further provide for positive catchment management outcomes.

Government considers that two levels of operating agreement are required:

- A 'high level operating agreement' for the implementation of the drainage programs which specifies the respective roles, responsibilities, and accountabilities of the Government agencies.
- An operating agreement for the implementation of 'surface water management plans'. This will be key to ensuring tighter accountability of the drainage programs to provide agreed catchment management outcomes.

High Level Operating Agreement

Government supports a high level operating agreement (HLOA) between NRE, the EPA, G-MW, and the CMAs to specify governance responsibilities. The HLOA will also specify that 'surface water management plans' will form the basis of accountability for the performance of the drainage programs. More specifically the HLOA will define agreed roles and responsibilities with respect to:

- Resourcing and implementing surface water management plans.
- Ownership and management.
- Priority setting.
- Monitoring and annual reporting.
- Target setting.
- Auditing.
- Sanctions which can be applied to the individual landholder.

The HLOA will also provide the delegated authority for the preparation of individual surface water management plans.

The HLOA will be in place within 6 months of this response with a joint reporting process involving NRE, EPA, G-MW, and the CMAs being provided to Government to assess satisfactory progress with implementation. The overall effectiveness of the operating agreement will be reviewed in three years after its adoption.

Surface Water Management Plans (SWMPs)

Government requests that NRE, G-MW, the EPA, and the Goulburn-Broken and North Central CMAs pilot the preparation of a surface water management plan (SWMP) for a 'typical' drainage catchment in each CMA region. The pilot SWMP will inform the process for the progressive preparation of SWMPs for each major irrigation district in Northern Victoria including the process for stakeholder consultation and sign-off.

Government expects that under the SWMP Operating Agreement the Government agencies will endorse targets and timelines for farm management and environmental management measures. The targets are aimed at protecting downstream water quality within agreed parameters, and the general enhancement of the sub-catchment environment and farm productivity.

Government expects that each SWMP will include agreed pollution and salt targets consistent with the Government endorsed regional nutrient and water quality management strategy, and allocation of salt credits. There will be agreed monitoring and reporting arrangements against each of the targets.

To achieve these targets the SWMP will specify implementation targets and the roles and responsibilities for the respective targets. The types of implementation targets a SWMP may include are:

- Farm program targets; ie whole farm plans, re-use systems, improved irrigation practice.
- Environmental enhancement targets; ie wetland and remnant vegetation protection and enhancement, and local agreements to ensure their on-going management.
- Standards for the operation and maintenance management of the drainage system.

The SWMP should also seek to promote reduced impacts of groundwater disposal on surface water within the context of broader scale targets established by regional catchment management strategies.

Government also expects the SWMP Operating Agreement to include, consistent with the HLOA, a course of action if the endorsed targets are not being achieved. This may include sanctions that can be applied to individual landholders if the agreed course of action is not being followed. The type of sanction would be specified through the HLOA.

After 2 years the pilot SWMPs will be reviewed by the CMAs in partnership with the EPA, G-MW and NRE to:

- Determine whether they are an effective mechanism for improving the accountability of drainage.
- Determine whether they are an effective mechanism for improving the environmental performance of the drainage programs.
- Review the appropriate scale and extent of a DMP.
- Identify key issues in developing and implementing a DMP.

Action

That NRE meet with the North Central and Goulburn-Broken CMAs, the EPA, and G-MW to negotiate a High Level Operating Agreement and for a Pilot Drainage Management Plan Operating Agreement in each of the Goulburn-Broken and North Central regions.

RECOMMENDATION 3

Government notes the consultant's comments that arrangements to implement drainage within the Loddon-Murray irrigation areas need to be strengthened. This includes adopting a more rigorous approach to applying the environmental assessment procedures. The North Central Catchment Management Authority agrees with these comments and are actively addressing this issue as follows:

- The CMA does not support funding drains unless their environmental assessment complies with the 'Statewide revised environmental assessment procedures for implementing surface drains'.
- The CMA has established the Loddon-Murray Surface Water Management Group to finalise the Loddon-Murray Surface Water Management Strategy. This includes integrating drainage with farm management, environmental management and enhancement, and nutrient management.

