



I N L A N D
R I V E R S
N E T W O R K

*Submission to the
New South Wales Office of Water
in response to the Draft Water Sharing Plan for the:*

. Gwydir Unregulated and Alluvial Water Sources

October 2011

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About Inland Rivers Network

The Inland Rivers Network (IRN)¹ is a coalition of environment groups and individuals concerned about the degradation of the rivers, wetlands and groundwaters of the Murray-Darling Basin. Member groups of IRN include the Australian Conservation Foundation; the Nature Conservation Council of NSW; the National Parks Association of NSW; the Central West Environment Council; Friends of the Earth; The Wilderness Society, Sydney Branch and the Coast and Wetlands Society. IRN has been advocating for the conservation of rivers, wetlands and groundwater within the Murray-Darling Basin since 1991.

PART 1

1.1 Introduction

The Inland Rivers Network welcomes the opportunity to provide comment on the draft Water Sharing Plan (“WSP”) for the Gwydir Unregulated and Alluvial Water Sources.

IRN strongly supports the development of this next round of Water Sharing Plans covering the use and management of many of the remaining water sources across the state. IRN believes that much remains to be done in order to better manage and restore water to the river systems of NSW after decades of increasing use and overallocation.

IRN appreciates that this next round of water sharing plans are being developed in the context of the imminent Commonwealth Murray-Darling Basin Plan. While the Basin Plan is to be an overarching plan for the way in which water resources are managed across the whole of the Basin, IRN believes that whatever the final outcomes of the Basin Plan process are, it will be important that these NSW Water Sharing Plans are robust enough to exist as stand-alone elements for the ecologically sustainable sharing of water resources into the future. This is critically important for the state of NSW, and for Australia as a whole.

In this submission IRN has focussed on some key areas of comment regarding this draft plan. Many of them are matters of concern that have previously been raised by IRN in submissions to the earlier round of Water Sharing Plans.

This submission will firstly elaborate on these key areas of concern and then discuss in detail some of the points that are specific to the each of the Water Source areas within the draft Water Sharing Plan.

1.2 General comments

As has been communicated in previous submissions to NOW, IRN believes that there are several key steps that need to be followed in order to ensure that Water Sharing Plans in NSW are consistent with National Water Initiative commitments and the spirit of the original NSW water reform agenda. These are, that:

- 1. over-allocated and/or overdrawn surface and groundwater systems must be returned to ecologically sustainable levels of extraction, in volume and timing;*

¹ For more information see website at www.irnsw.org.au

2. *surface and groundwater systems with high conservation value must be identified, acknowledged and their values protected;*
3. *connectivity between surface and groundwater resources must be recognised and connected systems be managed as a single resource;*
4. *a robust metering and monitoring program must be implemented and adequately resourced to ensure on-ground implementation of the plan and ensure secure environmental water allocations;*
5. *independent rigorous river health assessments need to be conducted to ensure the plans are maintaining or improving river health;*
6. *plans must include appropriate adaptive management provisions to utilise new knowledge and avoid costly remediation;*
7. *objective, transparent and accountable processes must occur to ensure adequate community input and confidence in the NSW water reform; and*
8. *water sharing plans should be consistent with existing environmental policy, statements of intent, bilateral, national and international water agreements, including the National Water Initiative and State Water Management Outcomes.*

As NSW Water Sharing Plans for areas within the Murray-Darling Basin will need to be accredited under the Murray-Darling Basin Plan, these WSPs will be required to be consistent with the *Water Act 2007 (Cth)*, which acknowledges the history of overallocation and overuse of water resources and aims to return desperately needed water to the environment.

Due to the absence of records, flow data and other scientific analysis for many of the water sources in this draft WSP, there is a vast amount that is unknown and unquantifiable in these systems. IRN also notes that, even in instances where data and records are available, there is a vast range of different interpretations of such data. IRN therefore refers to the need of the precautionary approach. That is, that where there are threats of serious damage to these freshwater systems, as is acknowledged in some Water Source report cards, lack of full scientific certainty should not be used as a reason to postpone measures to prevent such environmental harm.

1.3 Floodplain harvesting

The development of a NSW floodplain harvesting policy is a crucial step for water reform in NSW and once developed is something that all Water Sharing Plans will need to be integrated with, especially in terms of environmental flows and extraction levels. While IRN notes that creation of such a policy is underway, IRN stresses that this needs to be brought forward as a matter of some urgency.

The relationship between the environmental benefits of high flows in unregulated systems (for example aquifer recharge and wetland replenishment) and the impacts of floodplain harvesting needs to be identified.

1.4 Impacts of the water sharing plans on the water sources

While IRN is pleased to see that the Water Sharing Plans, including this one, that are currently being developed do contain provisions for the sharing of water between the environment and extractive users in a more equitable manner, nevertheless, there are many ways in which IRN believes the current draft plans could be strengthened.

