Mid Tweed River Water Source

Water Source Context	River Flows
Area: 5271 hectares (69% forested) **Average Annual Rainfall:** 1941 mm **Inflowing water sources:** Lower Oxley River, Byrill Creek, Upper Tweed River, Doon Doon Creek (includes Clarrie Hall Dam 16,000 ML capacity), Rolands Creek, Smiths Creek **Receiving water source:** Tweed Estuary	**Low Flow Index (80th%ile) = 15 ML/day** **Flow Records:** 67 years of data from Tweed River gauge @ Uki
Licensed Water Use	
▪ total entitlement 28707 ML/year ▪ 23 Water Act Licenses (96% used for Town Water Supply) ▪ 88% of total Extraction Management Unit entitlement	

Background Information		
Water Source Attributes	**Rating**	**Justification**
Relative Instream Value (within catchment)	**HIGH**	▪ 7 threatened frog species ▪ 5 threatened bird species ▪ high diversity ▪ high recreation value ▪ significant area of National Park
Hydrologic Stress	**HIGH**	▪ within water source = high ▪ cumulative stress = high - peak extraction demand exceeds available flows in November
Relative Economic Significance of Irrigation Value (within catchment)	**HIGH**	▪ high economic dependence of the local community on water extracted for irrigation ▪ high value of production from irrigation
Risk to Instream Value (from extraction)	**HIGH**	▪ instream values are at high risk of being impacted by extractions within the water source
Existing Access Arrangements During Drought Conditions		
Cease to Pump (CTP)	4 ML/day (95th %ile)	
Pumping Restrictions	8 hours/day at 8 ML/day	
Reference Point	1. Tweed River gauge @ Uki 2. Byrill Creek Road Crossing	
Water Users Association	None	

Proposed Recommendations for Mid Tweed River Water Source

Draft Access Rules	
Cease to pump (CTP)	95th %ile at the end of the water source (calibrated to gauge) Bray Park Weir bypass equivalent to 95th %ile natural flows at the end of the water source Drought Provision - if storage in Clarrie Hall Dam drops below a set percentage (to be determined in consultation with Tweed Council) then the weir bypass rule is relaxed.
Reference point	If the Tweed River gauge @ Uki cannot be used (due to influence of releases from Clarrie Hall Dam) a new gauge/staff gauge to be installed upstream of the Tweed River/Doon Doon Creek junction.
Daily Flow Sharing	Consideration is currently being given to implementing daily flow sharing during the life of the plan similar to those pumping restrictions operating under the existing access arrangements.

Draft Trading Rules	
INTO water source	Permitted only from Smiths Creek, Rolands Creek, Doon Doon Creek, Upper Tweed River, Brays Creek, Lower Oxley River or Byrill Creek water sources.
WITHIN water source	Permitted
Conversion to High Flow Access	Permitted if suitable gauging is available

Key Factors for Panel Decisions

- High instream value, high hydrologic stress, high risk to instream value and high economic dependence.
- High hydrologic stress primarily due to extractions from the town water supply.
- Additional flows released from Clarrie Hall Dam during low flow periods to supplement town water supply (not environmental flows).
- The town water extracts from Bray Park Weir which is situated at the end of the water source and does not pass any low flows.
- Access and trading rules identified through classification process were adopted by the Panel.
- Panel recommends that during the life of the Plan daily flow sharing is implemented at a level equivalent to the pumping restrictions currently applied to licensed extractors during periods of very low flow.
- To achieve the proposed environmental flow through the system, an environmental flow needs to pass through the weir. Otherwise environmental flows left by irrigators will be absorbed into the town water supply.

Please Quote Council Ref: Water Management - Licences

Your Ref No:

For Enquiries Please Contact: Mr Anthony Burnham

Telephone Direct (02) 6670 2411

L13M02

15 March 2006

Northern Rivers Catchment Management Authority
PO Box 283W
WEST KEMPSEY NSW 2440

Dear Sirs

North Coast Macro Water Plan – Mid Tweed Water Source

Tweed Shire Council's Submission Sheet responses – Community Consultation (March 2006) are as follows:

Response to 1

a) Mid Tweed – Tweed River area.

Response to 2

a) Please note, Tweed Shire Council have only restricted fish ladder flow at Bray Park Weir during extended dry periods, to prevent salt water ingress into the weir pool via the fish ladder. Noting king tides top the weir crest, which can only be minimised if weir pool is full. The fish ladder can pass approximately 22ML/day before weir crest spills.

Response to 3

a) It needs to be made clear to other licence holders that once a CTP occurs, and TSC releases from CHD, then the CTP stays in force until U/S flows increase again. See item 7 over page for potential use of Palmers Road Gauge and Bray Park Weir as an end of source gauge.

b) Can you confirm that the dividing point between the Lower Oxley River, Weir Pool and River Management Zones is the Old Lismore Road crossing?

c) During the circumstance of a CTP for Mid Tweed, and TSC is releasing from CHD, Uki Village town water supply must also be permitted to extract along with the Tweed District water supply at Bray Park.

Response to 7

a) Please note the existence of the Palmers Road manual river gauge, located upstream of Doon Doon Creek confluence. Details attached.

b) The Bray Park Weir is currently being rehabilitated, including concrete crest and capping. It may be able to be used as an automatic gauging station. Council

already has installed an automatic level recorder at the Raw Water Pump Station being only some 750m u/s. A rating curve should be reasonably easy to determine, particularly at low flows, given the fish ladder can pass up to approximately 22ML/day.

c) Council has almost completed modelling investigations which could provide data for the determination of the 95% flow at Bray Park Weir, if this site is considered appropriate as a reference point.

d) Can consideration be given to including an approval process which may permit supply of town water to Queensland, ie Gold Coast City Council, and such a process be recognised in the Water Sharing Plan? Council's understanding is that for any such arrangement to occur, it must be recognised in the Water Sharing Plan.

e) Additionally, can an approval process which may permit supply of town water to an adjacent Shire/Water Authority, ie Byron Shire or Rous Water, be recognised in the Water Sharing Plan?

f) Situation Example: How would you propose to manage the situation where a CTP flow is reached, all pumping is stopped, and the next day the flow increases due to pumping being stopped, resulting in the CTP being lifted? We appreciate that this example may be insignificant in many instances, however, there may be a few circumstances where it will be an issue.

g) Council notes the drought provision is still to be determined via consultation. Council's current Restriction policy is to impose restriction when CHD falls to 50% capacity, with increasingly severe restrictions being progressively imposed down to 35% capacity where the full range of restrictions are enforced. As Council's population grows, these restriction thresholds will have to be progressively raised to maintain an equivalent level of risk, until such time CHD is augmented or another dam is constructed.

h) If the Uki gauge is to be used, determining when the CTP is to be imposed should be relatively straightforward, however, as you have identified, Council will then release from CHD, and the determination of lifting the CTP may become problematic.

Council can reasonably estimate the CHD flow rate and volume of release (will investigate more accurate flow metering capability), however, Council will aim to match demand on a daily basis, therefore making it difficult for others using this gauge to determine real increases in natural flow.

i) The existing pumping restriction of 8 hours/day at 8ML/day: How is Council's operation of the weir pool and associated releases from CHD, to be managed?

Council would like to request an opportunity to work through with CMA and DNR the operation of the weir pool and when CHD releases are triggered, so a clear operational guideline can be developed and publicised.

Attached please find the following:

- 1.8.4 Stream Gauging Stations
- Gauging Details – D/s Palmers Road
- Location Map
- Photos
- Rating Graph – Palmers Road

If you require any further information regarding this matter, please contact Mr Anthony Burnham on 02 6670 2411.

Yours faithfully

David Oxenham
Manager
WATER

Encs

FAXED 16/3/06

North Coast Macro Water Plans
Submission Sheet – Community Consultation (March 2006)

Personal Details (Optional)

Name: TWEED SHIRE COUNCIL – CONTACT: ANTHONY BURNHAM

Address: P.O. Box 816 MURWILLUMBAH N.S.W.

14 TUMBULGUM ROAD MURWILLUMBAH N.S.W.

1. Name of the Water Source and Catchment it is located in MID TWEED – TWEED RIVER AREA – Please See Attached Letter

2. Are the existing access arrangements for this water source (as detailed on the report card) accurately described? If not, please provide your suggestions.

3. Do you see any operational problems with the proposed access rules (as detailed on the report card)? Please make suggestions for a better way to achieve the same outcome.

4. Has there been a major shift in irrigation enterprises in this water source in the last 10 years (eg irrigated pasture to horticulture)? If yes, please provide us with further details

1.8.4 STREAM GAUGING STATIONS

The Water Resources Commission have installed and rated three (3) gauging stations on behalf of Tweed Shire Council at the following locations -

1. Doon Doon Creek upstream of storage.
2. Doon Doon Creek downstream of storage.
3. Tweed River upstream of Doon Doon Creek.

(See Section 1.7.2 for details)

Details of each station are as follows:-

(1) 201013 Doon Doon Creek d/s Clarrie Hall Dam

Location: 1:25,000 series Burringbar 9541-II-S Grid Ref 307949
Gauge Range: 0 - 1 m
Gauge Zero: 20.33 m AHD
Reference Bench Mark: Bolt in concrete, right bank on control BMGS 781 RL 21.385 m AHD.

(2) 201014 Doon Doon Creek at Fogarty's Dip

Location: 1:25,000 series Burringbar 9541-II-S Grid Ref 295478
Gauge Range: 0 - 1 m
Gauge Zero: 20.97 assumed datum

(3) 201015 Tweed River d/s Palmers Road Crossing

Gauging Details			Rating Table No			
			Operative		Periods	
1. Stream: Doon Doon Creek			From	To	From	To
Station: D/s Clarrie Hall Dam	No: 201013		1.9.83			
Tentative Table:						

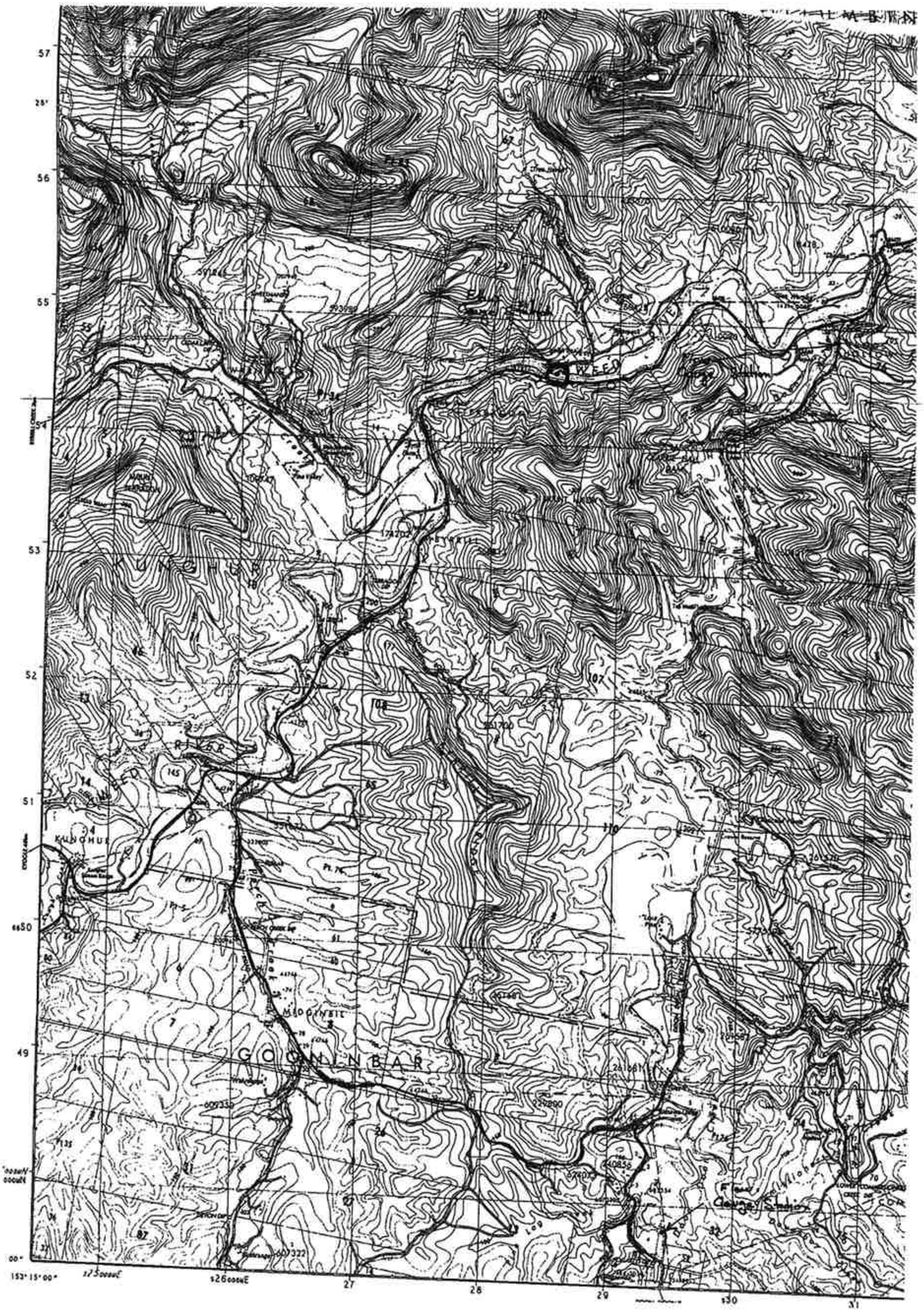
Gauge Height Metres 0	Discharges in Megalitres Per Day										Metres 0
	0	.01	.02	.03	.04	.05	.06	.07	.08	.09	
0.1			0	.03	.08	.14	.22	.32	.43	.56	0.1
0.2	.72	.90	1.13	1.36	1.62	1.90	2.30	2.70	3.20	3.80	0.2
0.3	4.5	5.4	6.5								0.3

	Rating Table No			
	Operative		Periods	
2. Stream: Doon Doon Creek	From	To	From	To
Station: Fogartys Dip No: 201014	31.8.84			
Tentative Table:				

Gauge Height Metres 0	Discharges in Megalitres Per Day										Metres 0
	0	.01	.02	.03	.04	.05	.06	.07	.08	.09	
0.1								.04	.10	.19	0.1
0.2	.34	.60	1.0	1.6	2.4	4.0					0.2
0.3											0.3

	Rating Table No 2			
	Operative		Periods	
3. Stream: Tweed River	From	To	From	To
Station: D/s Palmers Road No: 201015	20.1.85			

Gauge Height Metres 0	Discharges in Megalitres Per Day										Metres 0
	0	.01	.02	.03	.04	.05	.06	.07	.08	.09	
0.1	.02	.06	.12	.18	.25	.35	.47	.61	.76	.92	0.1
0.2	1.12	1.32	1.55	1.83	2.15	2.47	2.85	3.30	3.78	4.27	0.2
0.3	4.8	5.4	6.05	6.75	7.5	8.25	9.1	10.0	11.0	12.0	0.3
0.4	13.0	14.2	15.5	17.0	18.5	20.1	21.8	23.6	25.4		


KUNGHUR
GOONENGERRY
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TWEED
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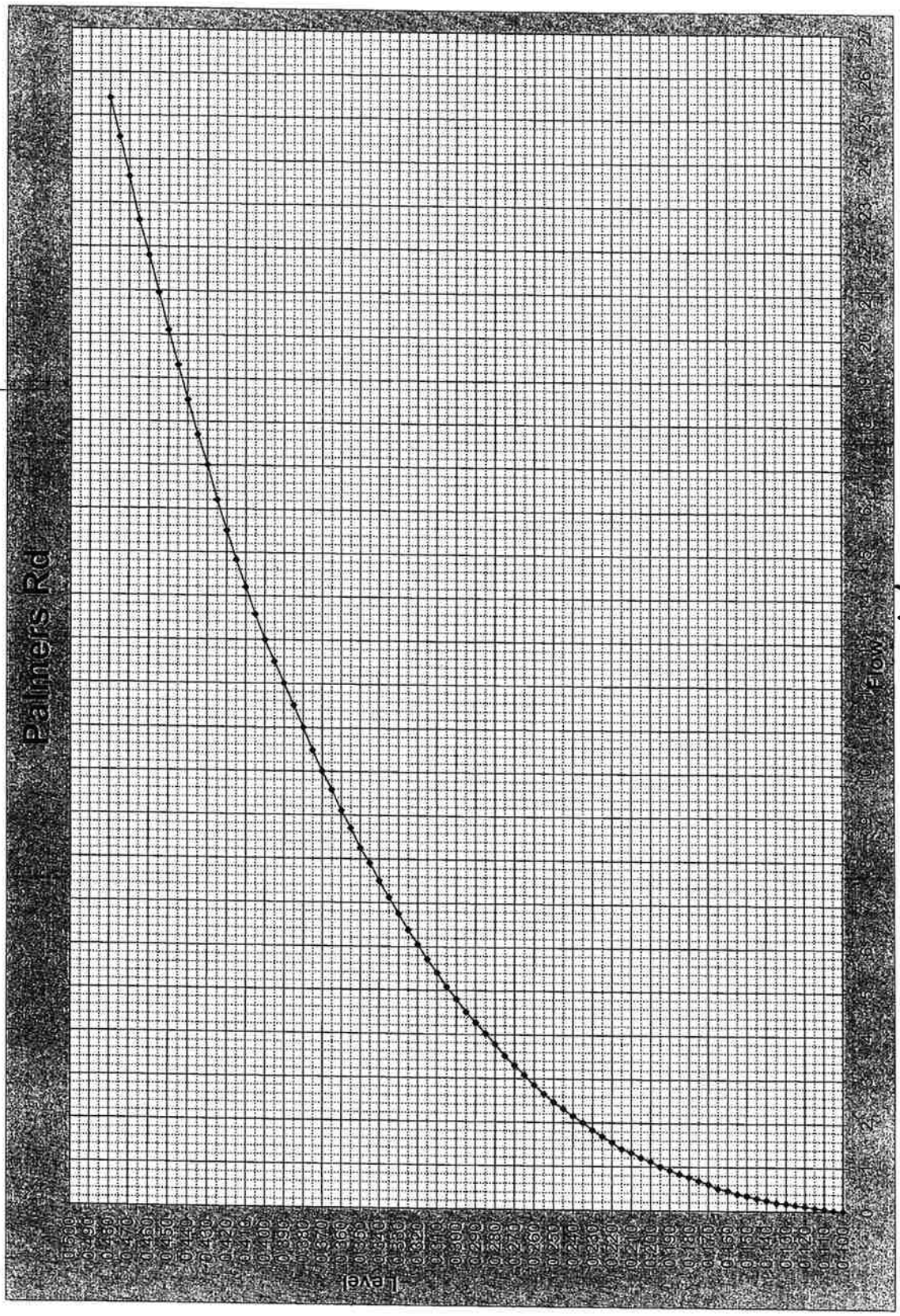

Palmers Rd
Level
Flow
ML / day


08/06/2005


08/06/2005

Upper Oxley River Water Source

Water Source Context	River Flows
Area: 3973 hectares (55% forested) **Average Annual Rainfall:** 1823 mm **Inflowing water sources:** None **Receiving water source:** Lower Oxley River	**Low Flow Index (80th%ile) = 2 ML/day** **Flow Records:** Low flow index calculated from nearest suitable gauging station (outside of water source)

Licensed Water Use
▪ total entitlement 381 ML/year ▪ 15 Water Act Licenses (53% used for industrial purposes, 29% used for irrigation purposes, 12% used for Town Water Supply) ▪ 1% of total Extraction Management Unit entitlement

Background Information		
Water Source Attributes	**Rating**	**Justification**
Relative Instream Value (within catchment)	**MEDIUM**	▪ 7 threatened frog species ▪ 1 threatened bird species ▪ 1 other threatened fauna ▪ high recreation value ▪ significant area of National Park
Hydrologic Stress	**HIGH**	▪ within water source = high - peak extraction demand exceeds available flows in November
Relative Economic Significance of Irrigation (within catchment)	**MEDIUM**	▪ medium economic dependence of the local community on water extracted for irrigation ▪ low value of production from irrigation
Risk to Instream Value (from extraction)	**MEDIUM**	▪ instream values are at moderate risk of being impacted by extractions within the water source
Existing Access Arrangements During Drought Conditions		
Cease to Pump (CTP)	No visible flow	
Pumping Restrictions	6 hours/day	
Reference Point	Tyalgum Weir at Limpinwood Road	
Water Users Association	None	

Proposed Recommendations for Upper Oxley River Water Source

Draft Access Rules	
Cease to pump (CTP)	Years 1 - 6 no visible flow Years 7 - 10 95th %ile at the end of the water source if the flows can be closely correlated to the gauge at Eungella.
Reference point	Years 1 - 6 Hoggs Road Crossing Years 7 - 10 Oxley River gauge @ Eungella
Daily Flow Sharing	Consideration is currently being given to implementing daily flow sharing during the life of the plan similar to those pumping restrictions operating under the existing access arrangements.

Draft Trading Rules	
INTO water source	No net gain
WITHIN water source	Permitted
Conversion to High Flow Access	Not recommended for this water source at this stage

Key Factors for Panel Decisions

- Medium instream value, high hydrologic stress, medium risk to instream value and medium economic dependence.
- Access and trading rules identified through classification process were adopted by the Panel.
- Can only implement the 95th %ile (at the end of the water source) access rule if flows from the water source can be closely correlated to the Lower Oxley River gauge @ Eungella.
- If flows can be correlated to the gauge the proposal is to stage the implementation of the access rule to provide irrigators with time to plan for the new access arrangements.
- Panel recommends that during the life of the Plan daily flow sharing is implemented at a level equivalent to the pumping restrictions currently applied to licensed extractors during periods of very low flow.

Please Quote
Council Ref: Water Management - Licences

Your Ref No:

For Enquiries
Please Contact: Mr Anthony Burnham

Telephone Direct (02) 6670 2411 I13m09

15 March 2006

Northern Rivers Catchment Management Authority
PO Box 283W
WEST KEMPSEY NSW 2440

Dear Sirs

North Coast Macro Water Plan - Upper Oxley River - Tweed River Area

Tweed Shire Council's Submission Sheet responses – Community Consultation (March 2006) are as follows:

Response to No 3

a) The CTP for no visible flow at the Tyalgum Weir, renders the weir pool redundant for significant periods. The commandable weir storage is approximately 8ML, which equates to 100 days supply at current average demands.

   Poor water quality in this weir pool during dry periods does currently limit the full use of this volume, however, Council is planning to install a new water treatment plant which will have the capability to treat very poor water quality.

b) Additionally, the introduction of the 95% flow CTP rule in year 7 would further limit the number of days the current system would be permitted to operate.

c) Council has purchased some adjacent land for the purposes of improving riparian vegetation adjacent to the weir pool and has also been in consultation with adjacent land holders about cooperative efforts on their properties.

   An off stream storage could be potentially located and constructed on the adjacent land. Very preliminary estimates are in the order of $400,000 for an 8ML open earth type storage.

If you require any further information regarding this matter, please contact Mr Anthony Burnham on 02 6670 2411.

Yours faithfully

David Oxenham
Manager
WATER

FAXED 16/3/06

North Coast Macro Water Plans
Submission Sheet – Community Consultation (March 2006)

Submission No. [illegible]

Personal Details (Optional)

Name: TWEED SHIRE COUNCIL – CONTACT ANTHONY BURNHAM

Address: P.O. Box 816 MURWILLUMBAH N.S.W.

Office – 14 Tumbulgum Road MURWILLUMBAH N.S.W.

1. Name of the Water Source and Catchment it is located in UPPER OXLEY RIVER – TWEED RIVER AREA – Please See attached Letter.

2. Are the existing access arrangements for this water source (as detailed on the report card) accurately described? If not, please provide your suggestions.

