Economic Regulation Authority Issues Paper
Bulk Water Charges for Harvey Water

Harvey Water

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CONTENTS

INTRODUCTION

Water Storage Charges and Dam Safety Costs are major cost issues for Harvey Water and its future in supplying water delivery services to irrigators in the Harvey Water Irrigation Area.

Our responses to this inquiry are intended to be constructive and acknowledge Harvey Water's responsibility for both Water Storage Charges and Dam Safety Costs which must inevitably be passed on to individual irrigators through the normal water delivery cost structure. We make the point a number of times that irrigators are essentially price takers in the market place with limited ability to pass on externally imposed costs, unlike most other businesses.

We discuss the evolution of changed community standards in relation to dam safety risks as a consequence of climate change and point out that impactors should bear a very much higher proportion of increased costs than beneficiaries such as irrigators who are probably net reducers of greenhouse gases.

In our opinion there is scope for legislative change which affects liability for risk and the standards which apply to risks from public assets in the community. We believe that legacy costs require further examination and that a renewals approach should be applied to costs of operating the dams.

Finally, we provide a suggestion as to how the costs might be allocated.

There is also a history of events and deliberations surrounding the establishment of the South West Irrigation Management Cooperative (now titled Harvey Water) that bear importantly on some of the issues raised in the Authority's Issues Paper, and these are referred back to in the commentary that is provided in this paper.

The Issues are commented on separately, in the same way as they are raised by the Authority, even though there is some overlap and inter-relationship between them.

FULL COST OR RENEWALS?

1. ***Should the Bulk Water Supply Agreement be based on the full cost method or the renewals method to recover the Corporation's costs of owning and operating dam infrastructure?***

The renewals method was used for the costing of the water storage charge for the first agreement in 1996 because COAG at that time thought that it better reflected the long term costs of single major infrastructure assets such as dams.

Water Corporation preferred to use the full cost recovery method and Harvey Water's understanding is that the difference in costs between the two methods was the amount of CSO which was paid to Water Corporation.

The payments agreed to by Harvey Water under the first Bulk Water Supply Agreement (BWSA) 1996, meet the Lower Bound Condition for return on assets as set by COAG under NCP.

Harvey Water believes that the renewals methodology is the most appropriate method of establishing the Water Corporation's costs of owning and operating dam infrastructure.

Clauses 65 to 66 of the NWI outline the water storage and delivery pricing approach that WA has agreed to in principle.

The Lower Bound Condition currently being met by the Harvey Water payment also meets the National Water Initiative (NWI) condition in Clause 66va.

Some guidance on this question is to be found in the origins of the National Water Initiative and its predecessors, the Competition Policy Agreement and the Water Reform Framework developed in the mid-1990's.

The objectives of the NWI are stated as being to promote economically efficient and sustainable use of water resources, water infrastructure assets, and government resources; ensure sufficient revenue streams to allow efficient delivery of services; facilitate the efficient functioning of water markets; give effect to the principles of consumption-based pricing and full cost recovery; and provide appropriate mechanisms for the release of unallocated water. (From the Intergovernmental Agreement on a National Water Initiative, signed by most Australian Governments in June 2004.)

Important background to an understanding of this statement is to be found in the earlier Agreements and their context. The Council of Australian Governments in its meeting in Hobart in February 1994 endorsed the principles and objectives of the Agreement, The Council communiqué stated, "In the case of rural water services, the framework (the Water

Reform Framework) is intended to generate the financial resources to maintain supply systems should users desire this….."[1]

However, the Council was anxious to ensure that the Agreement was carefully interpreted, so it formed an expert group to prepare a report on the mechanics for implementing the broad principles.

The operating environment for rural water utilities at the time is relevant to the arrangements that were agreed, and to the matter of the current review by the Economic Regulation Authority. Rural water utilities, and especially irrigation utilities, were making substantial and ongoing losses. Assets were being depleted or costs were being subsidized. In NSW for example, irrigation revenues were covering only 37 per cent of operating costs. Most other States were in a similar situation. In WA, irrigation operations of the Water Authority were making losses of some $5 million a year.

The expert group was working within this context. In preparing its report the expert group was advised by Ernst and Young, so the report has a strong foundation in accounting as well as economics.

It was the expert group that introduced the concepts of upper and lower bounds. The group was concerned about excessive prices yielding monopoly rents; as well as inadequate prices that did not fully recover costs. The upper bound is only relevant given this context. It is a price at which all operating and maintenance costs are recovered as well as an appropriate return for capital and provision for depreciation. The lower bound makes no provision for depreciation or for a return on capital.

In recognizing the lumpiness of some maintenance expenditures through time, the notion of a renewals basis for costing was agreed upon, really to even out the spread of costs through time. The expert group was concerned to make a distinction between existing and any future irrigation operations. It considered that pricing for existing irrigation infrastructure should be progressively raised to satisfy the lower bound - that is, a renewals approach. The upper bound was to apply to urban water supplies and any new rural irrigation schemes. Part of the logic of this is recognition that irrigation infrastructure has a very long life so depreciation is not such a relevant concept. Possibly more important is the principle of “a line in the sand”. The principles of good decisions now about the best use of the infrastructure (such as the requirement to earn an adequate rate of return) could not necessarily be applied to past investment decisions.

The report of the expert group was endorsed by COAG at its meeting in Hobart in February 1998.[2]

For the sorts of arguments outlined above, our view is that a renewals approach to pricing is the preferred one.

Should the ERA consider that full cost method is appropriate, then the following matters should be included in their considerations.

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[1] National Competition Council (1998) Compendium of National Competition Policy Agreements. Second Edition. June 1998. Page 102.

[2] Council of Australian Governments Hobart February 1998. Report of the Expert Group on Asset Valuation Methods and Cost Recovery Definitions for the Australian Water Industry.

Should the ERA seek movement towards Upper Bound Pricing (66vb) then the adoption of a transitional phase such as the 5 year phase developed by IPART is appropriate in this present case also.

Clause 64v notes that "perverse and unintended pricing outcomes" are to be avoided.

Harvey Water submits that the situation in WA where there are many small dams and relatively few customers able to pay for the high cost of Dam Safety (DS) Programs (DSP), particularly when compared to the Eastern Sates eg Victoria, a perverse pricing outcome would result if the full cost of the DSP was sheeted home to irrigators. It would rapidly drive them out of business. Our understanding is that a reliable current estimate of the DSP is $170 million.

For example, the implementation of a similar DSP in Victoria resulted in only a $4 to $5 per Megalitre increase in costs to irrigators, simply because there are thousands of them there compared to only 771 in the SW of WA. Harvey Water estimates that every $75 000 of annual cost of DS will add $1 per ML to a farmer's cost of water.