IRN emphasises the important point that healthy and ecologically sustainable river systems are necessary for a flourishing and sustainable community and a thriving economy across New South Wales.

1.5 Objectives of the plans

IRN believes that the WSPs should be consistent with objectives for inland river flows as per the NSW Interim River Flow Objectives.² That is, the plans for managing water sharing should:

- . protect pools in dry times;
- . protect natural low flows;
- . protect important rises in water levels;
- . maintain wetland and floodplain inundation;
- . mimic natural drying in temporary waterways;
- . maintain natural flow variability;
- . maintain natural rates of change in water levels;
- . manage groundwater for ecosystems;
- . minimise effects of weirs and other structures;
- . minimise effects of dams on water quality; and
- . make water available for unforeseen events.

1.6 Performance indicators

Part 2 of the draft WSP Order contains the performance indicators against which the success of the strategies, in reaching the objectives, is to be measured.

As stated above in the General Comments section above (1.2 at dot-point five), IRN believes that rigorous assessments will need to be undertaken in order to establish whether the plans are achieving the necessary outcomes. IRN considers that in order for this to be done, the performance indicators must be specific, measurable, achievable, relevant and time-bound. IRN notes that the performance indicators contained within Part 2 of the draft plans do not have these characteristics.

IRN is also concerned that these performance indicators contain little of the detail necessarily required in order to ensure that this plan is maintaining or improving river health.

In order for any performance indicators of the plan to be assessed, there must be an investment strategy to monitor the impacts of the plans. IRN believes that this monitoring program should involve rigorous independent assessments and that plan reviews should ensure adequate and genuine community consultation.

1.7 Identification of environmental values

IRN notes that none of the report cards the water sources in this draft WSP area have a background information section (with water source attributes such as relative instream value, hydrologic stress, relative economic significance of irrigation and risk to instream values) as has been the case in the

²NSW Water Quality and River Flow Objectives, <http://www.environment.nsw.gov.au/ieo/>

report cards for other recent draft WSPs.³ IRN believes that such background information should be presented in the report cards for all of the water sources, and for those where the information is unknown or has not been assessed, this lack of knowledge of these elements of the Water Source should be acknowledged. Particularly for an area such as the Gwydir with various Ramsar listed wetlands and significant lagoon sites, IRN believes that it is important to present this background information so comments on trading and access rules can refer to these details (such as instream values and hydrological stress).

According to the *Guidelines for surface water sharing plan report cards*,⁴ the assessment of relative instream value involves 'the various instream attributes [being] given a numerical score (and weighting if required) and then combined to determine an instream value. The values are then ranked by comparing them with all the other water sources in the plan area to yield a range of high, medium or low rating'. IRN has concerns that the 'instream value' classification (that has been done only for water sources in some of the draft water sharing plans), is only a relative one which compares and ranks these values against the other water sources in the plan area. This could mean that in a water sharing plan area which contains many water sources with 'high' instream values, some of those areas might subsequently be ranked as having 'low' value when compared to sites of higher value. As the 'relative instream value' classification is a factor used to justify the access and trading provisions, this is particularly concerning.

IRN believes that any water source which has high environmental values should have the potential for a 'high' classification, and to be accordingly protected in access and trading provisions, even if that means that all water sources within a management plan fall into that category.

IRN also believes that the overall environmental value of the water sources must also recognise terrestrial and floodplain environmental values, cultural and aesthetic values and the essential ecosystem health functions and that areas important for endemic species as well as bird and fish breeding should be identified and provided with specific rules that protect natural flow variability.

1.8 Cease to Pump Rules

IRN supports the development of *Cease to Pump* rules for all of the water sources in this plan area. IRN believes that *Cease to Pump* rules are critical in order to secure natural low flows and to protect pools. However, IRN is concerned that the *Cease to Pump* rules proposed in the majority of these water sources will not adequately protect natural low flows and very low flows in these water sources.

IRN supports the identification and listing in Schedule 4 of *Significant Identified Lagoons and Wetlands* and believes that this list should be open for further wetland and lagoon inclusions in the future. Lagoons can be highly important components of freshwater systems. They have a potential value for groundwater recharge in some areas as well as supporting a suite of macro-invertebrates through dry times.

While quantitative rules (such as those proposed as an allowable drawdown provision by percentage of depth) for limiting extraction from lagoons is preferable to their being no-limits on extraction

³ For example; NSW Office of Water, *Draft Water Sharing Plan for the Lachlan Unregulated and Alluvial Water Sources: Abercrombie River above Wyangala Water Source – Report card 1 of 24*, at pp.1.

⁴ NSW Office of Water, *Guidelines for surface water sharing plan report cards*.

from these water sources, IRN does not support pumping from lagoons generally and believes the CtP rules proposed are not quantifiable.

