

Submission to NSW Government

Draft NSW Aquifer Interference Policy Stage 1

120503

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Introduction

NSW Irrigators' Council (NSWIC) represents more than 12,000 irrigation farmers across NSW. These irrigators access regulated, unregulated and groundwater systems. Our Members include valley water user associations, food and fibre groups, irrigation corporations and community groups from the rice, cotton, dairy and horticulture industries. Many of these Members have been - and will be - affected by mining, including coal seam gas, in NSW.

This submission represents the views of the members of NSWIC to the *Draft NSW Aquifer Interference Policy – Stage 1*. However each Member reserves the right to independent policy on issues that directly relate to their areas of operation, or expertise, or any other issues that they may deem relevant.

Executive Summary

NSWIC welcomes the acknowledgment by the NSW Government that sustainable management of the state's natural resources - particularly water - and the protection of productive agricultural land are of significant importance. The objective to find an optimal balance between the preservation of the region's significant agricultural production and the extraction of the state's coal and coal seam gas reserves is strongly supported by NSWIC. It is disappointing however that the *Draft Aquifer Interference Policy – Stage 1* (Draft AI Policy) does not reflect this objective.

NSWIC is unable to support the Draft AI policy on the grounds that it lacks sufficient robustness and does not provide adequate protection for the state's water resources – both ground and surface water. A careful assessment of the Draft AI policy has revealed that it neither offers an optimal balance between the conflicting interest of mining and agriculture nor does it provide for a sensible management of the state's water resources during the exploration and operation stages of mining and coal seam gas (CSG) activities.

The long term future of the state's water resources and the productive capacity of those industries dependent on them are severely threatened as a result of the exemptions in the Draft AI policy. It provides countless opportunities for mining, including coal seam gas, operations to impact highly productive water and land resources without sufficient regulatory scrutiny and with potential detrimental effects on existing industries.

NSWIC is resolute in its opinion that the preservation of a sustainable resource for agriculture – water – must be absolute and unconditional. It is unacceptable that the NSW Government has ignored the 'no regrets' approach continuously advocated by NSWIC. If implemented, such an approach would ensure the protection and preservation of the state's water resources and force mining, including coal seam gas, operations to prove beyond doubt that their activities have no detrimental effect on both ground and surface water resources.

NSWIC submits that the AI Policy must apply equally across the state, through all stages of mining and coal seam gas operations and to all water sources within NSW. Without such a comprehensive and inclusive approach, water resources in the states will be severely threatened.

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PART 1 - General comments

NSWIC has outlined its policy - *Mining and Coal Seam Gas Approval; Protecting Water Resources*¹ - that it is not opposed to the mining industry or to its future development as long as the individual and cumulative impact of mining does not harm the state's water resources, or impede on industries that rely on them. NSWIC recognises that mining, including coal seam gas, has the potential to provide social and economic benefits for business and communities in NSW but only if the activities are carefully managed. It is disappointing that the Draft AI policy does not provide a regulatory framework that would allow for such a careful management of all of the state's resources.

NSWIC has significant expertise and knowledge in water resource management and, as such, believes that the current Draft AI policy does not provide an effective and implementable policy tool to protect the state's water resources. The overlapping policy structure and the multiple exemptions provide ample opportunities for mining, including coal seam gas, to operate in high quality agricultural areas and damage the productive capacities of the state's water resources. NSWIC believes that the current Draft AI policy does not provide strong enough protection and will allow mining, including coal seam gas, operations to circumvent the regulatory framework.

The Draft AI Policy does not align in many aspects with the policy of NSWIC. Our policy document clearly outlines that NSWIC expects the NSW Government to provide a strong Aquifer Interference policy that extends to all water sources and can be rigorously implemented and enforced. Our policy also affirms that NSWIC strongly advocates a 'no regrets' approach to the exploration and operation phases of mining, including coal seam gas. The current Draft AI policy does not fulfil any of these expectations and cannot be supported by Council in its current form.

Additionally, NSWIC would like to remind the NSW Government that the Draft AI policy stands in clear contrast to many of the election promises made prior to March 2011. The current Draft AI policy does not only fall substantially short of providing a balanced land use policy for the state and a better protection of high-value water resources but also does not offer any clarity on the exact areas where mining, including coal seam gas, will be allowed to take place.

NSWIC would like to emphasise that, as a member of the Strategic Regional Land Use Policy Stakeholder Reference Group, we have clearly outlined our expectations for an acceptable Draft AI policy in relation to water resource protection in NSW. We share our disappointment with other members of this reference group who are equally disheartened by the outcome of this Draft AI policy. We are frustrated that many of our recommendations have clearly been ignored in favour of a policy that has insufficient regulatory strength and continuous to allow potentially damaging activities to take place under the banner of 'exploration' or 'exemptions'.

¹ http://www.nswic.org.au/pdf/policy_documents/110829.pdf

PART 2 - Draft NSW Aquifer Interference Policy (Detail)

As stated in the Draft Strategic Regional Land Use Plan;

(This draft) represents a landmark moment in NSW's history which will forever change how we make decision on mining and agricultural issues².

NSWIC agrees that the *Draft NSW Aquifer Interference Policy - Stage 1* (Draft AI policy) has the potential to forever change the way in which decisions about mining, including coal seam gas, will be made in NSW but it is our concern that the decisions will not be based on an equitable and balanced evaluation of the impacts - both individual and cumulative - on all industries that use the state's water resources. It is our viewpoint that the current Draft AI policy heavily favours the interests of the mining industry and as such does not provide an adequate legislative framework to resolve the conflicting land use interests in NSW or protect the state's important water resources – both ground and surface water.

NSWIC submits that the Draft AI policy will expose the state's water resources and the industries dependent on them to substantial risk of severe and potentially irreversible damages. NSWIC therefore submits that the Draft AI policy be amended such that it reflects a strong legislative framework that provides protection of all water resources and balance between all water users.