3. Do you see any operational problems with the proposed access rules (as detailed on the report card)? Please make suggestions for a better way to achieve the same outcome.

4. Has there been a major shift in irrigation enterprises in this water source in the last 10 years (eg irrigated pasture to horticulture)? If yes, please provide us with further details

Report card for the Mid Tweed River water source

Water Source Context	**River Flows**
Area: 5271 hectares (69% forested) **Average Annual Rainfall:** 1910 mm **Inflowing water sources:** Lower Oxley River, Byrrill Creek, Upper Tweed River, Doon Doon Creek (includes Clarrie Hall Dam 16,000 ML capacity), Rolands Creek, Smiths Creek **Receiving water source:** Tweed Estuary	**Low Flow Index (80th%ile) = 38 ML/day** **Flow Records:** 1967 to 1986 and 1995 to present. Low flow index for critical month (November) derived from flow model (Sunwater, 2006) modified by 1969 to 1982 data from Tweed River, Uki gauging station (201900)

Licensed Water Use (at 20 February 2009)
Total surface water entitlement: 28,728 ML/year • 22 Water Act Licenses (96% used for Town Water Supply, 4% used for irrigation purposes) Total alluvial groundwater entitlement: 42 ML/year • 2 Water Act Licenses (86% used for irrigation purposes 14% used for stock and domestic purposes) 86% of total Extraction Management Unit entitlement

Background Information		
Water Source Attributes	**Rating**	**Justification**
Relative Instream Value (within catchment)	**HIGH**	▪ 7 threatened frog species ▪ 5 threatened bird species ▪ high diversity ▪ high recreation value ▪ significant area of National Park
Hydrologic Stress	**MEDIUM**	▪ within water source = low ▪ cumulative stress = medium - peak extraction demand is generally less than available flows in November
Relative Economic Significance of Irrigation Value (within catchment)	**HIGH**	▪ high economic dependence of the local community on water extracted for irrigation ▪ high value of production from irrigation
Risk to Instream Value (from extraction)	**LOW**	▪ instream values are at high risk of being impacted by extractions within the water source
Existing Access Arrangements During Drought Conditions		
Cease to Pump (CTP)	4 ML/day (95th %ile)	
Pumping Restrictions	8 hours/day at 8 ML/day	
Reference Point	1. Tweed River gauge @ Uki 2. Byrrill Creek Road Crossing	
Water Users Association	None	

Recommendations for Mid Tweed River water source

Draft Access Rules	
Cease to Pump	3 ML/day at the Eungella gauge (approximates the 95th%ile in the Mid Tweed Water Source). NB. A new gauge has been installed in the Mid Tweed Water Source at Palmers Road. Once the gauge is calibrated the cease to pump will be managed from this gauge based on the 95th%ile flow in the Mid Tweed Water Source. From year six of the plan the cease to pump condition will apply to aquifer access licences extracting from all alluvial aquifers within 40m of an unregulated river, except for existing Domestic and Stock access licences and Local Water Utility access licences for which these rules do not apply.
Daily Pumping Restrictions	Pumping permitted for a maximum of 6 hours/day between a specified time (to be determined)when flows are equal to or less than 5 ML/day and greater than 3 ML/day at the Eungella gauge (until the new Palmers Road gauge is calibrated)
Reference point	Oxley River, Eungella gauge (201001) in the Lower Oxley Water Source. The reference point will change to the Tweed River, Palmers Road gauge (201015) in the Mid Tweed Water Source once it is calibrated

Draft Trading Rules	
INTO water source	Permitted only from Smiths Creek, Rolands Creek, Doon Doon Creek, Upper Tweed River, Byrrill Creek, Brays Creek, Pumpenbil Creek, Upper Oxley Rivert, Hopping Dicks Creek or Lower Oxley River Water Sources
WITHIN water source	Permitted
Conversion to High Flow Access	Not permitted
Conversion to Aquifer Access Licence	Permitted, subject to assessment

Key Factors for Panel Decisions

- The proposed access rule for the Mid Tweed River Water Source is more stringent than that identified through the classification process because existing access arrangements are being continued.
- This approach also supports the Panel's assessment that the water source is subject to a higher hydrologic stress due to the substantial extractions for the town water supply.
- Discussions with Tweed Council have resulted in a new gauging station being installed at Palmers Road, on the Tweed River not far downstream of its junction with Byrrill Creek.
- Additional hydrological analysis has found good correlation between river flows in the Mid Tweed River Water Source and the Lower Oxley River Water Source. It is proposed that the Eungella gauge be used to manage the cease to pump rule until the new Palmers Road gauge is calibrated.
- The proposed pumping restrictions are based on existing arrangements and will continue a history of good water management and ensure consistency with the proposed management of adjacent water sources.
- The trading rules identified through classification process were adopted by the Panel.
- Neither Aboriginal Community Development access licences nor high flow conversions of licences will be granted in this water source due to the high flow stress caused by the extractions for Tweed Shire's town water supply.
- 2 submissions were received for the Mid Tweed River Water Source during targeted consultation which were considered by the Panel.
- The Panel agreed with the suggestion to change the boundary of the Mid Tweed River Water Source to locate the weir pool exclusively in the Mid Tweed Water Source. This boundary change results in all weir pool users being located in the same water source and operating under the same water sharing rules
- A number of comments about the operation of Tweed Shire's major town water supply were referred to the departments licensing staff who are liaising with Council about their future plans and requirements.
- An environmental flow for that part of Doon Doon Creek in the Mid Tweed Water Source is proposed by way of a daily flow release from Clarrie Hall Dam (inclusive of any release for local water utility purposes) into Doon Doon Creek downstream of the storage equivalent to or greater than:
  - (i) 2 ML/day when flow at the flow reference point is at or less than the 95th percentile,
  - (ii) 4 ML/day when flow at the flow reference point is greater than the 95th percentile and less than the 80th percentile, and
  - (iii) 6 ML/day when flow at the flow reference point is at or greater than the 80th percentile
- This environmental flow will contribute to the requirement for the passage of a range of flows through either, or both, of the fishways in Bray Park Weir, which is situated at the end of the water source. A daily flow release shall be made from the storage through the fish ladder(s) on Bray Park Weir equivalent to or greater than:
  - (i) 8 ML/day when Clarrie Hall Dam capacity is at or greater than the 75%,
  - (ii) 5 ML/day when Clarrie Hall Dam capacity is less than 75% and greater than 50%, and
  - (iii) 3 ML/day when Clarrie Hall Dam capacity is at or less than 50%

- Initial consultation with Aboriginal communities indicates that they consider healthy rivers with natural flows and good biodiversity as being important.

Groundwater Alluvial Access Licences

- The alluvial aquifers in this water source are highly connected to their adjoining streams and alluvial groundwater extraction can have an impact on the river. Accordingly, from year six the access rules will apply to aquifer access licences extracting from the alluvial within 40m of an unregulated river. Trading rules and rules for granting new licences will apply to aquifer access licences from year one.
- The groundwater "local impact" rules will also apply to all groundwater extractions. These rules can be used to limit groundwater extractions when water tables or groundwater quality is being impacted.

Seeking Comment

Your feedback is sought on all aspects of the draft Water Sharing Plan, and in particular, the following key issues:

- The draft access rules, including the proposed daily pumping restrictions.

  Note: During periods of restricted pumping hours DWE is required (for reasons of compliance) to set specific times during which extraction can occur. To undertake pumping outside of these defined times, application can be made to DWE. DWE is seeking feedback from irrigators on the most suitable timing for the specified period between the hours of 4.00 pm and 10.00 am. Irrigators should consider their irrigation regimes and infrastructure when providing comment.
- The draft trading rules.

More information about the macro planning process for the Tweed River Area unregulated and alluvial water sources is available at: www.dwe.nsw.gov.au

Publication number 09_115

NSW GOVERNMENT Office of Water	Submission form for comments on the draft Tweed River Area unregulated and alluvial Water Sharing Plan, 2009

Office Use Only		Submission No.	

How to fill out this form

This form can be used to provide comments on the rules and provisions in a draft water sharing plan or water source report card. Key issues are listed below and the NSW Office of Water would like your comments on these issues. You are also welcome to comment on other aspects of the draft water sharing plan. If you wish to provide more detailed comments than the space provided, you can attach additional pages.

Note: some aspects of a water sharing plan cannot be changed as they must meet the statutory requirements of the *Water Management Act 2000*. The key areas for comment are listed below in the issues section.

Post to: Draft water sharing plan comments, NSW Office of Water, PO Box 664 ALSTONVILLE NSW 2477

Fax to: Draft water sharing plan comments, 02 6627 0166 **Email to: tweedwsp@dwe.nsw.gov.au**

Note: Submissions close 9 October 2009

Information on privacy and confidentiality

Submissions received by the NSW Office of Water in relation to water sharing plans will be used by the Office and the Regional Panel to review the draft water sharing plan. The Office values your input into the water sharing plan process and appreciates that information that you provide may be of a private and personal nature.

If you wish your submission or your personal details to be treated as confidential for any reason then you can request this. Please indicate your preference by ticking the relevant box on the submission form below. You should be aware that the Office may be required by law to release copies of submissions received to third parties. A request for access to a confidential submission will be determined in accordance with the *Freedom of Information Act 1989*.

Please be aware that if you **do not** make a request for confidentiality, then the Office may make your submission, including any personal details contained in the submission, available to the public, if requested to do so.

I would like my submission to be treated as confidential	☐ yes	☑ no
I would like my personal details to be treated as confidential	☐ yes	☑ no

Name	TWEED SHIRE COUNCIL
Postal Address	P. O. Box 816 MURWILLUMBAH N.S.W. 2484
Stakeholder Group (please indicate which of the following best represents your interest by ticking one box)	☐ Irrigator Interests ☐ Aboriginal Interest ☐ Environment Interests ☐ Fishing Interests ☐ Local Landholder ☐ Community Member ☑ Local Govt./ Utilities ☐ Other (specify)
Which water source/s do your comments relate to?	MID TWEED
KEY ISSUES	**COMMENTS (Please provide reasons for your concerns):** See Attached

KEY ISSUES

1. Impacts of plan

What impact would the rules in the draft plan have on your operations or the water source?

Please see items 5, 7, 8 & 13 as detailed below.

2. Cease/commence to pump levels

Are these too high or too low? (The cease to pump is the higher of the upper limit of the very low flow class set out in Part 3, Clause 16 Flow classes for these water sources or the cease / commence to pump specified on the licence.)

Council considers the 95th percentile flow as a cease to pump trigger as appropriate.

3. Sharing flows on a daily basis

Are the daily pumping restrictions appropriate?
(Refer to Part 4, Clause 19 (3) Planned environmental water.)

Council considers Clause 19 (3) (h), & (j) as appropriate i.e. 6 hours per day between the 90th and 95th percentile flows.

4. Appropriateness of flow reference point e.g. gauge, monitoring bore

Are the proposed sites appropriate?
(Refer to Part 3, Clauses 15 and 16)

Council is in agreement with Clauses 15 (2) and 16 (1) (t), 16 (2) (a) and with Clause 19 (4).

5. Environmental water provisions

Do they provide adequate protection for the environment?
(Refer to Part 4 Environmental water provisions.)

Council is not in agreement with clause 19 (1) (c) which refers to clause 77 (a).

Council is of the opinion that the 95th percentile flow for Doon Creek is approximately 1 ML/day for the critical month (November). This can be supported some what by the proportion of catchment areas. That is, the Clarrie Hall Dam catchment is 59.8 km^2 being 10.5% of the catchment area above Bray Park Weir of 570 km^2. It would appear that the 95th percentile flow at Bray Park Weir in the critical month of November is approximately 9ML/day. Therefore 10.5% of 9ML/day equates to 0.95 ML/day.

The Nominated value of 2 ML/day in clause 77 (a) (i) is considered to be high and Council would request it be reviewed with anticipation that a figure closer to 1 ML/day be adopted.

Similarly the 4ML/day in clause 77 (a) (ii) and the 6ML/day in clause 77 (a) (iii) are considered to be high relative to the 90th and 80th percentiles flows respectively for the critical month in Doon Doon Creek and would impact significantly on Council secure yield from Clarrie Hall Dam.

The table below show the approximate annual volume that would need to be released from Clarrie Hall dam is 2007 ML. This represents 13.4% of the available dam capacity of 15,000 ML.

Percentile Flow	**Release Days/year**	**Release rate ML/day**	**Volume Released ML**
Percentile flow <= 95th	18.25	2	36.50
95th < Percentile flow <= 80th	54.75	4	219.00
Percentile flow > 80th	292.00	6	1752.00
Total Volume released / year	**365.00**		**2007.50**

Course approximations by Council staff based on the SunWater "Tweed River System Water Supply Security Review" November 1996 (copy previously provided), suggest that a further reduction in secure yield in the order of 15% will result from the conditions imposed in Clause 77 (a), subclauses (i), (ii), (iii) as proposed. A brief email exchange from Peter Cloke, Principal Hydrologist, NSW Department of Public Works is attached which also provides some preliminary support to this likely reduction in secure yield.

Council therefore requests that the flows nominated in clause 77 (a) be reviewed.

The flows nominated in Clause 77 (b) and its respective subclauses appear to be inline with the 95th flow expected at Bray Park Weir and are considered appropriate by Council. Council is also appreciative of the relief subclauses (ii) & (iii) provide as the level in Clarrie Hall Dam drops.

6. Aboriginal cultural values

Do the environmental water provisions provide adequate protection for Aboriginal cultural values?

No comment provided

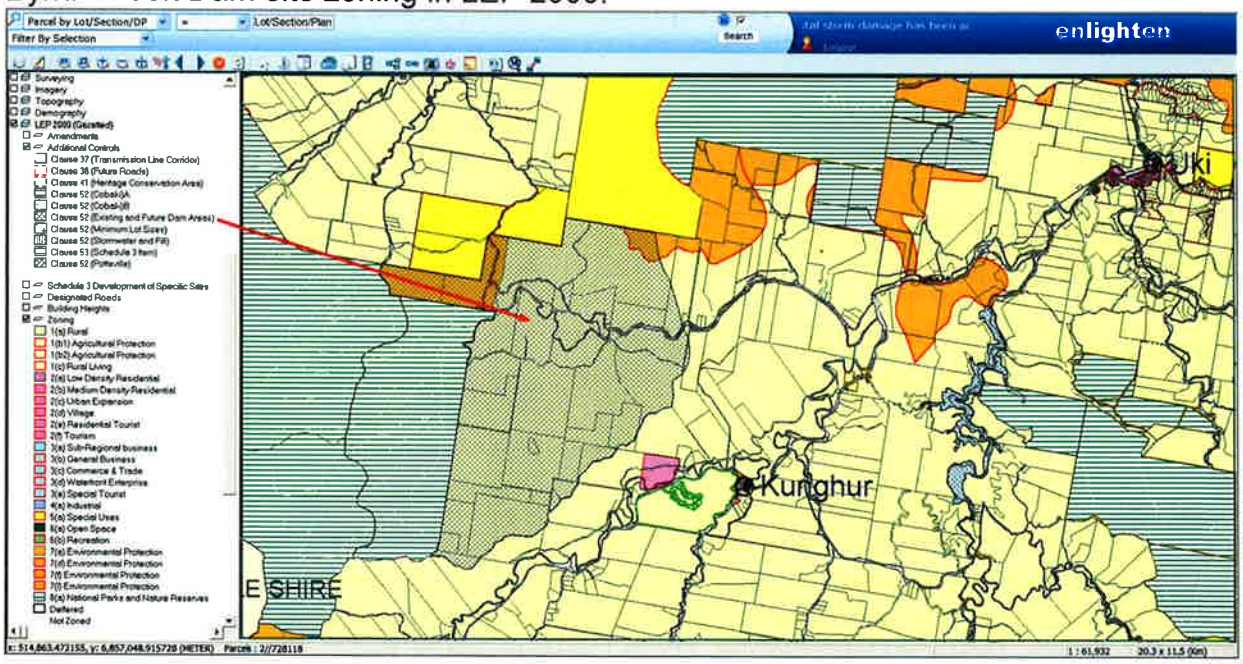
7. Local impact rules

Are these too restrictive or insufficient to protect environmental values/existing users? (Refer to Part 9 Rules for granting water supply works (bores) approvals and Part 11, Division 5 Management of local impacts).

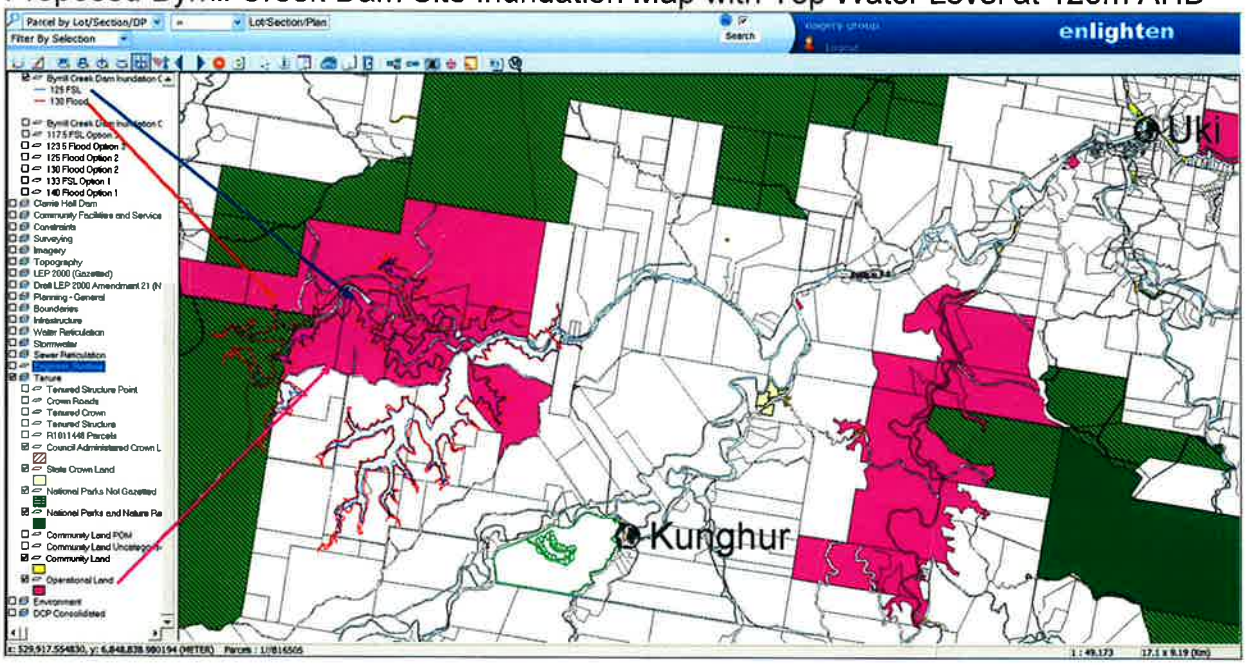
Council is not in agreement with Clause 36 which prohibits in-river dams on third order streams or higher in the Byrrill Creek water source.

Council has purchased the majority of property likely to be inundated by a future dam since the mid 1980's. This proposal for a future dam site has been public knowledge since that time and is incorporated in to the Current Local Environmental Plan (LEP) 2000 as Clause 52 Existing and Future Dam Areas. See inset below.

Byrrill Creek Dam site zoning in LEP 2000.



Proposed Byrrill Creek Dam Site Inundation Map with Top Water Level at 125m AHD



The inundation map above shows Council owned land in pink, national parks (not gazetted) in green and yellow diagonal stripes, leaving 8 property owners remaining.

The blue contour line represents a proposed top water level of 125 m AHD and the red contour line represents a maximum flood level of 130 m AHD. This size dam would have an approximate capacity of 36,000 ML. Larger sized copies of these maps are provide in the attachments to this submission.

Council requests that the Draft Water Sharing Plan be amended to permit the option of a future dam for town water supply at Byrrill Creek.

8. Trading rules
Are these too restrictive or insufficient to protect environmental/cultural values? (Refer to Part 13 Access licence dealing rules).

It would appear that Part 13 clauses 69 to 73 inclusive, prohibits any transfers from Tweed Shire Councils Water Act Licences to other adjacent Water Utilities/Authorities in NSW and QLD. This prohibition removes all cost effective options available to Council for drought management contingencies and significantly reduces available options for water supply augmentation.

Council requests that the Draft Water Sharing Plan be amended to permit options for the transfer of water to and from adjacent Water Utilities/Authorities in NSW and QLD for town water supply purposes with in the share component of the Mid Tweed Access Licence.

9. Water access licences that can be applied for
Are the categories of access licence which can be applied for appropriate? (Refer to Part 8 Rules for granting access licences)

No comment provided.

10. Circumstances where plan can change
Are the circumstances appropriate? (Refer to Part 16 Amendment to this Plan)

Council would request that the Minister also be able to amend the Part 13 - Access Licence Dealing Rules, of the Draft Water Sharing Plan to accommodate Council's request in item 8 above, to permit options for the transfer of water to and from adjacent Water Utilities/Authorities in NSW and QLD for town water supply purposes with in the share component of the Mid Tweed access licence.

11. Mandatory conditions
Where existing licence cease to pumps are at a higher level of restriction than the access rules proposed under the draft plan the existing cease to pump will continue to apply. Do you consider this to be appropriate?

Council considers the mandatory conditions appropriate.

12. Ministers Notes
Specific comment is being sought on issues raised in Ministers Notes in the plan in regard to:
a. High flow access for unregulated river access licences (Cl 71)
b. Licences listed in Schedule 2 (access in very low flows)

It is noted that Council can not covert its licences under Clause 71.

The Water Act Licences (Local Water Utilities) listed in Schedule 2 reflect Council's current Town Water Licences.

13. Other comments
Any other aspects of the draft plan

1. Bray Park Weir Fish Ladder Operation.
Acceptable physical mechanisms will need to be determined between Council and the relevant State Agencies to meet the low flow requirements in clause 77 (b). The two Fish Ladders can pass approximately 25 to 34 ML/day each respectively at weir crest level. These flow are far in excess of the requirements of clause 77 (b) and if not control will greatly reduce secure yield.

Allowing the weir pool to drop below crest level and only operating one fish ladder during low flow periods is operational possible excepting high tides will allow ingress of salt water into the weir pool during approximately 2 weeks per month when operating the weir pool at this low level.

2. Clarrie Hall Dam Operation.

Generally the low flow requirements of Clause 77 (a) can be accommodated by use of scour valves (with modification) on the two discharge pipelines from the Dam outlet structure.