By adopting the ‘no visible flow’ or the ‘equivalent’ ‘no draw down’⁵ *Cease to Pump* rule in the majority of the water sources, whilst it may be preferential as compared to the existing situation, the plan will essentially allow for the continuation of increased ‘drought’ periods for these river systems as well as limiting the natural period of connectivity between stream pools.

Protecting low to very low flows and pools has been an objective endorsed by NSW since 1999,⁶ and as such should be seen as more of a priority some eleven years later in the development of these water sharing plans. IRN sees that such ‘no visible flow’ and ‘no draw down’ *Cease to Pump* rules, especially when combined with the difficulties associated with monitoring and enforcement, will not protect low and very low flows. They will only protect pools to a certain extent, and only on paper.

IRN seeks further clarification from the NSW Office of Water (NOW) about the practicalities of the ‘no draw down’ rule. This rule is defined as pumping not being permitted when the water in the pool (either in river or off-river) is lower than it’s full capacity, with ‘full capacity’ to be approximated by the pool water level at the point where there is no visible flow into and out of that pool.

IRN sees that there would be obvious problems of approximation and enforcement of a rule reliant on such a ‘full capacity’ assessment. IRN has concerns that this would allow for pumping of pools when there is ‘no visible flow’ and the pool is at it’s full capacity (ie. it has not yet dropped below it’s full capacity – which is the point at which the ‘no draw down’ rule is triggered) and thus would not protect low to very low flows and would not provide adequate protection of these pools. IRN is concerned that pumping events that begin before the pool has dropped below it’s full capacity will not be adequately limited. IRN is particularly concerned with this CtP rule as the plan does not go on to set Total Daily Extraction Limits (TDEL)⁷ or Individual Daily Extraction Limits (IDEL)⁸ for any access licences within the water sources. IRN notes that Part 12 of the Plan allows for amendments to be made to establish TDELs and IDELs and would support further parameters on extraction.

Working within the limitations of the lack of gauges, the recent draft WSP for the Murray Unregulated and Alluvial Water Sources contains a draft access rule which has a better definition for a *Cease to Pump* rule. For the Albury water source, the draft access rule for the very low flow class is to ‘*maintain a visible flow (equivalent to full flow through a 200mm pipe)*’. IRN considers this rule to be more quantitative and thus a better definition and description of the rule when compared to ‘no visible flow’ rule. IRN believes that this provides an example which could be used, and improve, all unregulated river WSPs.

IRN strongly believes that *Cease to Pump* rules should be activated at the beginning of the WSP period. IRN asserts that the development of the remaining inland water sharing plans, including for the Gwydir Unregulated and Alluvial, has happened over an extended period of time and that the development of Water Sharing Plans to govern the remaining water sources in NSW and address

⁵No drawing down the water level in natural pools. Pumping not permitted from natural pools when the water level in the pool is lower than its full capacity. For example; NSW Office of Water, *Draft Water Sharing Plan for the Gwydir Unregulated and Alluvial Water Sources: Roumalla Creek Water Source – Report card 1 of 28*, at pp. 2.

⁶NSW Water Quality and River Flow Objectives, <http://www.environment.nsw.gov.au/ieo/>

⁷ NSW Office of Water, *Draft Water Sharing Plan for the Gwydir Unregulated and Alluvial Water Sources: Order*, s45.

⁸ NSW Office of Water, *Draft Water Sharing Plan for the Gwydir Unregulated and Alluvial Water Sources: Order*, s46.

unsustainable water extraction practices has been publicly known and anticipated. As such IRN does not support the activation of stringent Cease to Pump rules in some Water Sources only after year six of the Plan “to allow water users time to plan for the new access arrangements”.⁹ IRN strongly believes that the the implementation of CtP rules should be from Year 1 of the Plan in order to protect low and very low flows in these water sources.

IRN is very concerned by the implication of the Ministers Note¹⁰ and the point found in the Report Cards relating to ‘more lenient’ (compared to the proposed CtP for natural pools) access rules being ‘justified in areas where these rules would significantly impact on current water use practices’ if these areas are identified during public exhibition. IRN strongly reiterates that these WSP should be focusing on ensuring environmentally sustainable water use practices which will protect pools which are important for drought refuge, not simply maintaining current water use practices. IRN believes that provision for ‘more lenient’ access rules has the capacity to cumulatively undermine the main environmental value of this WSP (ie. providing some protection for important flows for pools, lagoons and wetlands – of which there are many important ones that have been identified in this WSP area). The detrimental impact of this potential leniency could be substantial and IRN opposes such a provision which is written up without any further detail or conditions. IRN would appreciate further information from NOW relating to the assessment criteria and process for the application of any ‘more lenient rules’.