2.1 - Definition for Biophysical Strategic Agricultural Land

NSWIC is concerned that the definition of Biophysical Strategic Agricultural Land is too formulaic and not supported by easily available scientific evidence that explain the derived values. In Section 1.4, Biophysical Strategic Agricultural Land is defined as;

- *Land that has reliable water of suitable quality, characterised by land having rainfall of greater than 350 mm per annum (9 out of 10 years) or land within 150m of the following surface or groundwater source:*
 - *A regulated river, or*
 - *Unregulated rivers where there are flows of at least 95% of the time or 5th order and higher rivers, or*
 - *Groundwater aquifers (excluding miscellaneous alluvial aquifers, also known as small storage aquifers) which have a yield rate greater than 5L/s and total dissolved solids of less than 1500mg/L*

NSWIC is not convinced that such formulaic value restrictions are adequate to protect the state's water resources. We are specifically concerned that 150m as a distance restriction to a highly productive water resource might not be sufficient in all instances. Given the great diversity of water resources in the state and their different levels of connectivity, a more careful consideration needs to be given to the required distance measure. NSWIC therefore recommends that 150m should be set as an absolute minimum and methods should be put in place that allow for an increase in this value if required. Additionally, specific characteristics of a water resource should be assessed to determine the necessary distance from each mining, including coal seam gas, operation.

² Draft Strategic Regional Land Use Plan - words Berry O'Farrell

NSWIC furthermore requests that Section 1.4 be extended to allow for area to be classified as Biophysical Strategic Agricultural Land if it has a reliable supply of water for irrigation howsoever delivered.

Additionally, NSWIC would like to highlight that the Strategic Agricultural Land Use Policy is based on a vertical view of the land resource without recognizing the horizontal nature of the water resources below it. The boundaries of water resources underneath Biophysical Strategic Agricultural Land must be clearly mapped to identify the aquifer integrity and connectivity with surface water resources and to ensure the protection of the entire natural resource unit - both land and water.

2.2 - Strategic Regional Land Use Plan (Upper Hunter and New England)

NSWIC is highly disappointed that the current Strategic Regional Land Use Plan only covers two areas in NSW - Upper Hunter and New England. We believe that such a narrow mapping analysis is highlight inadequate given that mining, including coal seam gas, is likely to affect all regions in NSW. NSWIC submits that a comprehensive Strategic Regional Land Use mapping be undertaken across the state so that individuals are aware where potential mining, including coal seam gas, activities are possible.

Associated with the current Strategic Regional Land Use Plans, we would like to highlight that the currently arranged consultation sessions are highly insufficient. As the NSWIC media release from 20th March³ has highlighted;

*...Minister Hazzard proudly announced that he'd arrange another 8 public consultation sessions on top of the less-than-generous two that were already arranged. The only problem is that every session is in **New England and the Upper Hunter**.*

Given the rapid expansion of mining and coal seam gas activities in the states, it is unacceptable that the focus of the consultation process has only been in two areas within NSW. Since exploration licenses have been issued in all areas of the state, it is evident that mining, including coal seam gas, will likely affect every corner of NSW. NSWIC therefore submits that in conjunction with finalising Strategic Regional Land Use Plans for all regions in NSW, the NSW Government should extend its current consultation process to incorporate all regions in NSW.

2.4 - Existing Mining & Coal Seam Gas Activities

The inadequate protection of the state's water resources is clearly evident in the absence of sufficient regulation for existing mining and coal seam gas operations - both during the exploration and operation stages - in the current Draft AI policy. As Section 3.4 highlights, an exemption from the need to hold an aquifer interference approval applies to;

Those individual activities that existed prior to aquifer interference approvals being 'switched on' under the Water Management Act 2000 where they did not require a licence under the Water Act 1912.

Given the multitude of currently existing mining and coal seam gas operations, it is apparent that such an approach will leave many of the state's water resources (both

³ http://www.nswic.org.au/pdf/press_release/2012/120320.pdf

ground and surface) exposed to substantial risk of irreversible damages. Under the current Draft AI policy, this risk is neither thoroughly assessed nor monitored - let alone sufficiently scrutinised in case of occurring damages. NSWIC is puzzled at such an exemption given that Section 3 of the Draft AI policy clearly states that;

Some aquifer interference activities can have significant impacts on water sources such as aquifers and rivers, their dependent ecosystems and other water users. These impacts can continue for decades or even centuries after the cessation of the activities.

Furthermore in Section 2.4;

..until an aquifer system reaches equilibrium may extend from months to centuries after cessation, depending on the scale of the activity, recharge relationship and aquifer characteristics.

These statements clearly acknowledge that the impact of mining, including coal seam gas, activities can be far reaching and extend to time periods far beyond the active mining operations. A sensible and diligent Draft AI policy that protects all water resources within the state would ensure that no existing mining, including coal seam gas, operation remains outside the legislative framework or allows for the opportunity to damage any of the state's water resources.

To apply an exemption to existing mining and coal seam gas activities is nothing short of a double standard and clearly does not take into consideration that many of these water resources are highly interconnected - hence the impacts on one water resource - ground or surface - is able to affect other water sources and consequently all consumptive water users.

NSWIC acknowledges that the Draft AI policy tries to deal with existing mining and coal seam gas activities but unfortunately not sufficiently. Existing mining and coal seam gas activities are required to obtain an aquifer interference approval if;

..the activity is modified or expanded resulting in a greater impact on the aquifer.
(emphasis added)

This statement highlights that mining, including coal seam gas, operations already have had a significant impact on aquifers in the state. It is plainly insufficient to limit the regulatory framework to the extension of existing projects especially since current activities already influence the state's water resources. NSWIC advocates for the protection of all water resources – surface and groundwater - and not only those which will be impacted through new or expanding mining and coal seam gas operations.

2.4 - Exploration Stage

NSWIC is extremely concerned that the exploration stage of mining, including coal seam gas, is too lightly regulated and in many cases 'excluded' from the need to hold an Aquifer Interference Approval. According to Section 3.4, an exemption will be granted to;

Mineral and coal exploration activities undertaken in accordance with conditions of authorisations under the Mining Act 1992 subject to those conditions not allowing the exploration activity to cause or enhance interconnectivity of aquifers.

and

Petroleum exploration activities undertaken in accordance with conditions of titles under the Petroleum (Onshore) Act 1991 subject to those conditions not allowing the exploration activity to cause or enhance interconnectivity of aquifers.