Harvey Water is particularly concerned about the valuation which is placed on dams when considering full cost recovery. Our understanding is that the dams were largely built using Federal grant funds and work for the dole type schemes during hard economic times and then were passed from Water Authority to Water Corporation at no cost at the incorporation of Water Corporation. They therefore represent a "sunk" cost and as such it is not appropriate to continually revalue them to form the basis of full cost recovery. Our understanding is that the value of the dam assets may be being annually indexed and periodically "rebased".

Harvey Water believes that this practice, if occurring, also results in a "perverse or unintended price outcome" whereby irrigators are to be charged rates of return on values and amounts of expenditure that have not actually been incurred, but simply are the product of artificial accounting practices - revaluation of the asset base – which are backward looking and have nothing to do with good forward looking resource management principles.

Whether full cost or renewals is chosen as the preferred method of assessing costs, there remains the question of the appropriate level of costs. There is a compelling case in terms of the Competition Principles Agreement as well as fairness, for pricing to be on the basis of best practice costs. This matter is considered further under issue 8 on the allocation of costs.

ANCOLD GUIDELINES

2. Are the ANCOLD Guidelines the appropriate guidelines for determining dam safety standards for the SW irrigation dams?

ANCOLD guidelines are useful as such and represent the only uniform approach to DS in Australia, albeit adjusted by many states both formally and informally.

The ANCOLD organisation insists that they are only guidelines and not standards and not intended to be used as de facto standards. (Len McDonald pers. comm. 2003)

If they are used, or used as a de facto, it is not good enough to only use them partially or to use the bits that appeal to the users, as this is the same as only consulting them rather than using them as the only way to do things and the standard to follow. There needs to be absolute consistency within a jurisdiction rather than a selective approach.

The ANCOLD guidelines are applied to ultimately determine the potential Loss of Life (LOL) in the event of a dam failure, which has a direct relationship on the Hazard Rating of the dam and the funds that need to be spent to bring the risk down to a level known As Low As Reasonably Possible (ALARP).

For general information it is worth noting that ANCOLD hydrologists currently say that in respect of SW dams, they must be constructed and managed such that they can cope with 1500 mm of rainfall in 72 hours. Perth's annual rainfall is currently about half of this and rapidly decreasing under the effects of apparent climate change. These levels of storm and flood risk are difficult for even the moderately informed person to come to terms with.

LOL calculations are critical to determining the level of risk and cost of fixing dams. It is our understanding that in the case of a SW dam the flood level in case of failure would reach only about 1 metre but that 3 lives were reckoned to be lost as a consequence of flooding of homes. This result was obtained from a desk top study. Actual on-ground investigations of the Population At Risk showed that building standards require that homes are built on a pad at least 600 mm high and more in some cases. This feature was apparently not taken into account in the desk top study. Therefore the effect of the supposed flood is actually very much less than used in the risk assessment, the LOL would be much lower (possibly nil) and so the cost of the DS works is inflated by an unknown but considerable amount to the detriment of those who are expected to pay for them. In this case, irrigators at Harvey Water.

These points are made to demonstrate that the ANCOLD guidelines are complex, confusing to the average person and need to be considered and applied with a level of resourcing and diligence which reflects the potential costs involved. They also need to be applied fully and consistently.

Harvey Water's opinion is that the consultation of ANCOLD guidelines is inevitable given the absence of any other common reference. However our comments below note that there are additional ways by which to achieve risk management outcomes which address safety as well as outputs.

We also seriously challenge the implication that irrigators are responsible for the climate based changes in community risk standards on which ANCOLD is based.

ALTERNATIVE APPROACHES TO DAM SAFETY

3. Are there alternative approaches to achieving levels of dam safety for the SW irrigation dams which accord with community risk expectations?

The ANCOLD Guidelines do have the effect of causing an over-investment in safety programs for the south west irrigation dams. The ANCOLD Guidelines were developed independently of consideration of the levels of risk that are accepted in other industries and other situations and this now represents a problem for public policy. Partly this is because there is not a symmetrical attitude to public risk – if resources are moved from an area of relatively low risk to an area of relatively high risk, there would probably be concern only about the area for which there is a reductions in levels of protection.

Another feature of public perceptions that creates a special difficulty for the treatment of dam safety risk is the public attitude to tragedies. To illustrate, there is more concern over 20 persons losing their lives in a single accident that might happen once in 20 years as compared with the loss of a single life every year. Similarly, an accident involving a bus load of school children (innocent lives) is considered to be a greater tragedy than an accident involving a helicopter load of young soldiers.

Those comments aside, it is important that a more consistent and equitable approach be adopted for the management of community risks. In large part, the problems of consistency are a result of institutional arrangements – which is addressed in the next section.

There will always be differences in approaches to safety, because of different ownership structures and different exposures of entities to the legal consequences of placing their workers or the general public in a situation of risk. To an extent, the differences have come into focus because of the move to corporatise some government agencies. In part, the differences have always been there and raised only occasional concerns when disasters such as chemical spills or asbestos related diseases became known.

ANCOLD guidelines do represent a useful technical starting point but could easily be used also to develop DS practices that accord with community risk expectations which are consistent across all similar infrastructure risks.

The ALARP principle of risk management should also be applied to roads, bridges, railways, power lines and other public infrastructure. But this is not necessarily easy to achieve.

For example, if $21 million is spent to save the potential loss of 3 lives in the unlikely event of flood event causing a dam failure in the SW, how much should be spent to save the roughly 200 lives which are lost on WA roads each year? Simple comparative maths says at least $1400 m (200 lives x $7m per life). But the community doesn't spend anything like that amount, so is it that road safety spending is too low or that dam safety costs are too high? The application of ANCOLD guidelines might suggest that road safety funding is too low but commonsense would probably say that dam safety costs are too high.

Further, what would be the effect on Perth urban infrastructure of the same sort of flood event (1500mm in 3 days) in the Swan/Avon catchment ? It would clearly be disastrous with flooding, disruption and so on but there is no indication that risk management practices or

funding have been put in place to cope with, let alone prevent, the consequences of an event of that magnitude.

It is clear that a widely different approach is being applied to DS compared to other public assets. Where these costs are being passed on to specific beneficiaries a much greater degree of equity is reasonable. Harvey Water is not able to think of another case where risk management costs associated with an asset constructed with public funds, for which there are a wide range of beneficiaries, are specifically identified and recouped from a sub-group, albeit a large one, of those beneficiaries.

That said, it is understood that it is apparently very difficult to develop standard approaches to community risk although this is being attempted in the UK. The models, assumptions and methods are yet poorly developed although the logic of the need is well accepted.

The answer to the question possibly lies in examining the current drivers for the high level of expenditure on dam safety. Is it LOL risk or is it the need to reduce specific liability ? Or is it both ?

INSTITUTIONAL ARRANGEMENTS

4. Are the current institutional arrangements for dam ownership and water rights in the Harvey Water Irrigation Area a barrier to achieving economically efficient levels of dam safety expenditure?