IRN is supportive of the proposed ‘more stringent’ CtP rules for the *Gwydir Water Source* (250ML at the Millewa Gauge for rivers and creeks)¹¹ and the *Gingham Watercourse Water Source* (400ML at the Gingham Birdge Gauge for rivers and creeks)¹² on account of the significant environmental value of the wetland sites, including Ramsar listed wetlands of international importance.

1.9 Lack of flow records, reference points and gauges

IRN appreciates that the lack of gauging devices and reference points creates limitations for the creation of *Cease to Pump* rules that are based on flow height or volume. IRN notes that a common theme in the draft plans was for the Interagency Regional Panel (“IRP”) to recommend a *Cease to Pump* rule based on ‘no draw down’ due to there being ‘no other suitable flow reference points to manage extraction in the water source’ (for example in the Roumalla Creek Water Source).¹³

IRN also notes that there are a number of water sources in this WSP area without flow records (eg. *Moree Water Source* and *Mosquito Creek Water Source*) and there are many which only have flow records from gauges which are ‘no longer in operation’ (eg. the *Roumalla Creek Water Source*, the *Boorolong Creek Water Source* and the *Upper Gwydir River Water Source*). The lack of records and gauges is particularly concerning in some of the water sources which have a relatively high number of access licences and large volume of surface water entitlement (eg. the *Mehi River Water Source* and the *Millie Creek Water Source*).

⁹ For example NSW Office of Water, *Draft Water Sharing Plan for the Gwydir Unregulated and Alluvial Water Source, Roumalla Creek Water Source, Report card 1 of 28 at pp.2.*

¹⁰ NSW Office of Water, *Draft Water Sharing Plan for the Gwydir Unregulated and Alluvial Water Sources; Order, at pp.37.*

¹¹ NSW Office of Water, *Draft Water Sharing Plan for the Gwydir Unregulated and Alluvial Water Sources: Gwydir Water Source – Report card 24 of 28 at pp.1.*

¹² NSW Office of Water, *Draft Water Sharing Plan for the Gwydir Unregulated and Alluvial Water Sources: Gingham Watercourse Water Source – Report card 26 of 28 at pp.1.*

¹³ NSW Office of Water, *Draft Water Sharing Plan for the Gwydir Unregulated and Alluvial Water Sources: Roumalla Creek Water Source – Report card 1 of 28.*

This highlights the desperate need for the installation and monitoring of a system of adequate and reliable reference points and gauges throughout these water sources across the state. This will be discussed in more detail later on in this submission. Amendment provisions in each of the draft water sharing plans should include the creation of new and more quantifiable *Cease to Pump* rules if and when new, desperately needed reference points are installed.

1.10 Protection of low and very low flows

IRN believes that *Cease to Pump* rules should ensure stream connectivity on at least 95% of the days that the water source is flowing, and that such rules should include clauses that allow very low flow levels to be altered following field verification.

Due to the critical nature of very low flows for many dependent organisms, under no circumstances should water users be able to extract water from the very low flow range. It is noted that such a position does not include the exceptional circumstances in which emergency response activities would require extraction.

As discussed above, IRN does not believe that the *Cease to Pump* rules proposed in the draft WSP adequately protect the low and very low flow range in these water sources, particularly when combined with the Ministers note regarding the potential application of '*more lenient*' CtP rules. This will be discussed specific to some of the water sources later in the submission.

1.11 Town water supply

IRN is concerned that low flows are not protected from town water supply pumping within the draft rules for the water sharing plans. IRN believes that low flows should be fully protected from town water pumping within two to four years of the WSP's implementation.

1.12 Commence to Pump Rules

IRN believes that *Commence to Pump* rules, such as first flush rules, are critical for protecting the integrity of small, medium and large freshes and floods. For example, a fresh flow occurring after a period of low flow (below the 80th percentile), should be protected from extraction for the first forty-eight hours. Such rules should recognise and meet the requirements of downstream wetlands and high conservation value sites.

IRN is concerned that *Commence to Pump* rules are not presented as a component of these draft WSPs. While infrastructure limitations, for example lack of gauges, may also affect the logistics of *Commence to Pump* rules, once again IRN would see this as an issue that should be addressed as a matter of some urgency.

1.13 Environmental Water Provisions

IRN emphasises that there should be no increase in water extractions from any source unless evidence can be provided that ongoing management will be ecologically sustainable and that the source will not be compromised by the proposed change.

As per the *Water Management Act 2000*,¹⁴ in each case the protection of the water source should take precedence over water extraction. In order for WSPs to be suitable for accreditation under the Murray-Darling Basin Plan (*Water Act 2007* Commonwealth), they will need to be in line with the objects of the Basin Plan which recognises that water desperately needs to be returned to the ailing river systems of the Basin.

