Central Plains Water — Summary of Main Issues

During August and September 2000, the Central Plains Water Enhancement Steering Committee facilitated a series of meetings with the various stakeholder groups that make up the Central Plains Water community of interest. The following is a summary of the issues and desired outcomes recorded at the meetings. The issues are in no particular order of importance. They have been separated into broad heading areas, though in many instances the issues do not fall neatly into one or other category.

Environmental Issues

- Groundwater – levels need to be protected down the Plains, and quality needs to be protected from the potential risks of leaching nitrates and run-off.
- What will be the effect of any scheme on the levels of Te Waihora (Lake Ellesmere) and Coopers Lagoon?
- Higher lake levels on Te Waihora will mean there will need to be more lake openings. Who will be required to pay for this?
- There is an opportunity to undertake enhancement work on Te Waihora.
- There are peat swamps in the lower plains with potential to hold large amounts of water and discharge it slowly.
- The effect on the spring zone, this is the distance spring sources can move from wet to dry years.
- If this scheme takes water out of Lake Coleridge, what effect does this have on Rakaia River flows?
- Concern about taking flood flows, which flush the shingle out of the river. Will lower flows lead to more shingle and increased danger of flooding?
- Maintain adequate flows in the rivers to ensure their life supporting capacity. Look at the minimum flows again to ensure they support the biota.
- The impact of abstractions on water temperatures in-stream.

Environmental Outcomes

- That our grandchildren can still drink clean, clear water.
- A stable water table – don't want to be flooded out but some recharge is acceptable to improve groundwater reliability.
- A good system of ongoing monitoring will be required – particularly to monitor the impact on drainage and water tables.
- A study to show what will be the effects of putting 10/20/30 cumecs of water on the Central Plains. The down stream effects need to be measured, when and where will the effects be felt?
- No Opua!

- Developing environmental benefits enables the use of water.
- Adverse effects are adequately avoided, remedied or mitigated.
- High quality potable water – preserve it for drinking not flushing.
- Protection of the flushing effect of gravel out of the river. No build up of shingle caused by the scheme.
- No dams on the main rivers in respect of migrating fish.
- Conservation Order on the Rakaia and Waimakariri minimum flow (Waimak River Plan) maintained.
- Retention of water in braided rivers to ensure sustainability of the biota and recreational resource.
- Net Quality Fishing Area – especially important in the Rakaia as it is an all river fishery.
- Stabilisation and improvement of water quality and benthic habitat conditions on Te Waihora and its catchment.
- Habitat for endangered braided river birds protected and enhanced.
- Fish will use man made lakes and channels so make sure they can get through the system both ways.
- Te Waihora should be a living lake, with enough water to allow it to reach its margins, water quality of recreational standard or better and no deformed fish. This will also enhance commercial opportunities from the lake.
- A scheme would provide an opportunity to enhance the environment outside the main braided rivers, particularly smaller rivers such as the Selwyn and Hawkins.
- Any scheme, in itself should be aesthetically pleasing.

Technical Issues

- Source – where will the water come from?
- Reliability – what guarantees, if any, can be given?
- Distribution – pipes or a race system? Also, how will any distribution system link in with existing water races?
- Storage – where? how? – recognition that harvesting the peak flood flows to feed a storage lake or network is likely to be an important part of any scheme.
- Water diversion, west to east – via Otira tunnel.
- It should be able to be delivered to public places such as sports grounds and parks.
- There may be problems getting access for irrigation across non-supportive farmers' land.
- How many days in a normal season will existing river irrigators find they are under restriction if this scheme is operating? More or less?
- Possibility of taking excess water from the lower Plains and piping it back up for re-use. Australian schemes examples of innovative re-use.

Technical Outcomes

- Irrigation schemes must meet a reasonable efficiency test on day one – ensuring that there is no waste, either as a resource conservation issue, or for the impact that wasting the water may have on groundwater/aquifer recharge further down the Plains.
- Financial imperative seen as driving the desirability for efficiency.
- Seven months supply, October – April.
- Water Quality –ensure that silt and sedimentation does not have a negative impact on irrigation equipment, stock or crops.
- Any new scheme does not affect reliability for existing users.
- Existing surface water irrigators are able to join this scheme when their present sources are turned off as the river is at or below the minimum flow.
- Future Proofing – need to make sure that increased demand (or some other factor) does not come along to destroy the assumptions we are making and leave any scheme requiring major modification very soon after it is completed.