The dam safety costs seem to be closely related to the responsibilities and liabilities faced by the ultimate owners of the dams, the Directors of the Water Corporation. Corporation management faces the same sorts of liabilities.

Quite rationally they have understood and accepted that there are risks with dams and that they need to do something about them.

Quite sensibly they are budgeting expenditure that will reduce the risk to them according to advice and practice from their legal, financial and technical experts. It is probably this feature of dam ownership which causes the expenditure on DSP to be disproportionate to risk management expenditure on other community assets.

It may be useful to consider several types of organisation and the ways in which their attitudes to risk will be fundamentally different. A Government Agency will address risks, but its urgency will be lessened by the protection bestowed by Crown Immunity. The persons making management decisions are largely protected from the public risk consequences of their decisions (apart from the occasional formal public inquiry).

A private sector organisation will have a different attitude to risk. It will be very aware of the consequences for the business of public risks and will manage and insure appropriately. However, because courts expect firms and individuals to take reasonable precautions to manage risks, the attitude of a large financially robust business will be to take greater care, relatively, than a smaller firm with fewer resources. Both forms of business will be driven by a profit motive and this will rationalise their levels of expenditure on risk mitigation.

The corporatised government entity is in a different situation from either of these types of organisation. The Directors of the Board of management of a government corporation are subject to the same requirements as directors of a private firm. While they are subject to the same potential legal sanctions, they are not subject to the same expenditure constraints.

As argued by Marsden and Jacob[3]:

> "For the objective of minimising corporate liability for risk, there is no doubt that the directors of a corporation, whether privately or publicly owned, will and should take account of the way the courts will attribute liability. A foremost motivation of a director will be to minimise personal and corporate liabilities. However, minimising liability is not the same as minimising risk.

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3 Marsden, J and P Jacob. Review of Dam Safety Program Relating to South West Irrigation Dams. Report for the Water Corporation and Harvey Water. August 2003.

> Public policy ought to be formulated in terms of efficiency and equity, i.e., on the basis of minimising the net costs and inequities of risk in the community/economy. Public policy should not be focused solely on protecting a public utility or protecting a particular arm of government from legal liability."

The implication is that a Government corporation, and in particular a monopoly provider, will overspend on safety compared with the level considered to be appropriate by a private sector entity with a lower level of financial resources such as Harvey Water. As discussed above, the incentives for best management decisions are quite different.

The issue of dam safety in the South West raises a wider issue of clear tensions in the current approach to risk management in Western Australia. Addressing these tensions is likely to lead to better outcomes, both with respect to dam safety and other public risk management issues.

Alternatives:

That said, it is understood that it is apparently very difficult to develop standard approaches to community risk although this is being attempted in the UK.[4] The models, assumptions and methods are yet poorly developed although the logic of the need is well accepted.

Research on the same issue of improved risk management practices, with particular reference to dam safety, is being developed in the United States.[5] However we have not been able to access this research in the time available.

The answer to the question possibly lies in examining the current drivers for the high level of expenditure on dam safety. Is it LOL risk or is it the need to reduce specific liability? Or is it both?

While it will not be possible to achieve a completely uniform approach to risk management across the public and private sectors, it would seem highly desirable to move towards uniformity, possibly by first adopting a uniform approach across government – as appears to be the approach in England.

Indemnity for the Water Corporation:

The government could provide the Water Corp with some form of indemnity which would not be much different from the government self insuring for roads, bridges, railways and other public infrastructure. Harvey Water understands that this is the situation in other jurisdictions, such as Queensland. It was also the situation in WA before corporatisation of the Water Authority.

The point is that Water Corporation Directors and management are basically in a corner with no room to move in a legal sense since any perceived failure to address the issue would leave them liable in the event of a failure and this is clearly undesirable.

If government had a greater say in risk management it would be able to develop more flexible and consistent approaches to community expenditure on public infrastructure risk.

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4 Cabinet Office, Strategy Unit, United Kingdom (2002) *Risk: Improving government's capability to handle risk and uncertainty*, Cabinet Office, London.

5 Taken from a radio interview which referenced work being done in Pittsburg by Professor Lester B Lave of the Carnegie Mellon University.

One of the problems with an indemnity arises where there are private sector providers or the prospect of private sector providers. These alternative providers would be placed at a competitive neutrality disadvantage if the indemnity or legislation is limited to the government entity. Of course, there are further problems if the indemnity or legislation extends to private sector providers. This would create the unusual and unacceptable position of the government providing an open-ended protection against some of the risks for a private sector organisation.

Single Government holder of assets:

An alternative approach is to recognise that the problem in government arises because of the diverse forms of "ownership" and management forms. It may help to recognise that the ownership of infrastructure assets by the corporation is an artificial construct. Assets are owned by the Government in the real sense that the beneficial owner is the single shareholder, who is the responsible Minister, undertaking that role on behalf of the Government of WA.

For example, as was considered for a time in the 1990's, all assets could be held by a single agency (which is understood to be the Victorian Government model) and they could all then be managed in accord with a single uniform piece of legislation. Under this model, the corporatised entities would operate and manage the assets in accordance with contracts. Provided they operated in accordance with the contract, public risks associated with infrastructure failures would rest with the Government.

If government had a greater say in risk management it would be able to develop more flexible and consistent approaches to community expenditure on public infrastructure risk.

Transfer the dams to Harvey Water:

An alternative is that Harvey Water could own the dams. This has appeal in that it removes the problem of a highly financial government entity being responsible for the safety program. As discussed later, the irrigators would adopt a quite different mix of management and capital expenditure strategies to address the issues of risk. However, its capacity to fund the dam safety program, even at a level more in keeping with its perception of risk, and to manage a DSP for the remaining dams is very limited with its current funding and structure. Although there is logic in the beneficiaries accepting responsibility for the risks associated with the dams it is not really a practical option.

Harvey Water notes that risks are increasing in many cases as development below dams are approved by shires, councils and planning authorities. Government raises stamp duty, tax revenue, rates from these developments and it results in economic wealth for individuals and the community. We question why these developments can be allowed to increase without proper oversight, as the "Loss of Life" risks increase but with the beneficiaries of the dams, such as Harvey Water irrigators, having to bear the increased costs. It is a fairly classic case of irrigators having responsibilities which are not matched by any degree of power to influence them. And it is plainly unfair.

If down stream building development standards are to be set below a 1500mm/72 hour standard on the basis that the State government will ensure that public infrastructure such as dams meet this criterion then it is only reasonable that an increased proportion of DS costs should be paid for by the State government on behalf of these beneficiaries.

CASE FOR SPECIFIC LEGISLATION

5. Would it benefit WA to develop its own legislation for dam safety standards?

The development of specific legislation dealing with the issue of safety standards for dams is another possible means of addressing the issue of safety standards for dams being inconsistent with those applying elsewhere.