The absence of sufficient regulation during the exploration stage of mining and coal seam gas developments under the current Draft AI policy is completely unacceptable. A strong aquifer interference policy would ensure that the state's water resources are protected under all circumstances and through all stages of coal and coal seam gas developments. NSWIC reiterates its policy on this matter;

.. we believe that potential damage (at the exploration stage) remains significant and hence protection mechanisms must be strongly made and rigorously enforced.

The basic requirement that the exploration stage cannot 'cause or enhance interconnectivity of aquifers' is too vague (and not scientifically proven) to provide an adequate framework that protect the state's vital water resources. NSWIC stresses that any interference with an aquifer – during exploration or operation – has the potential to change the structure, pressure and/or water level and quality. Once an aquifer is damaged it is often impossible to reverse the process, regardless if the damage occurred during the exploration or operation stage. NSWIC therefore submits that the Draft AI Policy include a comprehensive regulatory framework that applies equally to the exploration and development stage of mining and coal seam gas activities.

NSWIC is furthermore disappointed that Section 3.4 claims;

Although an Aquifer Interference Approval may not be required at the exploration licence stage, the impacts of exploration activity on surface and ground water must still be assessed under Part 5 of the Environmental Planning and Assessment Act 1979.

A detailed evaluation of Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act) highlights that the objectives of Part 5 of the EP&A Act is;

(a) to encourage;

- i. the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,*

NSWIC stresses that 'encouragement' is not equivalent to 'protection' and the Draft AI policy should be the necessary and required policy that allows for the protection and preservation of the state's water resources, not an opportunity for their exploitation.

NSWIC is also highly critical of the overlapping regulatory framework of mining, including coal seam gas, operations. It appears that regulations (i.e. Mining Act 1992 and Petroleum (Onshore) Act 1991) which were clearly designed with a different purpose than protecting water resources from mining and coal seam gas activities, act as a replacement for regulation through the Draft AI policy. It is the opinion of NSWIC that such a method is not an adequate means for protecting water resources in NSW. The

Draft AI policy should address the impact of mining and coal seam gas exploration directly and not pass on this responsibility to other related policies.

NSWIC is aware that previously issued exploration licences cannot be retrospectively regulated through the Draft AI Policy. However, to limit the damages through exploration activities, NSWIC submits that any renewal of exploration licences should be subject to an AI Policy. Once an exploration licence has been switched on (i.e. exploration activities have commenced), this licence should be regarded as 'active'. In case such an active licence has to be renewed, it should be a requirement that this renewal assessment falls under the regulation of the Draft AI Policy.

2.5 - Cumulative Impacts

NSWIC submits that a comprehensive Draft AI policy must assess the individual and cumulative impact of mining, including coal seam gas activities. Such a comprehensive assessment would require an evaluation of the direct impact of a new mining or coal seam gas operation on an existing water resource and also the indirect impact given already existing mining activities in the area.

An assessment of the direct and indirect impacts on a water source will be necessary to determine the total impact of the mining and coal seam gas activities. Proof that those two conditions are met needs have to be provided and independently verified. This will ensure that the individual and cumulative impact of mining, including coal seam gas, activities has been carefully assessed and the state's water resources are sufficiently protected.

To more fully address cumulative impacts through the Draft AI Policy, NSWIC recommends that the minimal harm criteria should include both a horizontal and vertical dimension for the individual risk management zones. Whilst not comprehensive, this would be a necessary first step to account for both individual and cumulative impacts of mining, including coal seam gas activities.

2.6 - Ministerial Discretion

NSWIC believes it is highly inadequate that the recent amendments to the EP&A Act allows for the provision of a streamlined approval process for *state significant developments* and *state significant infrastructure* projects.

Should such a provision be implemented, then this would potentially result in a significant number of projects to bypass the requirement to hold an Aquifer Interference Approval. NSWIC objects to the exemption of *state significant projects* given that no detail is provided as to what constitutes such a project. NSWIC stresses that every proposed mining or coal seam gas project should be treated identically as the regulatory framework would otherwise be severely diluted. To simply circumvent or speed up the assessment process will be inadequate for the protection of the state's water resources.

NSWIC can also not comprehend why the Minister for Primary Industries is only given an **advisory role** on the assessment of any aquifer impact for mining and coal seam gas proposals. We regard 'advice' as an insufficient tool for the Minister to prevent potentially damaging mining, including coal seam gas, activities to take place. This advisory role should be binding, hence the Minister should be given a veto power to stop any mining or coal seam gas activity that the Minister regards as harmful to the state's water and land resources.

Furthermore, the Draft AI Policy should clearly specify when the advice given by the Minister will be made publicly available; this will ensure accountability to the community and help individuals understand what the individual and cumulative impacts will be.

Additional to state significant projects, Section 3.4 outlines further exemptions for the need to hold an aquifer interference approval in the case of;

..aquifers that the Minister determines as being high value aquifers – footings and foundations (intersecting or affecting the water table) if a water access license is not required

and

..aquifers that the Minister determines as not being high value aquifers – footings and foundations (intersecting or affecting the water table) regardless of whether a licence is required.

This statement reaffirms NSWIC previous argument that the Draft AI Policy has insufficient regulatory strength – it should not be possible under any circumstances to treat certain aquifer interference activities differently regardless if it is a high or low value aquifer. We re-emphasise that a policy that has more exemptions than applications cannot constitute an adequate policy that protects the state's water resource.

2.7 - Gateway certificate

Further exemptions that allow mining and coal seam gas projects to bypass the Draft AI Policy seriously question the regulatory strength of the proposed policy.

Section 3.4 states that an exemption from holding an Aquifer Interference Approval will be granted for;

State significant mining and coal seam gas development proposals that have been granted either a gateway certificate or development consent (where the gateway does not apply) under the EP&A Act.

