



Submission to the Murray Darling Basin Authority
on the
Guide to the Proposed Basin Plan

1. Introduction

This submission is made on the grounds that as a resident of the upper Kiewa Valley, my expertise lies with the conditions in this valley and to a minor degree, the conditions that exist in the Ovens Valley and the Mitta Mitta Valley.

It was disturbing to see so many errors in a semi-government report. The length of time taken to produce the report in comparison to the length of time granted for submissions did not bode well.

This report was not well read or peer reviewed. It is hoped that this submission may help the Authority re-investigate its own data before releasing the final report, especially when the livelihoods of so many Australians will be affected.

2. Base Line Data

Throughout the MDBA's Guide to the Proposed Basin Plan, all calculated data has been referred back to a "without development" scenario.

However on page 33 "the Authority has adopted the full historical record (1895 – 2009) as the assessment baseline".

Yet on page 25 the dateline table provided shows the (presumably) starting date as 1902 (coloured green versus yellow). The immediate question at this point is 'what is so important that 1895 became the chosen date. It is obviously not pre-without development, as that is tabled as 1850.

Whatever the reason for the chosen date, it is highly unlikely that any environmental data was collected and analysed prior to the construction of the first pumping station (1850) or weir (1891). Anecdotal evidence at the time no doubt includes minor references to environmental factors but would hardly provide sufficient evidence on which to produce the current baseline data. Modelling without accurate data is not 'best available science'.

Major scientific organizations using modelling, produce multiple models in order to assist them in assessing the models with the highest correlation.

The report does not mention multiple models in the production of base line data.

As a result the data could only, at best, be regarded as an unsubstantiated guess and lacking credibility.

More recent times has seen all major construction programs undertake environmental effects statements.

These studies would have valuable information on which to use as base line data.

It is interesting to note that international treaties do not use 100year plus base data for any reports.

RAMSAR, which is quoted throughout the report, along with CITES, Bonn Convention et al all start at the time they were entered into force, viz. 1975, 1975 and 1983.

The Kyoto Protocol has still not been signed by the USA on the grounds that there was not enough data available prior to 1990. It is hard to comprehend how an internal Australian government appointed authority can set an arbitrary date of “without development” when the international community does not apply the same theory.

3. Kiewa River

3.1 Base Line Data

Once again the MDBA has reverted to the “without development” scenario for the Sustainable Rivers Audit.

On the basis of Hydrology, it may be feasible to investigate rivers and streams emanating from remote sites, to provide a tenuous base line.

However, nearly all of Victoria was at some stage developed by settlers, whose presence influenced all ecological and environmental factors.

It is not feasible to develop a Reference Condition criteria based on a hypothetical reconstruction of the components of an ecosystem as they would have been prior to significant human impacts.

History records that the upper reaches of the Dargo, Ovens and Kiewa valleys, and undoubtedly other alpine valley's, all had populations of Koala's prior to the 1939 bushfires.

If the SRA had included native animals in their assessments, then nearly every other catchment would have failed the Ecosystem Health report card.

The same applies to the Fish and Macro-invertebrates as there were few, if any studies done on these populations in the early/mid 1800's.

In undertaking the SRA's, the MDBA obviously did not want the data scrutinized fully.

Throughout the report and even each summary provides data on each basin.

But when it comes to Table A14 (Volume 2 Part 2 Appendix A) Key Environmental Assets, all the data reference sites for the Murray basin are combined.

To not list the sites by individual basins, suggests an attempt to cover-up data findings by the SRA team.

The data collection for Fish was undertaken in March 2006 and for Macro-invertebrates in March 2007.

The sites were only sampled once in contrast to other basins where there were multiple sampling dates.

The twelve month difference in dates produces a skewed result as there were significant environmental issues which appear not to have been taken into consideration.

On a purely cost effective basis, the MDBA have paid the SRA team extra for an audit which should have been done concurrently with the Fish audit (or vice versa).

3.2 Kiewa River Basin

The Kiewa River basin is the third smallest of Victoria's basins. It is approximately 100km's long, typically is only 20km's wide and covers an area of approximately 1800kms.

It is also the smallest basin the Murray Darling Basin.

The geology of the Kiewa basin includes granite, quartz, sandstone, mudstone, shales, basalt and extensive alluvium areas.

Small occurrences of various rock types cross in and out of the Kiewa basin, but have no direct bearing on the basins actual structure.

According to a number of government and educational institutions websites, there is no written word about any interconnection between the Ovens River basin and the Kiewa River basin.

Yet in the MDBA's Overview, Table 5.4, there is a reference to an "Ovens-Kiewa Sedimentary Plain" – a non-existent entity.

Other sections and tables in the report combine the Ovens and Kiewa rivers and basins, in their calculations.

This is clearly wrong and as such, all workings and modellings need to be reworked if the MDBA is to truly represent the two very different and individual valleys.