IRN believes that the extractive share or daily extraction limit of licences should be altered where inactive licences become activated in order to ensure that there is no additional water extraction.

1.14 Groundwater sources

IRN believes that 30% of the average annual recharge into groundwater sources must be reserved for the environment and thus be protected from extractive use. IRN also believes that, due to lack of information about accurate sustainable yield figures for groundwater, WSPs should include clauses limiting extraction in low yield years. In addition, plans should include a clause that allows for a reduction in extraction where GDEs are stressed or it becomes understood that current extraction levels might cause degradation.

Groundwater recharge needs to be protected and upstream flows are important in order for this to occur. Therefore, in addition to WSPs, robust floodplain management and floodplain harvesting policies are also needed to be put into place and effectively implemented.

As stated previously, IRN does not support the increase in any water extraction unless it can be proven that it can be managed in an ecologically sustainable manner. At this point in time, all of the scientific knowledge on groundwater systems supports the use of the precautionary approach.

The level and complexity of connectivity between surface water flows and groundwater remains largely unknown for many systems. IRN reiterates that the purposes of the Murray-Darling Basin Plan (as contained in the Federal Water Act 2007) are not to increase extraction levels, but to return water to the highly stressed environment of the Basin.

High conservation value ecosystems such as wetlands, hanging swamps and limestone cave systems that are dependent on surface and groundwater systems must be identified and their values protected.

IRN supports the identification and listing (in Schedule 7) of high priority groundwater dependent ecosystems (GDEs) and believes research and investigation into these sites should be a priority so that they are listed early in the life of the plan. In addition, IRN believes that such clauses should exist for the listing of surface water dependent ecosystems and the recognition of their water requirements. However, IRN believes that the rules for groundwater bore distances from these sites are inadequate to ensure that GDEs will not be impacted upon.

¹⁴*Water Management Act 2000* (NSW)

IRN is strongly supportive of a precautionary approach¹⁵ – particularly when it comes to groundwater systems and their associated dependent ecosystems – but challenges that this approach is being undertaken when investigation and listing of such sites has not been completed prior to the draft plan does being exhibited. IRN is concerned that water supply works approvals could be approved earlier in the life of the plan before GDEs could be identified and listed.

1.15 Water Supply Works Approvals for Groundwater Sources

Water Sharing Plans should include rules, excluding extraction within a distance of at least 400 metres from GDEs, for all access licences. As such, IRN does not believe the proposed distances are adequate or appropriate to limit risk to GDEs and does not support the lesser distances proposed within the draft plan. The plan excludes bores within 200 metres from areas described as ‘sensitive environmental areas’ for Basic Landholder Rights.¹⁶ Such short distances provide greater risk of negative impacts on these sensitive environmental areas. IRN believes that the level of uncertainty around impacts to groundwater sources and their dependent ecosystems requires the precautionary approach and thus a greater distance from these sites for bores.

IRN is very concerned about the statement that ‘*distance restrictions do not apply if the Minister is satisfied that; no drawdown of water will occur at the perimeter of any GDE listed in the plan*’.¹⁷ IRN believes that such an inclusion needs qualification, and that the levels of uncertainty around GDEs at the current time are too high to warrant such a provision.

Due to a current lack of groundwater data, all bores should be mapped, metered and monitored and all unlicensed extractions halted. IRN also believes that bores identified within 1km of a GDE should be targeted for reductions in extraction at least until clear, documented and peer reviewed evidence that a particular bore is totally unconnected with the hydrology sustaining the associated GDE.

IRN also notes two other points of concern regarding how groundwater components are dealt with in the plans. Whilst the draft orders detail that the dictionary (Schedule 1) will explain the terms referred to in the document, neither ‘groundwater dependent culturally significant sites’ nor ‘sensitive environmental areas’ are included in the dictionary.¹⁸ IRN asserts that this level of detail should be included in both the plans and supporting documents.

1.16 Carryover Provisions

IRN considers carry over in unregulated streams and groundwater systems as impossible to regulate and highly inappropriate, especially as such ‘accounting’ can result in loss of flows to the environment when it is most needed.

Carryover accounting can negatively impact on levels of groundwater recharge.

¹⁵ As referred to in the note on pp.77 of the NSW Office of Water, *Draft Water Sharing Plan for the Gwydir Unregulated and Alluvial Water Sources*: Order.

¹⁶ NSW Office of Water, *Draft Water Sharing Plan for the Gwydir Unregulated and Alluvial Water Sources*: Order, s54.

¹⁷ NSW Office of Water, *Draft Water Sharing Plan for the Gwydir Unregulated and Alluvial Water Sources*: Order, s54(2).

¹⁸ NSW Office of Water, *Draft Water Sharing Plan for the Gwydir Unregulated and Alluvial Water Sources*: Order, Section 54, Section 55 and Schedule 1.

