

PROSERPINE IRRIGATORS COMMITTEE

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11 November 2002

The Chief Executive Officer
Queensland Competition Authority
GPO Box 2257
BRISBANE Q 4001

Dear Sir

Submission on QCA Draft Report on Burdekin Haughton Water Supply Scheme

The following is our response to the Queensland Competition Authority's Draft Report for Consultation – ***Burdekin Haughton Water Supply Scheme: Assessment of Certain Pricing Matters relating to the Burdekin River Irrigation Area.***

That the QCA has in most instances ruled in favour of the position adopted by *Burdekin Rivers Irrigation Area Committee* is as a consequence of a lack of clear policy on water pricing by the State government. This leads to uncertainty, suspicion and confrontation between all participants and is an issue that needs to be identified and addressed by the Authority in its report to government.

As a consequence of a similar situation in New South Wales the government of NSW not only adopted very clear policies on water pricing and how capital contributions were to be addressed in this process, but also introduced an ***Independent Pricing and Regulatory Tribunal (IPART)*** to oversee regulation in the water and other industries in New South Wales. A crucial role that the IPART plays is in setting maximum prices for monopoly services provided by government and government-owned agencies like SunWater.

Attached for your information are copies of letters sent by the Queensland Water Resources Commission to landholders in the Proserpine Irrigation Scheme benefited area that reinforce this position. Any references to capital contributions and interest and redemption charges (rate of return) are non-specific and misleading. The letter of 20 November 1992 for example, refers to a capital charge of \$100 per megalitre for the Proserpine Irrigation Area – no reference is made to additional ongoing capital repayments for the cost of the dam. It is little wonder then that irrigators, having paid the \$100 capital contribution at the outset, are confused and angry about having to pay ongoing capital charges.

Irrigators cannot operate or invest in infrastructure in an environment where they do not have a very clear understanding as to how water is to be priced. A pertinent example is the proposed development of the Paradise Dam in

Bundaberg. Landholders in the benefited area have no clear understanding as to what they will have to pay for their water allocations, how the cost of water is to be calculated or what the maximum price will be that they can expect to pay – the so called upper bound.

The QCA has identified capacity to pay is an ever-present issue for irrigators. Current water pricing policies only add to the uncertainty. This matter must be addressed.

Sincerely

Ian McBean
Secretary



Department of
Primary Industries

Water Resources Commission

Mineral House, 41 George Street, GPO Box 2454, Brisbane, Qld 4001
Telephone (07) 224 2111, Facsimile (07) 221 9312, Telex 41761

Enquiries to Mr K G Pearce
Telephone 224 7140
Your reference
Our reference 92/22440 PEAMD.P
Date 20 November 1992

Address all correspondence to:
The Commissioner of Water Resources

The Property Owner
PROSERPINE QLD

Dear Property Owner

Irrigation Development Proserpine Region

As you are well aware, the Water Resources Commission constructed Peter Faust Dam in the late 1980's to provide water for urban, industrial and agricultural expansion in addition to providing protection to the community from the frequent flooding of the Proserpine River.

The 56 metre high structure was built at a cost of \$ 63 million and impounds a storage of some 500,000 megalitres. The storage was estimated to yield some 57,000 megalitres during critical periods with ultimate demands of 29,300 megalitres for sugar cane and 20,480 megalitres for urban and industrial use.

Thanks to Cyclone Joy, the storage filled within a few weeks of the closure of the dam in December 1990 which has been an unexpected bonus for the community. As indicated in Figure 1, the available supplies have subsequently been readily taken up in the Urban and Industrial Sector however, have not been as readily taken up in the Agricultural Sector.

As a result of representations from local industry leaders for the opening up of new cane land in the district and requests from local cane growers for the provision of public infrastructure to convey water to existing farms, the Water Resources Commission has considered proposals to establish irrigated farms in the Ten Mile Creek and Tailings Gully areas as well as proposals to convey water to the Kelsey Creek, Koolachu-Myrtle Creek and Strathdickie areas (Refer Figure 1).

The Bureau of Sugar Experiment Stations has however, cast doubts as to the feasibility of growing cane in the new areas and it is currently proposed that only the proposals to convey water to existing farms will be recommended to Government at this stage.

Current Government Policy on financing such developments is that the beneficiaries should contribute to the cost of the scheme as well as meet the full operation and maintenance costs. Many of you have previously indicated that you are willing to contribute to this extent; however, I must ask that you now make a more formal expression of this commitment by filling out the attached *Letter of Intent*.

