The TANK Working Group is working towards progressing plan change proposals for the Greater Heretaunga Plains. The TANK Group has met regularly since October 2012 and by mid-2018 we expect to have a draft plan available for consultation.
As well as the wide range of knowledge and views of the 30 or so people involved in the TANK Group, a wide range of science, cultural and economic information has and will be used.
New science in 2017 told us the waterways and aquifer below the Heretaunga Plains are highly inter-connected – like a big bathtub. It might seem a bottomless water resource, but it's really a water tank flowing above and below ground. This means that all community stakeholders, including municipalities, have a role to play in meeting the community's expectations for how the water resources in the catchment are managed.
Meanwhile the Water Conservation Order hearing is being delayed to give the TANK Group the opportunity to conclude its collaborative process and summarise its vision for the management of the catchment's water resource.

Tom Skerman, Group Manager Strategic Development, Hawke's Bay Regional Council.

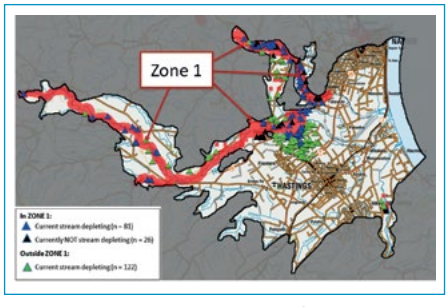
TANK – looking at the year ahead

The TANK Group is now very focussed on making decisions to meet the targets set by the Regional Planning Committee and the Special Tribunal for the Ngaruroro WCO by the middle of the year.

GROUNDWATER MANAGEMENT

The Group recently agreed on further development of the following management approaches for stream depleting groundwater takes.

- Each groundwater take in Zone 1 is to be managed as if it was a surface water take from the adjacent river, and is subject to the allocation limit and flow restrictions. An applicant could do further testing to confirm otherwise. Zone 1 includes the areas modelled and also those areas adjacent to the main rivers where there was less model data, but higher confidence about the level of groundwater/surface water interaction.
- Any other groundwater take in the Heretaunga Plains will be subject to the allocation limit for that combined Zone and requirements for stream flow mitigation.
- New ground and surface water zones will affect how some existing takes are classified. The impact of these changes on permit holders is being assessed.
- The use of the Stream Depletion Calculator to measure the stream flow depletion for each consent and the associated mitigation requirements is being examined in more detail.



TANK area showing Zone 1.

STREAM DEPLETION CALCULATOR

The Stream Depletion Calculator has been developed by HBRC's groundwater modeller and has provided a way to assess individual contributions to stream depletion across the plains. The calculator can be used to look at stream depletion over different time periods, locations and pumping rates and can assess multiple locations at once.

The calculator could also be used to work out how consent holders will contribute their share to any flow augmentation scheme. The feasibility of the scheme – as a way to mitigate the stream depletion effects of groundwater takes – is being considered by the TANK's Water Augmentation Group. This option is being looked at alongside other mitigation options, including reducing the amount of water currently being used, better riparian land management and wetland development to improve aquatic ecosystem health.

NUTRIENT MANAGEMENT

The estuaries of the TANK catchments are showing signs of enrichment and degradation. The tributaries of the Ngaruroro and Tutaekuri, as well as many streams in the Karamū catchment, have dissolved nutrients higher than objectives being set by the TANK Group. At this stage, property scale nutrient allowances are not being further developed, but the Group is working with key industry groups to identify ways of reducing nutrient losses. It is likely to result in a focus on some land use activities and practices, and some locations where risk of nutrient loss is high. The TANK Group will be looking for measures and milestones to ensure improvements to aquatic ecosystems are being made.

WATER ALLOCATION

Priority allocation for water has been considered by the TANK Group, including how to manage water bottling takes. The primary aim of TANK's new water allocation policy (subject to decisions about further reductions) is to ensure on-going actual and reasonable use of water with no increases above water use levels in 2012–2013. The TANK Group largely supported the use of IRRICALC to ensure a consistent approach to assessing irrigation demand and annual allocations. There was also wide agreement about requiring efficient water use, using industry good practice standards.

