Submission to the discussion document “Action for Healthy Waterways” by the Upper Taieri Water Management Group

Executive summary
This submission refers to our experience of Integrated Catchment Management in one of the driest landscapes in NZ, where the best use of a scarce water resource is critical. We fully support the objectives expressed in the “Healthy Waterways” document.

Current water quality is a product of present and past regulatory policy, its vision, and its implementation. We submit that the most problematic has been implementation and a factor in this has been the mismatch of national policy with the reality at catchment level.

Changes to Policy and tightening of standards at National level does not address this failure and will further stress the already over extended capacity of regional administration.

A pathway for improving and/or maintaining water resource quality already exists but it needs the full attention of government at all levels. Successful implementation of policy requires broad participation at catchment level. To address capacity issues and meet the specific challenges at this level we need to harness community resources, energy, knowledge and passion.

We urge you to consider the following case and the concluding recommendations.

The Submitter-
The Upper Taieri Water Management Group (UTG) is a broad affiliation of agencies and individuals with a strong interest in the Taieri River and its tributaries. The group was initiated in 2007 at the conclusion of the Taieri Trust programme. The UTG, as the name suggests was more focused in the Upper catchment with emphasis on resolving issues related to the pending expiry of Deemed Permits. This form of water allocation was dominant in the catchment, and an orderly transition to modern resource consents was vital to the wellbeing of the community.

The UTG promoted a shift to collective allocation so that the traditional system of individual priority rights could be replaced by community owned consents managed under water sharing agreements. It has required a significant culture shift, and it has taken time, but as a result, this catchment has largely made the transition within the deadline of 2021.

The development of user groups has created a foundation for an enduring catchment wide structure with the potential to deliver further benefit to the community and the environment. Without this structure, decisions around the allocation and use of resources are doomed to the care of an increasingly expensive and destructive adversarial process in which the component parts of the UTG will separately do battle with each other, often ending in the environment court. Not least in the cost of that process is the lost opportunity for shared understanding and recognition of mutual opportunity.

Current actions include;

- The development of a Wetlands Management Plan for the upper catchment from Paerau to Waipiata. This is being led by members of the UTG including representation from Fish and Game Otago, local farmers and residents of the Maniototo.
- Facilitation of a proposal from a Strath Taieri group seeking to increase the catchment and storage capacity of the Loganburn Dam to enhance supply for irrigation from the river to that part of the catchment. This could result in higher summer flows through the river as far as Middlemarch.
- Ongoing monitoring and reporting of water quality and flow volumes throughout the upper catchment.

The Resource

The Taieri River is notable for its sprawling scroll plains and unique wetlands, as well as a long history of failed irrigation plans. The river has a naturally low summer flow, making it unsuited for irrigation of the dry Maniototo plains, without a large storage facility. None of the early proposals could make a viable economic case for the construction of the required storage and headworks. Construction by the Ministry of Works of the Maniototo Irrigation Scheme hit the same barrier when the project was halted in 1983 due to cost overruns with only 40% of the scheme completed. The work was ultimately completed by private contractors. The operation of the Loganburn Dam for Hydroelectric Power Generation and irrigation has brought some change to the river in flood mitigation as well as an enhanced minimum flow. For more than two decades following commissioning, the dominant method used to apply water from the scheme was border dyke. On porous soils, this caused a significant rise in water levels in the lower terraces, especially at a distance from the river. This created a much wetter perimeter to the existing wetlands and contributed to the expansion of the defined boundary by the Otago Regional Council during the 1990’s. Since 2000 there has been a shift to centre pivot and other spray systems, and a return to a more natural state.

The encroachment of crack willow into the wetlands had already changed the natural character of the river by the 1970’s, and the Catchment Board at that time embarked on significant willow clearing and a controversial “channel Improvement” project.

The Otago Regional Council continues to control willow encroachment of the main channel, and this along with flood mitigation has stabilised the wetlands to a condition similar to that of the 1950’s. Large populations of Pukeko have been replaced by Canada and feral geese which require ongoing culling.

Water quality became a major issue following the development of large-scale dairy near Patearoa, but that issue has been resolved through the creation of a land use covenant. Fencing in the vicinity of the river is difficult due to flood effects, and most of the stock exclusion has been achieved by 2 wire electric boundaries which can be restored as required.