Other states have adopted this approach as it reflects a less stringent and more flexible approach to DS based on local considerations.

Usually they have their basis in the ANCOLD guidelines but adopt a local approach based on local risk management perceptions.

Harvey Water suggests that the government reviews the different approaches taken by other states to find sensible common ideas which have application in WA.

We note that although climate change is accepted to be occurring widely, it is also recognised that its greatest effect so far has been in the SW of WA where the dams are located. This provides a logical basis for a local approach.

The legislation to cover safety standards would be complex in having to distinguish between different forms and different sources of risks. Again, the requirements of Competition Policy would require that the legislation apply to all current and potential providers of water services in the State. The government would then be sharing risks with private sector entities which could be expected to bring its own special difficulties.

COMPARABILITY WITH SAFETY STANDARDS ELSEWHERE

6. To what extent should dam safety be based on measures that are comparable throughout the economy?

This issue of comparability is raised in the other specific issues identified in the Authority's Issues Paper, and we consider it has been adequately addressed in our earlier comments.

This would be desirable since the costs of the DSP do seem to be disproportionate on the surface.

Harvey Water would like to see a situation where the costs are consistent across the economy on a risk management basis rather than a physical assessment and application approach.

We recognise that the costs of dam safety are relatively "lumpy" but believe less of an "open chequebook" approach would yield more reasonable results for the community and the economy.

What measures could be used ? For example a risk management measure used in road safety is a blanket 110 kph speed limit. Is there a similar measure which could be applied to risk for dams? ? Harvey Water does not know the answer to that question and is disappointingly unable to suggest worthwhile ideas.

However we question the value of DS apparent very high LOL risk given low population density, low potential flood and very low likelihood of the necessary storm event in normal weather conditions let alone climate change.

BENEFICIARIES OF DAMS AND DAM SAFETY

7. Who are the beneficiaries of the expenditure on maintaining and operating SW irrigation dams?

There is a very real difference between the beneficiaries of the irrigation dams and the beneficiaries of the irrigation dam safety programs. This is a quite complex question.

Beneficiaries of dams:

Even the beneficiaries of the dams are in two groups – those who benefit from receiving the water (consumptive users) and those who benefit from the dams themselves (non-consumptive users). This latter group includes recreational users and the tourism industry. There are active recreational users, as in water skiers and canoeing where that is allowed, and passive recreational users in sightseers, picnickers and bush walkers, who don't directly impact on the dams or water bodies but benefit from the scenery and the more pleasant ambience they provide.

A number of these benefits constitute "public goods" and a discussion of the implications of public good attributes is provided in the following discussion of the beneficiaries of dam safety.

Harvey Water believes that this question would be more correctly posed by also asking who are the impactors as well as who are the beneficiaries.

Harvey Water believes that the whole community is the beneficiary of the dams since irrigators use the water from the dams to produce food for the community at large such that benefits are spread in a way that is analogous to the economic multiplier effect. Recreation is also enjoyed by the whole community.

We note that many economic studies which report on benefits to society, such as from the deregulation of the dairy industry, take great care and effort to distinguish those benefits right through the economy down to the consumer level. Harvey Water would be well pleased to see an economic study on dam safety which was equally determined and diligent in apportioning impactor costs to society in the same way.

Harvey Water and its cooperative irrigator members are major direct beneficiaries as the stored water is used to support agricultural enterprises such as dairy, beef, and annual and perennial horticultural production. These support employment, tourism and regional economic development which are clear goals of all communities and levels of government.

There is a long list of other beneficiaries mostly related to tourism of various sorts, recreation of many types and education of different kinds. Benefits can be direct in terms of the immediate pleasure obtained by individuals eg water skiing, or they can be indirect through the creation and/or preservation of nature and the environment and all that entails.

People using the dams for a wide range of recreational pursuits have put their case very loudly in respect of Logue Brook Dam in recent times. Irrigators have always made direct payments for water storage and delivery services and operation of the dams while other beneficiaries have been supported by government subsidy.

Dams protect roads, railways and other public infrastructure from flood damage.

The Water Corporation is an increasing beneficiary of the dams as trades from Harvey Water to the IWSS increase over the years. If all that has been proposed by Harvey Water in terms

of saving water through piping comes to fruition, there will be about 40 GL of water which will move from Harvey Water to Water Corporation. Obviously, these changes in water entitlement in the dams should be reflected in changes in DS costs to beneficiaries over time.

Beneficiaries of dam safety:

Climate change is widely believed to be occurring as a result of the greenhouse effect which has created a warming, drying trend in certain parts of the world with an increase in more extreme weather events such as flash flooding. Plant growth in agriculture is a sink for greenhouse gases, particularly carbon dioxide, so its contribution to the problem is relatively small and is probably reducing it, compared to major industries, and other human activities such as driving motor cars.

But the community, through its technical experts, are agreeing that different more stringent dam safety standards should apply with the higher costs to be borne by the industry, which in this case are narrowly seen to be irrigators. However, consistent with the principle of polluter pays, the impactors are those industries who are said to be ultimately causing the problem of greenhouse gas production to a much greater degree. There is considerable unfairness in this approach which irrigators would like to see reflected in apportionment of costs.

There are a wide range of beneficiaries of dam safety which includes but goes well beyond the irrigation industry. For its part, the irrigation industry, producers, processors, service groups and customers – benefit in that they are spared the cost of supply disruptions that would follow from a dam failure. (This consideration can easily be overstated. The fact that there are a number of dams, means that the risks to supply of a single dam failure would be limited – and the risks of multiple dam failures are most remote.)

There would also be for irrigators the benefit of reduced costs of inundation following a dam break. For those farmers in the flood path, inundation costs would include the costs of damaged and destroyed assets, loss of productive land for a period, livestock losses, as well as the possibility of personal damage and even loss of life.

Irrigators will not be the only ones living or working in the flood path. And neither will all irrigators have their farms there. Many other occupational groups live and work in the flood path, and they need to be recognized as receiving a benefit from improved dam safety.

In addition there are other persons who will be occasional inhabitants of the flood path, and still others could be passing through it at any one time.

There are also benefits to the environment. Benefits would include the protection of flora and fauna from damaging flood waters, and similarly the protection of ecosystems and land forms from potentially severe damage.

Other extractive users of the water similarly benefit to the extent that it reduces the risk of supply not being available due to dam failure. An alternative cost that is avoided is that of any reduction in the level of service/supply used as a management strategy to reduce the risk of dam failure. This form of benefit exists for a number of the South West Dams where industry and the Water Corporation have licenses to extract water. Examples include Samson Brook, Stirling and Wellington Dams.

The owners of the dam receive a benefit from the safety upgrades in that they do not have to meet the costs of its replacement. They also avoid the potential legal cost of damage to other members of society.

Safety is a public good.