3. **Draft Report** by Dr K.A. Bishop 2nd July 2008

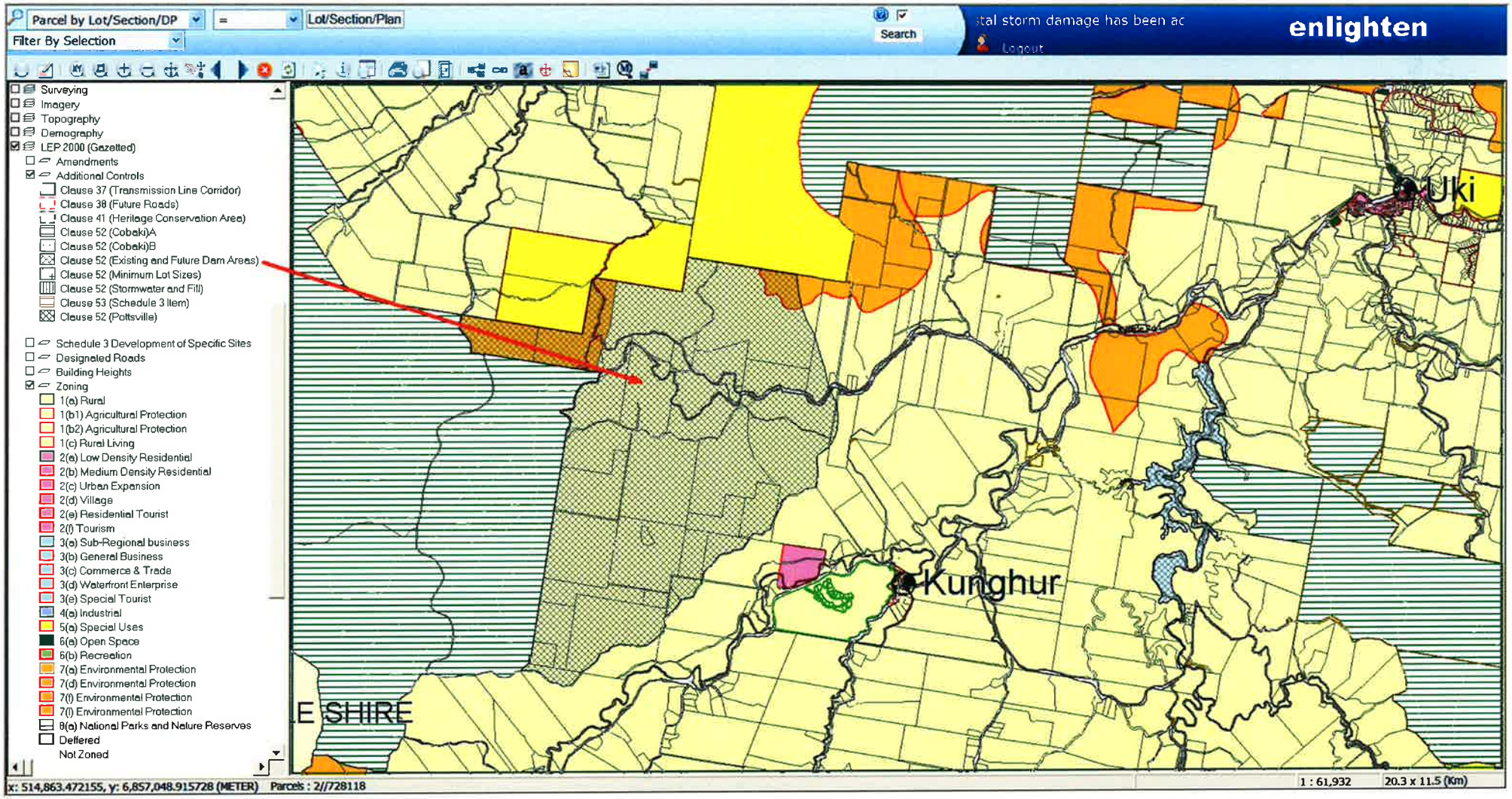
Please find attached **Draft Report** by Dr K.A. Bishop 2nd July 2008 on Environmental Flow Scoping Study for Doon Doon Creek & the Lower Tweed River, NSW. This study was commission by Council to inform the assessment process associated with the proposal to raise Clarrie hall Dam.

Attachments:

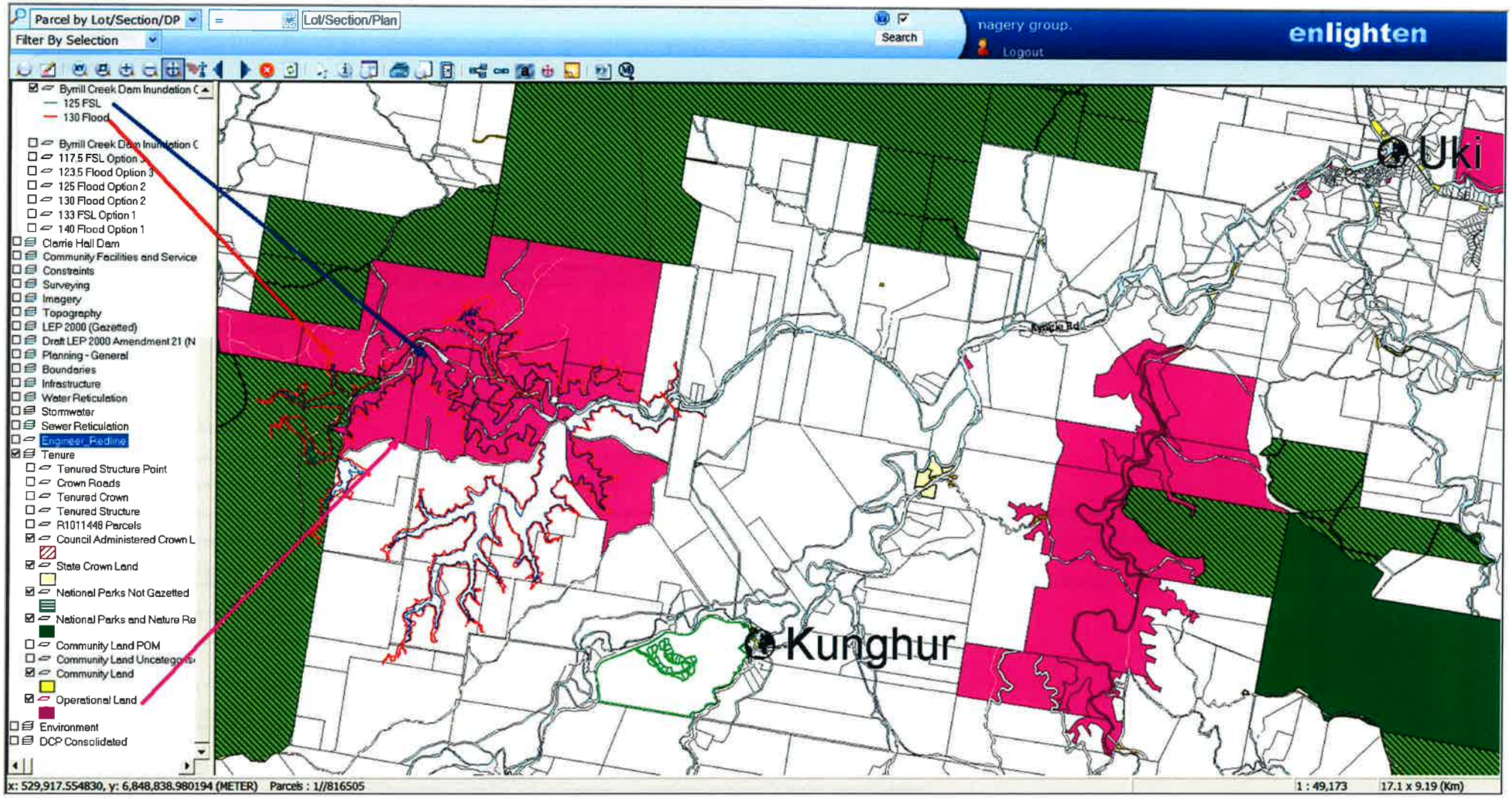
1. Byrrill Creek Dam site zoning in LEP 2000.
2. Proposed Byrrill Creek Dam Site Inundation Map with Top Water Level at 125m AHD
3. Email exchange from Peter Cloke, Principal Hydrologist, NSW Department of Public Works

4. Environmental Flow Scoping Study for Doon Doon Creek & the Lower Tweed River, NSW. **Draft Report** by Dr K.A. Bishop 2nd July 2008. (Note, attached as separate document due to size).

Byrrill Creek Dam site zoning in LEP 2000.



Proposed Byrrill Creek Dam Site Inundation Map with Top Water Level at 125m AHD



From: Tim Mackney
Sent: Tuesday, 6 October 2009 9:30 AM
To: Anthony.Burnham
Subject: FW: Affect of proposed water sharing plan on CHD secure yield

Anthony,
This is probably what we were expecting. But I'm not sure this says enough to help you with the submission? I can pursue more from Peter if you think we need it.
If we feel we need more substantial modelling from Peter, then we'll have to instruct him early.
Tim

From: Peter Cloke [mailto:Peter.Cloke@services.nsw.gov.au]
Sent: Tuesday, 6 October 2009 8:15 AM
To: Tim Mackney
Subject: Re: Affect of proposed water sharing plan on CHD secure yield

Tim,
Based on a brief examination of the voluminous material attached and our experience on the impacts of environmental flows on secure yield on other schemes the following advice is offered:

1) Imposition of environmental flows or changes to environmental flows can significantly reduce the secure yield of water supply headworks systems.

2) Due to the non linearity of systems and their non linear responses to operating constraints it is not possible to ascertain with reasonable certainty what the effects of imposing particular environmental flow requirements on a particular systems secure yield without detail modelling of the particular system including operating rules and environmental flow requirements.

3) Some idea of the potential sensitivity of secure yield to environmental flows can be obtained from Table 7.1 in SunWaters 2006 report. Imposition of 95%ile environmental flows on Bray Park Weir reduced the system secure yield from 16,900 ML/a (Case C) to 13,750 ML/a (Case D).

4) Even without changes to environmental flows, other changes to a system and its operating rules and constraints can significantly changes a systems secure yield due to non linearity thus making it difficult to deduce effects of environmental flows on secure yield from other cases.

We would expect to undertake the required modelling before Christmas unless we were able to rearrange priorities.

It would be appreciated if you could provide an order to cover 2 hours of my time to cover our discussions, pursuing of the attached material and the above advice.

I trust the above meets your requirements.

Regards

Peter Cloke
Principal Hydrologist

>>> Tim Mackney <TMackney@tweed.nsw.gov.au> 23/09/09 15:40 >>>
Peter,

As discussed, NSW Office of Water presented the draft Water Sharing Plan for the Tweed last week. The environmental flow values appear to have increased from the existing CHD license conditions (which differs from previous advice from the department), and we are concerned about what affect this will have on the secure yield of the CHD system. The draft documents from NOW are attached.

The closing date for submissions in 09.10.2009. NOW accepted that the results from modelling will not be ready by that date, and proposed that Council's submission highlight TSC's concerns and state that modelling results will be forwarded in due course once completed.

In order to complete the submission, we require some preliminary advice from NSW Water Solutions as to probable affects on the existing secure yield. My understanding is that Scenario 4C from the 2006 SunWater report is the baseline against which comparisons need to be made. Council is prepared to pay on a time & expense basis, and we'll need your advice by 02.10.2009.

So that Council can instruct for the works to proceed, can you please advise by return email:
i) what information and format you will be able to provide
ii) an estimated cost for this preliminary advice.

If required, the more detailed modelling of the water sharing effects will form part of another engagement.

Kind regards,
Tim Mackney
NSW Public Works
North Coast Region - Tweed
T: (02) 6670 2506
F: (02) 6670 2557
M: 0408 563 584

Report card for the Upper Oxley River water source

Water Source Context	**River Flows**
Area: 3973 hectares (55% forested) **Average Annual Rainfall:** 1976 mm **Inflowing water sources:** None **Receiving water source:** Lower Oxley River	**Low Flow Index (80th%ile) = 4 ML/day** **Flow Records:** 1969 to 1982. Low flow index for critical month (November) estimated from former Oxley River, Tyalgum gauging station (201006)
Licensed Water Use (at 20 February 2009)	
Total surface water entitlement: 361 ML/year • 13 Water Act Licenses (55% used for industrial purposes, 26% used for irrigation purposes, 13% used for Town Water Supply, 4% used for farming purposes) 1% of total Extraction Management Unit entitlement	

Background Information		
Water Source Attributes	**Rating**	**Justification**
Relative Instream Value (within catchment)	**MEDIUM**	▪ 7 threatened frog species ▪ 1 threatened bird species ▪ 1 other threatened fauna ▪ high recreation value ▪ significant area of National Park
Hydrologic Stress	**LOW**	▪ within water source = low - peak extraction demand is significantly less than available flows in November
Relative Economic Significance of Irrigation (within catchment)	**MEDIUM**	▪ medium economic dependence of the local community on water extracted for irrigation ▪ low value of production from irrigation
Risk to Instream Value (from extraction)	**LOW**	▪ instream values are at low risk of being impacted by extractions within the water source
Existing Access Arrangements During Drought Conditions		
Cease to Pump	No visible flow	
Pumping Restrictions	6 hours/day	
Reference Point	Tyalgum Weir at Limpinwood Road	
Water Users Association	None	

Recommendations for Upper Oxley River water source

Draft Access Rules	
Cease to Pump	3 ML/day at the Eungella gauge (approximates no visible flow in the Upper Oxley River Water Source) NB: From year six of the plan the cease to pump condition will apply to aquifer access licences extracting from all alluvial aquifers within 40m of an unregulated river, except for existing Domestic and Stock access licences and Local Water Utility access licences for which these rules do not apply
Daily Pumping Restrictions	Pumping permitted for a maximum of 6 hours/day between a specified time (to be determined) when flows are equal to or less than 5 ML/day and greater than 3 ML/day at the Eungella gauge
Reference point	Oxley River, Eungella gauge (201001) in the Lower Oxley Water Source

Draft Trading Rules	
INTO water source	Permitted only from the Hopping Dicks Creek, Lower Oxley River, Mid Tweed River, Smiths Creek, Rolands Creek, Doon Doon Creek, Upper Tweed River, Byrrill Creek, Brays Creek or Pumpenbil Creek Water Sources up to a maximum additional entitlement of 418 ML
WITHIN water source	Permitted
Conversion to High Flow Access	Not permitted
Conversion to Aquifer Access Licence	Permitted, subject to assessment

Key Factors for Panel Decisions

- The access and trading rules identified through the classification process were adopted by the Panel.
- As additional hydrological analysis has found good correlation between river flows in the Upper Oxley River water source and the Lower Oxley River water source, it is proposed that the Eungella gauge be used to manage the cease to pump rule.
- This is supported by advice from DWE Licensing that Eungella gauge is considered a more suitable reference point. The gauge (which can be accessed by phone or internet) should be more convenient for water users than travelling to a reference point.
- The proposed pumping restrictions are based on existing arrangements and will continue a history of good water management and ensure consistency with the proposed management of adjacent water sources.
- Aboriginal Community Development access licences will not be granted in this water source due to insufficient water being available to support new licences during high flows.
- High flow conversion of licences will not be permitted as the water source is not assessed as being under high hydrologic stress nor are its instream values at high risk.

- 1 submission was received for the Upper Oxley River Water Source during targeted consultation which was considered by the Panel. The comments were related to town water supply and the Panel suggested licensing staff clarify with Tweed City Council that the proposed rules will not impact on the current town water supply arrangements.
- Initial consultation with Aboriginal communities indicates that they consider healthy rivers with natural flows and good biodiversity as being important.

Groundwater Alluvial Access Licences

- The alluvial aquifers in this water source are highly connected to their adjoining streams and alluvial groundwater extraction can have an impact on the river. Accordingly, the proposed trading rules and rules for granting new licences will apply to aquifer access licences from year one.
- The groundwater "local impact" rules will also apply to all groundwater extractions. These rules can be used to limit groundwater extractions when water tables or groundwater quality is being impacted.

Seeking Comment

Your feedback is sought on all aspects of the draft Water Sharing Plan, and in particular, the following key issues:

- The draft access rules, including the proposed daily pumping restrictions.

  Note: During periods of restricted pumping hours DWE is required (for reasons of compliance) to set specific times during which extraction can occur. To undertake pumping outside of these defined times, application can be made to DWE. DWE is seeking feedback from irrigators on the most suitable timing for the specified period between the hours of 4.00 pm and 10.00 am. Irrigators should consider their irrigation regimes and infrastructure when providing comment.
- The draft trading rules.

More information about the macro planning process for the Tweed River Area unregulated and alluvial water sources is available at: www.dwe.nsw.gov.au

Publication number 09_115

NSW GOVERNMENT Office of Water	Submission form for comments on the draft Tweed River Area unregulated and alluvial Water Sharing Plan, 2009

Office Use Only		Submission No.	

How to fill out this form

This form can be used to provide comments on the rules and provisions in a draft water sharing plan or water source report card. Key issues are listed below and the NSW Office of Water would like your comments on these issues. You are also welcome to comment on other aspects of the draft water sharing plan. If you wish to provide more detailed comments than the space provided, you can attach additional pages.

Note: some aspects of a water sharing plan cannot be changed as they must meet the statutory requirements of the *Water Management Act 2000*. The key areas for comment are listed below in the issues section.

Post to: Draft water sharing plan comments, NSW Office of Water, PO Box 664 ALSTONVILLE NSW 2477

Fax to: Draft water sharing plan comments, 02 6627 0166 **Email to: tweedwsp@dwe.nsw.gov.au**

Note: Submissions close 9 October 2009

Information on privacy and confidentiality

Submissions received by the NSW Office of Water in relation to water sharing plans will be used by the Office and the Regional Panel to review the draft water sharing plan. The Office values your input into the water sharing plan process and appreciates that information that you provide may be of a private and personal nature.

If you wish your submission or your personal details to be treated as confidential for any reason then you can request this. Please indicate your preference by ticking the relevant box on the submission form below. You should be aware that the Office may be required by law to release copies of submissions received to third parties. A request for access to a confidential submission will be determined in accordance with the *Freedom of Information Act 1989*.

Please be aware that if you **do not** make a request for confidentiality, then the Office may make your submission, including any personal details contained in the submission, available to the public, if requested to do so.

I would like my submission to be treated as confidential	☐ yes	☑ no
I would like my personal details to be treated as confidential	☐ yes	☑ no

Name	TWEED SHIRE COUNCIL
Postal Address	P.O. Box 816 MURWILLUMBAH N.S.W. P/C 2484
Stakeholder Group (please indicate which of the following best represents your interest by ticking one box)	☐ Irrigator Interests ☐ Aboriginal Interest ☐ Environment Interests ☐ Fishing Interests ☐ Local Landholder ☐ Community Member ☑ Local Govt./ Utilities ☐ Other (specify)
Which water source/s do your comments relate to?	UPPER OXLEY
KEY ISSUES	**COMMENTS (Please provide reasons for your concerns)** SEE Attached.

KEY ISSUES

1. Impacts of plan

What impact would the rules in the draft plan have on your operations or the water source?

Please see items as detailed below.

2. Cease/commence to pump levels

Are these too high or too low? (The cease to pump is the higher of the upper limit of the very low flow class set out in Part 3, Clause 16 Flow classes for these water sources or the cease / commence to pump specified on the licence.)

Council considers the 95th percentile flow as a cease to pump trigger as appropriate.

3. Sharing flows on a daily basis
Are the daily pumping restrictions appropriate?
(Refer to Part 4, Clause 19 (3) Planned environmental water.)

Council considers Clause 19 (3) (j) as appropriate i.e. 6 hours per day between the 90th and 95th percentile flows.

4. Appropriateness of flow reference point e.g. gauge, monitoring bore
Are the proposed sites appropriate?
(Refer to Part 3, Clauses 15 and 16)

Council is in agreement with Clause 16 (1) (ee).

5. Environmental water provisions
Do they provide adequate protection for the environment?
(Refer to Part 4 Environmental water provisions.)

Council is in agreement with clause 19 (3) (j) and appreciates the exclusion of schedule 2 licence for town water supply.

6. Aboriginal cultural values
Do the environmental water provisions provide adequate protection for Aboriginal cultural values?

No comment provided

7. Local impact rules
Are these too restrictive or insufficient to protect environmental values/existing users?
(Refer to Part 9 Rules for granting water supply works (bores) approvals and Part 11, Division 5 Management of local impacts).

No comment provided

8. Trading rules
Are these too restrictive or insufficient to protect environmental/cultural values?
(Refer to Part 13 Access licence dealing rules).

No comment provided

9. Water access licences that can be applied for
Are the categories of access licence which can be applied for appropriate?
(Refer to Part 8 Rules for granting access licences)

No comment provided.

10. Circumstances where plan can change
Are the circumstances appropriate?
(Refer to Part 16 Amendment to this Plan)

No comment provided.

11. Mandatory conditions
Where existing licence cease to pumps are at a higher level of restriction than the access rules proposed under the draft plan the existing cease to pump will continue to apply. Do you consider this to be appropriate?

Council considers the mandatory conditions appropriate.

12. Ministers Notes
Specific comment is being sought on issues raised in Ministers Notes in the plan in regard to:
a. High flow access for unregulated river access licences (Cl 71)
b. Licences listed in Schedule 2 (access in very low flows)

It is noted that Council can not covert its licences under Clause 71.

The Water Act Licences (Local Water Utilities) listed in Schedule 2 reflect Council's current Town Water Licences.

13. Other comments
Any other aspects of the draft plan

Attachments: Nil

NSW GOVERNMENT | Office of Water

Draft Water Sharing Plan

Tweed River Area unregulated and alluvial water sources

Order

FOR PUBLIC EXHIBITION
August–October 2009

Department of
Environment, Climate Change and Water NSW

Publisher

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The NSW Office of Water manages the policy and regulatory frameworks for the State's surface water and groundwater resources to provide a secure and sustainable water supply for all users, and supports water utilities in the provision of water supply and sewerage services throughout New South Wales. It forms part of the Department of Environment, Climate Change and Water (NSW).

Draft Water Sharing Plan
Tweed River Area unregulated and alluvial water sources

Order

August 2009

ISBN 978 1 921546 50 1

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Minister's foreword

I am pleased to place on public display the draft water sharing plan for the Tweed River Area Unregulated and Alluvial Water Sources, 2009.

Water is a key natural resource, vital for the health and survival of our native flora and fauna. It is essential for basic human needs and agricultural production, as well as for recreational and aesthetic purposes.

Commencing a water sharing plan will be a significant step for the future management of the unregulated rivers within the Tweed River catchment and the adjoining smaller coastal catchments of Cudgen, Cudgera and Mooball Creeks.

The Plan, once finalised and gazetted under the Water Management Act 2000, will be legally binding for 10 years. The Plan will provide clearly defined access rights and a decade of security and certainty for all water users, including irrigation, town water supply and the environment.

The draft Plan was developed by an Interagency Regional Panel comprising staff from the former Department of Water and Energy, Department of Environment and Climate Change, Department of Primary Industries and the Northern Rivers Catchment Management Authority. It builds on the work done by the Far North Coast Water Management Committee during the first round of water sharing plans. While some targeted consultation has already occurred with a number of the key stakeholder groups, further public comment is essential to this process.

The draft Plan proposes a number of new provisions to maintain and improve the long-term health of riverine ecosystems as required by the State Plan. The draft Plan will benefit from community input. I'd like to draw your attention to some particularly important recommendations and have highlighted each of them in the text of the draft Plan as Minister's Notes. Your comments on these aspects are especially invited.

The draft plan will be on public exhibition until 9 October 2009. I commend this draft plan to you and ask that you make submissions on its content. A submission form is available from www.dwe.nsw.gov.au

All submissions will be referred to the Interagency Regional Panel for consideration. It is intended that the water sharing plan will commence on 1 April 2010.

To obtain the best outcome for all, it is important that water management is a shared, community-driven process. I look forward to receiving your comments on this draft Plan.

The Hon. Phillip Costa MP
Minister for Water

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Water Sharing Plan for the Tweed River Area Unregulated and Alluvial Water Sources 2009

Part 1 Introduction

1 Name of this Plan

This Plan is the "Water Sharing Plan for the Tweed River Area Unregulated and Alluvial Water Sources 2009" (hereafter ***this Plan***).

2 Nature and Status of this Plan

(1) This Plan is made under section 50 (1A) of the *Water Management Act 2000* (hereafter ***the Act***).

(2) This Plan is a plan for water sharing, and generally deals with matters set out in sections 20, 21 (a) to 21 (c) and 21 (f) of the Act.

3 Date of commencement

This Plan takes effect on 1 April 2010.

4 Area to which this Plan applies

(1) The area in respect of which this Plan is made is that area of land within the Northern Rivers Water Management Area, known as the Tweed River Area Unregulated and Alluvial Water Sources (hereafter ***these water sources***).

(2) These water sources exclude the area of land below the mangrove limit.