3.3 Kiewa River Hydrology

As a result of the Kiewa Hydro-Electric Scheme, there is a plethora of data available on the whole of the hydrological conditions in the Kiewa Valley.

However the MDBA has chosen to ignore this easily obtained data and revert back to the unknown, hypothetical "without development" scenario.

In 1972, the Soil Conservation Authority quoted a State Rivers and Water Supply Commission report of 1971 where it was stated that the average annual yield in the Kiewa Valley could be as high as 857,000ML.

By 1977, the Land Conservation Council report on the Alpine Study Area stated "Mean annual discharge rates for the Bogong High Plains, indicated by stream gaugings on Rocky Valley and Pretty Valley Creeks – Kiewa catchment, are about 1550ML per km², compared with the average for the whole Kiewa catchment of 514ML per km²."

Notwithstanding the varying reports of the size of the Kiewa Valley, if the MDBA figure of 1800km² is accepted, then the basin produces 925,000ML of water per annum.

However by 2003-2004, the average annual yield of the basin had dropped to 650,630ML according to the "Our Water Our Future report of that year.

There may have been droughts in the interval but a basin does not 'lose' in excess of 277,000ML of water.

In the ensuing years, the “Our Water Our Future” and “Our Water” reports have claimed that the Kiewa basin contributes between 650,000ML and 689,000ML.

The latter figure (689,000ML), is a reallocation of the figure from the previous year as the “mean annual basin outflows estimated from input to Murray Basin resource allocation model plus estimates of urban use and usage from unregulated rivers and small catchment dams (2004/05 use from State Water Report 2004/05).” – a direct quote from the Northern Region Sustainable Water Strategy.

And what that means is ‘inflows have been back calculated from outflows plus diversions.’ – a direct quote from the Our Water 2004-2005 as mentioned above.

Of course the report does not detail whether the diversions are licenced amounts or actual usage figures.

The most offensive part of all this, is the fact that since 2003-2004, there has been no peer review, no attempts at justifying any of the figures or even proof reading these reports.

And to make matters worse, the MDBA and its SRA team have accepted all the errors in the previous reports and placed them in the guide as the gospel truth (Table 5.1).

It is interesting to note that the MDBA appear to have conveniently ignored the role of the Kiewa Hydro-Electric Scheme in its calculations of water storage and use.

This is probably a result of a poor analysis by the MDBA of the water figures in the Victorian government’s reports.

Given that AGL can hold over 28,500ML in storage and its status is as a non consumptive use, this water can only be assessed as purely environmental water.

As such, it should appear as credit towards the environment from the Kiewa Valley, not an underhand extra environmental grab for water at the expense of other consumptive users.

3.4 Kiewa River Fish

It is interesting to note that the SRA Fish Audit was conducted in March 2006.

This was only three years after the terrible 2002-2003 bushfires caused huge devastation across the alpine region, including the Kiewa River.

All of the ecology was severely impacted upon and both State and Commonwealth agencies, indicated that the negative impacts of the fires was still being felt at the time of the SRA first audit.

The effects of the bushfires travelled down the ecological chain, including loss of habitat for fish, increased water temperatures and lower water flows.

The latter occurring because of the higher uptake of water by regrowth forest and higher evaporation rates as a result of less ground cover.

There is no easily found detail in the SRA or the Overview to indicate what impacts the bushfires had on the fish populations.

In regard to the location and number of sites sampled, the comments in section 3.1 are pertinent.

The SRA fish audit was undertaken with a weighted bias to sites closest to the higher human population centres of Albury-Wodonga.

As well a large proportion of the (overall) sites tested were at localities that are easily accessed by the general public.

This would have a major impact on the results.

Constant disturbance by people fishing, swimming, picnicking or just walking the dog would obviously disturb and affect the habitat of different species of fish.

It is highly unlikely that the results of any audit undertaken at well frequented sites, would produce a representative result.

Alien fish species are not highly rated throughout the whole of the MDBA's reports and audits.

And therefore it could be assumed the same is applicable to the Victorian State Government.

It is and was the Victorian government's policy to stock the Kiewa River with Rainbow and Brown Trout.

Other species, both alien and native have been stocked into the Kiewa River since the late 1800's.

Trout were introduced into streams in the Monaro in 1864 and progressively placed in other alpine streams after that date.

In the last five year period, the Victorian Government's Go Fish program has seen 10,000 Rainbow Trout and 5,000 Brown Trout released into the Kiewa River.

As a result of the Go Fish program, it is therefore not unreasonable to record such high levels of Trout in the Kiewa River.

If the artificial stocking rate of alien species is discounted by the numbers of Trout then there is a reduction of approximately 31% in the alien species recorded.

This then makes the alien species count below that of the native fish count.

The issue of Climbing Galaxias as a native species being considered an alien species for the purpose of the audit is difficult to comprehend.