It is the understanding of NSWIC that the Aquifer Interference Policy is designed to be a key input into the Gateway process in order to assess whether a mining or coal seam gas activity is able to progress to the next stage of operation. Should the acquisition of a gateway certificate allow for an exemption to hold an Aquifer Interference Approval then the entire approval process for mining and coal seam gas projects is highly contradictory. Since the gateway certificate will be issued by the Planning Assessment Commission, it will be entirely at the discretion of this Commission to override any requirements of the Aquifer Interference Policy – meaning that the Aquifer Interference Policy will have no influence on the decisions on where mining, including coal seam gas will take place. This seriously questions the veracity of the Aquifer Interference Policy.

Additionally, it is a severe concern that state significant mining and coal seam gas applications are processed substantially quicker than other projects which do not fall into this category. Referring to the same exemption point as before, it is stated in Section 3.4 that;

(t)he assessment of aquifer impacts will be brought forward in the overall assessment process as a specific criterion at the gateway stage, ensuring an early and comprehensive assessment.

It is difficult to comprehend how an exemption from the need to hold an Aquifer Interference Approval will allow for a comprehensive assessment of aquifer impacts. To the contrary, bringing the overall assessment process forward will, in the opinion of NSWIC, potentially threaten the state's water resources to a greater extent as a complete assessment of all impacts cannot take place. To stress this point further, NSWIC submits that a quicker assessment process will not allow for sufficient time to gather all vital key information.

NSWIC would like to reiterate at this stage its 'no regrets' approach to mining and coal seam gas activities, as we believe the productive capacity of the state's water sources should under no circumstances be compromised for the extraction of a resource that does not diminish over time if left untouched. This non-diminishing characteristic of coal and coal seam gas should be seriously considered and compared to the potential detrimental effects on the state's water resources, which – in the case of damage – might take centuries to recover. NSWIC strongly advocates for a uniform and comprehensive assessment process where all mining, including coal seam gas, project proposals, are subject to the same thorough assessment in which all relevant information on all local and regional costs/risk are being taken into consideration.

Furthermore, NSWIC is also highly concerned that;

The advice (to any mining and coal seam gas proposal) will be based on be minimal harm criteria specified in section 3.3 of this policy. (emphasis added)

This 'minimal harm criteria' forms the basis of all exception for the need to hold an Aquifer Interference Approval. Section 3.3.2 states that

An aquifer interference approval, will either be exempted or will only be issued where it can be demonstrated that adequate arrangements are in place to ensure that no more than minimal harm be done to the aquifer or its dependent ecosystem.

The minimal harm criteria are provided for the four specified 'Zones' but merely provide a distance tool that, in the opinion of NSWIC, allows mining activities to take place. As in an example, the minimal harm criteria threshold states that in an inner risk management zone, a mining activity is regarded harmful if it is;

Less than 2m at a distance that is 2,000m from the AI activity, relative to natural variation, and less than 20% cumulatively of the pre-mining saturated thickness of the aquifer, at the out edge of this zone.

It is clearly evident that Appendix A does not give minimal harm criteria, but merely outlines a distance measure that describes when a mining activity including coal seam gas is regarded as harmful. There is no detail provided where these figures are taken from and hence this is clearly not sufficient as an assessment for 'minimal harm'. Furthermore, Appendix A also outlines the threshold requirement for water quality. In the same example, the inner risk management zone requires minimal harm criteria of;

No individual AI activity can change the beneficial use category of the water at a distance of 40m or greater from that AI activity whilst the activity is on going and post closure.

First of all, it is questionable that there is a cut-off at 40m and secondly it is questionable that the Limited Intrusion Zone for highly Productive Groundwater that is below Biophysical Strategic Agricultural Land has a distant restriction of 40m whilst the non-highly productive groundwater that is not below Biophysical Strategic Agricultural Land as defined in the relevant Strategic Regional Land Use Plan has the requirement that;

No individual AI activity can change the beneficial use category of the water anywhere within the WPZ, LIZ, IRMZ or ORMZ of Highly Productive Groundwater whilst the activity is on going and post closure.

NSWIC does not comprehend why the restriction for non-highly productive groundwater sources is higher than for highly productive groundwater sources.

NSWIC is furthermore considerably disappointed that the minimal harm criteria only applies to groundwater sources and does not incorporate surface water resource. This is a severe limitation and must be corrected. Specifically stringent protection must be put in place for primary catchment rivers and defined minimal harm criteria for all surface water resources including 3rd and 4th order streams and 1st and 2nd order streams.

The absence of surface water resources from the minimal harm criteria are especially surprising as Section 2.3 makes specific references to surface water resources;

.. if high security entitlements have been purchased to cover the ongoing take of water from a regulated river water source, then there may be years of low water allocations due to low water availability.

This section clearly outlines that the main body of the Draft AI Policy refers to surface water resources, whilst the minimal harm criteria does not.

NSWIC submits that surface water resources ought to be included into the minimal harm criteria to allow for a protection of all water resources. In the alternative, a separate policy has to be drafted that applies specifically to the protection of surface water resources. Of these two alternatives, NSWIC would clearly opt for the first - a comprehensive and inclusive policy that deals with both ground- and surface water resources.

Should a separate policy be drafted for surface water resources, NSWIC is concerned that - in the interim - surface water resources will be exposed to risk of potentially irreversible damages. Such risk exposure is unacceptable especially given the connection between the two water sources.

2.8 - Water Quality

NSWIC is highly concerned about the impact of mining, including coal seam gas activities, on water quality. We would like to stress that the quality of a water resource is of crucial importance for the production of agricultural commodities and hence any adjustment to the quality of the water source could have detrimental effects on productivity. We strongly advocate that the Draft AI policy directly addresses issues related to water quality - salinity and chemicals - in the context of mining and coal seam gas activities. Since the use of chemicals is not covered under the Draft AI Policy, NSWIC would like to question as to how the policy aims to address the potential damaging impact of chemicals and other substances that can influence the water quality. NSWIC would like to reiterate its policy at this point;

It is our policy that contaminated water – be it through mining process or an adjunct to operations – is utterly unacceptable and must be vigorously guarded against. Any returned water must be of a quality at least equal to or higher in quality to independently assessed benchmark data obtained prior to operations commencing. NSWIC will not accept averaging of water quality testing, but requires that all returns meet this standard.