Note. The mangrove limit is as defined in the *'DIPNR Survey of tidal limits and mangrove limits in NSW estuaries 1996 to 2003' (NSW Dept of Commerce, Manly Hydraulics Laboratory).*

5 Waters to which this Plan applies

(1) These water sources in respect of which this Plan is made, and shown on the registered plan called The Tweed River Area Unregulated and Alluvial Water Sources XXXXX – XXXX *(registered plan number to be inserted at time of making plan)* held in the NSW Office of Water Head Office, are:

(a) the Bilambil Creek Water Source,

(b) the Brays Creek Water Source,

(c) the Burringbar River Water Source,

(d) the Byrrill Creek Water Source,

(e) the Christies Creek Water Source,

(f) the Clothiers Creek Water Source,

(g) the Cobaki Broadwater Water Source,

(h) the Cobaki Creek Water Source,

(i) the Crystal Creek Water Source,

(j) the Cudgen Lake Water Source,

(k) the Cudgera Creek Water Source,

(l) the Doon Doon Creek Water Source,

(m) the Dunbible Creek Water Source,

(n) the Dungay Creek Water Source,

(o) the Duroby Creek Water Source,

(p) the Hopping Dicks Creek Water Source,

(q) the Lower Oxley River Water Source,

(r) the Mid Rous River Water Source,

(s) the Mid Tweed River Water Source,

(t) the Mooball Creek Water Source,

(u) the Nobbys Creek Water Source,

(v) the Piggabeen Creek Water Source,

(w) the Pumpenbil Creek Water Source,

(x) the Rolands Creek Water Source,

(y) the Sheens Creek Water Source,

(z) the Smiths Creek Water Source,

(aa) the Terranora Broadwater Water Source,

(bb) the Tweed Estuary Water Source,

(cc) the Upper Oxley River Water Source,

(dd) the Upper Rous River Water Source, and

(ee) the Upper Tweed River Water Source.

Note. An overview of these water sources is shown in Appendix 1. Copies of registered plans referred to in this Plan may be inspected at offices listed in Appendix 2.

(2) The following water sources are divided into management zones and shown on the registered plan called The Tweed River Area Unregulated and Alluvial Water Sources XXXXX – XXXX *(registered plan number to be inserted at time of making plan)* held in the NSW Office of Water Head Office:

(a) Burringbar River Water Source:

(i) Burringbar River Management Zone, and

(ii) Crabbes Creek Management Zone, and

(b) Tweed Estuary Water Source:

(i) Rous River Tidal Pool Management Zone, and

(ii) Tweed Estuary Management Zone.

(3) The Minister may amend subclauses (1) and (2) to amend an existing water source or management zone, or establish a new or additional water source or management zones.

(4) Following the amendment to a water source, management zone or management zones under subclause (3) the registered plan called The Tweed River Area Unregulated and Alluvial Water Sources XXXXX – XXXX *(registered plan number to be inserted at time of making plan)* held in the NSW Office of Water Head Office may be amended.

(5) The waters of these water sources include:

(a) all water occurring on the land surface shown on the registered plan called The Tweed River Area Unregulated and Alluvial Water Sources XXXXX – XXXX *(registered plan number to be inserted at time of making plan)* held in the NSW Office of Water Head Office, including but not limited to all rivers, lakes and wetlands in these water sources, and

(b) all groundwater within all alluvial sediments below the surface of the land on the registered plan called The Tweed River Area Unregulated and Alluvial Water Sources XXXXX – XXXX *(registered plan number to be inserted at time of making plan)* held in the NSW Office of Water Head Office, excluding:

(i) any groundwater contained in the coastal sands, and

(ii) any groundwater contained in fractured rock aquifers and basement rocks in the area to which this Plan applies.

6 Interpretation

(1) Words and expressions that are defined in the Act have the same meanings in this Plan.

(2) Words and expressions that are defined in Schedule 1 of this Plan have the meanings set out on that Schedule.

(3) Notes in the text of this Plan do not form part of this Plan.

(4) Schedules to this Plan form part of this Plan.

(5) Appendices to this Plan do not form part of this Plan.

Part 2 Vision, objectives, strategies and performance indicators

7 Vision, objectives, strategies and performance indicators

This part is made in accordance with section 35 (1) of the Act.

8 Vision

The vision of this Plan is to provide healthy and enhanced water dependant ecosystems and equitable water sharing among users in the Tweed River Area Unregulated and Alluvial Water Sources.

9 Objectives

The objectives of this Plan are to:

(a) protect, preserve, maintain or enhance the important river flow dependent and high priority groundwater dependent ecosystems of these water sources,

(b) protect, preserve, maintain or enhance the Aboriginal, cultural and heritage values of these water sources,

(c) protect basic landholder rights,

(d) manage these water sources to ensure equitable sharing between users,

(e) provide opportunities for market based trading of access licences and water allocations within sustainability and system constraints,

(f) provide sufficient flexibility in water account management to encourage responsible use of available water,

(g) contribute to the maintenance of water quality,

(h) provide recognition of the connectivity between surface water and groundwater, and

(i) adaptively manage these water sources.

Note. For the purposes of the Inter-government Agreement on the National Water Initiative (2004) the environmental and other public benefit outcomes are:

1. the important river flow dependent environmental, Aboriginal, cultural and heritage values of these water sources are protected, preserved, maintained or enhanced,

2. these water sources are managed to ensure equitable sharing between users,

3. basic landholder rights of owners of land are protected, and

4. the maintenance of water quality contributed to.

10 Strategies

The strategies of this Plan are to:

(a) establish environmental water rules,

(b) identify water requirements for basic landholder rights,

(c) identify water requirements for access licences,

(d) establish rules for granting of access licences and approvals,

(e) establish rules that place limits on the availability of water for extraction,

(f) establish rules for making available water determinations,

(g) establish rules for the operation of water accounts,

(h) establish rules which specify the circumstances under which water may be extracted,

(i) establish access licence dealing rules,

(j) establish performance indicators, and

(k) identify triggers for and limits to changes to the rules.

11 Performance indicators

(1) The following indicators are to be used to determine the performance of this Plan against its objectives:

(a) change in low flow regime,

(b) change in moderate to high flow regime,

(c) change in groundwater extraction relative to the long-term average annual extraction limit,

(d) extent of groundwater level fluctuations,

(e) change in local water utilities access,

(f) change in, or maintenance of, ecological value of key water sources and their dependent ecosystems,

(g) extent to which basic landholder rights requirements have been met,

(h) extent to which local water utility requirements have been met,

(i) extent to which native title rights requirements have been met,

(j) change in economic benefits derived from water extraction and use, and

(k) extent of recognition of spiritual, social, economic and customary values of water to Aboriginal people.

(2) The Minister is to undertake an assessment of the performance of the Plan against these performance indicators after each five year period in which the Plan has been in operation.

Part 3 Basis for water sharing

12 Basis for water sharing

This Part is made in accordance with sections 20 (2) (a) and 20 (2) (c) of the Act.

13 Climatic variability

This Plan recognises the effects of climatic variability on river flow and groundwater level variability in these water sources by having provisions that manage:

(a) the sharing of water in these water sources within the limits of water availability on a long-term average annual basis,

(b) the sharing of flows that occur in specified water sources on a daily basis, and

(c) water extraction to maintain groundwater dependent ecosystems.

14 Extraction management units for these water sources

(1) The availability of water for extraction from these water sources on a long-term average annual basis will be determined at the level of an extraction management unit.

(2) The extraction management units for these water sources are the Tweed River Catchment Extraction Management Unit, the Clothiers Creek Catchment Extraction Management Unit and the Burringbar River Catchment Extraction Management Unit, and are shown on the registered plan called The Tweed River Area Unregulated and Alluvial Water Sources XXXXX – XXXX *(registered plan number to be inserted at time of making plan)* held in the NSW Office of Water Head Office.

(3) The Tweed River Catchment Extraction Management Unit consists of the following water sources:

(a) Bilambil Creek Water Source,

(b) Brays Creek Water Source,

(c) Byrrill Creek Water Source,

(d) Cobaki Broadwater Water Source,

(e) Cobaki Creek Water Source,

(f) Crystal Creek Water Source,

(g) Doon Doon Creek Water Source,

(h) Dunbible Creek Water Source,

(i) Dungay Creek Water Source,

(j) Duroby Creek Water Source,

(k) Hopping Dicks Creek Water Source,

(l) Lower Oxley River Water Source,

(m) Mid Rous River Water Source,

(n) Mid Tweed River Water Source,

(o) Nobbys Creek Water Source,

(p) Piggabeen Creek Water Source,

(q) Pumpenbil Creek Water Source,

(r) Rolands Creek Water Source,

(s) Smiths Creek Water Source,

(t) Terranora Broadwater Water Source,

(u) Tweed Estuary Water Source,

(v) Upper Oxley River Water Source,

(w) Upper Rous River Water Source, and

(x) Upper Tweed River Water Source.

(4) The Clothiers Creek Catchment Extraction Management Unit consists of the following water sources:

(a) Clothiers Creek Water Source, and

(b) Cudgen Lake Water Source.

(5) The Burringbar River Catchment Extraction Management Unit consists of the following water sources:

(a) Burringbar River Water Source,

(b) Christies Creek Water Source,

(c) Cudgera Creek Water Source,

(d) Mooball Creek Water Source, and

(e) Sheens Creek Water Source.

15 Flow reference point

(1) For the purposes of this Plan, all flows referred to relate to the estimated flows at the flow reference points for each water source or management zone as shown on the registered plan called The Tweed River Area Unregulated and Alluvial Water Sources XXXXX – XXXX *(registered plan number to be inserted at time of making plan)* held in the NSW Office of Water Head Office, or as otherwise stated in this Plan.

(2) The Minister may amend the flow reference points for the Byrrill Creek Water Source, the Doon Doon Creek Water Source, the Mid Tweed River Water Sources, the Rolands Creek Water Source, the Smiths Creek Water Source and the Upper Tweed River Water Source, after year 5 of this Plan, if sufficient data has been collected to calibrate the newly installed Tweed River at

Palmers Road gauge (201015) in the Mid Tweed Water Source, in accordance with clause 16 (2) (a) of this Plan.

(3) The registered plan called The Tweed River Area Unregulated and Alluvial Water Sources XXXXX – XXXX *(registered plan number to be inserted at time of making plan)* held in the NSW Office of Water Head Office may be amended by the Minister as a result of the establishment of, or changes to, flow reference points under subclause (2) and clause 16 (2) of this Plan.

16 Flow classes for these surface water sources

(1) This Plan establishes the following flow classes as the basis for sharing of daily flows from these water sources:

Note. The following flow classes apply to all access licences extracting from surface water specified for each water source from the commencement date of this Plan, excluding those access licences listed under clause 60 and access licences that nominate a runoff harvesting work. They will also apply to all existing aquifer access licence holders extracting from alluvial aquifers within 40 metres of the high bank of the river from year six of this Plan, except where provided for under clause 62 (2) of this Plan. For those aquifer access licences outside the 40 metres, daily flow classes will not apply.

(a) for the Bilambil Creek Water Source, at the Cobaki Creek at Cobaki gauge (201012) in the Cobaki Creek Water Source:

(i) the Very Low Flow Class is when flows are at or below 0.5 ML/day, and

(ii) A Class is when flows are greater than 0.5 ML/day,

Note. 0.5 ML/day corresponds to the estimated 84th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(b) for the Brays Creek Water Source, at the Oxley River at Eungella gauge (201001) in the Lower Oxley River Water Source:

(i) the Very Low Flow Class is when flows are at or below 3 ML/day, and

(ii) A Class is when flows are greater than 3 ML/day,

Note. 3 ML/day corresponds to the estimated 95th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(c) for the Burringbar River Management Zone of the Burringbar River Water Source, at the Burringbar Staff gauge:

(i) the Very Low Flow Class is when there is no visible flow, and

(ii) A Class is when there is a visible flow,

(d) for the Crabbes Creek Management Zone of the Burringbar River Water Source, at the Crabbes Creek Road:

(i) the Very Low Flow Class is when there is no visible flow, and

(ii) A Class is when there is a visible flow,

(e) for the Byrrill Creek Water Source, at the Oxley River at Eungella gauge (201001) in the Lower Oxley River Water Source:

(i) the Very Low Flow Class is when flows are at or below 3 ML/day, and

(ii) A Class is when flows are greater than 3 ML/day,

Note. 3 ML/day corresponds to the estimated 95th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

Note. The flow classes and flow reference point may change after year 5 of this Plan, following the calibration of the newly installed Tweed River at Palmers Road gauge (201015) in the Mid Tweed Water Source, in accordance with clause 16 (2) (a) of this Plan.

(f) for the Christies Creek Water Source, at the Kanes Road Crossing:

(i) the Very Low Flow Class is when there is no visible flow, and

(ii) A Class is when there is a visible flow,

(g) for the Clothiers Creek Water Source, no flow classes are established by this Plan,

(h) for the Cobaki Broadwater Water Source, at the Cobaki Creek at Cobaki gauge (201012) in the Cobaki Creek Water Source:

(i) the Very Low Flow Class is when flows are at or below 0.5 ML/day, and

(ii) A Class is when flows are greater than 0.5 ML/day,

Note. 0.5 ML/day corresponds to the estimated 84th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(i) for the Cobaki Creek Water Source, at the Cobaki Creek at Cobaki gauge (201012):

(i) the Very Low Flow Class is when flows are at or below 0.5 ML/day, and

(ii) A Class is when flows are greater than 0.5 ML/day,

Note. 0.5 ML/day corresponds to the estimated 84th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(j) for the Crystal Creek Water Source, at the Rous River at Boatharbour No.3 gauge (201005) in the Mid Rous River Water Source:

(i) the Very Low Flow Class is when flows are at or below 6 ML/day,

(ii) A Class is when flows are greater than 6 ML/day and less than or equal to 28 ML/day, and

(iii) B Class is when flows are greater than 28 ML/day,

Note. 6 ML/day corresponds to the estimated 80th percentile. 28 ML/day corresponds to the estimated 50th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(k) for the Cudgen Lake Water Source, no flow classes are established by this Plan,

(l) for the Cudgera Creek Water Source, at the Cudgera Creek Road Bridge (east of Highway):

(i) the Very Low Flow Class is when there is no visible flow, and

(ii) A Class is when there is a visible flow,

(m) for the Doon Doon Creek Water Source, at the Oxley River at Eungella gauge (201001) in the Lower Oxley River Water Source:

(i) the Very Low Flow Class is when flows are at or below 3 ML/day, and

(ii) A Class is when flows are greater than 3 ML/day,

Note. 3 ML/day corresponds to the estimated 95th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

Note. The flow classes and flow reference point may change after year 5 of this Plan, following the calibration of the newly installed Tweed River at Palmers Road gauge (201015) in the Mid Tweed Water Source, in accordance with clause 16 (2) (a) of this Plan.

(n) for the Dunbible Creek Water Source, at the Stokers Road Crossing:

(i) the Very Low Flow Class is when there is no visible flow, and

(ii) A Class is when there is a visible flow,

(o) for the Dungay Creek Water Source, at the Dungay Creek Road Crossing:

(i) the Very Low Flow Class is when there is no visible flow, and

(ii) A Class is when there is a visible flow,

(p) for the Duroby Creek Water Source, at the Cobaki Creek at Cobaki gauge (201012) in the Cobaki Creek Water Source:

(i) the Very Low Flow Class is when flows are at or below 0.5 ML/day, and

(ii) A Class is when flows are greater than 0.5 ML/day,

Note. 0.5 ML/day corresponds to the estimated 84th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(q) for the Hopping Dicks Creek Water Source, at the Oxley River at Eungella gauge (201001) in the Lower Oxley River Water Source:

(i) the Very Low Flow Class is, for years 1 to 5 of this Plan, when flows are at or below 2 ML/day, and for years 6 to 10 of this Plan, when flows are at or below 3 ML/day,

(ii) A Class is, for years 1 to 5 of this Plan, when flows are greater than 2 ML/day, and for years 6 to 10 of this Plan, when flows are greater than 3 ML/day, and less than or equal to 43 ML/day, and

(iii) B Class is when flows are greater than 43 ML/day,

Note. 2 ML/day corresponds to the estimated 98th percentile. 3 ML/day corresponds to the estimated 95th percentile. 43 ML/day corresponds to the estimated 50th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(r) for the Lower Oxley River Water Source, at the Oxley River at Eungella gauge (201001) in the Lower Oxley River Water Source:

(i) the Very Low Flow Class is, for years 1 to 5 of this Plan, when flows are at or below 2 ML/day, and for years 6 to 10 of this Plan, when flows are at or below 3 ML/day,

(ii) A Class is, for years 1 to 5 of this Plan, when flows are greater than 2 ML/day, and for years 6 to 10 of this Plan, when flows are greater than 3 ML/day, and less than or equal to 43 ML/day, and

(iii) B Class is when flows are greater than 43 ML/day,

Note. 2 ML/day corresponds to the estimated 98th percentile. 3 ML/day corresponds to the estimated 95th percentile. 43 ML/day corresponds to the estimated 50th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(s) for the Mid Rous River Water Source, at the Rous River at Boatharbour No.3 gauge (201005):

(i) the Very Low Flow Class is when flows are at or below 1 ML/day,

(ii) A Class is when flows are greater than 1 ML/day and less than or equal to 28 ML/day, and

(iii) B Class is when flows are greater than 28 ML/day,

Note. 1 ML/day corresponds to the estimated 95th percentile. 28 ML/day corresponds to the estimated 50th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(t) for the Mid Tweed River Water Source, at the Oxley River at Eungella gauge (201001) in the Lower Oxley River Water Source:

(i) the Very Low Flow Class is when flows are at or below 3 ML/day, and

(ii) A Class is when flows are greater than 3 ML/day,

Note. 3 ML/day corresponds to the estimated 95th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

Note. The flow classes and flow reference point may change after year 5 of this Plan, following the calibration of the newly installed Tweed River at Palmers Road gauge (201015) in the Mid Tweed Water Source, in accordance with clause 16 (2) (a) of this Plan.

(u) for the Mooball Creek Water Source, no flow classes are established by this Plan,

(v) for the Nobbys Creek Water Source, at the Rous River at Boatharbour No.3 gauge (201005) in the Mid Rous River Water Source:

(i) the Very Low Flow Class is when flows are at or below 6 ML/day, and

(ii) A Class is when flows are greater than 6 ML/day,

Note. 6 ML/day corresponds to the estimated 80th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(w) for the Piggabeen Creek Water Source, at the Cobaki Creek at Cobaki gauge (201012) in the Cobaki Creek Water Source:

(i) the Very Low Flow Class is when flows are at or below 0.5 ML/day, and

(ii) A Class is when flows are greater than 0.5 ML/day,

Note. 0.5 ML/day corresponds to the estimated 84th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(x) for the Pumpenbil Creek Water Source, at the Oxley River at Eungella gauge (201001) in the Lower Oxley River Water Source:

(i) the Very Low Flow Class is when flows are at or below 3 ML/day,

(ii) A Class is when flows are greater than 3 ML/day and less than or equal to 43 ML/day, and

(iii) B Class is when flows are greater than 43 ML/day,

Note. 3 ML/day corresponds to the estimated 95th percentile. 43 ML/day corresponds to the estimated 50th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(y) for the Rolands Creek Water Source, at the Oxley River at Eungella gauge (201001) in the Lower Oxley River Water Source:

(i) the Very Low Flow Class is when flows are at or below 3 ML/day, and

(ii) A Class is when flows are greater than 3 ML/day,

Note. 3 ML/day corresponds to the estimated 95th percentile of all days. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

Note. The flow classes and flow reference point may change after year 5 of this Plan, following the calibration of the newly installed Tweed River at Palmers Road gauge (201015) in the Mid Tweed Water Source, in accordance with clause 16 (2) (a) of this Plan.

(z) for the Sheens Creek Water Source, at the Sleepy Hollow Road Crossing:

(i) the Very Low Flow Class is when there is no visible flow, and

(ii) A Class is when there is a visible flow,

(aa) for the Smiths Creek Water Source, at the Oxley River at Eungella gauge (201001) in the Lower Oxley River Water Source:

(i) the Very Low Flow Class is when flows are at or below 3 ML/day, and

(ii) A Class is when flows are greater than 3 ML/day,

Note. 3 ML/day corresponds to the estimated 95th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

Note. The flow classes and flow reference point may change after year 5 of this Plan, following the calibration of the newly installed Tweed River at Palmers Road gauge (201015) in the Mid Tweed Water Source, in accordance with clause 16 (2) (a) of this Plan.

(bb) for the Terranora Broadwater Water Source, no flow classes are established by this Plan,

(cc) for the Rous River Tidal Pool Management Zone of the Tweed Estuary Water Source, at the Rous River at Boatharbour No.3 gauge (201005) in the Mid Rous River Water Source:

(i) the Very Low Flow Class is when flows are at or below 1 ML/day, and

(ii) A Class is when flows are greater than 1 ML/day,

Note. 1 ML/day corresponds to the estimated 95th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(dd) for the Tweed Estuary Management Zone of the Tweed Estuary Water Source, no flow classes are established by this Plan,

(ee) for the Upper Oxley River Water Source, at the Oxley River at Eungella gauge (201001) in the Lower Oxley River Water Source:

(i) the Very Low Flow Class is when flows are at or below 3 ML/day, and

(ii) A Class is when flows are greater than 3 ML/day,

Note. 3 ML/day corresponds to the estimated 95th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(ff) for the Upper Rous River Water Source, at the Rous River at Boatharbour No.3 gauge (201005) in the Mid Rous River Water Source:

(i) the Very Low Flow Class is when flows are at or below 1 ML/day,

(ii) A Class is when flows are greater than 1 ML/day and less than or equal to 28 ML/day, and

(iii) B Class is when flows are greater than 28 ML/day, and

Note. 1 ML/day corresponds to the estimated 95th percentile. 28 ML/day corresponds to the estimated 50th percentile. The percentiles refer to critical month flows at the gauge and include all days of record.

(gg) for the Upper Tweed River Water Source, at the Oxley River at Eungella gauge (201001) in the Lower Oxley River Water Source:

(i) the Very Low Flow Class is when flows are at or below 3 ML/day,

(ii) A Class is when flows are greater than 3 ML/day and less than or equal to 43 ML/day, and

(iii) B Class is when flows are greater than 43 ML/day.

Note. 3 ML/day corresponds to the estimated 95th percentile. 43 ML/day corresponds to the estimated 50th percentile. The percentiles refer to critical month flows at the gauge and include all days of record.

Note. The flow classes and flow reference point may change after year 5 of this Plan, following the calibration of the newly installed Tweed River at Palmers Road gauge (201015) in the Mid Tweed Water Source, in accordance with clause 16 (2) (a) of this Plan.

(2) The Minister may amend subclause (1) to establish a new or additional flow class or flow classes in:

(a) the Byrrill Creek Water Source, the Doon Doon Creek Water Source, the Mid Tweed River Water Sources, the Rolands Creek Water Source, the Smiths Creek Water Source and the Upper Tweed River Water Source, after year 5 of this Plan, if sufficient data has been collected to calibrate the newly installed Tweed River at Palmers Road gauge

(201015) in the Mid Tweed Water Source to enable determination of the Very Low Flow Class at the flow reference point at or below the equivalent to the 95th percentile at the end of the Mid Tweed River Water Source for the water sources, and the bottom of the B Class at the flow reference point at or below the equivalent to the 50th percentile at the end of the Mid Tweed River Water Source for the Upper Tweed Water Sources, and

(b) the Cobaki Broadwater Water Source, the Terranora Broadwater Water Source, the Tweed Estuary Water Source, the Cudgen Lake Water Source, the Clothiers Creek Water Source, the Christies Creek Water Source, the Cudgera Creek Water Source, the Sheens Creek Water Source, the Burringbar River Water Source and the Mooball Creek Water Source if a Drainage Management Plan, Floodplain Management Plan or similar management plan is developed for all or part of the water sources.

17 Determination of flow management

Where flow gauging stations are being used to determine daily flow classes, announcement of the flow class may be made by the Minister from time to time.