The suggestion that “Climbing Galaxias was introduced via inter basin flows from the Snowy Mountains Scheme” is astonishing. The poor plagiarization of that statement from earlier papers and journals ridicules the intelligence of the SRA members.

As the Snowy Mountains Scheme has NO physical connection with the Kiewa Hydro-Electric Scheme, the interbasin transfer for a so-called coastal species is just not possible.

This of course does not preclude the intervention of the human species in transferring the Climbing Galaxias.

However as the species has very little appeal (if any) to fisherman and as no self respecting environmentalist would ever transpose species from one environment to the other, there must be another explanation.

It may be that the Climbing Galaxias found were another sub-species of the coastal fish, which had not been recorded previously in the upper Kiewa River.

Certainly Boulenger and Walford both described *G. brevipinnis* as a relatively little known and infrequently collected species.

Perhaps the Climbing Galaxias find is the Mountain Pigmy Possum of the fish world.

It would appear that the SRA fish figures and species identification should be re-assessed so that the next audit will have an accurate base for comparison.

3.5 Kiewa River Macro-invertebrates

Once again, the lack of base data on which to produce an expected families list for the Kiewa Valley is not available.

It is unacceptable to assume that the list provided contains all or none of the macro-invertebrates in the Kiewa Valley.

In Section 3.4 Fishes, mention was made of the effects of bushfires on the Kiewa River.

The audit of the Macro-invertebrates was undertaken in March 2007 – immediately following the devastating Great Divide Fire in Victoria.

This fire, combined with the Tawonga Gap Fire burnt not only new areas, but areas previously burnt in the Kiewa Valley in 2003.

The combined effect of these fires has had an enormous impact on the environment ever since.

Evidence is available of the 2010 Kiewa Valley floods carrying the debris of the 2003 bushfires off Mt. Bogong.

Yet the SRA team surveyed the Macro-invertebrate families immediately after the disaster.

And they made no allowance for the effects of the natural disaster on their results.

Macro-invertebrate sampling sites were again disproportionate in their dispersal across the Kiewa Valley and were in excess of the number of sampling sites for fish.

There does not appear to be any reason for this variance.

Again, as mentioned in the above section, many of the sampling sites are at or near areas frequented by humans.

Human interference in the habitat of any animal is going to have an adverse affect and as such has produced a skewed result in the Kiewa Valley.

Failure to record a macro-invertebrate family may not mean that it is extinct or absent, just that it was not near the chosen site on the chosen day.

3.6 Kiewa Valley Forestry

The role of forestry plantations in the Kiewa Valley has been greatly exaggerated.

Only a small area of softwood plantation remains in the Kiewa Valley.

The 2010 Beechworth Fire (on Black Saturday) destroyed part of the plantation and as a result, the water consumption figures as portrayed in Table 5.3 of the report appear to be inaccurate.

The comparison between the size of the Ovens Valley and the Kiewa Valley plantations and their estimated water use, suggest a higher correlation than actually exists.

3.7 Kiewa Valley Agriculture

Whilst the Commonwealth Water Act gave prominence to the environment over human needs, in the future it will be human needs that dictate how the water is used.

And humans will need both water and food.

Whilst it may seem that a high rainfall valley could be the ideal target for reducing the current diversion limits, however the reverse is more likely to be appropriate.

In years of high rainfall, in places like the Kiewa Valley, irrigation needs are reduced and the water not used remains in the river and becomes de-facto environment water.

This is in stark contrast to agriculture produced in marginal areas or to agricultural crops grown outside the conditions needed to produce an economic return.

In fact this very point has been recognized by the Commonwealth Government with its buy-back program.

Anecdotal evidence is available of an attempted sale of water in the Kiewa Valley to the Commonwealth government for the environment which has been declined.

This suggests that the Commonwealth government declined the offer because it recognizes the value of keeping water close to the source.

3.8 Key Environmental Assets

After examining all the sites listed for the Kiewa River Basin, the ratings of the sites under the five criteria raises doubts as to the level of actual study.

Clover Lake has been altered from its original state by the construction of a power station.

Lake Guy has been altered greatly especially after the recent construction of a power station alongside the lake.

The Kiewa River West branch was greatly altered by the State Electricity Commission in the days when the area was known as Petticoat Lane.

Bogong Creek contains a mix of native environment and regrowth as a result of works by the State Electricity Commission.

All of the above apparently met criteria 2,3,4,5 even though they are in an altered state.

Mountain Creek is also rated as 2,3,4,5 but this watercourse has been grazed by cattle, logged, burnt and well visited by humans.

Pretty Valley Creek rated as 2,3,4,5 has seen works by the State Electricity Commission and grazed by cattle.

4. Conclusion

The MDBA report is riddled with errors but if the authority can revisit its data and correct the errors prior to releasing the final report, then that document will have a greater acceptance in the wider community.

References

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