Most economic arguments for government intervention are based on the idea that the marketplace cannot provide public goods or handle externalities. Public health and welfare programs, education, roads, research and development, national and domestic security, and a clean environment all have been labeled public goods.

Public goods have two distinct aspects—"non-excludability" and "non-rivalrous consumption." Non-excludability means that nonpayers cannot be excluded from the benefits of the good or service. If an entrepreneur stages a fireworks show, for example, people can watch the show from their windows or backyards. Because the entrepreneur cannot charge a fee for consumption, the fireworks show may go un-produced, even if demand for the show is strong.

The fireworks example illustrates the "free-rider" problem. Even if the fireworks show is worth ten dollars to each person, no one will pay ten dollars to the entrepreneur. Each person will seek to "free-ride" by allowing others to pay for the show, and then watch for free from his or her backyard. If the free-rider problem cannot be solved, valuable goods and services, ones that people want and otherwise would be willing to pay for, will remain unproduced.

The second aspect of public goods is what economists call non-rivalrous consumption. Assume the entrepreneur manages to exclude non-contributors from watching the show (perhaps one can see the show only from a private field). A price will be charged for entrance to the field, and people who are unwilling to pay this price will be excluded. If the field is large enough, however, exclusion is inefficient because even non-payers could watch the show without increasing the show's cost or diminishing anyone else's enjoyment. That is nonrivalrous competition to watch the show.

Externalities occur when one person's actions affect another person's well-being and the relevant costs and benefits are not reflected in market prices. A positive externality arises when people visiting or traveling through the irrigation areas in the summer months take pleasure in the view of green pastures and orchards. It adds to their amenity and has value, even though it cannot be charge for.

Sometimes the market can work to impose some cost recovery on public goods. For example, a charge can be made for access to dam areas. This would be an imperfect solution for two reasons. First it is difficult to deny access to areas without fencing and surveillance- which are costly. Second it is impossible to capture all the benefits – such as the benefits to people who are simply passing through the area. Thirdly, there are transaction costs. The collection of access fees is expensive.

Another alternative that is sometimes attempted is to impose administrative solutions to the public good issues. This might take the form of a toll or licence fee for tour operators who use the dams and their environment as a tour destination. Again, however, the same problems occur. There are heavy transaction costs, the fees are a clumsy and inaccurate cost recovery mechanism and the results are inefficient from an economic point of view.

Conclusion: Dam safety is a public good, just like road safety. For the irrigation dams, the irrigators are just one of many groups of beneficiaries. As a public good, the safety of irrigation dams is a public responsibility and should be funded from the public purse.

We accept, however, that irrigators do obtain a direct benefit from dam safety in the form of a more guaranteed supply of water. This is a production benefit, as distinct from the wider community benefit of having a less risky living environment. In recognition of this

production benefit, the irrigators accept that they should make a direct financial contribution towards the cost of the dam safety upgrades.

This contribution should be a relatively small part of the overall cost. Since it is impossible to assess this proportion with any confidence, because the benefits have such a diverse array of values. In the absence of anything more accurate to guide such a decision, the irrigators are prepared to pay the original estimated cost of safety upgrades of $17 million. This offer, in our view, is consistent with some of the other considerations that are advanced in this paper.

The outcomes from this ERA Inquiry should explicitly take into account that costs to beneficiaries is not a static situation and that both water trades and the construction work associated with the DSP make it particularly dynamic, certainly over the next 5 years. This suggests that the outcomes of this Inquiry should build this dynamism in from the start or allow for periodic review.

ALLOCATION OF COSTS

8. How should the costs be allocated between Harvey Water and Other Beneficiaries?

Harvey Water believes that this is the core of the matter when considering dam safety costs although as above, the full and proper question should really ask about allocating costs to the impactors as well.

The context is that irrigators are essentially price takers in the market place and have very limited ability to pass on extra input costs like most other industries and businesses. They must attempt to absorb them and face declining profitability which may force an exit from the industry.

When the privatisation discussions involving Harvey Water were happening 10 years ago it was accepted that there were needs to address dam safety and this understanding was written into the BWSA. Currently the dam safety program is estimated to cost about 10 times what was envisaged 10 years ago. Recent estimates suggest that the total cost may be over $170 million. And there is the distinct possibility that it will have increased even more by the time that the current plans are completed in about another 10 years.

If this potential increase had been known at the time of privatisation then it most likely would not have occurred as the irrigators could not have afforded it. But in the mean time community standards for risk management have changed except that the irrigators are expected to bear the costs not the community.

The Marsden & Jacob report suggested irrigators pay 30% for Waroona and 40-50% for the rest of the dams. This is based on Eastern States experience where there are different fundamentals eg fewer but larger dams and many more irrigators so the cost per irrigator is much diluted.

Any other number is probably just a guess not based on any real grounds except “affordability” which is basically not able to be calculated because there is not a uniform group of users which can bear the cost equally. Beef, dairy, annual and perennial horticultural enterprises all face different cost structures and market conditions with the latter traditionally volatile over a run of years. What may be affordable in one year may be totally unaffordable the next.

The question of affordability was investigated in Queensland by SunWater and they came to the conclusion that there are too many variables to determine an objective, reasonable and equitable figure for all users.

The problem with determining a reasonable percentage as a basis for costs is to know with certainty what the final cost will be so that Harvey Water and its irrigators know what they may be committing to. Obviously 30% of $17 million (1996) is a grossly different from $170 million (2006). And there is every expectation that the costs will increase even further. Harvey Water could not commit its irrigators to an open ended financial liability and it would be unreasonable to expect it to do so.

It is also of concern to Harvey Water, looking well into the future, that another round of community risk management standards in relation to dam safety and therefore costs may become intolerable in terms of capacity to pay.

As a general proposition, cost should be allocated in accordance with the distribution of benefits. These were the subject of comment in the previous section. The conclusions from the discussions in that section are summarised as:

- Benefits of dams are distributed in a quite different way from benefits of dam safety.
- The beneficiaries of dams are mainly the irrigators, other water consumers, and the people and industries that provide services to them, the industries that process their products, and the final consumers of those products. As we have argued, the imposition of water charges on the irrigators is a proxy for charging all of these beneficiaries. Economic theory tells us that the water charge will be shared up and down the production chain in accordance with supply and demand elasticities. However, given the nature of those elasticities, the major part of the share falls on the irrigators because they are unable to pass the costs on – they are largely price takers, especially since deregulation of the dairy industry.
- The other beneficiaries of the dams are visitors and tourists and the industries that service them.
- The beneficiaries of dam safety are largely the public at large.
- Irrigators receive only a small share of the benefits of dam safety, by virtue of the reduced risks of disruption to their water supply and hence production activities.

Apart from these general conclusions, there are a number of more specific and relevant considerations.