Part 4 Environmental water provisions

18 Environmental water provisions

This Part is made in accordance with sections 8 (1), 8 (1A), 8 (2), 8 (4), 8A, 8B, 8C, 8D, 8E and 20 (1) (a) of the Act.

19 Planned environmental water

(1) Planned environmental water is identified and established in these water sources as follows:

(a) water volume in excess of the respective long-term average annual extraction limit established in clause 43 of this Plan may not be taken and used for any purpose in these water sources, thereby protecting a proportion of river flows for fundamental ecosystem needs from increases in long-term water extraction,

(b) for all water sources, the water remaining in the water source after taking water to meet basic landholder rights and for access licences in accordance with the rules identified in subclause (3),

(c) for the Mid Tweed River Water Source, the release of water for the environment from Clarrie Hall Dam shall be made in accordance with the system operation rules specified in clause 77 of this Plan, and

(d) for the Tweed Estuary Water Source, the release of water for the environment from Bray Park Weir shall be made in accordance with the system operation rules specified in clause 77 of this Plan.

(2) The planned environmental water established in subclause (1) (a) for these water sources is maintained by the rules in clause 45 that limit the availability of water for extraction under access licences, thereby protecting a proportion of natural river flows for fundamental ecological needs from increases in long-term water extraction.

(3) The planned environmental water established in subclauses (1) (b), (1) (c) and (1) (d) is maintained as follows:

(a) in management zones or water sources with a Very Low Flow Class, the holders of access licences, excluding access licences listed in Schedule 2 or access licences specified in clause 60, and access licences that nominate a runoff harvesting work, are not permitted to take water when flows are within the Very Low Flow Class, and

(b) in all water sources, excluding access licences listed in Schedule 2 or access licences specified in clause 60, and access licences that nominate a runoff harvesting work, notwithstanding all other rights and conditions, extraction of water from a river by an approved water supply work is permitted only where it complies with the flow conditions imposed on the authorised water supply work, or in the absence of such condition:

(i) if there is a visible flow in the river in the downstream vicinity of the water supply work, or

(ii) where water is being taken from a pool, a visible inflow and outflow to and from that pool,

(c) in the Brays Creek Water Source, excluding access licences listed in Schedule 2, aquifer access licences under clause 60 and access licences that nominate a runoff harvesting

work, notwithstanding all other rights and conditions, extraction of water from a river by an approved water supply work is permitted for no more than 6 hours per day, when the flow in the Oxley River at the Eungella gauge (201001) in the Lower Oxley River Water Source is greater than 3 ML/day and less than or equal to 5 ML/day,

Note. 3 ML/day corresponds to the estimated 95th percentile. 5 ML/day corresponds to the estimated 90th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(d) in the Byrrill Creek Water Source, excluding access licences listed in Schedule 2, aquifer access licences under clause 60 and access licences that nominate a runoff harvesting work, notwithstanding all other rights and conditions, extraction of water from a river by an approved water supply work is permitted for no more than 6 hours per day, when the flow in the Oxley River at the Eungella gauge (201001) in the Lower Oxley River Water Source is greater than 3 ML/day and less than or equal to 5 ML/day,

Note. 3 ML/day corresponds to the estimated 95th percentile. 5 ML/day corresponds to the estimated 90th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(e) in the Doon Doon Creek Water Source, excluding access licences listed in Schedule 2, aquifer access licences under clause 60 and access licences that nominate a runoff harvesting work, notwithstanding all other rights and conditions, extraction of water from a river by an approved water supply work is permitted for no more than 6 hours per day, when the flow in the Oxley River at the Eungella gauge (201001) in the Lower Oxley River Water Source is greater than 3 ML/day and less than or equal to 5 ML/day,

Note. 3 ML/day corresponds to the estimated 95th percentile. 5 ML/day corresponds to the estimated 90th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(f) in the Hopping Dicks Creek Water Source, excluding access licences listed in Schedule 2, aquifer access licences under clause 60 and access licences that nominate a runoff harvesting work, notwithstanding all other rights and conditions, extraction of water from a river by an approved water supply work is permitted for no more than 6 hours per day, when the flow in the Oxley River at the Eungella gauge (201001) in the Lower Oxley River Water Source is greater than, for years 1 to 5 of this Plan 2 ML/day, and for years 6 to 10 of this Plan 3 ML/day, and less than or equal to 5 ML/day,

Note. 2 ML/day corresponds to the estimated 98th percentile. 3 ML/day corresponds to the estimated 95th percentile. 5 ML/day corresponds to the estimated 90th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(g) in the Lower Oxley River Water Source, excluding access licences listed in Schedule 2, aquifer access licences under clause 60 and access licences that nominate a runoff harvesting work, notwithstanding all other rights and conditions, extraction of water from a river by an approved water supply work is permitted for no more than 6 hours per day, when the flow in the Oxley River at the Eungella gauge (201001) in the Lower Oxley River Water Source is greater than, for years 1 to 5 of this Plan 2 ML/day, and for years 6 to 10 of this Plan 3 ML/day, and less than or equal to 5 ML/day,

Note. 2 ML/day corresponds to the estimated 98th percentile. 3 ML/day corresponds to the estimated 95th percentile. 5 ML/day corresponds to the estimated 90th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(h) in the Mid Tweed River Water Source, excluding access licences listed in Schedule 2, aquifer access licences under clause 60 and access licences that nominate a runoff harvesting work, notwithstanding all other rights and conditions, extraction of water from a river by an approved water supply work is permitted for no more than 6 hours per day,

when the flow in the Oxley River at the Eungella gauge (201001) in the Lower Oxley River Water Source is greater than 3 ML/day and less than or equal to 5 ML/day,

Note. 3 ML/day corresponds to the estimated 95th percentile. 5 ML/day corresponds to the estimated 90th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(i) in the Pumpenbil Creek Water Source, excluding access licences listed in Schedule 2, aquifer access licences under clause 60 and access licences that nominate a runoff harvesting work, notwithstanding all other rights and conditions, extraction of water from a river by an approved water supply work is permitted for no more than 6 hours per day, when the flow in the Oxley River at the Eungella gauge (201001) in the Lower Oxley River Water Source is greater than 3 ML/day and less than or equal to 5 ML/day,

Note. 1 ML/day corresponds to the estimated 99th percentile. 5 ML/day corresponds to the estimated 90th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(j) in the Upper Oxley River Water Source, excluding access licences listed in Schedule 2, aquifer access licences under clause 60 and access licences that nominate a runoff harvesting work, notwithstanding all other rights and conditions, extraction of water from a river by an approved water supply work is permitted for no more than 6 hours per day, when the flow in the Oxley River at the Eungella gauge (201001) in the Lower Oxley River Water Source is greater than 3 ML/day and less than or equal to 5 ML/day, and

Note. 3 ML/day corresponds to the estimated 95th percentile. 5 ML/day corresponds to the estimated 90th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(k) in the Upper Tweed River Water Source, excluding access licences listed in Schedule 2, aquifer access licences under clause 60 and access licences that nominate a runoff harvesting work, notwithstanding all other rights and conditions, extraction of water from a river by an approved water supply work is permitted for no more than 6 hours per day, when the flow Oxley River at Eungella gauge (201001) in the Lower Oxley River Water Source is greater than 3 ML/day and less than or equal to 5 ML/day.

Note. 3 ML/day corresponds to the estimated 95th percentile. 5 ML/day corresponds to the estimated 90th percentile. The percentiles refer to critical month flows (November) at the gauge and include all days of record.

(4) The Minister may amend subclause (3) (c) for the Byrrill Creek Water Source, the Doon Doon Creek Water Source, the Mid Tweed River Water Sources and the Upper Tweed River Water Source, after year 5 of this Plan, if sufficient data has been collected to calibrate the newly installed Tweed River at Palmers Road gauge (201015) in the Mid Tweed Water Source, to enable determination of the 95th and 90th percentile at the end of the Mid Tweed River Water Source.

(5) Following the establishment of or amendment to a flow class or flow classes under clause 16 (2), the Minister may amend subclauses (1), (2) and (3) to identify, establish and maintain planned environmental water in the relevant water source or management zone.

20 Adaptive environmental water

(1) The holder of an access licence may request that the Minister impose an adaptive environmental water condition in respect of the access licence.

(2) An access licence may be granted in these water sources, pursuant to sections 8C and 8D of the Act, by the Minister so long as the adaptive environmental water condition imposed on the access licence is not to be removed.

Part 5 Basic landholder rights

21 Basic landholder rights

This Part is made in accordance with section 20 (1) (b) of the Act.

22 Domestic and stock rights

(1) At the commencement of this Plan the water requirements of holders of domestic and stock rights within these water sources are estimated to total 7.0 megalitres per day (hereafter ***ML/day***) and are distributed as follows:

(a) 0.1 ML/day in the Bilambil Creek Water Source,

(b) 0.2 ML/day in the Brays Creek Water Source,

(c) 0.6 ML/day in the Burringbar River Water Source,

(d) 0.2 ML/day in the Byrrill Creek Water Source,

(e) 0.1 ML/day in the Christies Creek Water Source,

(f) 0.1 ML/day in the Clothiers Creek Water Source,

(g) 0.1 ML/day in the Cobaki Broadwater Water Source,

(h) 0.1 ML/day in the Cobaki Creek Water Source,

(i) 0.2 ML/day in the Crystal Creek Water Source,

(j) 0.1 ML/day in the Cudgen Lake Water Source,

(k) 0.2 ML/day in the Cudgera Creek Water Source,

(l) 0.2 ML/day in the Doon Doon Creek Water Source,

(m) 0.4 ML/day in the Dunbible Creek Water Source,

(n) 0.2 ML/day in the Dungay Creek Water Source,

(o) 0.1 ML/day in the Duroby Creek Water Source,

(p) 0.2 ML/day in the Hopping Dicks Creek Water Source,

(q) 0.3 ML/day in the Lower Oxley River Water Source,

(r) 0.2 ML/day in the Mid Rous River Water Source,

(s) 0.3 ML/day in the Mid Tweed River Water Source,

(t) 0.1 ML/day in the Mooball Creek Water Source,

(u) 0.1 ML/day in the Nobbys Creek Water Source,

(v) 0.1 ML/day in the Piggabeen Creek Water Source,

(w) 0.2 ML/day in the Pumpenbil Creek Water Source,

(x) 0.2 ML/day in the Rolands Creek Water Source,

(y) 0.1 ML/day in the Sheens Creek Water Source,

(z) 0.1 ML/day in the Smiths Creek Water Source,

(aa) 0.3 ML/day in the Terranora Broadwater Water Source,

(bb) 1.2 ML/day in the Tweed Estuary Water Source,

(cc) 0.1 ML/day in the Upper Oxley River Water Source,

(dd) 0.2 ML/day in the Upper Rous River Water Source, and

(ee) 0.4 ML/day in the Upper Tweed River Water Source.

(2) This Plan recognises that the exercise of domestic and stock rights may increase during the term of this Plan.

Note. Basic landholder rights exercised under section 52 of the Act must be exercised in accordance with any guidelines established by the Minister with respect to the reasonable use of water for domestic consumption and stock watering.

Increase in use of domestic and stock rights may occur as a result of an increase in the number of landholdings fronting rivers and lakes or overlying alluvial groundwater in these water sources and/or as a result of the increase in the exercise of basic landholder rights by existing landholders. The Minister may limit new domestic and stock rights in new subdivisions in any water source by regulation under section 52 (2) of the Act.

Inherent water quality and land use activities may make the water in some areas unsuitable for human consumption. Water from these water sources should not be consumed without it first being tested and appropriately treated.

23 Native title rights

(1) At the commencement of this Plan there are no native title rights in these water sources and therefore the water requirements for native title rights total 0 ML/year.

(2) This Plan recognises that the exercise of native title rights may increase during the term of this Plan.

Note. An increase in native title rights may occur as a result of the granting of native title rights under the Commonwealth's *Native Title Act 1993*.

24 Harvestable rights

The requirement for water under harvestable rights is the amount of water owners of land are entitled to capture pursuant to a harvestable rights order made under section 54 of the Act and published from time to time in the NSW Government Gazette.

Part 6 Bulk access regime

25 Bulk access regime

(1) This Part is made in accordance with section 20 (1) (e) of the Act.

(2) This Plan establishes a bulk access regime for the extraction of water under access licences in these water sources having regard to:

(a) the environmental water provisions established under Part 4 of this Plan,

(b) the requirements for basic landholder rights identified under Part 5 of this Plan, and

(c) the requirements for water for extraction under access licences identified under Part 7 of this Plan.

(3) The bulk access regime established in subclause (2):

(a) recognises the effect of climate variability on the availability of water as provided for under Part 3 of this Plan,

(b) establishes rules according to which access licences are granted as provided for in Part 8 of this Plan,

(c) recognises and is consistent with limits to the availability of water as provided for in Part 10, Division 1 of this Plan,

(d) establishes rules according to which available water determinations are to be made as provided for in Part 10, Division 1 of this Plan,

(e) establishes rules according to which access licences are managed as provided for in Parts 10 and 11 of this Plan, and

(f) establishes rules with respect to the priorities according to which access licences are to be adjusted as a consequence of any reduction in the availability of water as provided for in Part 10 of this Plan.

Part 7 Requirements for water under access licences

26 Requirements for water under access licences

This Part is made in accordance with section 20 (1) (c) of the Act.

Note. The amount of water specified in this Part represents the total volumes or unit shares specified in the share components on access licences in these water sources. The actual volumes of water available at any time will depend on climate, access licence priority and the rules in this Plan.

27 Share component of domestic and stock access licences

Note. Domestic and stock access licences are required by those landholders or occupiers without river frontage, or where the water is distributed across more than one landholding to extract water from a river or an aquifer for domestic and/or stock watering needs.

It is estimated that at the time of commencement of Part 2 of Chapter 3 of the Act, the share components of domestic and stock access licences authorised to extract water from these water sources will total 95 megalitres per year (hereafter ***ML/year***), distributed as follows:

(a) 5 ML/year in the Bilambil Creek Water Source,

(b) 0 ML/year in the Brays Creek Water Source,

(c) 11 ML/year in the Burringbar River Water Source,

(d) 8 ML/year in the Byrrill Creek Water Source,

(e) 0 ML/year in the Christies Creek Water Source,

(f) 0 ML/year in the Clothiers Creek Water Source,

(g) 3 ML/year in the Cobaki Broadwater Water Source,

(h) 7 ML/year in the Cobaki Creek Water Source,

(i) 1 ML/year in the Crystal Creek Water Source,

(j) 0 ML/year in the Cudgen Lake Water Source,

(k) 5 ML/year in the Cudgera Creek Water Source,

(l) 4 ML/year in the Doon Doon Creek Water Source,

(m) 1 ML/year in the Dunbible Creek Water Source,

(n) 5 ML/year in the Dungay Creek Water Source,

(o) 3 ML/year in the Duroby Creek Water Source,

(p) 5 ML/year in the Hopping Dicks Creek Water Source,

(q) 8 ML/year in the Lower Oxley River Water Source,

(r) 4 ML/year in the Mid Rous River Water Source,

(s) 3 ML/year in the Mid Tweed River Water Source,

(t) 0 ML/year in the Mooball Creek Water Source,

(u) 0 ML/year in the Nobbys Creek Water Source,

(v) 1 ML/year in the Piggabeen Creek Water Source,

(w) 10 ML/year in the Pumpenbil Creek Water Source,

(x) 0 ML/year in the Rolands Creek Water Source,

(y) 0 ML/year in the Sheens Creek Water Source,

(z) 0 ML/year in the Smiths Creek Water Source,

(aa) 0 ML/year in the Terranora Broadwater Water Source,

(bb) 3 ML/year in the Tweed Estuary Water Source,

(cc) 5 ML/year in the Upper Oxley River Water Source,

(dd) 0 ML/year in the Upper Rous River Water Source, and

(ee) 3 ML year in the Upper Tweed River Water Source.

28 Share component of local water utility access licences

It is estimated that at the time of commencement of Part 2 of Chapter 3 of the Act, the share components of local water utility access licences authorised to extract water from these water sources will total 27,613 ML/year, distributed as follows:

(a) 27,567 ML/year in the Mid Tweed River Water Source,

(b) 46 ML/year in the Upper Oxley River Water Source, and

(c) 0 ML/year in all other water sources.

29 Share component of unregulated river access licences

It is estimated that at the time of commencement of Part 2 of Chapter 3 of the Act, the share components of unregulated river access licences authorised to extract water from these water sources will total 7,995 unit shares, distributed as follows:

(a) 221 unit shares in the Bilambil Creek Water Source,

(b) 196 unit shares in the Brays Creek Water Source,

(c) 802 unit shares in the Burringbar River Water Source,

(d) 240 unit shares in the Byrrill Creek Water Source,

(e) 103 unit shares in the Christies Creek Water Source,

(f) 183 unit shares in the Clothiers Creek Water Source,

(g) 210 unit shares in the Cobaki Broadwater Water Source,

(h) 117 unit shares in the Cobaki Creek Water Source,

(i) 57 unit shares in the Crystal Creek Water Source,

(j) 566 unit shares in the Cudgen Lake Water Source,

(k) 188 unit shares in the Cudgera Creek Water Source,

(l) 65 unit shares in the Doon Doon Creek Water Source,

(m) 68 unit shares in the Dunbible Creek Water Source,

(n) 131 unit shares in the Dungay Creek Water Source,

(o) 216 unit shares in the Duroby Creek Water Source,

(p) 319 unit shares in the Hopping Dicks Creek Water Source,

(q) 195 unit shares in the Lower Oxley River Water Source,

(r) 407 unit shares in the Mid Rous River Water Source,

(s) 1,183 unit shares in the Mid Tweed River Water Source,

(t) 3 unit shares in the Mooball Creek Water Source,

(u) 44 unit shares in the Nobbys Creek Water Source,

(v) 200 unit shares in the Piggabeen Creek Water Source,

(w) 321 unit shares in the Pumpenbil Creek Water Source,

(x) 32 unit shares in the Rolands Creek Water Source,

(y) 177 unit shares in the Sheens Creek Water Source,

(z) 9 unit shares in the Smiths Creek Water Source,

(aa) 414 unit shares in the Terranora Broadwater Water Source,

(bb) 300 unit shares in the Tweed Estuary Water Source,

(cc) 311 unit shares in the Upper Oxley River Water Source,

(dd) 44 unit shares in the Upper Rous River Water Source, and

(ee) 373 unit shares in the Upper Tweed River Water Source.

30 Share component of unregulated river high flow access licences

It is estimated that at the time of commencement of Part 2 of Chapter 3 of the Act, the share components of unregulated river high flow access licences authorised to extract water from these water sources will total 0 unit shares, distributed as follows:

(a) 0 unit shares in the Crystal Creek Water Source,

(b) 0 unit shares in the Mid Rous River Water Source,

(c) 0 unit shares in the Pumpenbil Creek Water Source, and

(d) 0 unit shares in the Upper Tweed River Water Source.

Note. The water sources listed above are the only water sources within the Plan area which have been identified as suitable for unregulated river high flow access licences. This Plan allows for a specified amount of unregulated river access licences to be converted to the unregulated river high flow access licences. However, at the commencement of this Plan, there are no existing access licences of this category, hence the 0 unit shares indicated.

31 Share component of aquifer access licences

It is estimated that at the time of commencement of Part 2 of Chapter 3 of the Act, the share components of aquifer access licences authorised to extract water from these water sources will total 494 unit shares, distributed as follows:

(a) 0 unit shares in the Bilambil Creek Water Source,

(b) 5 unit shares in the Brays Creek Water Source,

(c) 55 unit shares in the Burringbar River Water Source,

(d) 0 unit shares in the Byrrill Creek Water Source,

(e) 0 unit shares in the Christies Creek Water Source,

(f) 9 unit shares in the Clothiers Creek Water Source,

(g) 0 unit shares in the Cobaki Broadwater Water Source,

(h) 0 unit shares in the Cobaki Creek Water Source,

(i) 15 unit shares in the Crystal Creek Water Source,

(j) 215 unit shares in the Cudgen Lake Water Source,

(k) 0 unit shares in the Cudgera Creek Water Source,

(l) 0 unit shares in the Doon Doon Creek Water Source,

(m) 4 unit shares in the Dunbible Creek Water Source,

(n) 6 unit shares in the Dungay Creek Water Source,

(o) 0 unit shares in the Duroby Creek Water Source,

(p) 0 unit shares in the Hopping Dicks Creek Water Source,

(q) 0 unit shares in the Lower Oxley River Water Source,

(r) 0 unit shares in the Mid Rous River Water Source,

(s) 38 unit shares in the Mid Tweed River Water Source,

(t) 0 unit shares in the Mooball Creek Water Source,

(u) 0 unit shares in the Nobbys Creek Water Source,

(v) 0 unit shares in the Piggabeen Creek Water Source,

(w) 0 unit shares in the Pumpenbil Creek Water Source,

(x) 11 unit shares in the Rolands Creek Water Source,

(y) 120 unit shares in the Sheens Creek Water Source,

(z) 0 unit shares in the Smiths Creek Water Source,

(aa) 0 unit shares in the Terranora Broadwater Water Source,

(bb) 13 unit shares in the Tweed Estuary Water Source,

(cc) 0 unit shares in the Upper Oxley River Water Source,

(dd) 3 unit shares in the Upper Rous River Water Source, and

(ee) 0 unit shares in the Upper Tweed River Water Source.

Note. The total share components for aquifer access licences specified in these water sources could be higher as a result of additional share components for unidentified aquifer access licences in the alluvial groundwater.

32 Changes to total share components

This Plan recognises that the total requirements for water for extraction within these water sources may change during the term of this Plan as a result of:

(a) the granting, surrender or cancellation of access licences,

(b) the granting, surrender or cancellation of access licences through a dealing under Part 13 of this Plan, and

(c) the variation of local water utility licences under section 66 of the Act.

Note. The total share components identified in this Part may also change due to volumetric conversion of Water Act licences that are currently non-volumetric.

Part 8 Rules for granting access licences

33 Rules for granting access licences

(1) This Part is made in accordance with sections 20 (2) (b), 61 and 63 of the Act, having regard to the limits to water availability in these water sources and the need to protect dependent ecosystems.

(2) In addition to those applications for specific purpose access licences permitted under clause 19 of the Water Management (General) Regulation 2004 (hereafter ***the Regulation***) applications may also be made in these water sources for:

(a) a domestic and stock access licence in the Bilambil Creek Water Source, the Burringbar River Water Source, the Christies Creek Water Source, the Clothiers Creek Water Source, the Cobaki Broadwater Water Source, the Cobaki Creek Water Source, the Cudgen Lake Water Source, the Cudgera Creek Water Source, the Dunbible Creek Water Source, the Dungay Creek Water Source, the Duroby Creek Water Source, the Mooball Creek Water Source, the Piggabeen Creek Water Source, the Sheens Creek Water Source, the Terranora Broadwater Water Source and the Tweed Estuary Water Source, if the applicant can demonstrate a history of extraction in the area downstream from the defined tidal limit, provided that the extraction was previously exempted from requiring a licence under the *Water Act 1912*,

(b) an access licence that may be granted in accordance with a dealing,

(c) a domestic and stock access licence in the Tweed Estuary Water Source, if the application involves the taking of water from the alluvial sediments, and

(d) an unregulated river (Aboriginal community development) access licence, that can extract water from B Class flows only (flows greater than the 50th percentile flow), that has no more than minimal harm at the water source level impact assessment and provided that no more than the following total unregulated river (Aboriginal community development) access licence share component has ever been issued or will cause the following total share component to be exceeded, in the respective water source:

(i) 143 ML/year in the Hopping Dicks Creek Water Source,

(ii) 500 ML/year in the Lower Oxley River Water Source,

(iii) 297 ML/year in the Mid Rous River Water Source,

(iv) 209 ML/year in the Upper Rous River Water Source, and

(v) 121 ML year in the Upper Tweed River Water Source.