The values-

Maniototo has many iconic values associated with the landscape, with its history and with the lifestyle of its community. As in many other rural communities, these are threatened by social, environmental and economic change, but there is no going back.

We value our history and the many remaining unique features of this place, but we must find our own ways to deal with change. To this end we have among other things;

- Established a community owned and managed pest management company
- our own health company with a new hospital in Ranfurly, mostly with local funding
- transitioned from individual ownership of “water rights” to catchment based shared consents
- established the UTG to give whole of community transparency to the operation of these groups, and to promote partnership with other users.

The pest company is a success story and Maniototo has the lowest rabbit population of all the historically rabbit prone areas in Otago. It should be no surprise that the community was better informed and more motivated in managing this problem than the regional pest service. The company also manages the Canada goose problem in the wetlands.

Against all odds we retain good medical services.

We are the only area in Otago to have negotiated the transition from deemed permits for all the main tributaries two years ahead of the 2021 deadline.

Every one of these initiatives has been driven by need, and each succeeds because of local knowledge and innovation. Essential to this is a sense of ownership and responsibility at community level, coupled with the statutory backing which comes from clear, achievable limits defined in Regional Plans.

Key principles -
There is an important distinction to make between the setting of environmental limits, and the imposition of rules constraining behaviour. The former is a direct statement of what must be achieved, while the latter is intended to change behaviour in the hope that it will produce the desired environmental outcome. Too often it is a vain hope, because factors contributing to environmental degradation are many and varied, and often come in complex combinations which cannot be addressed successfully by a rules-based approach. Rules imposed across varied situations are bound in many instances to be numerous, onerous, unnecessary and/or ineffective. Many of the rules proposed in the Discussion Document fit this description. Such an approach is inefficient, expensive and alienating.

The imposition of rules, especially from Central Government has the effect of disenfranchising communities of legitimate ownership and responsibility. Farmers are unlikely to engage in community self-management when deprived of sensible options and embittered by unnecessary expense. This will bring a quick end to groups like ours.

In section 2.4 of the document some recognition is given to those communities and water users who established their own initiatives to address water issues. The section concludes with the comment that these efforts “are not going to be enough” and Central and Local Government must set clear rules and regulations to ensure that all land owners know what’s expected of them.

We reject this argument and make the case that while some rules are necessary, this is likely the worst way in which to attempt to convey the required message. Far more effective and incentivising would be a statement of clear, achievable environmental outcomes. It is on these outcomes that any action plan should be judged, rather than on compliance with rules.

Wetland Management
This section has been submitted to the UTG by Fish and Game Otago.

Considerate grazing of wetlands and riparian margins throughout Otago assists in the management of introduced plant species. In many modified waterways total stock exclusion results in the dominance of introduced grasses and pest plants such as crack willow, gorse, black berry and broom.
The Upper Taieri Wetland Management group encourage grazing practices that maintain introduced vegetation and do not compromise natural habitats. A wide range of exotic species are well established throughout the wetland. Without regular grazing these species are released and can invade the ephemeral wetland zone and result in loss of native wetland plant species. Introduced plants can also become a hinderance for public access and enjoyment of waterways. Other than regular grazing there is no pragmatic way to control introduced grass swards over large areas. Willows and other pest plants can be sprayed although it is preferable to avoid chemical application over wetlands where possible.

It is not practical to apply a single regulation such as total stock exclusion across all waterways in Otago. In many wetlands especially those that are ephemeral (such as much of the Upper Taieri) grazing is a useful tool when soil moisture levels are appropriate (generally summer). Within parts of the Upper Taieri it is often best to break-fence areas and have lighter stocking rates close to permanent water.

Wetlands such as peat bogs, or where native vegetation is dominant (or a strong seed banks exists), are best left un-grazed to encourage native regeneration and avoid the introduction of pest plants. Some rare plant communities can benefit from very light grazing to control introduced grasses, others are best left un-grazed. Generally, a site-specific management and monitoring regime is best when dealing with rare plant communities.