Best practice costs: Also relevant to this question is the principle of pricing on the basis of best practice costs. Even renewals costs need to be subject to the rigor of best practice. Again the Agreements of the 1990's (the Competition Principles Agreement) provide some guidance. One of the issues raised in the context of the Agreement was the pricing behaviours of monopolies, and particularly government monopolies. There is an absence of competitive pressures that would otherwise keep costs to an efficient minimum. In the absence of such competitive pressures, it has to be the role of regulators to ensure that pricing reflects costs that are based on best practice methods.

Management alternatives: Alternative approaches to dam safety: The engineering solutions to dam safety are not the only ones, even though they are emphasised by the Water Corporation. Safety systems, monitoring, and other management practices such as taking water first from the dams under most threat – or even choosing to have lower spillways and lower holding capacities.

Marsden and Jacob in their report used the expression "as if they (the irrigators) owned the dams". Their analysis accepted that, even though recognising that the Water Corporation had good reasons to expend at a high level on dam safety, the issues would be addressed in totally different ways if the dams had been owned and were the responsibility of the south west irrigators.

Renewals: Renewals rather than full cost is the appropriate basis for pricing – as discussed already under Issue 1.

Origins of the 15%: The public good component of the irrigation dams has, in the past been assessed at 15 per cent. The origins of this number were always questionable, but were related to the value of the tourism and recreation value of the dams. The number has gained

some credibility over time because it has been used so frequently over the years; not because it is based on any robust analysis.

It is beyond the capacity of the Harvey Water to conduct a more robust analysis to gain a more robust measure of the value of these public benefits. However, we consider that such an analysis is needed, if only in recognition that the 15 per cent is a very old and very imprecise estimate and there have been significant changes since then in the growth of the tourism and recreation markets in the South West of the State.

Phasing of any changes: Should the Authority consider it desirable to increase the costs to irrigators, for example were it to seek movement towards Upper Bound Pricing, then the adoption of a transitional phase such as the limit of 15 per cent a year (plus allowance for inflation) as developed by IPART is appropriate in this present case also.[6]

6 IPART (2006) Review of Bulk Water Prices in NSW 2006, from October 2006. September 2006.

LEGACY COSTS

9. Are there elements of the expenditure on the dams which could be viewed as legacy costs?

Harvey Water considers that the question of legacy costs is a most important one in the context of this review. There are significant legacy costs that must be accounted for in allocating financial responsibility for the program to upgrade the safety of the irrigation dams. Legacy costs have been accepted by other regulators as a fair and legitimate claim for government contribution to the cost of a program.[7]

Legacy costs involve current and future costs that are attributable to the past. Just as current costs should be borne by current beneficiaries, so too should past costs be borne by past communities that were responsible for them. In most cases, of course, the past communities cannot be identified with any precision and the government acts as surrogate for them in taking financial responsibility for their decisions.

This means that adopting a legacy cost approach implies that not all of the costs associated with the south west dams are "avoidable costs". The legacy approach recognises that some of these costs arise from any number of past factors, including for example poor policy decisions of government or poor commercial decisions of its agencies, past standards or community values, and past inactions to known problems – such as environmental or health consequences that could be foreseen but were not attended to.

As such, governments accept responsibility for these past actions and, appropriately, bear their cost.

The IPART decisions are often referenced as an expert opinion on the proper treatment of legacy costs.[8] IPART has reached a view that legacy costs are an appropriate factor in apportioning responsibility for dam safety costs. For practical reasons of implementation, IPART adopted a "line in the sand" as at July 1997 for the recovery of such costs. July 1997 is seen as the relevant date for NSW as that was the date on which assets previously held by the Department of Natural Resources were transferred to the new business entity, State Water (the transfer actually occurred in October 1997).

Legacy costs include "current and future costs attributable to past (pre 1997) activities and/or restoring natural and artificial infrastructure to prevailing 1997 community standards".[9] Expenditures related to meeting standards established after the 1997 date do not form part of the legacy, and IPART has taken the view that it is only these latter costs that are to be shared between government and beneficiaries.

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7 See various decisions of IPART, such as IPART (Independent Pricing and Regulatory Tribunal of NSW) (2001) Department of Land and Water Conservation. Water Prices from 1 October 2001. Final Determination, December 2001.

8 IPART (2004) Bulk Water Prices from 2005/06 Issues Paper, Discussion Paper DP78, September 2004.

9 IPART (2004) page 25.

IPART has tended to the view that post-1997 costs should be shared 50:50 between government and users. However, this is clearly a "rule of thumb" and there are departures from it.

For the south west irrigation dams the parallel date for legacy costs is 1995, which is the date on which the irrigation businesses were established and some of the assets were handed over from the Water Authority of WA to them.

Following the logic of the IPART reasoning, legacy costs are the costs of restoring the dams to the community standards (the ANCOLD standards) as they were known in 1995. That the cost of this was estimated by the Water Corporation at $17 million and that cost has subsequently blown out to much more is not relevant to the issue of legacy costs. The principle of legacy costs says that the dam safety standards of the time should be re-established, and the full cost borne by the government.

Harvey Water firmly believes that the Bulk Water Supply Agreement cannot be interpreted to expunge the generic principle of legacy costs. The BWSA was entered into in good faith by the irrigators at the time, in recognition that the Water Corporation was to restore the working condition of the irrigation assets, and the safety upgrades was a mechanism whereby the irrigators could make a contribution to the total work needed – but that was affordable to them.

It is unconscionable for the Water Corporation to now be advising that the safety upgrades are, in fact, a major component of the overall cost of bringing the assets up to an acceptable working condition.

Harvey Water believes that at least in the case of Waroona dam there were problems evident from the earliest days after construction in the middle of last century. These problems were known but not acted on until the Water Corporation became a corporation with Directors being liable. This coincided with the privatisation of Harvey Water. It seems at least morally unfair that these costs should be incurred and sheeted home to irrigators when they had been known about for at least 40 years and should have been fixed up by the government agency when it was in charge of the dams. The fact that it wasn't surely reflects the very low LOL risk applicable to SW dams.

Although the M&J Review of Dam Safety (2002) did interpret the 1996 BWSA as providing "a line in the sand" that mitigated legacy cost considerations as per the NSW IPART experience, these comments were tempered by the comparisons to the foreign currency loan court cases of the 1980s (M &J Review p100 2002). In the larger portion of these cases that went to court it was found that the reliance on the lender for accurate information was paramount to entering into the finance agreement. M & J observed "As the monopoly supplier of water to the South West irrigators, the responsible agency for the safety of the dams in WA and the centre of dam safety expertise in the West, we consider that Water Corporation has some obligation that should be able to be relied upon by smaller counterparties in contract and pricing negotiations."

Although the 1996 BWSA did provide discretion for some future cost increases, and that irrigators would contribute the quantum of error in information provided by the Water Corporation as to future DS costs, needs to be considered in a balanced manner. For these reasons, completely disregarding the "legacy" conditions of the South West dams is considered to be inappropriate.