Note. Approval for granting of an unregulated river (Aboriginal community development) access licence will be subject to assessment of the application in regard to the level of impact of the proposed extraction. This should include consideration of the potential impact on high flow (e.g. flows greater than the 50th percentile flow) values, and any potential impact on the water source as a whole.

Note. An unregulated river (Aboriginal community development) access licence will not be fully commercial. Allocations under these licences will be able to be traded to non-Aboriginal people however the licence itself can only be traded amongst Aboriginal people, and as such will remain in the Aboriginal community for the life of the licence. These licences will not be able to be converted to any other category of licence. Aboriginal communities, enterprises and individuals are encouraged to seek financial assistance from funding bodies to purchase fully commercial licences.

Note. At the commencement of this Plan, clause 19 of the Regulation provides for the following specific purpose access licences to be applied for:

(i) a local water utility access licence (subcategory "domestic and commercial"), for the purpose of domestic consumption and commercial activities,

(ii) a domestic and stock access licence (subcategory "domestic"), for the purpose of domestic consumption,

(iii) an unregulated river access licence (subcategory "town water supply"), for the purpose of supply to communities for domestic consumption and commercial activities,

(iv) an aquifer access licence (subcategory "town water supply"), for the purpose of supply to communities for domestic consumption and commercial activities, and

(v) any category of specific purpose access licence (subcategory "Aboriginal cultural"), for Aboriginal cultural purposes.

Section 61 (b) of the Act also allows for a person to apply for an access licence with a zero share component.

Section 61 (c) of the Act also allows for a person to apply for an access licence where the right to apply for that access licence has been acquired under section 65 of the Act.

(3) The Minister should make a controlled allocation order under section 65 of the Act to allow applications for an unregulated river access licence in the Bilambil Creek Water Source, the Burringbar River Water Source, the Christies Creek Water Source, the Clothiers Creek Water Source, the Cobaki Broadwater Water Source, the Cobaki Creek Water Source, the Cudgen Lake Water Source, the Cudgera Creek Water Source, the Dunbible Creek Water Source, the Dungay Creek Water Source, the Duroby Creek Water Source, the Mooball Creek Water Source, the Piggabeen Creek Water Source, the Sheens Creek Water Source, the Terranora Broadwater Water Source and the Tweed Estuary Water Source, if the applicant can demonstrate a history of extraction in the area from downstream of the defined tidal limit, provided that the extraction was previously exempted from requiring a licence under the *Water Act 1912*.

(4) The Minister should make a controlled allocation order under section 65 of the Act to allow applications for an aquifer access licence in the Tweed Estuary Water Source, subject to a study being undertaken to identify a total water balance and future needs (including future specific purpose licences and exempt extraction) in the coastal alluvial.

(5) The Minister should make a controlled allocation order under section 65 of the Act to allow application for an unregulated river access licence in the Burringbar River Water Source, the Christies Creek Water Source, the Clothiers Creek Water Source, the Cobaki Broadwater Water Source, the Cudgen Lake Water Source, the Cudgera Creek Water Source, the Dungay Creek Water Source, the Duroby Creek Water Source, the Mid Tweed River Water Source, the Mooball Creek Water Source, the Sheens Creek Water Source, the Terranora Broadwater Water Source and the Tweed Estuary Water Source if the applicant can demonstrate a history of extraction prior to the commencement of the Plan subject to the extraction being:

(i) previously exempted from requiring a licence under the Water Act 1912, and

(ii) for the purpose of establishing a sugar cane crop, and

(iii) from a cane drain.

(6) An access licence of the subcategory (Aboriginal cultural) can only be granted if the application does not exceed 10 ML/year.

(7) An application for a specific purpose access licence will only be granted if the share or extraction component of the access licence is the minimum required to meet the circumstances in which the access licence is proposed to be used.

(8) Any new local water utility access licence varied under section 66 (3) or (4) of the Act in these water sources shall only be permitted to take water when flows exceed a level to be determined by the Minister and specified on the access licence.

(9) Where total daily extraction limits have been established in a water sources, any new access licence granted in the water sources, in accordance with this clause must have a share component within the respective total daily extraction limit initially assigned.

(10) Where flow classes have not been established in a water sources, any new access licence granted in the water sources, in accordance with subclause (2) (3) (4) or (5) shall only be permitted to take water when flows exceed a level to be determined by the Minister and specified on the access licence.

Part 9 Rules for granting and amending water supply works approvals

Division 1 General

34 Granting and amending water supply works approvals

This Part is made in accordance with sections 21 (b) and 21 (e) of the Act.

35 Runoff harvesting dams

(1) New or expanded runoff harvesting dams shall, in addition to other considerations, be subject to the dam capacity not exceeding that which is consistent with the access licence share component specifying the runoff harvesting dam as the nominated work.

(2) When the share component of an access licence that nominates an approval for a runoff harvesting dam is reduced either by the Minister, or on application of the licence holder, or by an assignment in accordance with Part 13 of this Plan, the Minister shall impose an additional condition requiring the dam to be modified so as to reduce its capacity, or requiring the water taken and evaporated from the dam to be reduced, consistent with the reduction in share component.

Note. Extraction of water from a runoff harvesting dam requires an unregulated river access licence nominating an approval for a runoff harvesting dam, unless the runoff harvesting dam is within the maximum harvestable right dam capacity for the property on which it is located, in which case no licences or approvals are required.

Note. Following the assignment of water allocations from a water allocation account of an access that nominates an approval for a runoff harvesting dam, the Minister may impose conditions requiring that runoff harvesting dam by-pass flows.

36 In-river dams

New in-river dams requiring approval within the Mid Tweed River Water Source and the Byrrill Creek Water Source on third order stream or higher are prohibited.

The Minister may consider applications for in-river dams within these water sources, excluding the Mid Tweed River Water Source and the Byrrill Creek Water Source, consistent with the principles of the *Water Management Act 2000*.

Note. Taking of water from an in-river dam requires an access licence unless it is taken in accordance with section 52 of the Act (domestic and stock rights). In either case, however, the dam requires a water management works approval unless exempted by regulation under the Act. All new or modified in-river dams will also require assessment under the *Fisheries Management Act 1994*.

Division 2 Taking water from the alluvial sediments

37 Rules for granting or amending water supply works approvals being used to take water from the alluvial sediments

This division is made in accordance with sections 21 (c) and 21 (e) of the Act, to minimise extraction interference between neighbouring bores and to ensure minimal harm to groundwater and their dependent ecosystems.

Note. Extracting groundwater results in the draw down of water levels in the vicinity of the extraction. It is important to manage these local effects. Extraction may result in unacceptable water level declines in other works/bores close by, increasing the pumping costs associated with this extraction, or even cutting

off supply altogether. It may interfere with the results of the regional water level monitoring undertaken by the Office. It may also lower the water levels in groundwater dependent ecosystems and cultural features close by. Finally, it may mobilise contaminated groundwater in the area, drawing it towards a point of extraction. It is important, therefore, to manage the location at which groundwater is extracted to minimise these local impacts. This is achieved in this clause by applying a minimum distance condition to works.

38 Rules for granting water supply works approvals to minimise interference between authorised extraction

(1) To minimise interference between authorised extraction in these water sources, the Minister shall not grant an approval under section 95 of the Act, amend an approval under section 107 of the Act, or consent to a nomination of a work under section 71W of the Act, where a water supply work being used to take water from the alluvial sediments is proposed to be located within:

(a) 200 metres of an approved water supply work used to take water from the alluvial sediments nominated by another access licence,

(b) 200 metres of an approved water supply work used to take water from the alluvial sediments from which basic landholder rights water is being extracted,

(c) 100 metres of the property boundary, unless negotiated with a neighbour for a lesser distance,

(d) 500 metres of an approved water supply work used to take water from the alluvial sediments from local water utility/major utility, and

(e) 400 metres of a Departmental observation or monitoring bore, unless negotiated with the Department of Water and Energy for a lesser distance.

Note. The distance conditions in this clause apply to new or amended approvals. That is, when the applicant wants to construct a new water supply work used to take water from the alluvial sediments, and add it to an existing approval. The distance conditions also apply when the licence holder wants to nominate new or different works on the licence.

(2) The distance restrictions specified in subclause (1) do not apply where:

(a) the application relates to a work solely for the purpose of exercising basic landholder rights,

(b) the water supply work being used to take water from alluvial sediments is used for monitoring or environmental management purposes or remedial works, or

(c) the application is for a replacement bore.

(3) Where the distance restrictions specified in subclause (1) cannot be met, the Minister may grant a water supply works approval provided:

(a) a hydrogeological study undertaken by the applicant, and assessed as adequate by the Minister, demonstrates minimal potential for adverse impacts on existing authorised extraction,

(b) all potentially affected access licence or approval holders have been notified by the applicant, and

Note. Potentially affected access licence holders are typically neighbouring access licence or approval holders and those in the near vicinity.

(c) there is a process for remediation in the event that any adverse impact occurs in the future, specified as conditions on the access licence.

(4) The Minister may amend the distance restrictions in subclause (1) or add additional restrictions to minimise impact on neighbouring works:

(a) after year 5 of this Plan, or

(b) if the Minister identifies the need for further restrictions in a local impact area established under Division 5 Part 11 of this Plan.

39 Rules for granting water supply works approvals near contamination sources

(1) The Minister shall not grant an approval under section 95 of the Act, amend an approval under section 107 of the Act, or consent to a nomination of a work under section 71W of the Act, where a water supply work used to take water from the alluvial sediments is proposed to be located within:

(a) 100 metres of a contamination source as listed in Schedule 3, unless the proponent can demonstrate to the Minister's satisfaction that a lesser distance will result in no more than minimal harm to the water source, and that extraction will not impact on the environment or cause a threat to public health as advised by the Minister for Health, or

(b) a greater distance than in subclause (a) that the Minister nominates in order to ensure that no more than minimal harm will occur to the groundwater source and that extraction will not impact on the environment or cause a threat to public health as advised by the Minister for Health.

(2) Extraction of groundwater from a new water supply work used to take water from the alluvial sediments for any purpose, except basic landholder rights, between 100 metres and 500 metres of a contamination source as listed in Schedule 3 will require:

(a) an application to the Minister by the approval holder providing evidence that no drawdown of the groundwater within 100 metres of a contamination source will occur,

(b) the Minister to assess the application as adequate, and

(c) the Minister to approve the application.

(3) Subclauses (1) and (2) may be applied by the Minister in relation to contamination sources not on Schedule 3, based on the results of a site inspection or other relevant information provided to the Minister.

(4) The Minister may amend Schedule 3 by inclusion or deletion of a contamination source based on the results of a site inspection or other relevant information provided to the Minister on that contamination source.

(5) The distance restrictions specified in subclauses (1) and (2) do not apply to:

(a) a water supply work being used to extract water from alluvial sediments used for monitoring or environmental management purposes or remedial works, or

(b) an application for a replacement bore.

40 Rules for granting water supply works approvals near sensitive environmental areas

(1) The Minister shall not grant a new approval under section 95, or an amended approval under section 107, or consent to a nominated work under section 71W in these water sources, where a water supply work being used to take water from the alluvial sediments is proposed to be located:

(a) for basic landholders rights only, within 100 metres of a high priority groundwater dependent ecosystem, excluding high priority karst environment groundwater dependent ecosystems, listed in and shown on the maps in Schedule 4, or

(b) for water supply works nominated by an access licence, within 200 metres of a high priority groundwater dependent ecosystem, excluding high priority karst environment groundwater dependent ecosystems, listed in and shown on the maps in Schedule 4, or

(c) within 500 metres of a high priority karst environment groundwater dependent ecosystem, listed in and shown on the maps in Schedule 4, or

(d) within 40 metres of the top of the high bank of any third order or above stream, or lagoon, or

(e) within 40 metres of first and second order stream, unless the water supply work used to take water from the alluvial sediments is drilled into the underlying parent material, and the slotted intervals of the works commences deeper than 30 metres.

Note. Subclause (1) will not apply to current authorised extraction from an existing water supply work being used to take water from the alluvial sediments at current or equal share component.

(2) Where the distance restrictions specified in subclauses (1) (a) and (1) (b) cannot be met, the Minister may grant a water supply works approval provided:

(a) a hydrogeological study undertaken by the applicant, and assessed as adequate by the Minister, and

(b) an application to the Minister by the licence holder providing evidence that no drawdown of the groundwater at the outside edge of the perimeter of the groundwater dependent ecosystem in Schedule 4.

(3) The restrictions specified in subclause (1) (e) on the drilling into the underlying parent material and the depth of slotted intervals may be amended by the Minister if the applicant can demonstrate, to the satisfaction of the Minister, that the water supply work used to take water from the alluvial sediments will have minimal impact on base flows in the stream.

(4) Subclauses 1 (d) and 1 (e) do not apply to a new water supply works used to take water from the alluvial sediments required as part of a dealing involving the conversion of an unregulated river access licence to an aquifer access licence under section 71O of the Act and clause 71 of this Plan.

(5) The Minister may amend the exclusion distances in subclauses (1) based on the outcomes of further studies of groundwater ecosystem dependency undertaken or assessed by the Minister.

(6) The Minister may identify further high priority groundwater dependent ecosystems and include them in Schedule 4 after year 5 of the Plan, based on further studies of groundwater ecosystem dependency undertaken or assessed by the Minister.

(7) The Minister may identify that a high priority groundwater dependent ecosystem in Schedule 4 does not have groundwater dependency and delete it from Schedule 4, based on further studies of groundwater ecosystem dependency undertaken by the Minister.

(8) The distance restrictions specified in subclause (1) do not apply to water supply works used to take water from the alluvial sediments used for monitoring, environmental management purposes or remedial works.

Part 10 Limits to the availability of water

Division 1 Long-term average annual extraction limit

41 Limits to the availability of water

This Division is made in accordance with section 20 (2) (a) of the Act.

42 Extraction management units for these water sources

In accordance with clause 14 of this Plan, management of the long-term average annual extraction of water from these water sources will be undertaken in the context of the Tweed River Catchment, Clothiers Creek Catchment and Burringbar River Catchment Extraction Management Units (hereafter ***these Units***).

43 Long-term average annual extraction limit

The long-term average annual extraction limit for each of these Units is equal to the total of:

(a) the quantity of water specified in conditions attached to or included in entitlements issued under Part 2 of the *Water Act 1912* in the Unit, immediately prior to the commencement of this Plan, plus

(b) an estimate of annual extraction of water under domestic and stock rights and native title rights in the Unit at the commencement of this Plan, plus

(c) the sum of share components of access licences granted in the Unit under clause 19 of the Regulations and clause 33 (2) (a), clause 33 (2) (c), clause 33 (2) (d), clause 33 (3), clause 33 (4) and clause 33 (5) of this Plan.

44 Variation of the long-term average annual extraction limits

(1) The long-term average annual extraction limit of these Units may be varied by the Minister if surface water dealings under Part 13 of this Plan result in issuing or cancellation of access licences in the respective extraction management unit.

(2) The long-term average annual extraction limit for each extraction management unit may be varied by the Minister following the purchase and cancellation of an access licence in the respective extraction management unit.

(3) The long-term average annual extraction limit for the Tweed River Catchment Extraction Management Unit may be varied upon the conversion of access licences from an unregulated river access licence to an unregulated river high flow access licence.

(4) The variation in subclause (3) will result in the long-term average annual extraction limit being reduced by the amount of the cancelled share component of the unregulated river access licence and increased by the amount of the share component of the granted unregulated river high flow access licence.

45 Compliance with the long-term average annual extraction limits

(1) In each of these Units, total water extractions under basic landholder rights and access licences will be monitored each water year to determine if there is any growth in volumes extracted above the respective long-term average annual extraction limit established under clause 43

based on comparison of the extraction limit against the average extraction within these Units over that year and the preceding 2 years.

(2) For the purposes of auditing compliance against the long-term average annual extraction limit established under clause 43, the taking of water pursuant to an access licence that has been committed as adaptive environmental water where the access licence has been granted under section 8C of the Act shall not be accounted for as extraction under subclause (1).

(3) For water sources in these Units, if the 3 year average of total water extractions under basic landholder rights and access licences exceeds the respective long-term average extraction limit established in clause 43 by 5% or greater, then the available water determination made for unregulated river access licences under clause 49 (1), for the following water year for unregulated river access licences in these water sources shall be reduced by an amount that is assessed as necessary by the Minister to return subsequent total water extractions under basic landholder rights and access licences in the Unit to the long-term average annual extraction limit.

(4) For water sources in these Units, if the 3 year average of total water extractions under basic landholder rights and access licences is less than 95% of the respective long-term average annual extraction limit established in clause 43, the available water determination made under clause 49 (1) for the following water year for unregulated river access licences in these water sources shall be increased to such an extent as to allow total water extractions under basic landholder rights and access licences in the Unit to increase to the long-term average annual extraction limit.

Note. The effect of this subclause and clause 49 is that available water determinations for unregulated river access licences can never be greater than 1 ML per unit share, except for the available water determination made for the first year of the Plan.

(5) Any reduction or increase to the available water determinations made under clause 49 (1) for unregulated river access licences in these water sources as a result of subclause (3) or (4) should be repeated for each of the subsequent two water years.

(6) For water sources in these Units, if the 3 year average of total water extractions under basic landholder rights and access licences exceeds the respective long-term average annual extraction limit established in clause 43 by 5% or greater, then the available water determination made for unregulated river high flow access licences under clause 50 (1), for the following water year for unregulated river high flow access licences in these water sources shall be reduced by an amount that is assessed as necessary by the Minister to return subsequent total water extractions under basic landholder rights and access licences in the Unit to the long-term average annual extraction limit.

(7) For water sources in these Units, if the 3 year average total water extractions under basic landholder rights and access licences is less than 95% of the respective long-term average annual extraction limit established in clause 43, the available water determination made under clause 50 (1) for the following water year for unregulated river high flow access licences in these water sources shall be increased to such an extent as to allow total water extractions under basic landholder rights and access licences in the Unit to increase to the long-term average annual extraction limit.

Note. The effect of this subclause and clause 50 is that available water determinations for unregulated river high flow access licences can never be greater than 1 ML per unit share, except for the available water determination made for the first year of the Plan.

(8) Any reduction or increase to the available water determinations made under clause 50 (1) for unregulated river high flow access licences in these water sources as a result of subclause (6) or (7) should be repeated for each of the subsequent two water years.

(9) For water sources in these Units, if the 3 year average total water extractions under basic landholder rights and access licences exceeds the respective long-term average annual extraction limit established in clause 43 by 5% or greater, then the available water determination made for aquifer access licences under clause 51 (1), for the following water year for aquifer access licences in these water sources shall be reduced by an amount that is assessed as necessary by the Minister to return subsequent total water extractions under basic landholder rights and access licences in the Unit to the long-term average annual extraction limit.

(10) For water sources in these Units, if the 3 year average total water extractions under basic landholder rights and access licences is less than 95% of the respective long-term average annual extraction limit established in clause 43, the available water determination made under clause 51 (1) for the following water year for aquifer access licences in these water sources shall be increased to such an extent as to allow total water extractions under basic landholder rights and access licences in the Unit to increase to the long-term average annual extraction limit.

Note. The effect of this subclause and clause 51 is that available water determinations for aquifer access licences can never be greater than 1 ML per unit share, except for the available water determination made for the first year of the Plan.

(11) Any reduction or increase to the available water determinations made under clause 51 (1) for aquifer access licences in these water sources as a result of subclause (9) or (10) should be repeated for each of the subsequent two water years.

Division 2 Available water determinations

46 Available water determinations

(1) This Division is made in accordance with section 20 (2) (b) of the Act.

(2) All available water determinations in these water sources shall be expressed as either:

(a) a percentage of the share component for all access licences where share components are specified as megalitres per year, or

(b) megalitres per unit share for all access licences where share components are specified as a number of unit shares.

(3) An available water determination for each category of access licence in these water sources should be made at the commencement of each water year.

47 Available water determinations for domestic and stock access licences

(1) An available water determination shall be made at the commencement of each water year for domestic and stock access licences in these water sources and should be 100% of those licences share components, except where the available water determination is made under subclause (2).

(2) The available water determination made at the commencement of the first year of this Plan, for domestic and stock access licences in these water sources, should be 200% of those licences share components.

48 Available water determinations for local water utility access licences

(1) An available water determination shall be made at the commencement of each water year for local water utility access licences in these water sources and should be 100% of those licences share components, except where the available water determination is made under subclause (2).

(2) The available water determination made at the commencement of the first year of this Plan, for local water utility access licences in these water sources, should be 200% of those licences share components.

49 Available water determinations for unregulated river access licences

(1) An available water determination shall be made at the commencement of each water year for unregulated river access licences in these water sources and should be equal to 1 megalitre multiplied by the number of unit shares in those licences share components, or such lower amount as results from clauses 45 (3) or 45 (4), except where the available water determination is made under subclause (2).

(2) The available water determination made at the commencement of the first year of this Plan, for unregulated river access licences in these water sources, should be equal to 2 megalitres multiplied by the number of unit shares in those licences share components.

Note. The effect of this clause and clause 45 (4) is that available water determinations for unregulated river access licences can never be greater than 1 ML per unit share, except for the available water determination made for the first year of the Plan.

50 Available water determinations for unregulated river high flow access licences

(1) An available water determination shall be made at the commencement of each water year for unregulated river high flow access licences in these water sources and should be equal to 1 megalitre multiplied by the number of unit shares in those licences share components, or such lower amount as results from clauses 45 (6) or 45 (7), except where the available water determination is made under subclause (2).

(2) The available water determination made at the commencement of the first year of this Plan, for unregulated river high flow access licences in these water sources, should be equal to 2 megalitres multiplied by the number of unit shares in those licences share components.

Note. The effect of this clause and clause 45 (7) is that available water determinations for unregulated river high flow access licences can never be greater than 1 ML per unit share, except for the available water determination made for the first year of the Plan.

51 Available water determinations for aquifer access licences

(1) An available water determination shall be made at the commencement of each water year for aquifer access licences in these water sources and should be equal to 1 megalitre multiplied by the number of unit shares in those licences share components, or such lower amount as results from clauses 45 (9) or 45 (10), except where the available water determination is made under subclause (2).

(2) The available water determination made at the commencement of the first year of this Plan, for aquifer access licences in these water sources, should be equal to 2 megalitres multiplied by the number of unit shares in those licences share component.

Note. The effect of this clause and clause 45 (10) is that available water determinations for unregulated river high flow access licences can never be greater than 1 ML per unit share, except for the available water determination made for the first year of the Plan.

Part 11 Rules for managing access licences

Division 1 General

52 Rules for managing access licences

This Part is made in accordance with sections 20 (2) (b), 21 (a) and 21 (c) of the Act, having regard to this Plan's:

(a) environmental water rules,

(b) requirements for water to satisfy basic landholder rights, and

(c) requirements for water for extraction under access licences.

Division 2 Water allocation account management

53 Individual access licence account management rules

(1) Water taken by an approved water supply work nominated by an access licence will be periodically debited against the access licence water allocation account.

Note. The volume of water extracted by an approved water supply work is used to account for the extractions against an individual access licence water allocation account.

(2) Where an approved water supply work is being used both to take water for basic landholder rights and an access licence(s), the water is to be accounted on the basis that an annual volume equal to the basic landholder right for the water year will be the first volume regarded as being taken and all other water taken in that year will be accounted as extraction pursuant to the access licence(s).

(3) The maximum volume that may be taken under a domestic and stock, local water utility, unregulated river unregulated river high flow and aquifer access licences in these water sources in any 3 consecutive water years may not exceed a volume equal to:

(a) the sum of water allocations accrued under the access licence from available water determinations in those years,

(b) plus any water allocations assigned from another access licence under section 71T of the Act, in those years,

(c) plus any water allocations recredited in accordance with section 76 of the Act, in those years, and

(d) minus any water allocations assigned to another access licence under section 71T of the Act, in those years.