Water year in review – what and wai 2017

Looking back at 2017 which, in terms of irrigation related matters, was a momentous year for Hawke's Bay.

JANUARY 2017

1. Drought was the worry at the start of 2017. Much of the region had around half the normal rainfall in November and December. Farmers in the western hill country, known as 'summer safe' areas, did not have the usual regular rainfall tipping over the ranges, and in eastern coastal areas, many farm dams did not get the usual top up. By the start of the month, low flow bans for irrigation were on higher take limits on most of the rivers. Rainfall enabled some irrigation bans to be lifted by 24 January, but more were back on by the end of the month. Groundwater levels in the Heretaunga and Ruataniwha aquifers were well below normal.

FEBRUARY

2. Early in the month, rural representatives met to gain an overview of the dry conditions following a regular climate briefing by Hawke's Bay Regional Council (HBRC) staff. Forty irrigation bans were in force by 7 February, until a weekend of rain helped relieve the situation and by 20 February only one irrigation ban was still in force.
3. New science information was presented to the TANK Group showing that groundwater resources over the whole Heretaunga Plains are more closely linked than previously thought, meaning the previous approach to stream-depleting takes is likely to change substantially.

MARCH

4. Andrew Newman stepped down as Chief Executive on 31 March 2017.
5. TANK Group members received more new science from HBRC hydrologists about flow statistics for the Ngaruroro River. This showed the Mean Annual Low Flow (MALF) was higher than previously thought, with implications for planning.

APRIL

6. HBRC made four applications to the Ministry for the Environment's Freshwater Improvement Fund, in the hope of fast-tracking improvements to some of the region's degraded waterways through the 'hot spot' priority initiative.

Tukituki River in summer at Patangata.

MAY

7. James Palmer was appointed as HBRC's new Chief Executive.
8. A councillor-initiated review of the Ruataniwha Water Storage Scheme was presented on the legal, financial, economic, engineering and environmental elements of the scheme. This included the impacts and consequences of implementing the Tukituki Plan Change 6 (with and without the Scheme) as well as the implications of withdrawing from the Scheme. At the end of the month, the Council put in place stronger conditions to reduce the environmental and financial risks of the Ruataniwha Water Storage Scheme.
9. HBRC signalled staff would be keeping a closer watch over winter on feedlot and feedpad operations and their impacts on water quality. A field day seminar was held at Smedley Station on the topic.
10. Havelock North Water Inquiry issued Stage 1 report.

AUGUST

11. HBRC opposed the Water Conservation Order (WCO) for the Ngaruroro and Clive rivers, explaining that the process cut across the functions of the regional council and the work already well advanced with the TANK planning.
12. Scientific advice provided by HBRC to the TANK Group indicated the effects of current groundwater takes from the Heretaunga Aquifer are at the limit of what is environmentally acceptable.
13. The Council voted to withdraw its financial support for the Ruataniwha water storage scheme to focus its efforts on other priorities. The ability for the scheme to proceed became uncertain after the Supreme Court's decision not to allow the Department of Conservation land swap necessary for the construction of the proposed Ruataniwha dam.

NOVEMBER

14. The Hawke's Bay Climate Resilience Programme report was made available, and will be used to develop the council's Long Term Plan, www.hbrc.govt.nz, search #climatechange

DECEMBER

15. The Irrigation Efficiency Check Up programme got underway, with the support of IrrigationNZ. This is the start of a wider programme, where HBRC will be talking to all key players seeking their support for efficient water use and a voluntary pledge to reduce use by 10 percent. Achieving this target could reduce the need for rationing or reductions on takes.
16. A new flow measuring structure was installed on the Karamū Stream near the Whakatu Arterial Route development to improve accuracy of flow reporting. Data from this site is now available on hbrc.govt.nz.
17. Stage 2 report of the Havelock North Water Inquiry was released.

Essential to maintain your telemetry

New consents that have a requirement for telemetry to be installed are required to take a manual reading in June each year and email this to waterinformation@hbrc.govt.nz by 10 July.