Therefore IRN supports the proposal for no carryover of account water from one water year to the next as is outlined for the *Upper Gwydir Alluvial Groundwater Source*.¹⁹

1.17 Trading Rules

IRN supports the indicative trading rule that trading into a water source with high hydrologic stress or high instream value is not permitted. However, IRN is somewhat concerned that that background information about the hydrological stress and instream values for the water sources is not presented. Once again, IRN reiterates that the purpose of these WSP processes is to address overallocated and highly stressed and degraded river systems and that actions that will cause any increase in hydrological stress should not be provided for.

As it is extremely difficult to regulate trading into high flows in unregulated systems, and there is an extremely limited capacity to do so, IRN does not support trading into high flows. High flows are also an essential part of the natural flow regime and as such should also warrant protection.

Past experiences in some river systems have illustrated the difficulties involved with and the impacts that can be had on the environment and other water users downstream. IRN therefore believes that instream trading should only be allowed in a downstream direction and that the details of assessments of trade within water sources should be transparent and publicly available.

1.18 Infrastructure, monitoring and compliance

IRN strongly emphasises the need for both monitoring infrastructure and compliance and enforcement components to be well resourced. The lack of gauging points and lack of flow data is a point of uncertainty for such a large number of water sources across the state, in that water is a critical and limiting component for many dependent ecosystems as well as farms. Extension of the reference point network should therefore be a priority action that accompanies these water sharing plans. Without resources for infrastructure, monitoring, compliance and enforcement, any water sharing plan that is developed will be less than optimal and provide much less than is required to achieve ecologically sustainable management of these complex systems.

Gauges and meters should be installed for all high environmental value, high economic value, and high-risk water sources within three years of the WSP's gazettal. Restoration of flow volume, flow variability and ecological values must be prioritised.

The report cards for these water sources illustrate how much remains unquantified and merely inferred with regard to extraction amounts. IRN considers that all water extractions, including for stock and domestic use, should be mapped, gauged and monitored within five years of the WSP's implementation in order that all water extraction is quantified. Of critical importance, to the future health of many systems, will be the prevention of illegal extraction activities and the implementation of a rigorous compliance program.

¹⁹ NSW Office of Water, *Draft Water Sharing Plan for the Gwydir Unregulated and Alluvial Water Source, Upper Gwydir Alluvial Groundwater Source, Report card 28 of 28 at pp.2*.

1.19 Determination of Long-term Average Annual Extraction Limits (LTAAEL)

IRN calls for the use of a stringent precautionary approach to calculating LTAAEL. IRN assumes that these plans are being developed on the basis of the best available peer-reviewed science and advice.

1.20 Basic Landholder Rights

IRN would also like to make the general comment that, particularly in some of the water sources under high hydrological stress, unfettered growth of Basic Landholder rights, for example through subdivisions, will have a negative impact on the shares of all other water users.

Water Sharing Plans should send a strong message to local government about the implications for Local Environment Plan development. Water Sharing Plans should be a mechanism to inform development in relation to water management through local government.

1.21 Other comments

As one of probably few organisations commenting on all of the draft plans currently on public exhibition, IRN would firstly like to raise the issue of inconsistency in the language and layout used to by the Office of Water in the supporting documents, namely the report cards, for each water source. Whilst this may be a relatively minor point of concern, IRN believes that consistency in language and the information presented (or not presented) is essential in order for comparative assessment of each of draft plan to be undertaken.

For example, none of the report cards include a background information section including details about the environmental values (or 'instream values') of the water sources as has been the case in other recently developed draft WSPs. If this information is unknown, or unassessed, than this should be acknowledged and presented in the report cards.

As highlighted in IRN's other previous submissions to NOW on the recent round of draft WSPs, it is commonplace that the report cards highlight the substantial lack of suitable flow reference points/gauges/flow records in the large majority of the water sources. IRN strongly states that sustainable management of our water resources in the future will be reliant on much more extensive monitoring activities and infrastructure.

PART 2

DRAFT WATER SHARING PLAN for the GWYDIR UNREGULATED and ALLUVIAL WATER SOURCES

First and foremost, IRN would like to note that a number of the water sources in this plan area have significant lagoons and important wetlands, including some with internationally important Ramsar listed sites. IRN strongly supports the development of robust trading and access rules that will wind-back the pressures on what remains of these high conservation value areas. Many important wetlands in the area have been lost (for example there is less than half the area remaining of the Gwydir wetlands that existed prior to river regulation in the area).

Below some specific points are discussed as they relate to each of the water source areas within the draft WSP area. Many of the points raised are common to most of the water sources – and have just been highlighted as an example in a particular water sources.