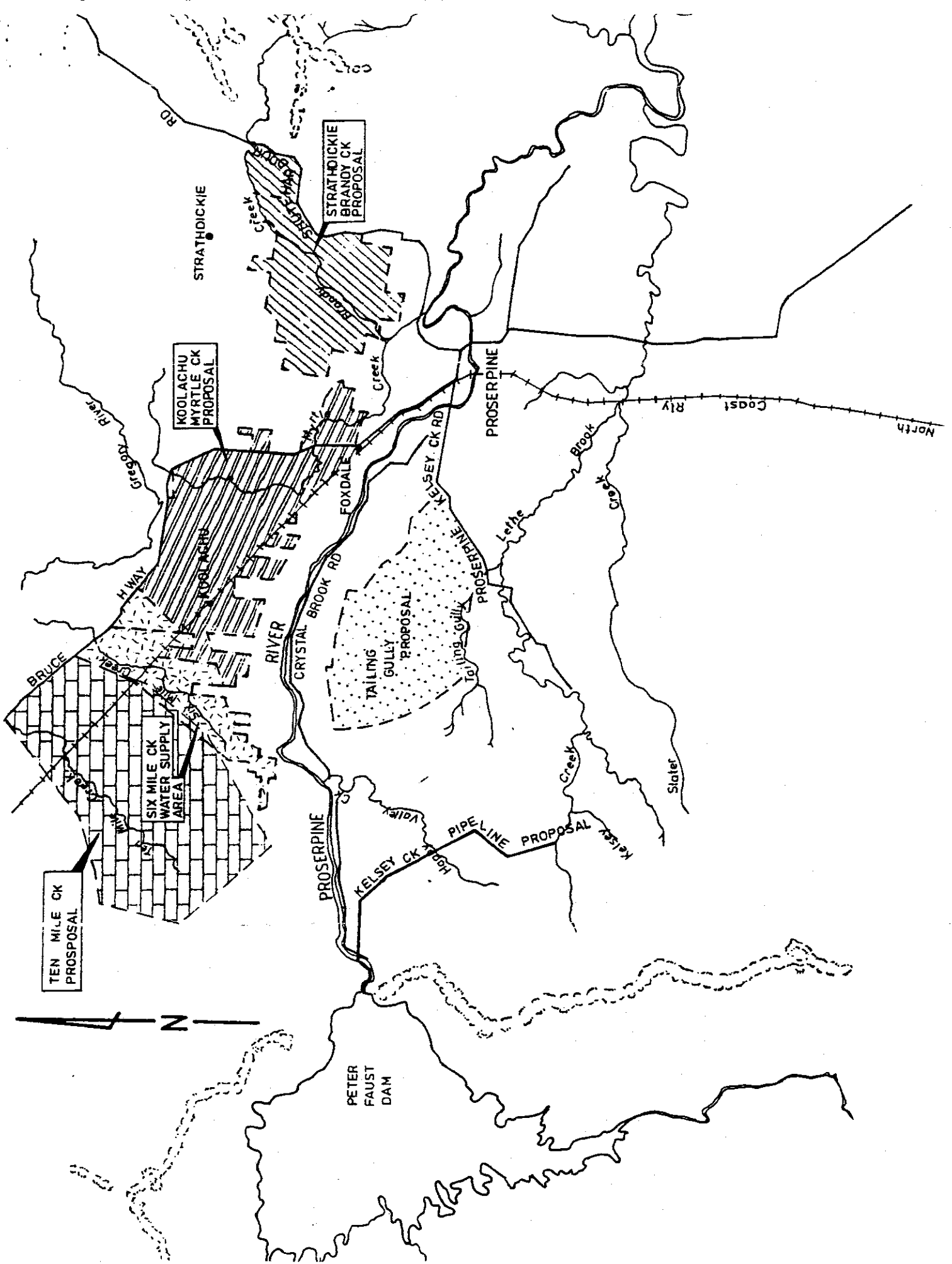
Submissions will then be made to Government in time for consideration by the Cabinet Budget Review Committee for inclusion in the 1993/94 budget. A delay of approximately two years is envisaged for detailed design and construction of the first of the proposals should the Government decide to proceed.

Attached also is a copy of the statistics on the project for your consideration when filling in your offer.