This statement highlights that NSWIC strictly opposes the change in quality of water resources. As previously mentioned, the damage to an aquifer or the change in the water quality of the aquifer can have huge ramifications for other consumptive water users and must be avoided under all circumstances.

Whilst the Draft AI policy's minimal harm criteria threshold addresses certain aspects of impacts on water quality, it does not take a comprehensive approach to this issue. NSWIC suggests that a legislative framework should be put in place that addresses the question of;

- Access
- Reliability
- Availability and Use

NSWIC refers to its policy on *Mining, including Coal Seam Gas*⁴, in which it is clearly highlight that;

Irrigators are subject to significant obligation in respect of access, reliability, quality and impacts. These are largely contained with the Water Management Act and subordinate legislation. That is, irrigators face a legislative regime to manage, preserve and protect the water resource. We believe that mining and coal seam gas operations must be subject to a process that is at least as prescriptive and enforced.

NSWIC proposes that the minimal harm criteria include the same legislative regime that is faced by irrigators in relation to the three aspects mentioned before - access, reliability and availability/use. With respect to access, NSWIC demands that;

Under no circumstances should a watercourse or aquifer be damaged or altered either permanently or temporary.

Furthermore, in terms of reliability;

There should be no impact on the reliability at both short and long term temporal intervals as they will have material negative impacts on irrigators.

In relation to availability and use;

All mining use of water must be on the basis of licensed extraction to avoid third party impacts associated with further allocation in fully allocated systems.

2.9 - Dealing with Damages

⁴ http://www.nswic.org.au/pdf/policy_documents/110829.pdf

NSWIC welcomes the position by the NSW Government that in case of an on-going take of water, the mining - including coal seam gas - needs to retain a water licence for the period until the system returns to equilibrium. However, NSWIC does not agree that such a responsibility can be surrendered to the Minister. Section 2.4 states that;

If the water licence is surrendered, the Minister will retain the licence entitlement to account for the ongoing take of water.

It is furthermore concerning that the section continuous with;

Given the likelihood of a less active management regime post-closure, surrendering of licence entitlements, which adequately cover any likely future low available water determination periods is preferable.

NSWIC cannot understand why the responsibility to hold an adequate licence can so easily be surrendered after closure of a particular mining or coal seam gas activity. The individual mining activity responsible for the interference with the aquifer should be held responsible for the entire time (including post closure) until the water source reaches an equilibrium.

NSWIC believes that such a provision will allow mining and coal seam gas operations to simply walk away from the sites without the necessary precaution to ensure that the system reaches again equilibrium.

This would mean that the responsibility for any damages to both water and land resources post closure would fall to the Minister. It is evident that this will require a careful assessment on the part of the Minister as to how much funds would be needed (i.e. this will mean that a sufficiently large security bond has to be put in place to accounts for any ongoing costs). NSWIC would like to highlight that this will place substantial pressure on the NSW Government as these costs are difficult to determine accurately. NSWIC strongly holds the opinion that mining and/or coal seam gas operators should be held accountable throughout the entire operation phase (including post closure) and should therefore not be allowed to surrender their licence as a convenient alternative.

Furthermore, the additional management costs associated with a surrendered water access licence will ultimately fall on the remaining licence holders, which will be faced with higher per unit costs of the management. NSWIC reemphasise that mining and/or coal seam gas operations have to be held responsible for the entire life of the activity - including post closure -, and that there should be no third party impacts on other water access licence holders, i.e. in form of higher costs or otherwise.

Furthermore, according Section 3.3, the NSW Office of Water has to assess whether a mining or coal seam gas project has;

Demonstrate(d) that the proposal includes strategies to prevent any more than minimal harm occurring to any water source, their dependent ecosystems or other water users;

and

Commit(ted) to undertake remedial action for unforeseen adverse impacts occurring during and after the aquifer interference activity were planned mitigation, prevention or avoidance strategies fail.

As mentioned previously, the minimal harm criteria is highly doubtful not only on a quantitative basis but also on a plain implementation basis. It is plainly not good enough that;

The approval holder will generally be required to cease the activity until such time as remedial action has been completed.

Once an aquifer is damaged it is damaged, and hence it should not be enough that the cease of an activity is sufficient without providing sufficient compensation for the damages. NSWIC requests that full compensation schemes are put in place in case remediation cannot be achieved, i.e. especially in case of catastrophic failures.

Furthermore, NSWIC policy clearly states, that we expect the NSW Government to impose a mechanism that;

The state authorities must, at the expense of the operator, provide a publicly accessible report of the breach and must notify stakeholders directly of the breach what measures were taken to avoid the breach and what additional conditions will be imposed as a result of the breach.

Whilst NSWIC still highly advocates the protection of water resources in the state, it is known that accidents happen and hence compensation should be paid in case those damages occur. The avoidance of third party impacts will be imperative – hence damages to aquifer or any other water resource constitutes such a breach and hence those affected should be sufficiently compensated.

NSWIC requests that a clear process is put in place that outlines at what stage a company director becomes responsible for the environmental damages occurring as a result of the aquifer interference; who takes the complaint in case damages occur after the operation phase has commenced and how high the penalties will be.

Furthermore, insufficient information is provided as to how the security deposits are managed (Section 4.1). Whilst NSWIC welcomes the establishment of security deposits to cover costs of remediation works, there is not enough information provided on where these funds should be invested and subsequently used.

PART 3 - NSW Government Election Commitments

The NSW Government claimed in its election policy on *Strategic Regional Land Use*⁵, that if elected, it will undertake;

an immediate economic assessment of the mining effects on communities and determine 'mining affected communities'. (emphasis added)

NSWIC is aware that the Centre of International Economics (CIE) has been engaged to assess the feasibility of a cost benefit analysis (CBA) that relates to the effects of mining, however we do not see any evidence that progress has been achieved on this matter.

⁵ <http://www.nswnationals.org.au/images/stories/pdf/strategic%20regional%20land%20use%20policy.pdf>

We strongly urge the NSW Government to conduct a complete cost benefit analysis as we believe it will be of crucial importance to fully determine the impacts of mining, including coal seam gas.