The ideal wetland management regime will also depend on the outcome desired. For example, if managing an area to maximise waterfowl productions a patchwork of un-grazed and grazed areas can be the best way to provide a mixture of habitat included nesting cover and feeding habitat. Tall cover provides protection from predators for nesting birds, but a short pick is best for feeding habitat.

In many cases an adaptive approach involving collaboration from DOC, Fish and Game and farmers sharing their knowledge is the most successful way to maintain and enhance waterways and wetlands. Grazing of water margins should be monitored carefully to ensure it does not compromise water quality, native vegetation or habitat. Stock and soil moisture levels need to be checked regularly to ensure animals are removed before they over-graze vegetation, cause pugging of bank margins or sedimentation of waterways. Local farmers often know the best climatic periods and stocking rates to graze wetlands in a considerate manner and can provide practical advice when developing management plans.

Water Quality

This section has been submitted to the UTG by Matt Hickey (MSc Ecology; PG Dip Sci Ecology; BSc (double major)).

For the five monitoring sites on the Taieri River mainstem upstream of the Sutton flow site (which represents the area covered by the UTG) the following summarises the existing water quality:

Median DIN levels (less than 0.04 mg/L) or A band based on the latest NPSFM attribute for ecosystem health.

Median DRP levels range from 0.004 mg/L at Linnburn to 0.024 mg/L at Waipiata. Ranging from A band to failing the proposed national bottom line of 0.018 mg/L.

For nitrate toxicity all sites are considered A band.

Median E. coli for the five Taieri mainstem sites upstream of Sutton ranges from 41 to 105 (CFU/100 mls) or A band based on the latest NPSFM attribute for human health[1].

MCI is only monitored at one site with a median score of 107, or C band for ecosystem health[2].
The UTG through time has made changes as and when water quality issues have been raised by ORC or the public. Members of UTG have participated in nutrient loss research with ORC and AgResearch which highlighted that due to soil types there is some risk of P losses from soils under irrigation\[3\]. This information has been used in understanding the effects of nutrient loss from different irrigation methods and risks of different methods contributing to changes in water use and management. Overtime we hope to reduce DRP concentration in the river.

\[1\] We acknowledge we have only used the median value for this attribute as we haven’t access to the more complicated % exceedance and percentile data
\[2\] Again we use the 5 year median as we don’t have access to the 5yr rolling average required by the NPSFM.

These and future test results will be used in the development of catchment plans for wetlands and if considered practical, depending on the current national and regional policy, a collective environment plan.

Response to questions in the discussion document

Given our stated opinion on past policy implementation and the need for more “bottom up” involvement, our reply to most of these questions should be self-evident, but we submit the following.

**Questions 1.6**

4. **What actions do you think you, your business, or your organisation would take in response to the proposed measures?**

As they stand, these proposals are likely to create a siege mentality in the community of “everyone for themselves”. If every farm must develop a separate environment plan whether or not they are relevant to the issue, walk away from effective wetland management through stock exclusion rules and spend large sums of money on compulsory but unnecessary fencing, then there is nothing left to be discussed at community level. Water quality will be considered the responsibility of the Regional Authority who will be further alienated from the farming community. The UTG will become irrelevant.

**Do you think it would be a good idea to have an independent national body to provide oversight of freshwater management implementation, as recommended by KWM and FLG?**

No. Current failure of policy implementation is largely attributable to the disconnect between national policy and the reality at catchment level. This top down approach is only worsened by the creation of more high-level bureaucracy.

**5.8-5.12 Water Quality and Quantity**

Grand parenting leeching losses for nutrients allows polluters to pollute, while penalising those who have farmed using sustainable management practices. It will alienate that portion of community that is already complying with existing environmental limits. These are generally farmers having a long-term view of their business and their family in the community. Typically, they are the core members of Catchment Groups. We deplore the notion that one type of farmer should be granted more leeway to pollute than another.
Questions 5.13

We respond in the affirmative to the questions relating to water quality, noting that they represent little change from existing standards in the Otago Regional Plan except for E. coli limits which we consider to be unrealistic at higher flows.

We do not agree with proposals regarding wetlands because we believe the unique attributes of the Upper Taieri Wetlands are better protected in the management regime described in the section of this submission by Otago Fish and Game.