(4) Notwithstanding subclause (3), the maximum volume that may be taken under a domestic and stock, local water utility, unregulated river unregulated river high flow and aquifer access licences in these water sources in the first 3 water years of this Plan may not exceed a volume equal to:

(a) 3 times the share component for access licences with share components expressed as ML/year or 3 ML multiplied by the number of unit shares for access licence with share components expressed as a number of unit shares,

(b) plus any water allocations assigned from another access licence under section 71T of the Act, in those years,

(c) plus any water allocations recredited in accordance with section 76 of the Act, in those years, and

(d) minus any water allocations assigned to another access licence under section 71T of the Act, in those years.

(5) The maximum water allocation that can be carried over in the accounts of a domestic and stock, local water utility, unregulated river unregulated river high flow and aquifer access licences in these water sources from one water year to the next shall be equal to:

(a) 100% of the access licence share component for access licences with share components expressed as ML/year, or

(b) 1 ML multiplied by the number of unit shares for access licences with share components expressed as a number of unit shares.

(6) If water that, pursuant to an access licence in these water sources, is committed as adaptive environmental water to be left in a river for environmental purposes, then the water allocation taken under that access licence shall be assumed to be 100% of the available water determination made in Division 2 Part 10 of this Plan.

Division 3 Sharing surface water flows on a daily basis

54 Sharing surface water flows on a daily basis

This Division is made in accordance with sections 20 (2) (b) and 21 (a) of the Act.

55 Total daily extraction limits

At the commencement this Plan, total daily extraction limits (hereafter ***TDELs***) have not been established in these water sources.

56 Initial assignment of TDELs to categories of access licences

No TDELs will be initially assigned to any category of access licence in these water sources.

57 Unassigned TDELs

At the commencement of this Plan, there are no unassigned TDELs in these water sources.

58 Daily extraction limits for individual access licence holders

At the commencement of this Plan, there are no individual daily extraction limits (hereafter ***IDELs***) established for licence holders.

59 Unassigned IDELs

At the commencement of this plan, there are no unassigned IDELs in these water sources.

60 Very low flow access in these water sources

(1) During periods of very low flows, holders of local water utility access licences, specified in Schedule 2, may continue to access water until such time as the licence holder undertakes major augmentation, where the demand exceeds the sustainable yield of the existing infrastructure, to meet town water supply requirements

(2) During periods of very low flows, holders of access licences other than local water utility access licences, specified in Schedule 2 may continue to access water for the following purposes:

(a) fruit washing,

(b) cleaning of dairy plant and equipment for the purpose of hygiene,

(c) poultry watering and misting, or

(d) cleaning of enclosures used for intensive animal production for the purposes of hygiene.

(3) The maximum daily volume that can be extracted under subclause (2) will:

(a) be the minimum required to satisfy the purposes specified in that subclause,

(b) be individually assessed and specified on each access licence within 12 months of the commencement of this Plan, and

(c) will not exceed 20 kilolitres per day.

(4) Once specified under subclause (3) (b) the maximum daily volume that can be extracted under subclause (2) cannot be increased.

(5) For the first three years of this Plan only, a domestic and stock access licence or a domestic and stock (subcategory "domestic") access licence, may take water for domestic consumption only when the Very Low Flow Class applies in the water source.

Note. Domestic consumption is defined in section 52 of the Act.

(6) Notwithstanding subclauses (2) and (3), extraction of water by an approved water supply work is only permitted where it complies with the flow conditions of the authorised water supply work or in the absence of such condition, if there is a visible flow in the river in the downstream vicinity of the water supply work.

(7) The Minister may add a licence to Schedule 2 following written request by the holder of an access licence, but only if extraction under the licence is for the purposes established in subclause (2), and the purpose was on the entitlement that was replaced by the access licence.

(8) The Minister may remove a licence from Schedule 2 if:

(a) any access licence dealing results in the water being extracted under that licence from a different location,

(b) an alternative water supply is obtained, that satisfies the requirements of subclause (2), or

(c) the licence is surrendered or cancelled or the purpose ceases to exist.

(9) Following an assessment of the continuing requirements for access under this clause the Minister may amend or delete Schedule 2, if such a review determines that access under this clause is no longer required.

61 Infrastructure failure in these water sources

In the event of infrastructure failure in these water sources, the Minister may elect to:

(a) continue to announce the current flow class,

(b) announce another flow class based on climatic conditions and any other flow gauging information, and

(c) restrict access to water to the lowest flow class or in the absence of flow classes to visible flow.

Note. If satisfied that it is necessary to do so in the public interest, the Minister may direct the holders of an access licence to cease using a water supply work in accordance with section 324 of the Act.

Division 4 Management of surface and groundwater connectivity

62 Access conditions for access licences which nominate a water supply work approval being used to take water from the alluvial sediments in these water sources

(1) This Division is made in accordance with section 20 (1) (c) and 20 (2) (e) of the Act.

(2) The taking of water under an aquifer access licence which nominates a water supply work being used to take water from the alluvial sediments that is at or less than 40 metres from the top of the high bank of a river shall, for the first five years of this Plan, not be subject to the access rules applying to unregulated river access licences within the same water source or management zone, except where subclause (3) applies, but will be subject to any other relevant condition on the access licence.

(3) Notwithstanding subclause (2), where a new water supply work is being used to take water from the alluvial sediments is required as part of a dealing involving the conversion of an unregulated river access licence to an aquifer access licence under clause 71 of this Plan then the taking of water under the aquifer access licence shall be subject to the same access rules applying to unregulated river access licences within the same water source or management zone.

(4) The taking of water under an aquifer access licence which nominates a water supply work being used to take water from the alluvial sediments that is greater than 40 metres from the top of the high bank of a river shall not be subject to the access rules applying to unregulated river access licences within the same water source or management zone, but will be subject to any other relevant condition on the access licence.

(5) The taking of water under an aquifer access licence which nominates a water supply work being used to take water from the alluvial sediments that is at or less than 40 metres from the top of the high bank of a river shall, after year five of this Plan, be subject to the relevant access rules applying to unregulated river access licences within the same water source or management zone and any other relevant condition on the access licence.

(6) The taking of water under a local water utility access licence which nominates a new water supply work being used to take water from the alluvial sediments that is at or less than 40 metres from the top of the high bank of a river shall, be subject to the relevant access rules applying to unregulated river access licences within the same water source or management zone and any other relevant condition on the access licence.

(7) For the purposes of subclauses (5) and (6), an unregulated river access condition that requires a visible flow at the pump site shall be for an aquifer access licence taken to mean a visible flow

in the river immediately adjacent to the water supply work being used to take water from the alluvial sediments.

(8) The taking of water under a local water utility or domestic and stock access licence which, at the commencement of this Plan, nominates a water supply work being used to take water from the alluvial sediments, that is less than 40 metres from the top of the high bank of a river shall not be subject to the access rules applying to local water utility or domestic and stock access licences within the same management zone or water source, but will be subject to any other relevant condition on the access licence, except where clause (6) applies.

Division 5 Management of local impacts

63 Management of local impacts

(1) This Division is made in accordance with section 21 (a) of the Act.

(2) The Minister may declare a defined area to be known as a local impact area in order to:

(a) protect water levels within a water source,

(b) protect water quality within a water source,

(c) protect high priority groundwater dependent ecosystems in Schedule 4 through the protection of water quality and/or water levels, or

(d) protect aquifer integrity.

(3) The declaration in subclause (2) is to set out local impact areas and those rules which are to apply in a local impact area.

(4) The Minister is to advise in writing each licence or approval holder, who is in a local impact area, of the local impact rules that their access licence or water supply works being used to take water from alluvial sediments approval is now subject to.

Note. The Minister may also, if satisfied that it is necessary to do so in the public interest, make an order under section 324 of the Act, directing that for a specified period, the taking of water from a specified water source is totally prohibited.

64 Water level management

(1) The Minister may declare a local impact area under clause 63 of this Plan within the these water sources, restricting extraction to such an extent and for such time as is required to restore groundwater levels to a sustainable level, protect aquifer integrity and or protect or restore groundwater dependent ecosystems.

(2) The Minister may nominate specific water levels to define the terms referred to in subclause (1) to ensure extraction does not cause an ongoing decline in groundwater levels.

(3) In the case of subclause (1), the local impact rules may also be:

(a) expressed as restrictions on yearly, quarterly, or weekly extraction in the affected areas, and

(b) subject to review based on assessment of data from monitoring bores within the local impact area.

(4) If water levels recover, extraction restrictions may be eased to such an extent as to allow recovered water levels to be maintained and fluctuate within the normal bounds of climate variability.

Note. This clause recognises that in some locations, at certain periods of high groundwater demand, critical water level declines may occur, and that additional extraction limitations may be required. The Department of Water and Energy will identify monitoring bores, and determine the method for specifying an affected area.

65 Water quality management

(1) The beneficial use of the groundwater in these water sources is for irrigation and aquatic ecosystems

Note. Beneficial use classes are based on *Australian and New Zealand Environment and Conservation Council Water Quality Guidelines 2001* and the *National Health and Medial Research Council Raw Water for Drinking Purposes Guidelines 2004.* However, some water sources will not meet all water quality triggers associated with each class.

Note. There are localised areas within these groundwater sources where the beneficial use is of a lower class.

Note. It is not recommended that water direct from the groundwater be consumed by humans without prior treatment. Land use activities may have resulted in pollution of the groundwater in some areas.

(2) Water quality decline will be deemed unacceptable if extraction causes, or is likely to cause, water quality to decline to a lower beneficial use class, as prescribed within the framework described in the NH&MRC/ARMCANZ *Australian Drinking Water Guidelines* (1996), and the ANZECC/ARMCANZ *Guidelines for Fresh and Marine Water Quality* (2000).

(3) Before making a local impact area declaration under this Plan (in respect to water quality on groundwater dependent ecosystems), the Minister should consider the results of:

(a) a site inspection, and

(b) water analysis from bores,

within the proposed local impact area.

(4) If water quality decline is resulting from extraction, extraction from all water supply works being used to take water from the alluvial sediments nominated by an access licence within a local impact area declared under this Plan, will be restricted to such an extent and for such time as required to halt that decline, or restore the beneficial use of the groundwater.

(5) In the case of subclause (4), the local impact rules may be:

(a) expressed as restrictions on yearly, quarterly, or weekly extraction in the affected areas, and

(b) subject to review based on assessment of data from monitoring bores within the local impact area.

(6) An existing water supply work (bore), within 100 metres of a contamination source identified in Schedule 3, will be able to continue extraction of groundwater at levels equivalent to the access licence share component at the commencement of this Plan nominating that work, subject to any restrictions arising from subclause (4).

66 Infrastructure failure in local impact areas

(1) The operational rules relating to a local impact area may rely on water levels at specified monitoring bores.

(2) In the event of a monitoring bore failure the Minister may:

(a) continue with the current access rules until the monitoring bore is reinstated,

(b) adjust the current access rules based on climatic conditions and monitoring bore information, until the monitoring bore is reinstated, and

(c) rely on another monitoring bore in the area to provide information.

Part 12 Rules for managing existing water supply works approvals being used to extract water from alluvial sediments

67 Rules for managing existing water supply works approvals being used to extract water from alluvial sediments

(1) This Part is made in accordance with section 21 (a) and 21 (b) of the Act.

(2) An existing water supply work, being used to extract water from alluvial sediments within 500 metres of a contamination source identified in this Plan, will be able to continue extraction of groundwater at levels equivalent to the access licence share component at the commencement of this Plan nominating that work, subject to any restrictions arising from clause 65 (4).

(3) The Minister may, during the term of this Plan, impose further restrictions on the rate and timing of extraction of water from the water source to mitigate impacts.

Part 13 Access licence dealing rules

68 Access licence dealing rules

(1) This Part is made in accordance with section 20 (1) (d) of the Act.

(2) An application for a dealing can only be made in accordance with the access licence dealing rules established by this Plan and any access licence dealing principles order which is in force under section 71Z of the Act.

(3) To the extent that the water allocation of an access licence, which is subject to an adaptive environmental water condition, is not required to meet the requirement of the condition it may be the subject of an assignment dealing in accordance with the Dealings Rules in Part 13 of this Plan.

(4) Notwithstanding subclause (3) an access licence with an adaptive environmental water condition may be the subject of any other dealing permitted by the Dealing Rules in this Plan, provided the benefit to the environment provided for in the adaptive environmental condition is not diminished.

Note. There are a number of mechanisms within the Act, called access licence dealings, to change either the holder of all or part of an access licence, or the location within a water source at which all or part of the share and extraction components of access licences can be exercised. These dealings are governed by the principles in section 5 of the Act, the Minister's access licence dealing principles, and the rules in this Part.

Note. Where there is an inconsistency between access licence dealing rules established in this Plan and Minister's access licence dealing principles gazetted subsequent to the commencement of this Plan, section 71Z of the Act provides for the Minister's access licence dealing principles to prevail.

Note. An unregulated river (Aboriginal community development) access licence will not be fully commercial. Allocations under these licences will be able to be traded to non-Aboriginal people however the licence itself can only be traded amongst Aboriginal people, and as such will remain in the Aboriginal community for the life of the licence. These licences will not be able to be converted to any other category of licence. Aboriginal communities, enterprises and individuals are encouraged to seek financial assistance from funding bodies to purchase fully commercial licences.

69 Rules relating to constraints within these water sources

(1) This clause applies to any relevant dealings under sections 71Q, 71S, 71T and 71W of the Act.

(2) Applications for the dealings specified in subclause (1) are prohibited if:

(a) the dealing would result in the total extraction under access licences through nominated water supply works that are being used to take water from the alluvial sediments in the area, plus basic landholder rights extraction, causing any adverse local impact in accordance with Part 11, Division 5 of this Plan,

(b) the dealing involves an assignment of access rights or an allocation assignment from an aquifer access licence that nominates a water supply works that are being used to take water from the alluvial sediments outside 40 metres from the top of the bank of a river to a water supply works that are being used to take water from the alluvial sediments within 40 metres from the top of the bank of a river,

(c) the dealing involves an assignment of access rights or an allocation assignment from an access licence in:

(i) the Tweed Estuary Water Source, if it is from the Tweed Estuary Management Zone to the Rous River Tidal Pool Management Zone and it causes total access licence share components in the Rous River Tidal Pool Management Zone to exceed total access licence share components in that management zone at the commencement of this Plan, and

(ii) the Burringbar River Water Source, if it is from one management zone to the other management zone,

(d) the dealing involves an assignment of access rights or an allocation assignment from an unregulated river high flow access licence to an access licence of another category, and

(e) the dealing involves an access licence that currently nominates works in:

(i) the Tweed Estuary Management Zone of the Tweed Estuary Water Source, nominating works in the Rous River Tidal Pool Management Zone of the Tweed Estuary Water Source and it causes total access licence share components in the Rous River Tidal Pool Management Zone to exceed total access licence share components in that management zone at the commencement of this Plan, and

(ii) one management zone nominating works in the other management zone in the Burringbar River Water Source.

70 Rules for change of water source

(1) This clause relates to dealings under section 71R and 71W of the Act.

Note. Section 71R dealings are the mechanism by which access licences can move from one water source to another. Once the change in water source has been affected, if permitted, the new licence will have to nominate specified works (by a dealing under section 71W of the Act) in the receiving water source before extraction can commence.

(2) Dealings under section 71R and 71W of the Act that change the water source to which an access licence applies are prohibited in these water sources if:

(a) the dealing involves a change of water source from one extraction management unit to another extraction management unit,

(b) the dealing is into the Burringbar River Water Source, the Byrrill Creek Water Source, the Christies Creek Water Source, the Cobaki Broadwater Water Source, the Cudgera Creek Water Source, the Doon Doon Creek Water Source, the Mooball Creek Water Source, the Sheens Creek Water Source and the Terranora Broadwater Water Source,

(c) the dealing is into the Bilambil Creek Water Source, the Cobaki Creek Water Source, the Crystal Creek Water Source, the Dunbible Creek Water Source, the Dungay Creek Water Source, the Duroby Creek Water Source, the Nobbys Creek Water Source, the Piggabeen Creek Water Source, the Pumpenbil Creek Water Source or the Upper Tweed River Water Source and it causes total access licence share components in the water source to exceed total access licence share components in that water source at the commencement of this Plan,

(d) the dealing is into the Rous Tidal Pool Management Zone of the Tweed Estuary Water Source and it causes total access licence share components in the management zone to exceed total access licence share components in that management zone at the commencement of this Plan,

(e) the dealing is into the Brays Creek Water Source and it causes total access licence share components in the water source to exceed total access licence share components in that water source at the commencement of this Plan plus 170 megalitres,

(f) the dealing is into the Hopping Dicks Creek Water Source and it causes total access licence share components in the water source to exceed total access licence share components in that water source at the commencement of this Plan, plus 94 megalitres,

(g) the dealing is into the Lower Oxley River Water Source and it causes total access licence share components in the water source to exceed total access licence share components in that water source at the commencement of this Plan plus 663 megalitres,

(h) the dealing is into the Rolands Creek Water Source and it causes total access licence share components in the water source to exceed total access licence share components in that water source at the commencement of this Plan plus 1,871 megalitres,

(i) the dealing is into the Smiths Creek Water Source and it causes total access licence share components in the water source to exceed total access licence share components in that water source at the commencement of this Plan plus 23 megalitres,

(j) the dealing is into the Upper Oxley River Water Source and it causes total access licence share components in the water source to exceed total access licence share components in that water source at the commencement of this Plan plus 418 megalitres,

(k) the dealing is into the Upper Rous River Water Source and it causes total access licence share components in the water source to exceed total access licence share components in that water source at the commencement of this Plan plus 385 megalitres,

(l) the dealing is into the Mid Rous River Water Source:

(i) from any of these water sources other than Nobbys Creek Water Source, Crystal Creek Water Source or the Upper Rous River Water Source, and

(ii) from Nobbys Creek Water Source, Crystal Creek Water Source or the Upper Rous River Water Source and it causes total access licence share components in the water source to exceed total access licence share components in that water source at the commencement of this Plan, and

(m) the dealing is into the Mid Tweed River Water Source from any of these water sources, other than Smiths Creek Water Source, Rolands Creek Water Source, Doon Doon Creek Water Source, Upper Tweed River Water Source, Brays Creek Water Source, Lower Oxley River Water Source and Byrrill Creek Water Source.

(3) Dealings under section 71R and 71W of the Act that change the water source to which an access licence applies are prohibited in these water sources if the dealing involves an unregulated river high flow access licence.

(4) Dealings under section 71R and 71W of the Act that change the water source to which an access licence applies are prohibited in these water sources if the dealing would result in the total extraction under access licences through nominated water supply works that are being used to take water from the alluvial sediments in the area, plus basic landholder rights extraction, causing any adverse local impact in accordance with Part 11, Division 5 of this Plan.

(5) Unless the application is for a replacement water supply work being used to take water from the alluvial sediments that is part of a bore network for a local water utility or town water supply or a new water supply works being used to take water from the alluvial sediments required as part

of a dealing involving the conversion of an unregulated river access licence to an aquifer access licence under section 71O of the Act and clause 71 of this Plan, consent to a nominated work under section 71W, is not to be granted in these groundwater sources, if it would result in a water supply work being used to take water from the alluvial sediments being authorised to extract water within 40 metres of the top of the high bank of a river.

(6) The share component on an access licence issued under this clause is to be equal to the cancelled access licence share component.

(7) The extraction component of the cancelled access licence is not to be carried over to the new access licence.

71 Rules for conversion of access licence category

(1) This clause relates to dealings under section 71O of the Act.

(2) Conversion of an access licence of one category to an access licence of another category is permitted only if the conversion is from:

(a) an unregulated river access licence to an aquifer access licence, or

(b) an unregulated river access licence to an unregulated river high flow access licence in the Crystal Creek Water Source, the Mid Rous River Water Source, the Pumpenbil Creek Water Source and the Upper Tweed River Water Source.

(3) For any conversion of an access licence under subclauses (2) (a) and 2 (b), the access licence being converted shall be cancelled and a new licence issued.

(4) The share component on an access licence issued under subclause 2 (a) is to be equal to the cancelled access licence share component.

(5) The volume of share component on an access licence issued under subclause (2) (b) is to be equal to 2.5 times the cancelled access licence share component.

(6) The total amount of all access licence share component that can be converted to unregulated high flow access licences under subclause (2) (b) shall be limited to:

(a) 88 unit shares in the Crystal Creek Water Source,

(b) 629 unit shares in the Mid Rous River Water Source,

(c) 176 unit shares in the Pumpenbil Creek Water Source, and

(d) 238 unit shares in the Upper Tweed River Water Source.

Note. Approval for conversion of an unregulated river access licence to an unregulated river high flow access licence will be subject to assessment of the application in regard to the level of impact of the proposed conversion. This should include consideration of the potential impact on high flow (e.g. flows greater than the 50th percentile flow) values, and any potential impact on the water source as a whole.

MINISTERS NOTE: The Regional Panel is keen to seek comment from licence holders in water sources where conversion to high flow access has been proposed as to whether licence holders are interested in undertaking such a conversion.

The aim of conversion to high flow access is to provide for a reduction in high stress on low flows in-stream values in those water sources where there is likely to be water available in higher flows for users to access without significant impact on high flow in-stream values.

Where conversion occurs to a higher flow class, consideration is being given as to how the volume of water forfeited in the low flow class may be protected rather than taken up in extraction by the remaining users. One option is to introduce daily flow sharing for all water users in both the high and low flow classes once conversion occurs. The introduction of this form of management would be based on appropriate management systems being in place, such as measurement of use. This would mean that all licenced extractors would be limited to a total daily extraction limit which they must manage to as a group. The Regional Panel is keen to seek comment from licence holders as to whether the introduction of daily flow shares would impact on the level of uptake of conversion to high flow.

Your comment on this matter would be appreciated.

72 Rules for interstate access licence transfer and assignment of water allocation

(1) This clause relates to dealings under section 71U and 71V of the Act.

(2) Dealings that result in the interstate transfer of an access licence into or out of these water sources or interstate assignment of water allocations to or from these water sources are prohibited.

73 Rules for water allocation assignments between water sources

(1) This clause relates to dealings under section 71T of the Act.

(2) Dealings under section 71T that result in water allocation assignments to or from an access licence in one of these water sources to or from an access licence in another of these water sources are prohibited in these water sources if the dealing would result in the total extraction under access licences through nominated water supply works that are being used to take water from the alluvial sediments in the area, plus basic landholder rights extraction, causing any adverse local impact in accordance with Part 11, Division 5 of this Plan.