OTHER BASES FOR COST RECOVERY

10. What other basis might be used to determine cost recovery?

In one sense cost recovery may relate to government's wider policies and philosophies on regional development, food production and tourism.

When the dams were built they were done within a nation building, social and economic benefit and development context. This has changed as a more stringent approach is being adopted as economic policy generally within Australia and specifically with water.

The studies that accompanied the privatisation of the irrigation area in 1996 showed that in a number of cases it was more expensive to shut down the dams than to carry on. This remains true today of the Drakesbrook Dam, for example. This effect creates a reverse economic multiplier with the extra costs radiating out into the community.

The dams are currently predominantly used for irrigation but given the trade proposals put forward by Harvey Water and other opportunities that may arise, they will increasingly become a future potable water source and so will be needed for that purpose with dam safety costs applied in proportion.

FARMERS ABILITY TO PAY

11. How should the ERA take into account farmers' ability to pay for dam safety upgrades?

Determining affordability is basically impossible as not all irrigators are the same and neither are market conditions from year to year.

The affordability of water is quite different for beef, dairy, perennial and annual horticultural enterprises as their capital investments, cost structures, returns and sensitivity to water supply are markedly different in terms of production.

Likewise, as price takers in the food market place, irrigators face very different prices for their products depending on local, Australian and international markets. What may be an affordable price for water one year maybe completely unaffordable the next year. In general agricultural businesses do not have significant capacity to quickly turn on or off according to market circumstances.

What any business seeks is the greatest possible degree of certainty in costs or changes in costs so that production systems and budgets can be developed, if possible, to return a profit which will keep them in business.

For example, an increase of each $75 000 for DS costs applied to Harvey Water will have to be passed on to irrigators and will result in the increase of fixed costs for water of $1 per Megalitre. Irrigators currently pay $43.59 per Megalitre of which $22.05 per Megalitre is a fixed charge. The issue of whether this is a high or low price for water must be considered against the returns and profits made by irrigators from that water. Harvey Water believes that market conditions are such at present that profitability is low in irrigated agriculture and so further cost increases need to be kept to a minimum.

Another way to consider the cost of water is that the average cost of water to all irrigators when they use a total of about 70GL (which is roughly 100% of the inflow but only 65% of the total license) is over $55/ML.

It needs to be clearly recognised and can be stated again that irrigators do not have the ability to simply pass on production cost increases down the supply chain as can occur in many other industries and businesses. They have to try to absorb them as the oligopoly in retail food prevents irrigators obtaining a reasonable share of profits in the supply chain.

Irrigators would be prepared to pay full unsubsidised costs for water and Dam Safety as envisaged by economic theorists if they were able to pass those costs on down the supply chain, but, as discussed in the section on cost sharing, they can't.

An irrigator effectively operates to convert water into food and it is the final consumer who actually consumes the water; eg a lettuce is over 90% water.

Over the 10 years since privatisation of Harvey Water the Perth CPI has increased by 21.6% and this has been reflected in input costs passed on directly to irrigators. Over the same period, the average farm gate price of milk has decreased from 35cents/litre to 29 cents/litre. While other food products such as fruit and vegetables may not now have a lower farmgate price to the irrigator they certainly have not kept pace with inflation. This data needs to be considered when DS and Water Storage Charges are developed.

The ERA might also like to reflect that deregulation of the dairy industry has already delivered it's economic rationalist pound of flesh from the Harvey Water Irrigation Area and consider what effects further input cost increases will have and whether they are fair, reasonable or even desirable.

A consequence of the dairy deregulation has been that the irrigation industry in the Harvey Water Irrigation Area is clearly in transition between one which was focused on the regulated dairy industry using surface irrigation of pasture and one which will use the benefits of the pipe scheme to undertake new and different enterprises using new and different irrigation technology.

We think that some recognition needs to be given to this state of transition by building into the cost structure applied to impactors and beneficiaries the ability for review on a periodic basis, notwithstanding our request for some certainty in future costs.

VALUE OF WATER AND VALUE OF DAM SAFETY

12. Does the value of water traded within the Harvey Water cooperative provide any guidance on the value of dam safety upgrades?

It is necessary to fully understand the pricing schedule faced by irrigators as the Issues Paper appears to include some misapprehensions about trade and value capture.

Irrigators have an annual fixed charge (2006/7) of $18.48 per share in SWIAC which is used to fund the R&M of the water delivery system comprising the channels, structures and pipes. So, if an irrigator has 100 shares (equal to 100 ML of water) his annual fixed cost to SWIAC is $1848.

Irrigators also have fixed costs in Harvey Water (SWIMCO) related to their ownership of water. There is a fixed charge of $2.64 for every ML owned which directly passes on the Water Storage Charge from Water Corporation.

Harvey Water has also levied irrigators with a fixed charge of $0.93 cents per ML to fund R&D in the irrigation area.

Therefore total fixed charges per ML paid by irrigators are $22.05.

When irrigators trade water on an annual or temporary basis they initially seek to recoup some or all of their fixed charges. As there are 3 different markets with different characteristics this does not always happen but they do reduce their outlays by whatever they receive.

The average temporary trade prices over 10 years in Waroona, Harvey and Collie districts are $12, $15 and $11 per ML respectively.

It is not normal for the temporary trade price to be above $22.05 except in low supply years in Harvey district, so the implication that irrigators are capturing value each year as the difference between the Water Corporation Storage Charge ($2.64) and the trade price is not correct.

There is no value capture or extra DS affordability as a result of trade. In fact most trades are made at a loss or break even at best.

Trade prices bear no relation to the value of DS but are more directly related to water supply and quality.

There are 3 distinct markets in the Harvey Water Irrigation Area. These are:

- Waroona – average permanent sale price is about $225/ML
- Harvey – average permanent sale price is about $500/ML
- Collie – average permanent sale price is about $38/ML

In Waroona there is a good supply of good quality water as the dam catchments are reliable. The total cost of the Dam Safety Program for dams supplying this district is estimated (2006)

as $46 million. The current licensed entitlement in Waroona is 15.66 GL and will be 11.46 GL by 2008/9. There are 112 shareholders in the district.

In Harvey there is a restricted supply of good quality water because demand is high and the catchments are less reliable. The total cost of the Dam Safety Program for dams supplying this district is estimated (2006) as $73m. The current licensed entitlement is 68 GL and will be 56.9 GL by 2009/10. There are 394 shareholders in the district.

In Collie, there is a good supply of very poor quality water. The total cost of the Dam Safety Program for dams supplying the Collie district is estimated (2006) as $50m. The current licensed entitlement is 68 GL and could be 46 GL within the decade, if piping proposals are accepted. There are 265 shareholders within the district.