Even if your consent does not require this, it pays to do some maintenance checks of your telemetry equipment, well before the next season. You will have a good idea of any equipment issues that you experienced over summer, and can use winter to fix or upgrade any gear that you will need operating perfectly during the next season. Ants love your telemetry unit as it is warm and dry but they play havoc with the electronics and spreading some ant sand around can be a good way to keep them at bay.

When you look at your data regularly, you soon notice if the data isn't being transmitted to your provider. A quick look should show any loose wires or the meter not ticking over.

Hawke's Bay Regional Council (HBRC) has an alarm system that alerts us if we haven't received your data for 48 hours and we'll follow up with your telemetry provider first. We also follow up if the rate appears too high for your pumps normal capability as false pulses can occur, and this shows that something is going wrong. Occasionally the telemetry is set up with the wrong pulse rate, so it pays to check your data soon after it is installed to check everything is working correctly.

Check that aerials are still intact, that birds or rats haven't been making a messy home in the telemetry box, and that your solar panels are lined up for summer sun and not shaded by recent tree growth or changes in shed walls.

Replace any batteries running low, and check that wires are attached and in good repair (i.e. not corroded).

HBRC provides a self audit form to help you check your own telemetry – hbrc.govt.nz, Search #water reporting and look under Related Documents at the foot of the page. This helps line up the meter readings with the data coming via telemetry.

Five-year verification

If you have a water meter it is important to get it verified to ensure it's working accurately. This needs to be done within one year from installation and every five years thereafter.

Hawke's Bay Regional Council has recently followed up on those verifications that were due within the first year of installation. In 2018 we will focus on any outstanding five-yearly verifications.

Please check your water meter verifications are up to date, and therefore avoid being contacted by our Compliance Team and incurring unnecessary compliance charges. This can be done by either contacting our Water Information Services team on 06 835 9200 or with your approved verifier.

The list of approved verifiers in Hawke's Bay is on www.hbrc.govt.nz, search #WISproviders.

LAWA
LAND AIR WATER AOTEAROA

Big picture data

Because of the wide range of data that LAWA now draws in from regional and unitary councils, it is able to provide us all with a better picture of resource use. Irrigators in particular can gain a broader picture of water use in Hawke's Bay. You can drill down the website to find general statistics on water use and consent use. For example – how much water was used in Hawke's Bayin 2016–17? How much was consented? This can become a hot topic, especially when there are restrictions on city water use.

DRILLING DOWN FOR DATA

1. On www.lawa.org.nz, Click on Hawke's Bay in the map
2. On the Hawke's Bay page click on the ***Water Quantity*** box
3. Under the Regional Summary picture click on ***Show+*** buttons to get more information. The third button can help settle discussions over a barbecue as you'll see how much the city and industry supplies use compared to irrigation.
4. Above the picture click on ***Surface Water Zones*** (centre tab)
5. From here, you click on the zone you want information on.
   - For example, clicking on the ***Karamū Zone*** (one of the TANK catchments) shows much water is in the catchment, how much is used and how consented water is used (click on Show+ each time).
   - Click on ***How much water is consented and used?*** to find that the amount consented per week exceeds the amount available to consent (141%), and that the amount used (which is actually measured) is 87% of the water available.
6. Alternatively from the ***Water Quantity*** page look at the ***Groundwater*** section to see relative breakdowns for the use of groundwater (right tab). For example the ***Heretaunga Groundwater Zone*** shows irrigation has 54.9% of the total consented water takes, and town supply is next at 22.5%.
7. As you switch between ***Surface Water*** and ***Groundwater*** pages, you will see the map of the left also display the locations of water takes.