This regime includes the use of cattle to manage the more aggressive exotic plant species, and we submit that in large parts of the wetland as currently defined, cattle should not be excluded.

With such exclusion we could expect wetlands to revert to the mess that we have already seen when for a time cattle were excluded from a large section due to a misunderstanding of the terms of a covenant. Exotic grasses grew to fence height and more, willows spread rapidly, and the resulting jungle became infested with wild pigs and other pests. The river was virtually inaccessible.

Questions 8.9

51-53 Restricting further intensification

We do not support prescriptive rules around changes in land use as a first option, noting that such change may be beneficial to the environment in some cases. For example, the opportunity to increase irrigated area is an important incentive to improve water use efficiency.

We prefer an effects-based approach within a framework of prohibited and permitted activities to be determined in relation to specific Fresh Water Management Units. We acknowledge current limitations in the science around long term effects and accept the need for a conservative approach where there is a risk of nitrogen leaching, however proximity to waterways/water bodies should be a determining factor. Regional Councils should be given latitude to develop catchment specific rules.

54-57 Farm Plan Options

We submit that a catchment based collective plan could deliver the desired outcome in a more timely and efficient manner. Such an alternative option would incentivise collective action, providing the opportunity for shared learning and ownership of related issues, as well as a more cost/time/labour-efficient approach. Farmers included in the plan would be required to make legally binding commitments to meet conditions designed to deliver outcomes defined in the Regional Plan.

58-64 Immediate action to reduce nitrogen loss

We are in an excluded region (Otago) and intend to continue to monitor inputs and effects on water quality to try to identify risk areas. We see benefit in the collective approach to this problem.

65-75 Excluding stock from waterways/Controlling intensive grazing/Restricting Feedlots/Reducing pollution from stock holding areas

The potential tangle of possible unintended consequence and cost benefit variation demonstrates the limitations of the prescriptive approach. We submit that a collective environment plan will resolve these questions, based on the existing regime of water quality tests on tributaries. We recommend exemption from these rules where a property is committed to a catchment plan as defined previously. It is likely that some of these practices could be defined as prohibited activities.
under the regional plan or within the catchment plan, based on conditions within the FMU. Ultimately the rules will be responsive to effects.

**Recommendations**

Regional Authorities should, as part of their responsibility in identifying FMU’s and developing specific rules and objectives for them, foster and facilitate community self-management. The aim should be to promote community ownership and responsibility and provide the opportunity to capitalise on local knowledge and aspiration.

Catchment groups should be representative of as many segments of the community as possible with no restriction on membership. Some will be more dependent on outside facilitation than others and some funding will be required for basic administration. Others will likely embark on community good projects for which there is already a range of funding options.

Council staff should make use of these groups as an efficient access point for the regional authority and other agencies to a widespread farming community with as many opinions as individuals. They offer cost savings in monitoring, reporting, investigating and analysing. It also brings to bear the important influences of shared experience and peer pressure. It provides the opportunity for shared learning and the development of important relationships. We believe there is greater cost/benefit in investment at this level than elsewhere.

We urge emphasis on working with, rather than against rural communities that are already addressing the issues. Essential to this is the promotion of:

- Innovation to develop local solutions to local problems
- Focus on environmental outcomes, rather than rules and compliance levels
- Community ownership
- Self-management at catchment scale as a preferred option

And the avoidance of:

- Offending and alienating people who are already doing or may do this work
- Imposing unnecessary work and cost on whole communities
- Creating excessive and punitive bureaucracy
- Top Down, “we know best” rules and policy development.

To this end we seek exemptions from the rules regarding:

- Wetlands, where a property is included in a satisfactory wetlands management plan that is developed at catchment level
- Farm Environment Plans where a farm is included in an approved catchment scale plan
- Fencing of tributaries, where the property is included in such a catchment plan and water quality is not impacted.

*Note; While the views expressed in this submission represent the consensus of the members of the UTG, in accordance with their policy the Dept of Conservation neither support nor oppose this submission.*

**We wish to be heard in support of this submission**

Personal details removed

Chair, Upper Taieri Water Resource Management Group