3.1 - Election Commitment on Cumulative Impacts

The election policy states that;

..significant growth of mining and coal seam gas developments has brought about increasing land use conflict and uncertainty over the individual and cumulative impact of the resource extraction industry.. (emphasis added)

As outlined in Part 2 of this submission, NSWIC does not recognise that the Draft AI Policy takes into consideration the cumulative impact of mining and coal seam gas operations. Given that each project is assessed individually - either through the gateway process or through the Planning and Assessment Commission - NSWIC believes that this process is insufficient to fully assess the cumulative impact of mining, including coal seam gas, activities and hence grossly understates the impacts.

NSWIC also questions how this Committee will be funded and if it has sufficient expertise. This is especially important since the NSW Office of Water has a pure advisory role in assessing damages. NSWIC believes a sufficient framework needs to be put in place that ensures that the Committee operates independently and provides an unbiased triple bottom line assessment.

3.2 - Election Commitment on Strategic Regional Land Use Plans

The election commitment further outlined that a planning and assessment process will be undertaken to improve the monitoring of mining, including coal seam gas, operations. This was supposed to be achieved through;

Strategic land use planning to better understand the constraints to, and opportunities for growth...

Whilst point 1 has commenced, it needs to be stressed that the Strategic Regional Land Use Policy has so far only commenced for two areas in NSW - **Upper Hunter** and the **New England**, which is far from acceptable. As mining and coal seam gas exploration licenses have been issued throughout the state, further regions have to be assessed according to the Strategic Agricultural Land use criteria as soon as possible. Additionally, NSWIC would like to question the accuracy of the currently available Strategic Regional Land Use Plans, as we believe several Biophysical SAL have been not been identified. We are not confident that the Strategic Land Use Plans have yet fulfilled the promise of a 'multi layered approach'. As it was claimed;

The plans will initially focus on those areas that will be the target of increasing activity in the coal and coal seam gas industries.

Further,

The process will identify the best places for agriculture, mining, coal seam gas extraction, viticulture, thoroughbred breeding, conservation, urban development and all other types of land uses in regional areas. It will provide certainty to local communities that cumulative impacts are being taken into account ...

Given the above statements, NSWIC wonders whether the 'initial focus' relates to Strategic Regional Land Use Plans which are not yet completed and hence require further analysis. Since we strongly believe that the current plans are insufficient and do not cover all necessary areas - we assume that this might be the case.

Furthermore, contrary to the election policy that ;

Strategic agricultural land is a finite resource that must be conserved into the future to ensure food security.

And

The NSW Liberals and Nationals believe that agricultural land and other sensitive areas exist in NSW where mining and coal seam gas extraction should not occur.

NSWIC does not believe that the current Draft AI policy and the associated Draft Strategic Regional Land Use Plans provide sufficient protection of agricultural land and its water resources. Given the exemptions listed in Section 3.4 of the Draft AI policy there is absolutely no certainty over regions that have been identified as areas where mining and coal seam gas extraction should not occur.

3.3 - Election Commitment on the Exploration Stage

The NSW government claimed that in the transitional period there would be greater caution in granting exploration licences. As such a precautionary approach was to be taken in order to assess the appropriateness of the areas for future mining and to grant new exploration licence for coal and coal seam gas.

Given that most of the exploration licences have already been issued, NSWIC questions the purpose of this approach. Unless a review of currently issued exploration licences is undertaken, the precautionary approach will see no effect. Associated with the previous argument;

The NSW Liberals and Nationals will also consult with the community prior to the tender for a Coal and Coal Seam Gas Exploration Licence...

As previously discussed, the community consultation has not been extensive enough and only covered two areas in NSW. NSWIC requests that this process be extended.

3.4 - Election Commitment on Assessment Process

Part of the changes to the planning assessment and approval process, the NSW Government has promised to implement some key changes to strengthen the assessment process which include the introduction of;

(A)n Aquifer Interference Regulation (...) will be rapidly finalised and implemented.. The Regulation will provide clear guidance on the acceptability of impacts on aquifers to ensure our water resources are protected for current and future generations.

As outlined in our submission, the Draft AI Policy does not - in its current form - provide an adequate protection for the state's water resources.

3.5 - Election Commitment on Coal Seam Gas

In relation to coal seam gas, the NSW liberal and nationals claimed that;

where CSG activities involve interference with groundwater systems, we will require that proponents must obtain an Aquifer Interference Approval under S91 of the Water Management Act 2000.

NSWIC would like to highlight that not only groundwater but also surface water should be included into this policy and furthermore, we would like to again highlight that not all coal seam gas projects require an Aquifer Interference Policy if they fall under Section 3.4 (exemption) of the Policy.

3.5 - Election Commitment on Balance

Concluding, the election commitments included a promise that;

examines options to protect prime agricultural land so that natural gas development exists in a balanced manner so that the commercial activities of both industries are not compromised.

As NSWIC believes the Draft AI Policy heavily favours the mining industry, we do not see that it provides balance - on the contrary, we strongly hold the view that the current Draft AI policy severely compromises many of those industries that rely on the state's water resources.

PART 4 - NSWIC & Strategic Regional Land Use Reference Group

Being part of the Strategic Regional Land Use Reference Group has allowed NSWIC to gain valuable insights into the development of the Draft AI Policy. It is disappointing therefore that many of our concerns have simply been ignored. We have continuously advocated for the protection and preservation of water resources in the state and we have stressed that this requires a careful evaluation of the impact of mining, including coal seam gas on all water resources during the exploration, operation stages and post closure. NSWIC is disappointed that our input and substantive experience in water resource management has had little bearing on the drafting of this policy. Being part of the Strategic Regional Land Use Reference Group, NSWIC believed that our voices would be heard. We share our disappointment with other members of this reference group who are equally disheartened by the insignificant input that members of this group seemed to have had.

PART 5 - Other Matters

NSWIC is disappointed that no adequate costs benefit analysis (CBA) has been undertaken during the drafting of the Draft AI policy. Whilst NSWIC understands that the NSW Treasury has engaged the Centre for International Economics to assess the feasibility for a cost benefit analysis, little progress has been made to determine if such a study is feasible. NSWIC believes that such a study is absolutely imperative in order to find an optimal land use policy that balanced the conflicting interest of mining, including coal seam gas, and agriculture. Without a suitable CBA, conducted over a long time frame, it will be impossible to determine whether the benefits outweigh the costs or vice versa.