Yours faithfully



for COMMISSIONER OF WATER RESOURCES



PROSERPINE IRRIGATION DEVELOPMENT

ALLOCATION AND USE

USE	ANTICIPATED DEMAND (Megalitres)	ALLOCATIONS TO DATE (Megalitres)	USE 1991-1992 (Megalitres)
Agriculture	29,300	14,497	17,227
Urban & Industrial	20,480	21,773	4,183
Surplus	7,220	20,730	
TOTAL	57,000	57,000	21,410

PROSERPINE IRRIGATION DEVELOPMENT

MARGINAL COSTS
JUNE 1992 DOLLARS

OPTION	AREA IRRIGATED (ha)	Volume ³ Allocated (MI)	Capital Cost (\$)	O&M Cost* (\$)	Development Cost			Annual Interest & Redemption ¹			
					\$/ha	\$/MI	\$/Tonne	Lump sum	\$/ha	\$/MI	\$/Tonne ²
Kelsey Ck	2,000	8,000	7.8	3	3,900	975	43	597,000	298	74	3.31
Koolachu-Myrtle Ck	1,742	6,968	5.6	13	3,215	804	36	429,000	246	61	2.73
Koolachu	1,362	5,448	4.9	17	3,598	899	40	375,000	275	69	3.06
Strathdickie Brandy Ck	736	2,944	2.25	23	3,057	764	34	172,000	234	58	2.60
Lower Myrtle & Brandy Cks	277	1,107	0.25	6	903	226	10	19,000	69	17	0.77

- Notes:
- ¹ Interest & Redemption over 30 years.
 - ² Based on 90 tonne/hectare.
 - ³ Interest rate equal to geometric mean of interest rates paid by Queensland Government since the financial markets were de-regulated in 1983.
 - ⁴ Allocation based on 4 MI/hectare.
- NB: Interest and redemption costs based on incrementing them in line with movement of the Consumer Price Index.
- The above costs do not include capital or operating costs for Proserpine Irrigation Area.
- Current charges in the Proserpine Irrigation Area are:
- Capital Charge = \$ 100/Megalitre
 - Annual Charge = \$ 10.55/Megalitre
- Excludes District and Head Office Overheads.
\$7.60/megalitre in 91/92.

Figure 2



Queensland Water Resources Commission

References

Telephone 224 7662

Mr. W.M. Barry
84/887/18

GPO Box 2454
Brisbane
Queensland 4001

Ivo Botia Pty. Ltd.,
P.O. Box 295,
PROSERPINE. Q. 4800

Dear Sir/Madam,

PROSERPINE RIVER IRRIGATION PROJECT

I refer to the meeting held in Proserpine on 15th May at which advice was given on the above project by the Minister for Water Resources and Maritime Services, and the Commissioner of Water Resources.

As your land will be within the benefited area, and in accordance with the undertaking given at the meeting, I am writing to seek an indication of your support for the scheme and willingness to meet the proposed charges for water supply involved. You are invited to do this by completing the attached form and returning it to the Commission in the enclosed business reply post envelope as soon as possible.

A copy of the notes distributed at the Proserpine meeting is also enclosed for your information.

Should you have any queries on the proposal that you would like answered before completing the form, officers of the Queensland Water Resources Commission will be in attendance at the office of the Proserpine Cane Growers' Executive, Main Street, Proserpine on Wednesday 11th July and Thursday 12th July.

It will be necessary to make an appointment by phoning 45-1844.

Yours faithfully,

W.N. Meredith,
SECRETARY.

DEPARTMENT OF PRIMARY INDUSTRIES
QUEENSLAND WATER RESOURCES COMMISSION

NOTES

ON

PROSERPINE RIVER IRRIGATION PROJECT

(May, 1984)

PURPOSE OF NOTES

Over recent years, investigations have been carried out on a dam site on the Proserpine River as a potential means of providing flood mitigation and water supply for irrigation, urban and industrial use. These notes briefly summarise the results of these investigations.

BACKGROUND TO AND NATURE OF INVESTIGATIONS

The Proserpine River experiences periodic flooding, largely as a result of cyclonic activity. The Proserpine Shire River Improvement Trust has carried out works to improve the capacity of the river channel and to permit controlled overflows. Flows of up to 1 130 cubic metres per second can now be carried safely, but larger floods still cause damage.