The independent reviewer identified that within the Loddon-Murray irrigation areas there are 4 salinity management plans with four advisory groups, a separate committees overseeing the Loddon-Murray surface water strategy, and a regional water quality and bio-diversity strategy. These groups report to the North Central CMA's Implementation Committees. Government is concerned that these arrangements may be an impediment to the integration of drainage.

Action

Government asks the North Central CMA to advise on arrangements to best ensure the integration of drainage with the farm management, nutrient management, and bio-diversity programs.

RECOMMENDATION 4

Government agrees that salinity and nutrient management in irrigation areas is closely related and needs to be addressed conjunctively. This requires that implementation arrangements for the salinity management plans, and nutrient and water quality management strategies ensure that these issues are addressed in an integrated way. Often one solution provides for salinity and water quality benefits.

Action

Further to Recommendation 3, Government also requests that the Goulburn-Broken CMA also advise on their arrangements to ensure the integration of drainage with the farm management, nutrient and water quality management, and bio-diversity programs.

RECOMMENDATION 5

Government agrees that the salinity management plans and nutrient and water quality management strategies should establish water quality and other environmental goals. Government supports surface water

management plans as the preferred mechanism for establishing water quality targets and other environmental goals for surface drains.

It is NRE's responsibility to take leadership in specifying the annual reporting of the performance of the drainage programs.

Action

NRE in partnership with key stakeholders develop annual reporting guidelines for reporting the performance of the drainage programs.

RECOMMENDATION 6

Government supports a transparent and accountable process for establishing monitoring of the drainage programs. This includes a transparent and agreed process for evaluating and reporting the monitoring results. It is important that the monitoring is targeted, and its objectives be agreed and made clear.

It is NRE's responsibility to define the required monitoring (including the monitoring methodology) in consultation with the EPA, the CMAs, and G-MW.

It is the responsibility of the CMA to review the monitoring information, and to report the results in terms of achievements against targets and goals (consistent with the Annual Reporting guidelines described in the response to recommendation 5).

Action

NRE to convene a meeting between the CMAs, EPA, and G-MW, to determine a process for establishing the monitoring of the drainage programs and reporting of the monitoring results.

RECOMMENDATION 7

Government agrees that the monitoring methodology and the water quality strategies be regularly reviewed to ensure that they are consistent with the Government endorsed water quality goals, including the State Environmental Protection Policies (Waters of Victoria). This is described in more detail in the response to Recommendations 2, 5, and 6.

Action

That the CMAs review their water quality monitoring methodologies and water quality strategies as part of their on-going catchment management review process.

RECOMMENDATION 8

Government agrees that it would be preferable for G-MW to have responsibility for all future irrigation drainage outfalls into natural waterways, wetlands, lakes, and other waterbodies. This will provide for a higher degree of management of drainage outfalls.

Government also agrees that G-MW should have responsibility for compliance water quality monitoring consistent with the process for establishing the monitoring methodology, accountability, and review outlined in the response to Recommendation 6.

Action

NRE and Goulburn-Broken and North Central CMAs negotiate with G-MW with regards to ownership and responsibility for all future irrigation drainage outfalls constructed under the drainage programs.

RECOMMENDATION 9

NRE is currently working with the Commonwealth on a case by case basis to ensure the drainage programs complies with the Environment Protection and Biodiversity Conservation Act. However, there may be benefit for NRE to demonstrate first hand to the Commonwealth Victoria's environmental assessment and consultation process required for each drainage proposal.

Action

NRE to develop a process for addressing the Environment Protection and Biodiversity Conservation Act in consultation with the CMAs, the Department of Infrastructure, and the EPA.

RECOMMENDATION 10

Government agrees that it would be sensible to revegetate and enhance native vegetation in areas that receive protection from waterlogging by surface drains. Government considers that to achieve the full range of bio-diversity benefits these activities must be consistent with the draft State Native Vegetation Framework and draft Native Vegetation Plans.

Action

The Goulburn-Broken and North Central CMAs to ensure that the proposed Drainage Management Plans are integrated with the draft Native Vegetation Plans. Also, that consistent with the draft Native Vegetation Plans, the CMAs give priority to native vegetation protection, enhancement, and re-establishment in areas that receive salinity and waterlogging benefits from drains.