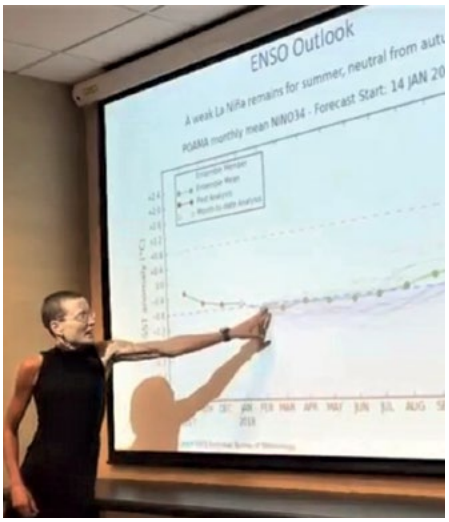
Heading into autumn

Hawke's Bay Regional Council (HBRC) environmental scientists regularly hold public briefings on the climate and state of the environment. Dates and videos of briefings are on www.hbrc.govt.nz, search #aboutclimate.

2018 has started well. January and February were mixed, with high temperatures at times but rain arriving at the right times, in the right quantities. Generally, it has been wet in the north and near normal rainfall in the southern part of the region, except the south coast where only two thirds of average rainfall has fallen. Soil moisture followed this pattern.

Aquifers recovered regularly as irrigators eased off pumping due to rain. River flows in the northern and southern coastal areas were close to or below normal, while close to or above normal in the rest of the region.

Summer's weak La Niña is expected to transition to neutral conditions in autumn. Climate models favour an easterly flow over the country for autumn due to a pattern of highs to the south and lower than usual pressures to the north and in the Tasman Sea. That raises the chances of higher than normal rainfall for Hawke's Bay, especially in the north, or at least decreases the risk of below normal rainfall.



Climate scientist Kathleen Kozyniak.

Irrigation checked up this summer

The Irrigation Check Up summer programme for 2017/18 has been completed. Over 40 properties were visited, many of which had multiple systems checked – everything from pivots, linears, drip and micro, to roto-rainers and K-lines. The wide range of systems have kept our summer university student employees, Chris Hicks and Elese Hugget, busy and on their toes.

The programme has helped to confirm a number of irrigator's suspicions – both good and bad. Most participants had an inkling of how efficient or inefficient their systems are, but have found it useful to put some numbers to it.

"It was good to see many systems operating with a high level of efficiency, but some irrigators with poorer systems are working toward repairing or replacing them. The data helps make a good business case for replacing worn out systems," says Monique Benson.

The programme report will be available in March and will be sent to all programme participants. It will also be able to be viewed or downloaded from hbrc.govt.nz, search #irrigation.

IN BRIEF

REMINDER ABOUT HERETAUNGA PLAINS WATER TAKE APPLICATIONS

A reminder that new water take applications for the Heretaunga aquifer will be considered on a case by case basis and may be declined by HBRC, unless applicants can demonstrate that there will be no adverse effects on rivers or neighbouring bores. This has resulted from work for the TANK process which has found that the amount of water used by consent holders is considerably less that the amount consented, and there would be problems if people used their full consents. The TANK Group will be looking at whether existing levels of water use can continue into the future or if there will need to be a reduction. They will be making recommendations to Council.

PROPOSED REGIONAL PEST MANAGEMENT PLAN – FEBRUARY/MARCH

The Proposed Regional Pest Management Plan was available for consultation from 2 February until 16 March. It covers animal, plant and horticulture (phytosanitary) pests. The proposed plan, plus cost-benefit analysis and cost allocation report are online at hbrc.govt.nz, search #biosecurity.

LONG TERM PLAN – APRIL/MAY

Hawke's Bay Regional Council's Long Term Plan "Facing the Future" will be available for consultation in April. The Council aims to continue its focus on providing stronger leadership in protecting and enhancing Hawke's Bay's environment. The focus on fixing hot spots, and increasing work in these priority areas while still working on other issues, will continue. The plan will be available for consultation during April and May 2018.

TUKITUKI FARM ENVIRONMENT PLANS – MAY DEADLINE

Farm Environment Management Plans are due to be completed in the Tukituki Catchment by the end of May. We are still working to ensure as many farmers as possible have completed their plans by this deadline.

HAWKE'S BAY REGIONAL COUNCIL

www.hbrc.govt.nz