NSWIC suspects that, whilst mining can provide several benefits, the local and regional socio-economic costs of mining - including coal seam gas - will, in many instances, outweigh the benefits. NSWIC holds the firm belief that a full analysis of both costs and benefits across must be undertaken by independent experts and fully published. Within this study it needs to be acknowledge that nothing will be able to compete with the short term financial gains of mining – however it needs to be recognised that if carefully managed, water resources can provide for food and fibre production indefinitely.

END OF SUBMISSION.

APPENDIX ONE

**Mining and Coal Seam Gas Approvals;
Protecting Water Resources**

Policy

110829

Andrew Gregson
Chief Executive Officer

Introduction

NSW Irrigators' Council (NSWIC) represents more than 12,000 irrigation farmers across NSW. These irrigators are on regulated, unregulated and groundwater systems. Our members include valley water user associations, food and fibre groups, irrigation corporations and commodity groups from the rice, cotton, dairy and horticultural industries.

This document represents the views of the members of NSWIC. However each member reserves the right to an independent view on issues that directly relate to their areas of operation, or expertise, or any other issues that they may deem relevant.

Executive Summary

This document sets out the policy of NSWIC in respect of the issuing of permits for mining, including for coal seam gas, across this state, for both exploration and operations.

The preservation of sustainable resources for agriculture – including water – must be absolute in addressing mining exploration or operational licence applications.

NSWIC advocates a strict “no regrets” approach to the licencing of both exploration and operations in mining in respect of water sources.

NSWIC believes that a strong aquifer interference policy must be developed, extended to all water sources, be of regulatory strength (not simply policy) and rigorously implemented and enforced.

Background

Our constituency and expertise is linked to water, both surface and ground. It is on that basis that this policy was drafted and accepted. NSWIC claims significant expertise in water resource management, but not in respect of mining, gas extraction or processing.

This policy is limited to the potential impacts of mining, including coal seam gas extraction, on water resources. This does not preclude NSWIC – or any of its Member organisations – from holding additional or separate policy positions on other issues with the mining industry that affect our stakeholders.

NSWIC is not opposed to the mining industry nor to its further development. We recognise that there may be significant social and economic benefits which in many instances can be delivered with limited negative impact to communities, to businesses and to the environment. We recognise that benefits may accrue at an individual level, a community level, a regional level and a state-wide level. In light of a sustained attack on productive water use, any additional economic activity generated by mining may be much needed by many communities.

NSWIC believes that the local and regional social and economic costs of mining activity may, in many instances, outweigh the benefits. A full analysis of both costs and benefits across the long term must be undertaken by independent experts and fully published.

By its nature, resource extraction is a short to medium term activity. Once the resource has been extracted, the business ceases to operate. Agriculture, on the other hand, is a sustainable long term activity. Sensibly managed, its use of renewable resources allows for food and fibre production indefinitely. We believe that this fact must underpin a basic policy proposition; the preservation of sustainable resources for agriculture – including water – must be absolute in addressing mining exploration or operational licence applications.

Potential Impacts

NSWIC has considered the potential impacts that mining activity may have on water resources. We have considered both ground and surface water sources, as we believe that both stand to be impacted by mining operations.

Irrigators are subject to significant obligations in respect of access, reliability, quality and impacts. These are largely contained with the *Water Management Act* and subordinate legislation. That is, irrigators face a legislative regime to manage, preserve and protect the water resource. We believe that mining and coal seam gas operations must be subject to a process that is *at least* as prescriptive and enforced.

Whilst it would seem a simple process to regulate and monitor individual operations to avoid impacts, NSWIC is concerned at the likelihood of cumulative impacts of multiple operations in and around individual water sources.

The Water Resource – Access

Physical access to the water resource – and its integrity – is a non-negotiable threshold requirement for NSWIC. There must be no circumstances under which the watercourse or aquifer is damaged or altered either permanently or temporarily.

Examples of such damage might be cracking an underground aquifer such that water is able to escape or become depressurised. In surface water, the diversion of a watercourse or escape to, say, an open cut that would not otherwise have occurred is a similar example, as is land and watercourse subsidence from long-wall operations.

Examples of temporary damage might include transfer of drilling fluids in the period prior to permanent casing.

The Water Resource – Reliability

The value of a water resource and an associated extraction licence to an irrigator is not only access to it, but the reliability of it. Irrigation necessarily involved the precise application of water resources at precise times. Impact on the reliability at both short and long term temporal intervals will have a material negative impact on irrigators.

Examples of reliability impacts might include temporary loss of availability.

The Water Resource – Quality

NSWIC is concerned at diminution of water quality from mining operations including salinity impacts and the addition of chemicals to water sources. It is our policy that contaminated water – be it through mining process or an adjunct to operations – is utterly unacceptable and must be vigorously guarded against. Any returned water must be of a quality *at least* equal to or higher in quality to independently assessed benchmark data obtained prior to operations commencing. NSWIC will not accept averaging of water quality testing, but requires that all returns meet this standard.

Examples of such impacts may include incursion of saline water and other contaminants to either surface or ground water as part of extraction operations. The injection of chemical-laden liquids to achieve hydraulic fracturing clearly has the potential to significantly diminish water quality, aside from the potential damage to the physical structure of an aquifer.

The Water Resource – Availability and Use

NSWIC is aware that mining operations and exploration are often significant users of water. We absolutely oppose the granting of water use exemptions in either case. Mining, by its nature, is a commercial activity. Commercial options to obtain water for use exist in the form of tradeable water entitlements. NSWIC insists that all mining use of water must be on the basis of licensed extraction to avoid third party impacts associated with further allocation in fully allocated systems.

Measures to Avoid Impacts

NSWIC recognises that there are essentially three separate phases of mining activity where water resources must be protected; exploration, operation and post-operation.

We believe that a risk management approach needs to be adopted to avoid impacts.