The existing sugar cane industry at Proserpine operates either under dry land conditions or using groundwater as the source of irrigation supplies. Groundwater is drawn from the bed sands of the river or from the tertiary sediments and alluvium. The total licensed allocations amount to 21 144 megalitres per year. An appraisal of the area suggests that the available supplies are at or near full commitment over much of the area. Irrigation of the dry land blocks or an expansion of the industry would require additional water supply.

Urban water supplies for the town of Proserpine, adjacent beach areas and the Sugar Mill are also drawn from groundwater with total allocations of 2 470 megalitres per year. Projected increases in population will result in increased demands for water supply.

The Bowen Shire Council is currently authorised to take 2 200 megalitres per year from local groundwater storage. In practice the median level of use between 1973 and 1982 was some 1 600 megalitres. Investigations have shown that no further allocations can be made from the aquifers and, in fact, restrictions are required during droughts. Projected population growth will place further demands upon water supplies.

It is possible that Comalco Limited will site an alumina refinery near Bowen. Water supplies for the plant and the increased population will be required.

Investigations have been carried out on the dam site at 58.1 kilometres on the Proserpine River to determine the feasibility of providing flood mitigation and water supply for some or all of the above purposes. The investigations have included preliminary designs and estimates for dams of various sizes at the site.

ASSESSMENT OF FUTURE WATER NEEDS

Proserpine Area

The Proserpine Shire Council has estimated that by the year 2005 the annual urban water requirements of Proserpine and the adjacent coastal towns could increase to a total of about 7 330 megalitres or some 5 630 megalitres in excess of the Council's current allocation from groundwater.

If the Proserpine Mill retains its present ratio of total Australian mill peaks in the future it is postulated that by the year 2000 the mill peak could increase by some 75 000 tonnes to a total of 200 000 tonnes. If it is assumed that 50 percent of this increased production is to be achieved under irrigated conditions it is postulated that a possible demand for some 29 300 megalitres of supply for irrigation could develop to supply lands within 2.0 to 2.5 kilometres of the Proserpine River.

The future water requirements of the Proserpine Area by the year 2000 are summarised as follows:-

Irrigation (Proserpine River)	29 300 megalitres
Urban Water Supplies (Proserpine & adjacent coastal towns)	5 630 megalitres
TOTAL	<u>34 930 megalitres</u>

Bowen Area

Bowen will require additional sources of water supply to meet future demands resulting from population increases and possible industrial development.

Based on likely normal growth patterns in the Bowen Area it is estimated that the population by the year 2005 will reach 14 100. If the Comalco development also proceeds, a population of 18 600 in the year 2005 is estimated.

Bowen's future requirements are based on:-

Urban Supply	
Normal Growth of Town	3 285 megalitres
If Comalco Alumina Plant Developed	6 450 megalitres
Industrial Supply	
Comalco Alumina Plant	10 000 megalitres

OBJECTIVES OF PROPOSED DEVELOPMENT

Apart from the provision of flood mitigation, four development options for water supply were examined.

- Option 1 - Provision of additional urban water supply and irrigation water needs for the Proserpine Area alone;
- Option 2 - As for (1) but including supply to meet the future water needs of Bowen to the year 2005 assuming normal population growth only;
- Option 3 - As for (1) but including supply to meet the water needs of Bowen to the year 2005 assuming the Comalco project proceeds, plus the industrial needs of the Comalco project; and
- Option 4 - As for (3) but with the dam built to the maximum practical storage capacity to provide some spare supply for possible future uses not yet identified.

POSSIBLE WORKS AND ESTIMATED CAPITAL COSTS

A zoned earth and rock fill dam at 58.1 kilometres on the Proserpine River is envisaged. The spillway would be located on the right abutment with a 4-5 metre diameter reinforced concrete conduit on the same side. The spillway is arranged to limit the discharge to a maximum of 1 130 cubic metres per second.

Table 1 gives the relevant details for the structure for each of the development options considered.

TABLE 1.
STORAGE DETAILS FOR VARIOUS DEVELOPMENT OPTIONS

DEVELOPMENT OPTION	ANNUAL WATER REQUIREMENT EX DAM (megalitres)	STORAGE CAPACITY (megalitres)	HEIGHT OF EMBANKMENT CREST ABOVE BED (metres)	CAPITAL COST(1) (\$ million)
1	34 930	260 000	39.8	28.1
2	38 215	285 000	40.4	28.5
3	49 780	416 000	43.2	30.7
4	57 000	500 000	44.9	32.0

Note: (1) Costs as at June 1983 and include purchase and installation of meters for irrigation in the Proserpine area.