Operational Issues

- Drought protection – some see this as a major motivator towards irrigation, others believe that irrigation should be an integral tool for any farm.
- Dependence on irrigation – once the scheme is on, users will become dependent on it, which is the reason reliability is so important.
- Farmers are more and more being required to sign supply contracts – they therefore need surety of supply for water.
- There is a high work load associated with irrigation, but this may be offset if farmers are able to afford to pay for extra labour unit if a new system increases profitability.

Operational Outcomes

- Ensure that farming remains an economic activity on the Central Plains.
- Pressurised water at the gate.
- Producing power from the pressure in the pipes.

Financial and Structure Issues

- Cost – what will it cost to get in? How will this compare to existing (ie groundwater) irrigation options? There will be opportunities for current irrigators to change to scheme water if it is more economic.
- Will farmers be charged for water or just for access?
- Will shareholding be connected to land ownership?
- Help required – and possible under-writing – from an outside agent (such as a Council) to initiate and keep the process on track.

- Reaching critical mass early to get over the lag phase with adoption, but capacity should be built in for new users to come in later.

Financial and Structure Outcomes

- Any scheme has to be economic, viable and sustainable.
- Keep the company structure, set up costs and administration simple – and free of bureaucracy.
- Flexibility – need to provide flexibility of entry, and flexibility/tradeability of use.
- An acceptable funding formulae to resolve any resulting problems:
  — Lake openings
  — Drainage issues
  — Flood protection.

Cultural Issues

- No direct discharges to water including stormwater.
- Transport of water should use natural ecosystem opportunities, not canals.
- Mixing of water is acceptable if it passes through the land – for example through a wetland – before mixing with other water.

Cultural Outcomes

- Direct discharges to be avoided if possible. Where this is the best alternative, the discharge should be treated.
- Minimisation of the effects of non-point discharges.
- The users of water are listening, hearing and adjusting their actions to minimise the impacts of their activity.
- Any scheme is not inconsistent with Ngai Tahu's Fresh Water Policy.

Social, Economic and Community Issues

- Population growth – and a consequent improvement in services (schools, roads) – seen as a positive by some and a negative by others.
- Rates will increase as land use changes, but Council will also need to improve services and infrastructure as population grows.
- Assessment and internalisation of social and environmental costs into the economic calculations.
- Will the rate base widen for the Selwyn River flood protection works?
- Every year a scheme is delayed represents the loss of hundreds of thousands of dollars to farmers.

Social, Economic and Community Outcomes

- Mainstream the idea of water enhancement.
- Integration – of issues such as marketing (ie we do not want to gear up to produce something that we will not be able to sell), professional advice on land use options, employment/training (ie we do not want to gear up to produce something that will require a large number of skilled workers when the workers with these skills cannot be found).
- Integration – of side benefit opportunities such as enhanced community infrastructure (schools, roads, etc) and recreational aspects – needs to be considered in the equation from the start, not on a reactive basis when it is too late. Along side this, is a need to identify the potential beneficiaries (not just users) and work out mechanisms to ensure that responsibilities – and funding – should come with benefits.

Land Use Issues

- Central Plains has responsive good quality soils for irrigation.
- Subdivision/Lifestylers – a scheme will provide opportunities for lifestyle farmers to farm intensively and therefore increase returns from their properties, though will also reduce the motivation of dryland farmers to subdivide.
- Lifestyle blocks may require less water per hectare because they use water more specifically – use where want it, when want it.
- Could cause issues over conflicting farming practices/enterprises next door, such as vineyards beside arable farmer, leading to spray drift issues.
- Potential for freshwater aquaculture should be examined.

Land Use Outcomes

- Different land uses have different water reliability demands – irrigation could provide the opportunity for multiple land use in one season.
- Matching use of water with geographic/economic/social/physical context so that returns from use are maximised while any adverse effects meet the obligations under the RMA.
- A scheme would have the potential to make foothill properties more viable by providing more regular demand for store stock to fatten on irrigation areas.

Process Issues

- Information – needs to be regular and sufficient to enable all stakeholders – and the rest of the community – to make sound decisions.
- Farmers will need to see a definite scheme before they can plan or make changes – most will only believe it when they see it.

Process Outcomes

- The win-win approach is required if we are to succeed.

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