2.1 Roumalla Creek Water Source

As discussed above, *Roumalla Creek* is an example of a water source with a gauge that is ‘no longer in operation’. IRN believes that an inadequate systems of monitoring infrastructure (which can also allow for the application of quantifiable access rules) is particularly problematic leading into a future with potential decrease in surface water availability and increased variability due to climate change – and will severely limit the application of a strategic adaptive management approach.²⁰

As stated in the general comments earlier in the submission, IRN is highly supportive of a move towards implementing Cease to Pump (CtP) provisions in all water sources. However, IRN has concerns about the adequacy of the proposed CtP provisions in this plan.

IRN would argue that there are some difficulties and problems involved in the CtP rules for natural off-river pools, based around the notion of ‘full capacity’.

IRN does not believe that the CtP provisions for rivers and creeks are adequate to protect the low to very low flow range in this water source. IRN strongly urges that the CtP provisions proposed for years six to ten of the plan be brought forward to also cover years one to five of the plan. There has already been substantial delays in developing and implementing WSPs for this area and IRN would argue that water users have been aware that new access arrangements have been imminent for some time in order for NSW to meet it’s water reform commitments. IRN would further argue that in a water source with such high relative instream value and low relative economic significance of irrigation (with only 37 licences) that a delay in implementing CtP provisions to protect important low and very low flows to after 1 July 2017 is unwarranted and that such a water source should be well placed to implement the stronger CtP rules earlier in the life of the plan.

IRN is very concerned, and does not support, the note referring to the application of ‘*more lenient*’ CtP access rules.

²⁰ Adaptive management of water sources is listed as one of the objectives of the WSP. See NSW Office of Water, *Draft Water Sharing Plan for the Gwydir Unregulated and Alluvial Water Sources*: Order, s10(i).

IRN supports the draft trading rules prohibiting trade into the water source on the basis of preventing any further degradation of instream values.

2.2 Rocky River Water Source

IRN does not support the statement that lack of CtP rules in existing licences justifies incremental changes to access provisions on the basis of providing irrigators time to adjust.²¹ IRN argues that the development of this WSP is long overdue, and that associated changes to access rules for water users has been publicly known and anticipated for some time. Failure to implement CtP provisions that will secure low and very low flows and will protect pools from the outset of the WSPs will undermine the environmental objectives of the WSP and the NSW and Commonwealth water reform process.

IRN notes the significant lagoons that are part of the Upland Wetlands of the Drainage Divide of the New England Tablelands Bioregion Endangered Ecological Community (EEC) and found in this water source. As such IRN supports the move to limit extraction. However, IRN believes that considering the important ecological value of these sites, that the WSP should go further and wind back extraction, as opposed to just limiting extraction to the current existing licensed extraction. IRN believes that a drawdown height or rate access condition should be imposed, early within the life of the Plan.

IRN would support the prohibition of any future access licences being granted in the Racecourse Lagoon and Dangar's Lagoon which are also part of this EEC, as these are important areas without current access licences.

2.3 Boorolong Creek Water Source

Once again, IRN believes that the Little Lagoon (as part of the abovementioned EEC and a lagoon without any current access licences) should be further protected from any future extractions. IRN believes that further information about the instream values and hydrological stress of this water source should have been recorded and presented.

2.4 Upper Gwydir Water Source

IRN is supportive of the propose limit to trade in the Gwydir River Tributaries on the basis of protecting high instream values.

IRN calls for the application of a precautionary approach in water sources such as this one whereby some parts of the water source are considered to be connected to the underlying alluvial groundwater but as yet, not groundwater dependent ecosystems have been identified in the WSP.

2.5 Laura Creek Water Source

IRN notes the Mother of Ducks Lagoon in this water source as being part of the EEC. As such, IRN has particular concern that the CtP access rule for rivers and creeks is sufficient to protect this lagoon.

²¹ NSW Office of Water, *Draft Water Sharing Plan for the Gwydir Unregulated and Alluvial Water Source, Rocky River Water Source, Report card 2 of 28 at pp.2* .

2.6 Bakers Creek Water Source

IRN notes that this water source is another example of a water source with a gauge 'no longer in operation' and whereby 'no other suitable reference points' is included in the justification for the difficult to quantify CtP rule of 'no drawing down the water level in natural pools'/'full capacity'.

2.7 Georges Creek Water Source

Once again, IRN is concerned about the notion that 'more lenient' access rules may be justified in certain areas based on impacts on current use.

2.8 Moredun Creek Water Source

IRN supports the limiting of trading through the rules in order to prevent any further degradation of instream values.

2.9 Keera Creek Water Source

IRN refers to its earlier stated concerns about the inadequacy of the CtP provisions for natural pools.

2.10 Copeton Dam Water Source

Once again, IRN does not support the potential application of 'more lenient' access rules for this water source.

2.11 Halls Creek Water Source

IRN supports the limiting of trading through the rules in order to prevent any further degradation of instream values.