RECOMMENDATION 11

Government agrees that it would be sensible for appropriate arrangements to be developed to ensure that the environmental benefits provided by drainage are provided into the long-term. The Goulburn-Broken and North Central CMAs currently provide a range of incentives to capitalise on the opportunities for environmental enhancement provided by drainage schemes. The CMAs are also considering hosting a workshop to identify the most appropriate arrangements to ensure the long-term benefits.

Action

That the CMAs develop arrangements to maximise the long-term environmental benefits provided by the drainage programs.

RECOMMENDATION 12

Government agrees that water quality monitoring from 'drainage outfalls' to receiving waters must be rigorous. Consistent with the response to Recommendations 2, 6, and 8 a transparent process is required to define the drainage programs monitoring, including monitoring of drainage outfalls.

Action

No further action is required to address this recommendation.

RECOMMENDATION 13

Government supports periodic independent auditing of implementation of the drainage programs. As part of this process, NRE commissioned this independent environmental review, and required a review of the Shepparton Irrigation Region Surface Water Management Strategy, and development of the Loddon-Murray Surface Water Management Strategy. The on-going process of review and auditing will be addressed in the Operating Agreement outlined in the Response to recommendation 2.

Action

Auditing arrangements will be developed as part of the High Level Operating Agreement.

RECOMMENDATION 14

Government supports retrofitting existing drains where there are demonstrable and cost effective water quality and other environmental benefits. However, the issue of cost sharing for retrofitting needs to be resolved (ie for example what constitutes routine drainage renewal and maintenance versus works for environmental enhancement).

Government also supports retrofitting for environmental enhancement as a component of the existing Government funding for drainage schemes in accordance with agreed cost sharing.

Action

That the Goulburn-Broken and North Central CMAs:

- **Recommend to NRE cost sharing for retrofitting existing drains for environmental enhancement.**
- **Identify priority drains for retrofitting, the cost of the retrofitting, and describe the environmental benefits.**

The independent reviewer also included other recommendations in their Main Report. Below is Government's response to these recommendations which are not also covered by the key recommendations outlined in the Executive Summary.

Regulations, Policies, Roles, and Responsibilities

Re The approach used to estimate the River Murray salinity impacts of drainage schemes be amended to use current information and knowledge.

The Goulburn-Broken CMA in partnership with G-MW, NRE, and the MDBIC has engaged an independent consultant to review the methodology for determining the River Murray salinity impacts from its surface drainage program.

Action

No further action is required to address this recommendation.

Drainage Program Planning

Re The approach currently being used to assess drainage priorities be reviewed to strengthen environmental considerations when setting drainage priorities.

It is Government policy that economic, environmental, and social considerations are given due and explicit consideration when assessing priorities. The State and Federal Governments require that Integrated Surface Water Management/Drainage Schemes take account of environmental issues during the planning phase. The process of the Environmental Assessment Procedures has been agreed to by both levels of Government based on a four tier approach to consider environmental factors. The four tier approach consists of:

One: A Government approved salinity management plan/catchment management plan.

Two: An Integrated Surface Water Management/Drainage Strategy as part of the Plan.

Three: The two stage environmental assessment process.

Four: NRE's on-going commitment to supporting the community groups implementing the Surface Water Management Strategies. This ensures that environmental factors are addressed throughout implementation.

The Goulburn-Broken CMA is reviewing how it properly accounts for the 'triple bottom line' in setting drainage priorities. The North Central CMA is in the process of advising Government how it intends to set drainage priorities (based on the triple bottom line) to implement the Loddon-Murray Surface Water Management Strategy.

Action

No further action is required to address this recommendation.

Design and Approval Processes and Practices

Re Drainage programs continue to develop the objective of eliminating irrigation runoff to reduce nutrient discharge into drains and to minimise drainage outfalls.

Government supports eliminating irrigation runoff into drains. Government notes that it is a high priority of the CMA's land and water management plans to encourage water use efficiency and to encourage drainage re-use. However, Government remains concerned that poor irrigation practice may offset the environmental benefits provided by drainage schemes.