In terms of external trade, which may be suggested as a means of increasing affordability to individual irrigators, Harvey Water notes that, in terms of National Water Initiative concepts, there is no possibility of a "trade" in irrigation water developing as there is basically only one buyer with major economic power. An unequal one buyer monopoly does not constitute a "true" market where price discovery can be freely obtained by multiple, roughly equal, buyers and sellers.

We reiterate our earlier arguments that, while the value of the dams may be related to the value of the water in the dams, it is not related to the value of dam safety. The value of the water is not just a product of the dams but also of the other infrastructure, both on the farm and off the farm that enables its delivery.

Making a link between the value of the water and the value of the dams, brings to mind the value of the dams at the time they were transferred to the Water Corporation. At that time, the dams were being operated at a loss – hence the CSO. It is reasonable to argue that the value of the dams, in a market sense, can be assessed as the net value of the future net revenue streams – which in 1995 were negative. So the value of the dams then was zero (or negative). There seems little rationale, now for the Corporation to be calculating a rate of return on those assets as part of its pricing regime.

STRUCTURE OF PRICES

13. What principles should govern the structure of water storage charges to Harvey Water?

Above all Harvey Water seeks certainty in the application of any charges over time.

Harvey Water believes that the calculation of water storage costs must be independently audited. Harvey Water pays attention to the operations of IPART in setting prices etc in NSW and believes that their general approach to audit of price setting methodology is worth applying here. They generally go through an audit process of the calculation methods for charges and determine what is reasonable, while transparently reporting on this process at the same time.

Harvey Water notes that the use of dams will increasingly change towards those that are used for potable purposes. The catchment management costs, compliance costs including the engagement of rangers, fences, gates, water testing, signs and so forth that are required for potable purposes are not required for irrigation purposes and should not be included in the operating costs to be recouped.

We believe that some of the functions currently carried out by the Water Corporation, such as control of release of water from the dams and the maintenance of the equipment needed for this, could arguably be done more efficiently by Harvey Water.

It should also be recognised in calculating operation and maintenance costs that as more of the irrigation area is piped over time there will be less management needed of releases since the valves will essentially remain open at all times.

Also, as the Dam Safety Program is progressively implemented it seems reasonable to assume that the condition of the dams will be better and so lower operating costs will be needed.

As already discussed, we think that a higher proportion of cost, currently 15%, should be borne by recreational users. Where the needs of recreation are given priority over potable purposes such as may occur in Logue Brook Dam, the value of that water entitlement for trade is constrained and encumbered as the possibility for trade is reduced. It is reasonable in that circumstance that the reduced value of that water be made up by those who are benefiting from the constraint.

The point that irrigators are price takers in the market place with limited ability to pass on costs is also appropriate in relation to water storage charges.

If Water Corporation's costs in relation to water storage have increased, then their remedy is simply to pass them along to their customers, in this case irrigators. Irrigators do not have the luxury of this easy out and this must be recognised by regulators when decisions on costs are being made. We consider that an important principle to be recognised in setting charges is that risks of reduced intakes and changes in demand for water should be shared between the irrigators and the owner of the storages.

The 1996 BWSA agreed that the payment would be structured such that there was a fixed component (about 50%) and a component related to the volume of water drawn from the dam (about 50% but varying each year according to the amount taken). This structure arose

because there was lack of clarity at the time of the agreement about whether or not Water Corporation was a bulk water supplier to Harvey Water and, if so, then it made logical sense to charge on the basis of volume of water drawn.

However this is not actually the case and Water Corporation only provides water storage services to Harvey Water in which our water is stored in their dams, and naturally a fee is payable. The problem with the original structure is that it has lead far too many people to conclude that Harvey Water is buying water off Water Corporation when this has never been the case.

One point of view is that if it is a storage charge then it should be a fixed charge because the costs of operating the dams are essentially the same if the dams are full or empty. Another point of view is that the charge should relate to the maximum volume of water stored in the dam by Harvey Water as a percentage of the total storage.

This cost relates to the capacity share arrangement with Water Corporation which has been developed in Stirling dam and is now developing in Samson dam. In future it may also apply to Logue Brook dam and Wellington dam. Harvey Water believes that the costs of water storage in the dams should be related to the capacity sharing of water approach and would like to work with ERA and others to develop this.

There is also the tax liability which results from the contribution to the DSP. Our taxation advice is that the DS payment represents a capital payment and is therefore not tax deductible for Harvey Water. This does not seem to be a fair and reasonable outcome. And if it is a capital payment then this implies that some ownership rights and responsibilities should accrue for Harvey Water over time. The ERA may wish to consider if this is a desirable outcome of the DSP.

CHARGES TO OTHER USERS

14. Should the water storage charge to Harvey Water be the same as the price to other users?

Harvey Water passes on the costs of water storage and the DSP to all users and customers.

Harvey Water has applied the pricing mechanism of the previous system managers when dealing with customers other than irrigators. This is also consistent with the current practice of the previous managers in other markets.

Harvey Water leads Australia in external trade of water from the irrigation area, not only in the concepts used but in the volume of water as well. Our proposal to government envisages 39 GL over time if all the area was piped. Limitations on infrastructure connecting to the IWSS and health regulations in relation to water source protection are significant constraints on trade opportunities but not within the control of Harvey Water.

The licences issued to Harvey Water explicitly include the ability to supply water to customers other than irrigators. Given their need for high security water at all times a different pricing regime is applied which is consistent with that used by other major water utilities.

A POSSIBLE COST SHARING ARRANGEMENT

15. An offer by Harvey Water as to how costs might be shared.

Harvey Water recognises that it will not be possible to come up with a formulation for cost sharing which is free of any subjective elements. Accordingly, in the interests of finding a solution it makes the following "without prejudice" offer:

Harvey Water:

- Agrees to pay 30% of Dam Safety costs with a cap of $17 million, but with the final cost share based on final water equity in each dam.
- Acknowledges that it agreed to a cost of about $17 million in the Bulk Water Supply Agreement in 1996.
- Is not responsible for climate change, and is probably making a positive contribution to offsetting it.
- Is not responsible for changing community risk management standards in relation to extreme weather events which increase DS costs.
- Is not causing any further LOL risk by its activities.
- Agrees that its proportion of DS cost should relate to its equity in terms of maximum water licence in each dam when all trades and all works are complete. Harvey Water notes that the probability that it will obtain its maximum licensed amount in the dams on a reliable basis is declining with declining rainfall and run-off
- Has no control over DS works or their costs.
- Accepts the figure of 30% of costs as suggested by Marsden & Jacob but with a cap of $17 million (as originally agreed) to keep costs to irrigators, and therefore affordability, within reasonable bounds.
- Agrees that payments should at least equal Lower Bound NCP / NWI parameters
- Seeks an upper limit of 15%, plus an allowance for inflation, in any one year during the transition phase to any increase in costs to irrigators
- Is prepared to consider trade from Samson Dam and Wellington Dam to extinguish funding liability.