2.12 Mackenzies Flat Water Source

This water source is another example of one lacking flow records and background information including about instream values or hydrological stress.

2.13 Myall Creek Water Source

IRN calls for the application of a precautionary approach in water sources such as this one whereby the water source is considered to be connected to the underlying alluvial groundwater but as yet, not groundwater dependent ecosystems have been identified in the WSP.

2.14 Gurley Creek Water Source

IRN refers to its earlier stated concerns about the inadequacy of the CtP provisions for natural pools and opposition to any 'more lenient' CtP rules being applied.

2.15 Tycannah Creek Water Source

IRN seeks further details of the assessment criteria that will be used to decide on permitting trade within the water source.

2.16 Warialda Creek Water Source

Once again, IRN is concerned about the notion that ‘more lenient’ access rules may be justified in certain areas based on impacts on current use.

2.17 Millie Creek Water Source

This water source is an example of one in which the lack of flow records is particularly concerning and IRN believes that infrastructure for flow monitoring should be installed.

2.18 Slaughterhouse Creek Water Source

As a water source with no licensed water extractions and containing sites of environmental significance such as Moboullboona Waterhole, Emmotts Waterhole and Barbers Lagoon – IRN believes granting of future extraction licences should be inhibited in order to protect these sites. IRN has concerns about the inadequacy of the CtP access rules for natural pools that are proposed in this WSP and the ability for them to protect sites such as Moboullboona Waterhole, Emmotts Waterhole and Barbers Lagoon into the future.

2.19 Mosquito Creek Water Source

This water source again illustrates the lack of flow records and gauges and IRN believes that infrastructure for flow monitoring should be installed.

2.20 Moree Water Source

IRN notes the identification of Yarraman Lagoon and an unnamed lagoon as significant and without current licences on them. As such, IRN believes it important that areas not yet under extractive pressure be protected from such activities into the future.

IRN supports additional protection for significant lagoons and reiterates that these measures should go beyond limiting extraction to current extraction in significant lagoons that do have existing licences to winding back extraction in these areas. More stringent access rules need to be developed and once again, IRN does not support the suggestion of ‘more lenient’ CtP provisions being applied.

2.21 Gil Gil Creek Water Source

The comments listed above for the Moree Water Source apply for this water source with the inclusion of the two unnamed lagoons in the water source area.

2.22 Thalaba Creek Water Source

Further to above comments for the *Moree* and the *Gil Gil Creek Water Sources*, IRN reiterates concerns around the CtP provisions and their limited likelihood to protect natural pools. IRN urges NOW to continue to work on more quantifiable measures as well as suitable monitoring and enforcement measures.

2.23 Mehi River Water Source

IRN is concerned that a water source with such relatively high surface water entitlement and licensed extraction, that there are no flow records. IRN believes that installation of monitoring and recording such information should be a priority for such water sources.

2.24 Gwydir Water Source

As discussed previously in the submission, IRN supports important acknowledgement of the international significant Ramsar wetlands within this water source area and the application of more stringent CtP provisions and limited trading rules. IRN opposes application of the concept of applying 'more lenient', as is referred to in the Ministers Note.

2.25 Carole Creek Water Source

IRN supports the limitation of trade into and within on the basis of protecting instream values into the future.

2.26 Gingham Watercourse Water Source

As discussed previously in the submission, IRN supports important acknowledgement of the international significant Ramsar wetlands within this water source area and the application of more stringent CtP provisions and limited trading rules. IRN opposes application of the concept of applying 'more lenient', as is referred to in the Ministers Note.

2.27 Barwon Water Source

IRN notes the large number of significant lagoons in this water source area. IRN does not believe the CtP 'no drawdown' rule is quantifiable or adequate to protect pools.

IRN supports additional protection for significant lagoons and reiterates that these measures should go beyond limiting extraction to current extraction in significant lagoons that do have existing licences to winding back extraction in these areas. More stringent access rules need to be developed and once again, IRN does not support the suggestion of 'more lenient' CtP provisions being applied.

2.28 Upper Gwydir Alluvial Groundwater Source

IRN calls for the application of the most precautionary approach in relation to groundwater systems with complex connectivity arrangements to surface water systems, especially in a system where there is an acknowledgement that *'activation of unused entitlement and consequent growth in water use is likely to significantly affect the sustainability of the aquifer'*.²²

IRN supports the no carryover of account water.

IRN supports the prohibition of trading into the groundwater source.

As stated previously in this submission, IRN does not support the proposed distances in which bores are allowed relative to GDEs and believes that distances should be greater in order to provide an adequate buffer zone for these sensitive environmental areas.

²² NSW Office of Water, *Draft Water Sharing Plan for the Gwydir Unregulated and Alluvial Water Source,, Upper Gwydir Alluvial Groundwater Source, Report card 28 of 28 at pp.2* .