Action

That the Goulburn-Broken and North Central CMAs advise of measures that they propose to reduce irrigation runoff into drains, and to encourage the sustainable use of drainage water.

Re The adopted design and approval standards be applied with equal rigour across the entire Goulburn Murray Irrigation District.

Government agrees that standards for drainage design and approval should be consistent and consistently applied. This is now in place. The CMAs and NRE have agreed to consistent environmental assessment procedures for the drainage programs.

Action

No further action is required to address this recommendation.

Re The primary drain design procedures currently being developed by G-MW, be endorsed and applied as soon as possible.

These procedures have been adopted and implemented for a number of years. They have however not been formally documented and endorsed by G-MW. This is being done at present.

The revised environmental assessment procedures include primary drains and these have been supported by NRE and G-MW. The Surface Drainage Coordinating Committee is charged with regularly reviewing the environmental assessment procedures.

Action

No further action is required to address this recommendation.

Re The environmental assessment documentation include a summary of the environmental benefits and disbenefits, and that there should be a post construction review.

Government agrees that the environmental assessment includes a description of the environmental benefits and disbenefits and that the assessment be properly documented. Government also agrees that the process should include a post drainage construction review. NRE advise that these proposals are now a policy of the drainage programs and are being undertaken as part of the environmental assessment procedures.

Action

No further action is required to address this recommendation.

Construction Management

Re Completion of environmental and wetlands projects to agreed design and time-lines be a condition of drainage scheme approval.

Government agrees that environmental and wetland benefits and considerations are fundamental and should be integrated into drainage schemes. These issues are addressed during the environmental assessment stage and are fundamental to the drainage design. However, due to the nature of community planning processes, NRE advises that it cannot guarantee strict time-lines, and interim measures are being undertaken to pursue the protection of environmental features.

Action

No further action is required to address this recommendation.

Management, Operation and Maintenance

Re The management, operation, and maintenance of community drains be improved with clearer delineation of responsibilities, with on-going support from NRE.

NRE advises that the operation and management responsibilities are already clearly delineated. The CMAs are overseeing procedures to improve the operation and management of drains. This includes G-MW considering ownership of community drains when requested by the landholders. Also, the operation and maintenance procedures for drainage schemes are now being documented.

Action

No further action is required to address this recommendation.

Drain Catchment Management

Re Continuing the research into benefits and costs of on-farm adoption of a range of sediment and pesticide trapping, and nutrient harvesting schemes.

Government agrees that research on best irrigation management practice, including methods to reduce nutrients in drains from discharging into waterways, is critical to the sustainability of drainage schemes. This research is a high priority and is being undertaken consistent with the nutrient management strategies.

Action

No further action is required to address this recommendation.

Monitoring Environmental Outcomes

Re The Victorian Mandatory Environmental Monitoring Program be strengthened to monitor a larger number and more representative range of sites to determine program effectiveness.

Government recognises that environmental monitoring is fundamental to Victoria's Salinity and Nutrient Management Programs. The purpose of the mandatory monitoring program is to provide a Statewide picture on the impacts of salinity on natural ecological systems. The Goulburn-Broken and North Central CMAs in partnership with NRE and G-MW oversee 'effectiveness monitoring' programs to monitor the environmental effectiveness of the implementation of the salinity plans. This includes annual reporting on the progress towards achieving agreed targets.

Action

That the review of the catchment management strategies consider whether the environmental monitoring programs are meeting the objectives of environmental monitoring, and whether the mandatory and effectiveness monitoring programs are integrated.

Re Establishing overall catchment health performance indicator and developing alternative monitoring and data generation methods.

NRE in partnership with the Victorian Catchment Management Council is developing catchment health indicators. It is intended that these indicators will be reported on regularly, and over time will indicate the effectiveness of the various catchment management programs.

Action

No further action is required to address this recommendation.

Education and Awareness Raising

Re A review of the comprehensiveness and approaches used by current education and awareness programs in view of the high turnover of farmers.

NRE is aware that the high turnover of landholders in the Goulburn Murray Irrigation Districts has implications with how it develops and delivers its community awareness and education programs. These are currently being reviewed by NRE in partnership with the CMAs.

Action

No further action is required to address this recommendation.