Water would be supplied in the Proserpine area by releases to the river from where it could be diverted by pumping directly from the river or from spears in the bed sands.

It is suggested that the water provided for urban supplies in the Proserpine Area and urban and industrial supplies in the Bowen Area be diverted direct from the dam itself. To enable this to be done a treatment plant and pipeline would be necessary to convey water to the Proserpine and Bowen areas from the dam. Design and construction of such works would be the responsibility of the users and no assessment has been made of the likely costs.

PROPOSED CHARGES

Irrigation Supplies

It is proposed that at today's cost the charge for irrigation supplies would be \$6.75 per megalitre in line with charges applied in similar irrigation areas. This charge is sufficient to meet the annual costs of operation, administration and maintenance on the portion of the works required to provide irrigation supplies and to meet a small part of the interest and redemption on the capital cost. The charge would be subject to annual review.

In addition, in line with irrigation projects in other sugar growing areas, a charge will be made on the sugar mill per tonne of peak attached to farms using irrigation water supplied under the scheme. The charge at today's cost would be \$2.65 per tonne of sugar peak.

Urban Supplies

As well as meeting the cost of operation, administration and maintenance, urban users will be expected to meet interest and redemption payments on the capital cost of providing the water supply after taking into account the normal state subsidy on such works (currently 20 percent).

Since the cost of providing water varies for the different options, the proposed charges range from \$103.25 per megalitre for Option 1 to \$72.55 per megalitre for Option 4. Table 2 below sets out the possible urban water charges for the various development options. It is stressed that the final charges would be determined in the light of the dam's final cost of construction.

TABLE 2.
OVERALL COST OF WATER AND POSSIBLE
CHARGES FOR WATER SUPPLY AT DAM

DEVELOPMENT OPTION	CAPITAL COST (\$ million)	OVERALL COST OF WATER (\$/megalitre)	POSSIBLE CHARGE FOR URBAN WATER SUPPLY TO PROSERPINE & BOWEN (1) (\$/megalitre)	POSSIBLE CHARGES FOR IRRIGATION (\$/megalitre)	POSSIBLE CHARGES FOR SUGAR MILL (\$/tonne sugar)
1	28.1	804	103.25	6.75	2.65
2	28.5	746	96.00	6.75	2.65
3	30.7	617	79.65	6.75	2.65
4	32.0	561	72.55	6.75	2.65

Note: (1) These charges do not include provision for cost of reticulation from dam to Proserpine or Bowen, or cost of water treatment.

Industrial Supplies

No subsidy is applicable to industrial users who would be expected to meet their share of the annual costs and full interest and redemption charges on water allocation.

Flood Mitigation

In order to restrict the outflow from the proposed dam to 1 130 cubic metres per second, it will be necessary to increase the overall height of the embankment. It is therefore considered reasonable that a charge be levied on the Proserpine Shire River Improvement Trust to defray at least some of this cost.

It is proposed that the River Trust be required to meet a charge of \$100,000 per year for the increased flood mitigation benefit provided by the dam.

Proposed Charges

The proposed charges for the various users of water (other than industrial) for the various development options are set out in Table 2.

CONCLUSIONS FROM INVESTIGATIONS

It is concluded that:-

- (1) It is feasible to develop a scheme capable of providing flood mitigation and water supply for irrigation, urban use in the Proserpine and Bowen areas, and industrial use.

- (2) The costs of development are significant.
- (3) Because of the level of costs involved, there is a need to discuss the proposals with local bodies including the Local Authorities, grower and mill organisations and possible industrial users.

GOVERNMENT CONSIDERATIONS

The Queensland Government has considered the report on the Irrigation project proposed jointly by the Department of Primary Industries and Queensland Water Resources Commission and has agreed that the report be released for examination by and discussion with interested organisations. In addition to the release of the report discussions are to be held with interested organisations in the Proserpine and Bowen areas as well as a public meeting to answer any queries which people may have.

To this end, it is proposed that the views of the individual irrigators be canvassed and that they be given the opportunity to indicate whether they favour implementation of the scheme or not.

FUTURE ACTION

Following the discussions with interested organisations and the canvass of potential irrigators a final report will be prepared by the two Departments for submission to the Government. This report will also set out details of public acceptance of the proposal.

When the final report has been submitted the Government will then decide whether the project is approved for inclusion in the State's future programme of water resources development.