(3) Dealings under section 71T of the Act that result in water allocation assignments to or from an access licence in one of these water sources to or from an access licence in another of these water sources are prohibited if:

(a) the dealing involves a change of water source from one extraction management unit to another extraction management unit,

(b) the dealing is into the Burringbar River Water Source, the Byrrill Creek Water Source, the Christies Creek Water Source, the Cobaki Broadwater Water Source, the Cudgera Creek Water Source, the Doon Doon Creek Water Source, the Mooball Creek Water Source, the Sheens Creek Water Source and the Terranora Broadwater Water Source,

(c) the dealing is into the Bilambil Creek Water Source, the Cobaki Creek Water Source, the Crystal Creek Water Source, the Dunbible Creek Water Source, the Dungay Creek Water Source, the Duroby Creek Water Source, the Nobbys Creek Water Source, the Piggabeen Creek Water Source, the Pumpenbil Creek Water Source or the Upper Tweed River Water Source and it causes total access licence share components in the water source to exceed total access licence share components in that water source at the commencement of this Plan,

(d) the dealing is into the Rous Tidal Pool Management Zone of the Tweed Estuary Water Source and it causes total access licence share components in management zone to exceed total access licence share components in that management zone at the commencement of this Plan,

(e) the dealing is into the Brays Creek Water Source and it causes total access licence share components in the water source to exceed total access licence share components in that water source at the commencement of this Plan plus 170 megalitres,

(f) the dealing is into the Hopping Dicks Creek Water Source and it causes total access licence share components in the water source to exceed total access licence share components in that water source at the commencement of this Plan plus 94 megalitres,

(g) the dealing is into the Lower Oxley River Water Source and it causes total access licence share components in the water source to exceed total access licence share components in that water source at the commencement of this Plan plus 663 megalitres,

(h) the dealing is into the Rolands Creek Water Source and it causes total access licence share components in the water source to exceed total access licence share components in that water source at the commencement of this Plan plus 1,871 megalitres,

(i) the dealing is into the Smiths Creek Water Source and it causes total access licence share components in the water source to exceed total access licence share components in that water source at the commencement of this Plan plus 23 megalitres,

(j) the dealing is into the Upper Oxley River Water Source and it causes total access licence share components in the water source to exceed total access licence share components in that water source at the commencement of this Plan plus 418 megalitres,

(k) the dealing is into the Upper Rous River Water Source and it causes total access licence share components in the water source to exceed total access licence share components in that water source at the commencement of this Plan plus 385 megalitres,

(l) the dealing is into the Mid Rous River Water Source:

  (i) from any of these water sources other than Nobbys Creek Water Source, Crystal Creek Water Source or the Upper Rous River Water Source, and

  (ii) from Nobbys Creek Water Source, Crystal Creek Water Source or the Upper Rous River Water Source and it causes total access licence share components in the water source to exceed total access licence share components in that water source at the commencement of this Plan,

(m) the dealing is into the Mid Tweed River Water Source from any of these water sources, other than Smiths Creek Water Source, Rolands Creek Water Source, Doon Doon Creek Water Source, Upper Tweed River Water Source, Brays Creek Water Source, Lower Oxley River Water Source and Byrrill Creek Water Source, and

(n) the dealing involves an unregulated river high flow access licence.

Part 14 Mandatory conditions

74 Mandatory conditions on access licences

(1) This Part is made in accordance with sections 17 (c) and 20 (2) (e) of the Act.

(2) All access licences in these water sources shall have mandatory conditions to give effect to the provisions of this Plan in relation to the following:

(a) water cannot be taken in excess of the volume of water allocated to, or assigned to or recredited to, the respective water allocation account,

(b) the requirement that all extraction under access licences will be subject to the account management rules established in this Plan,

(c) the requirement that water may only be taken under the access licence by a water supply work listed on the approval nominated on the access licence,

(d) the requirement that all extraction under aquifer access licences will be subject to any local impact rules established in Division 5 of Part 11 of this Plan, and

(e) any other conditions required to implement the provisions of this Plan.

(3) All access licences, excluding unregulated river high flow access licences, unregulated river (Aboriginal community development) access licences and access licence which nominates a water supply works being used to take water from the alluvial sediments, in these water sources shall have a mandatory condition which specifies a cease to pump which is the higher of:

(a) the upper limit of the Very Low Flow Class established in clause 16 for the respective water source or management zone, or

(b) the cease to pump threshold specified on the entitlement issued under Part 2 of the *Water Act 1912* that is being replaced by an access licence under the Act.

(4) All domestic and stock access licences in these water sources shall have mandatory conditions to give effect to the following:

(a) water may only be taken for the purposes of domestic consumption or stock watering as defined in section 52 of the Act,

(b) where a flow class has been determined by the Minister, water may only be taken at a rate not exceeding that specified for the flow class and in the access licence extraction component, unless otherwise authorised by an approved group,

(c) where a flow class has not been determined by the Minister, water may only be taken in accordance with the related cease to pump flow rate,

(d) notwithstanding subclauses (b) and (c), water may be taken without any restrictions in rate from an in-river dam while the dam is passing all inflows, and

(e) the conditions in subclauses (b) (c) and (d) are not to be imposed if the extraction component of the access licence specifies that water may only be taken from a runoff harvesting dam.

(5) All local water utility access licences in these water sources shall have mandatory conditions to give effect to the following:

(a) water may only be taken for the purposes of supplying water for the exercise of a water supply function of the local water utility or for other such purpose provided for under the Act,

(b) where a flow class has been determined by the Minister, water may only be taken at a rate not exceeding that specified for the flow class on the access licence extraction component, and

(c) notwithstanding subclause (b), water may be taken without any restrictions in rate from an in-river dam while the dam is passing all inflows.

(6) All unregulated river access licences in these water sources shall have mandatory conditions to give effect to the following:

(a) where a flow class has been determined by the Minister water may only be taken at a rate not exceeding that specified for the flow class and in the access licence extraction component, unless otherwise authorised by an approved group,

(b) where a flow class has not been determined by the Minister, water may only be taken in accordance with the related cease to pump flow rate, and

(c) notwithstanding subclauses (a) and (b), water may be taken without any restrictions in rate from an in-river dam while the dam is passing all inflows.

(7) All unregulated river high flow access licences and unregulated river (Aboriginal community development) access licence in these water sources shall have mandatory conditions to give effect to the following:

(a) a cease to pump flow rate which is the higher of:

(i) the lower limit of the B Class established in clause 16 for the respective water source or management zone, or

(ii) the cease to pump threshold specified on the entitlement issued under Part 2 of the *Water Act 1912* that is being replaced by an access licence under the Act,

(b) where a flow class has been determined by the Minister, water may only be taken at a rate not exceeding that specified for the flow class and in the access licence extraction component, unless otherwise authorised by an approved group,

(c) where a flow class has not been determined by the Minister, water may only be taken in accordance with the related cease to pump flow rate, and

(d) notwithstanding subclauses (b) and (c), water may be taken without any restrictions in rate from an in-river dam while the dam is passing all inflows.

(8) All access licences in these water sources that nominate a runoff harvesting work shall have a mandatory condition imposed on them specifying that water may be taken without restriction in rate, but only from the specified work.

(9) Access licences listed in Schedule 2 shall have mandatory conditions to give effect to clause 60.

(10) All (Aboriginal cultural) access licences shall have mandatory conditions that only allow the taking of water by Aboriginal persons or communities for personal, domestic and communal purposes, including the purpose of drinking, food preparation, washing, manufacturing traditional artefacts, watering domestic gardens, cultural teaching hunting, fishing and gathering and for recreational, cultural and ceremonial purposes.

(11) All unregulated river (Aboriginal community development) access licences shall have mandatory conditions that only allow the taking of water by Aboriginal persons or communities for commercial purposes.

(12) All access licences shall have mandatory conditions to give effect to a local impact area declaration under clause 63 of this Plan.

(13) All aquifer access licences shall have mandatory conditions to give effect to clause 62 of this Plan.

(14) Notwithstanding clauses 2 to 12, all access licences specified in clause 60 of this plan, shall have a mandatory condition to give effect to clause 60.

75 Mandatory conditions on water supply works approvals

(1) All approvals for water supply works, other than water supply works being used to take water from the alluvial sediments, in these water sources shall have mandatory conditions to give effect to the following:

(a) when directed by the Minister, flow measurement devices shall be installed and maintained on all works used for extraction of water under a surface water access licence and shall be of a type and shall be maintained in a manner which is acceptable to the Minister,

(b) water extraction and property water management infrastructure and cropping details shall be provided to the Minister on request,

(c) the taking of water may only occur in accordance with the conditions applying to the access licence for whose water allocation account the taking of water will be debited,

(d) it is the responsibility of the work approval holder to ascertain the flow class at any time before commencing to take water under an access licence,

(e) for all water sources, notwithstanding all other rights and conditions, extraction of water from a river by an approved water supply work is permitted only where it complies with the flow conditions of the authorised water supply works or in the absence of such condition, if there is a visible flow in the river in the downstream vicinity of the water supply work or where water is being taken from a pool, a visible inflow and outflow to and from that pool,

(g) extraction under an access licence through an approved work is only authorised with respect to the work nominated by the access licence,

(h) approvals for in-river dams must include a condition requiring the passing of such flows as the Minister determines to be appropriate to achieve the objectives of this Plan, and

(i) any other conditions required to implement the provisions of this Plan.

(2) Water supply works held by local water utilities in the Mid Tweed River Water Source shall have mandatory conditions to give effect to clause 77 of this Plan.

76 Mandatory conditions on water supply works approvals being used to take water from the alluvial sediments

Note. In accordance with the Act, actual extraction of groundwater can only be undertaken through an approved water supply work being used to take water from the alluvial sediments. Standards and conditions relating to the construction, maintenance, operation and decommissioning of these works are particularly important. If not properly adhered to, the works themselves can be a conduit for contamination of the groundwater source.

(1) All approvals for water supply works being used to take water from the alluvial sediments, in these water sources shall have mandatory conditions to give effect to the following:

(a) the water supply work being used to take water from the alluvial sediments is only to be constructed by a driller licenced under the *Water Act 1912* or the *Water Management Act 2000*,

(b) the water supply work being used to take water from the alluvial sediments must comply with drilling standards as specified by the Minister,

(c) construction of a water supply work being used to take water from the alluvial sediments must prevent contamination between aquifers through proper bore construction,

(d) a water supply work being used to take water from the alluvial sediments approval holder must ensure decommissioning procedures comply with applicable standards as specified by the Minister,

(e) a new or replacement water supply work being used to take water from the alluvial sediments to access water for basic rights will be required, as a condition of approval, to be constructed to sufficient depth to ensure that access to the resource is not unacceptably impacted by other authorised extractions,

(f) the water supply work being used to take water from the alluvial sediments approval holder is, within 2 months of completion, or after the issue of the approval if the water supply work is existing, to provide the Minister with:

(i) details of the water supply work being used to take water from the alluvial sediments on the prescribed form,

(ii) a plan showing accurately the location of the water supply work being used to take water from the alluvial sediments on the lot and deposited plan, GPS references and the location of the work in relation to property boundaries, and

(iii) details of any water analysis and/or pumping tests required by the Minister,

(g) if during the construction of the water supply work being used to take water from the alluvial sediments, saline or contaminated water is encountered above the production aquifer, such water is to be sealed off by:

(i) inserting the appropriate length of casing to a depth sufficient to exclude the saline or contaminated water from the work, and

(ii) placing an impermeable seal between the casing and the wall of the bore hole from the bottom of the casing to ground level, as specified by the Minister,

(h) if a water supply work being used to take water from the alluvial sediments is abandoned, the approval holder is to:

(i) notify the Minister that the work has been abandoned, and

(ii) seal off the aquifer by backfilling the work to ground level after withdrawing the casing (lining), as specified by the Minister,

(i) when directed by the Minister, an extraction measurement device shall be installed and maintained on each water supply work, being used to take water from the alluvial sediments used for extraction of water under an access licence, and shall be of a type and shall be maintained in a manner which is acceptable to the Minister,

(j) a water supply work being used to take water from the alluvial sediments must comply with the relevant local impact rules in Division 5 of Part 11 of this Plan,

(k) extraction under an access licence through an approved water supply work, being used to take water from the alluvial sediments is only authorised with respect to the work nominated by the access licence,

(l) a water supply work being used to take water from the alluvial sediments approval holder must supply to the Minister on request, and to the required standards, a report pertaining to the quality of the water obtained from the water supply work,

(m) all approved water supply works being used to take water from alluvial sediments in these water sources shall have a mandatory condition giving effect to an extraction limiting condition arising from this Plan, if that is required, to restrict the taking of water from these groundwater sources consistent with such condition,

(n) a water supply work being used to take water from the alluvial sediments must be constructed within 3 years of the approval being granted, and

(o) any other conditions required to implement the provisions of this Plan.

(2) All approved water supply works being used to take water from the alluvial sediments in these water sources shall have a mandatory condition that only allows the taking of water from these water sources whichever is the more restrictive of:

(i) the conditions specified on the entitlement issued under the *Water Act 1912* that is being replaced by an access licence and/or water supply works approval under the Act, or

(ii) an extraction limiting condition arising from this Plan.

Part 15 System operation rules

77 Operational rules from local water utility storages

In the Mid Tweed River Water Source:

(a) for the Clarrie Hall Dam, a daily flow release shall be made from the storage (inclusive of any release for local water utility purposes) into Doon Doon Creek downstream of the storage equivalent to or greater than:

(i) 2 ML/day when flow at the flow reference point is at or less than the 95th percentile,

(ii) 4 ML/day when flow at the flow reference point is greater than the 95th percentile and less than the 80th percentile, and

(iii) 6 ML/day when flow at the flow reference point is at or greater than the 80th percentile,

(b) for the Bray Park Weir storage, a daily flow release shall be made from the storage through the fish ladder(s) on Bray Park Weir equivalent to or greater than:

(i) 8 ML/day when Clarrie Hall Dam capacity is at or greater than the 75%,

(ii) 5 ML/day when Clarrie Hall Dam capacity is less than 75% and greater than 50% and

(iii) 3 ML/day when Clarrie Hall Dam capacity is at or less than 50%,

as correlated to the flow reference point,

(c) for the purpose of subclauses (a) and (b) the flow reference point is the Oxley River at Eungella gauge (201001) in the Lower Oxley River Water Source until such time as sufficient data has been collected to calibrate the newly installed Tweed River at Palmers Road gauge (201015) in the Mid Tweed Water Source, to enable determination of the percentiles at the end of the Mid Tweed River Water Source, and council is notified of the change in the flow reference point,

(d) the Minister may amend subclause (b) (iii) following the introduction of appropriate demand management strategies by the local water utility,

(e) the Minister may amend subclause (b) following the adoption of a Fishway Management Plan for the Bray Park Weir by the Department of Primary Industries and the Department, and

(f) the Minister may suspend or alter the release requirements under subclauses (a) and (b) for the purpose of an emergency or maintenance activity that has the potential to temporarily affect the flow volume or behaviour of water for periods of more than 24 hours.

Part 16 Amendment of this Plan

78 Amendment of this Plan

This part is made in accordance with section 45 (1) (b) of the Act.

79 Amendments due to floodplain harvesting

This Plan may be amended so as to provide for the floodplain harvesting of water, subject to the amendments not affecting the outcomes of the long-term average annual extraction limit specified within this Plan.

Note. This means that this Plan can be changed to issue and manage floodplain harvesting licences provided that the long-term average annual extraction limit (LTAAEL) does not increase or decrease. Floodplain harvesting in coastal systems is limited compared to inland systems. By not amending the LTAAEL with the granting of these licences, coastal systems are being consistent with inland systems where growth is managed within the existing LTAAEL.

80 Amendments for stormwater harvesting

The Minister may, under section 45 (1) (b) of the Act, amend:

(a) Part 3,

(b) Part 4,

(c) Part 8,

(d) Part 9,

(e) Part 10,

(e) Part 11, Division 2 and 3,

(f) Part 14, and

(h) Part 15,

to include rules for any new category of access licence established under the Act for the purpose of stormwater harvesting.

81 Amendments for possible enlargement of Clarrie Hall Dam

The Minister may, under section 45 (1) (b) of the Act, amend any relevant clauses of this Plan as a result of any future enlargement of Clarrie Hall Dam in the Mid Tweed River Water Source.

Schedule 1 Dictionary

The following definitions apply to this Plan in addition to the definitions set out in the Act:

farm dam is a privately owned dam typically of earthen construction designed to collect and/or store water for use on one or few properties. It does not include publicly owned dams or weirs.

flow gauging station is a device that is used to measure the height of a river, from which the flow in the river can be calculated.

in-river dam is a dam on a 3rd, 4th or higher order river. 3rd, 4th or higher order rivers are as defined in the order made under section 5 of the *Water Act 1912* in relation to the definition of a "river" gazetted 23rd March 2001.

karst environment means an area of land, including subterranean land, that has developed in soluble rock through the processes of solution, abrasion or collapse, together with its associated bedrock, soil, water, gases and biodiversity.

management zone is an area within the surface water source in which daily extraction limits may be defined or where dealing restrictions are approved. Management zones may be designated where the surface water source to which the plan applies is divided into areas and total daily extraction limits are defined for each area. They may also be designated where local dealing restrictions are in place.

replacement water supply work (bore) is a bore constructed within 20 meters of, and replacing, an existing water supply work (bore) licenced under the Water Management Act, and with an internal diameter no greater than 110 percent of the internal diameter of the bore it replaces.

runoff harvesting dam is a farm dam on a hillside or 1st or 2nd order stream which collects and stores rainfall runoff. 1st and 2nd order streams are as defined in the order made under section 5 of the *Water Act 1912* in relation to the definition of a river gazetted 23rd March 2001.

stream order is defined by the Strahler stream ordering method.

total daily extraction limit (TDEL) is the volume of water that may be extracted under access licences from an unregulated river on a daily basis from a particular flow class.

visible flow is the continuous downstream movement of water that is perceptible to the eye.

water storage means a state owned dam, weir or other structure, which is used to regulate and manage river flows in this water source and the water body impounded by the structure.

water year means a year commencing 1 July.

Note. The Strahler stream ordering method is explained as follows:

- Starting at the top of a catchment, any watercourse that has no other watercourses flowing into it is classed as a 1st order watercourse,
- Where two 1st order watercourses join, the watercourse becomes a 2nd order watercourse,
- If a 2nd order watercourse is joined by a 1st order watercourse - it remains a 2nd order watercourse,
- When two or more 2nd order watercourses join they form a 3rd order watercourse,
- A 3rd order watercourse does not become a 4th order watercourse until it is joined by another 3rd order watercourse and so on.

Schedule 2 Licences under the Water Act 1912 or Water Management Act 2000 with access to very low flows

Schedule 2 currently lists Water Act licences from which Water Management Act licences will be derived upon commencement of the Water Sharing Plan.

Ministers Note:

Licence holders should check this Schedule and advise the NSW Office of Water as part of any submission on the draft plan if they believe their licence has been omitted from this Schedule. The Schedule should list all access licences which use water for (a) local water utility access or (b) unregulated river and aquifer access for animal welfare or hygiene requirements eg dairy washdown, poultry misting, fruit washing etc.

Note: At the commencement of this Plan there are 21 licences included in this schedule.

Water Act Licences (Local Water Utilities)

30SL042959

30SL066195

30SL043483

30SL027933

30SL066194

Water Act Licences (Non Local Water Utilities)

30SL066914

30SL066303

30SL066692

30SL065993

30SL013278

30SL066546

30SL065987

30SL066004

30SL066199

30SL026428

30SL030399

30SL066230

30SL066304

30SL021825

30SL066008

30SL066499

Schedule 3 Contamination sources in the Tweed River Area Unregulated and Alluvial Water Sources

Contamination sources in the Tweed River Area Unregulated and Alluvial Water Sources include:

(a) on site sewage disposal systems or septic tanks,

(b) any sites where contamination has been assessed as presenting a significant risk of harm under *Contaminated Land Management Act 1997*,

(c) any sites with an historical use listed in Table 1 of "*Managing Land Contamination. Planning Guidelines. SEPP 55 – Remediation of Land*", and

(d) any relevant sites listed in an agency database relating to contamination sources.

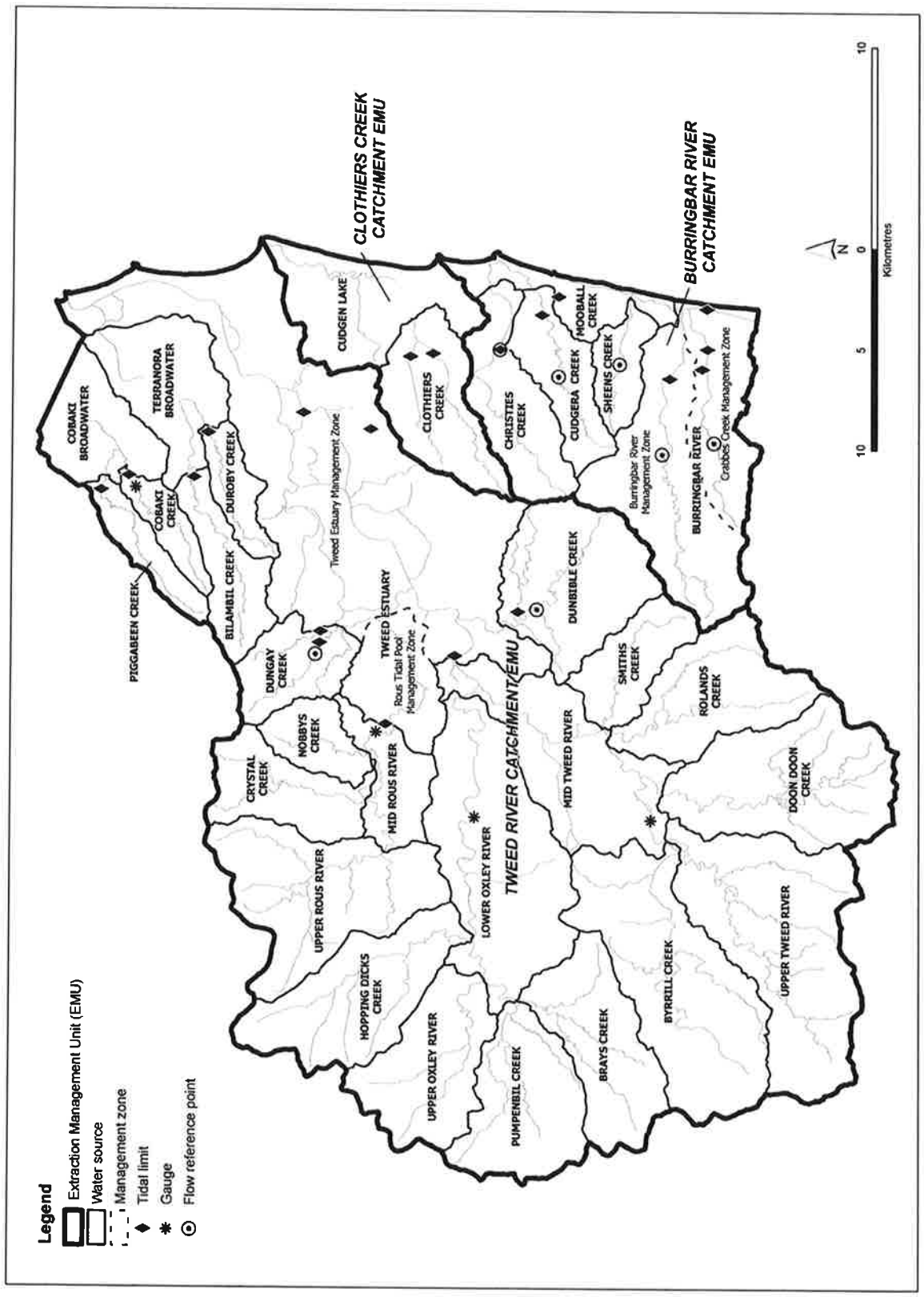
Note. The contamination sources listed in this Schedule may change during the period of this Plan. Locations of the NSW Office of Water, shown in Appendix 2, should be contacted for a current list.

Schedule 4 High priority groundwater dependent ecosystems

At the commencement of this Plan, no high priority groundwater dependent ecosystems or high priority karst environment groundwater dependent ecosystems have been identified in this Schedule.

Note. High priority groundwater dependent ecosystems (GDEs) are currently under investigation and some of these may be identified during the term of this Plan. The full list of potential GDEs will be identified on the NSW Office of Water GDE Register and as a precautionary approach, will be considered by staff in the assessment of any works approval within the plan area. If verified as high priority groundwater dependent ecosystems, the Schedule will be amended to include further GDEs.

Appendix 1 Tweed River Area Unregulated and Alluvial Water Sources, Tweed River Catchment, Clothiers Creek Catchment and Burringbar River Catchment Extraction Management Units



Appendix 2 Location of registered plans

Copies of registered plans in relation to this Plan may be inspected at the following NSW Office of Water locations:

10 Valentine Ave
Parramatta NSW

135 Main St
Murwillumbah NSW

76 Victoria St
Grafton NSW