NSWIC believes that each phase must be adequately regulated. We are content for this to be achieved by a Regulation based on an aquifer interference policy in conjunction with Water Sharing Plans. We require that in areas where Water Sharing Plans are not yet finalised, any mining activity – including exploration – must be deferred until such time as the Plan is finalised and active. We further require that the aquifer interference policy and regulation be extended to all water sources, not simply underground aquifers. We may be content with alluvial aquifers being included which essentially protect surface watercourses.

Council is concerned that there may be instances where no alluvial aquifers are situated adjacent to surface water courses, such as where a surface water course passes through a hard rock zone. In these instances, Council requires a methodology where a deemed alluvial aquifer exists or another legislative measure is used to enforce the conditions of the aquifer interference regulation.

Council is further concerned at impacts occasioned by interaction between deep and shallow aquifers. We understand that a stacked aquifer policy may address this, but reserve comment until such policy is understood.

An approved suite of tests – including isotope testing – must be undertaken (at least quarterly) and reported against by a suitably qualified independent entity at the expense of the proponent at each of the phases listed below.

Exploration

NSWIC acknowledges that the exploration phase of mining operations may pose a comparatively lower risk to water sources than full operations in some cases. At the same time, we believe that potential damage at this phase remains significant and hence protection mechanisms must be strongly made and rigorously enforced.

In the first instance, we believe that a “no negative impacts to third parties” approach must be adopted, save and except to levels that would be permitted pursuant to a Water Sharing Plan. Where an exploration permit is sought, the applicant must be able to prove that operations under the permit will not negatively impact third parties in respect of water resources. Such proof must be independently verified.

Where an applicant is required to provide proof of any matter, NSWIC believes that the burden must be that of “beyond reasonable doubt”.

We believe that an assessment of potential damage must be undertaken by a suitably qualified independent third party. This assessment must take into account potential cumulative impacts. Such an assessment may utilise a risk management matrix that allows variance for high value or strategically important areas to ensure that the response meets the potential threat. Based on such assessment, a security bond

mechanism must be determined and enforced such that the state holds a financial instrument capable of fully compensating for any damage occasioned.

The risk management approach and possible resultant matrix must also take into account the environmental and water resource history of the applicant. Where an applicant has a poor history – breaches of entitlements by it or an associated entity – or said applicant has no history in managing environmental and water resource impacts, their potential threat level must be increased.

Any take of water – either deliberate or inadvertent – as an adjunct to exploration must be fully accounted. Where threat levels are assessed on a higher scale according to the proposed matrix, this accounting must be required up front. That is, an operator must hold an entitlement (temporary or permanent) equivalent to the potential take from exploratory operations at the commencement of such operation.

Regular oversight and reporting against conditions on permits must be required and full transparency of the results must be guaranteed.

Operation

NSWIC believes that the operation phase has the greatest potential to cause significant damage to water sources and, as such, advocates that the strictest conditions and requirements be imposed at this phase. It is our position that all of the requirements for exploration permits must be continued and built upon, together with additional requirements being imposed.

As the potential for damage is significantly more considerable, the security bond mechanism and risk matrix analysis must again be used but must result in significantly higher values of bond held. The risk matrix analysis must include consideration of performance against requirements at the exploration phase both on the current proposal and on any previous operations by the proponent or any associated entity.

A full benchmarking process of the immediate and surrounding areas of the proposed operations must be conducted prior to the commencement of any activity. This must be completed by an independent entity and the results must be fully transparent and available publicly. It is against this benchmark data that all compliance must be measured over the course of operations.

As a minimum, quarterly testing of water quality, water quantity, pressure and availability must be undertaken and reported against the benchmark data. Again, this testing must be undertaken by an independent entity and be made publicly available. Where the risk matrix indicates a higher risk operation, testing at a greater frequency must be considered.

Any negative impact reported against a benchmark must be treated as a strict liability offence. That is, unless the operator can prove (on the balance of probabilities) that the damage was occasioned by an event or events *other than* those for which they are responsible, they must be held liable for the damage occasioned.

Produced Water

NSWIC recognises that operation of both mining and coal seam gas extraction routinely results in water being extracted, either subsequent to injection or as a tangent to operations.

As a basic premise, NSWIC notes that all extractions (other than recovery of injected water) must be pursuant to a Water Access License.

Where extracted water is of lower quality than the surrounding source and needs to be either stored or disposed of, a strict management regime must be required and rigorously enforced. Storage must be effected by a “closed system” that allows no opportunity for leakage or evaporation. Treatment of contaminated water (be it saline extracted water or recovered water from operations that contains chemicals) must include filtration to remove heavy metals. Independently verified testing of both input and output to treatment must be undertaken and made publicly available.

Any water to be reinjected or released in any fashion must be to *at least* the quality of the surrounding sources based on independently tested and publicly reported benchmark data.

Post Operation

By their nature, mining operations have a limited lifespan. The impacts on water resources, however, may not be restricted to that same lifespan.

It is the position of NSWIC that applications for operations permits must include an identifiable and third party verified withdrawal strategy with respect to water sources. That is, before a permit is issued and operations allowed to commence, an exit strategy that deals with how water management issues will be dealt with on withdrawal must be provided and independently verified.

At the conclusion of operations, independent verification of potential damage that may still be occasioned (taking into account the withdrawal strategy) must guide the quantum of security bond to be kept and the period over which it must be kept. The same verification must address the potential water requirements (leeching, inadvertent take and the like) that the site is likely to demand. Those demands must then be fully accounted (by acquisition of entitlement) and held until proof is presented that such requirements are not longer present.

Other Matters

At the time of writing, NSWIC is concerned at the capacity of Government regulatory bodies to deal with the anticipated scope of mining and coal seam gas exploration, operations and post-operation requirements pursuant to this policy. Without adequate resourcing – and efficient use of those resources – Council believes that the most rigorous of policy will be meaningless.

We specifically believe that industry self-regulation and self-reporting is meaningless and must be abandoned as a protocol or measure of protection, specific or implied.

Breaches of conditions at any phase must be considered a “reportable incident”. The State authorities must, at the expense of the operator, provide a publicly accessible report of the breach and must notify stakeholders directly of the breach, what measures were taken to avoid the breach and what additional conditions will be imposed as a result of the breach.

ENDS