

# Te Awarua-o-Porirua Whaitua Committee Meeting 6.10.16

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5-9 pm at Tawa Community Centre

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## Summary

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### Workshop Te Awarua-o-Porirua Whaitua Committee:

**Attendees** Barbara, Bronwyn, Diane, David, Jennie, Larissa, John G, John M, Naomi,  
Richard, Sharli-Jo, Stu (Chair), Warrick

### Project Team:

Alastair (Project Manager), Brent, Hayley, Isabella, Jonathan, Keith, Murray,  
Nicci, Sheryl

### Members of the Public: 4

- Workshop purpose** The purposes of this workshop were:
1. Committee feel comfortably informed about the modelling architecture’s progress and its procurement process.
  2. Committee are informed about and comfortable with work to date identifying attributes, and endorse proposed process for identifying further attributes
  3. Committee are comfortable with wording for mana whenua value description, & wording for economic value description
  4. Committee are informed about Wellington Water’s (WW) stocktake and further work educating community about three waters
  5. Committee are informed about GWRC’s Take Charge programme, understand pros / cons, as example of management option

6. Committee deepen understanding of scenarios: how some options might look different in “gold” and “less than gold” scenarios

The purposes were achieved.

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### **Actions and general business to do**

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<b>Modelling architecture</b>	<ul style="list-style-type: none"> <li>• MLG to arrange discussion with CMP WG on climate change in modelling</li> <li>• MLG to ensure appropriate consideration of Titahi Bay wastewater outfall in FMUs / spatial element of modelling</li> </ul>
<b>Values &amp; Attributes</b>	<ul style="list-style-type: none"> <li>• Project team: proceed with communication around values, using values poster modified as agreed</li> </ul>
<b>Take Charge</b>	<p>No time</p> <ul style="list-style-type: none"> <li>• Project team: register Committee desire for another opportunity to meet with Paula</li> </ul>

### **Meeting notes**

After a karakia, Stu Farrant welcomed the Committee and the manuhiri, including members of the public, and ran through the agenda. It was noted that this was the last Committee meeting for seven weeks, and possibly the last for some Councillor members.

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### **Session 2 – Te Awarua-o-Porirua Whaitua Modelling Architecture** (Ned Norton, Collaborative Modelling Project (CMP))

See Ned’s presentation on Te Awarua-o-Porirua Whaitua Committee [webpage](#)

This session aimed to build sufficient Committee understanding of the modelling architecture’s progress, and the processes by which it is being developed.

Ned Norton, chair Collaborative Modelling Project (CMP) Modelling Leadership Group (MLG) addressed the Committee with a 20-minute overview presentation, followed by 40 minutes of discussion and Q&A with Committee members / CMP Working Group.

#### 1. Key points from Ned’s presentation

Note: These notes only include information additional to the presentation slides. Numbers indicate the slides readers should refer to.

<b>Process to date</b>	<p>See slides 1 &amp; 2</p> <ul style="list-style-type: none"> <li>• The presentation to Committee is a summary of a two-hour session of the CMP MLG with the CMP Working Group (CMP WG). That session</li> </ul>
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	involved about 90 minutes of CMP WG members quizzing the CMP MLG.
<b>What the architecture is not</b>	<ul style="list-style-type: none"> <li>• This session for Committee is to answer any questions members have, acknowledging their colleagues' role in the CMP WG. Slide 2's text summarises the entire modelling architecture project in two sentences.</li> <li>• A key point is that Te Awarua-o-Porirua Whaitua modelling architecture is not one super-powerful übermodel, nor an off-the-shelf product that uses "recipes".</li> <li>• Rather, it is a custom-built integration and adaptation of the best available models. Different models are used in the architecture for different purposes, which involve models feeding one another in cascades of information.</li> <li>• These dependencies within the architecture influence the timeline for modelling.</li> </ul>
<b>Process: who does what</b>	<p>See slide 3 The Process We've Used.</p> <ul style="list-style-type: none"> <li>• The MLG's tricky task of anticipating Committee's questions is much assisted by the MLG's engagements with Committee so far.</li> <li>• Individual MLG members developing work briefs are area specialists. While external consultants will supply the different components of the modelling architecture, MLG have valuable understanding of how all the parts work together. They will therefore be active ensuring the results all integrate together.</li> <li>• One example of this is ensuring that the flows of information between models are working properly (e.g. the arrows on the diagram -see Slide 4).</li> </ul>
<b>Committee role</b>	<ul style="list-style-type: none"> <li>• The MLG is not expecting Committee (nor CMP WG members) to be expert peer reviewers of the modelling architecture as there are processes established for this.</li> <li>• Rather, the MLG will periodically check in with Committee to ensure that the modelling architecture and work properly accounts for things that are important to Committee members.</li> </ul>
<b>Timeline</b>	<ul style="list-style-type: none"> <li>• Committee will receive the Business As Usual scenario around May 2017.</li> <li>• The CMP will receive scenario inputs from Committee between March and (optimistically) provide scenario outputs June/July 2017.</li> <li>• These timelines are quite uncertain and the dependencies (cascades of information) within the modelling architecture contribute to the uncertainty.</li> <li>• The modelling work will try to fit with Te Awarua-o-Porirua Whaitua Committee timeline as well as possible.</li> </ul>
<b>Modelling work: the content</b>	<p>See Slides 5 &amp; 6, and slide 4 diagram (work area numbers refer to numbers on the coloured diagram).</p> <ul style="list-style-type: none"> <li>• Broadly speaking, the blue sloping boxes in the area of the diagram leading to "ecological attributes" has water quantity modelling on the left and water quality on the right. These identify contaminant loading</li> </ul>

in water, and how much water is flowing, for any scenario.

- Work areas 1-9 contribute here.
- Work areas 6 & 7 address converting contaminant loads into concentrations, to compare with the National Policy Statement for Freshwater (NPS-FM) and other guidelines.
- The BN (Bayesian Network) - work area 8 – is a catchall that picks up elements of the whitua that are not able to be modelled in a quantified (numeric) way, and enables them to be organised with some rigour and transparency.
- Work areas 10 and 10 (typo!) are elements that Jim (MLG) has covered to Committee already (Committee meeting 11.6.16).
- Work areas 11 and 12 are not going to have the same kind of work briefs done as they will not be tendered.
- The cultural assessment (11) will be done by Hepa and the Ngāti Toa Rūnanga. Point discharges (wastewater overflows – 12) will be done by WW.

**Gaps: works in progress**

See slide 7.

- The MLG has been working on these since last Monday's CMP Working Group meeting.
- At present they are considering pros and cons of different ways to incorporate climate change into the modelling.
- The MLG are also noting that similar discussions are needed for mapping areas with important species for the modelling, and for the attributes development.

Key points from discussion are below.

- Format: Committee question / statement
- → response (from Ned Norton / Project Team members)

**Uncertainty: lots, being addressed; transparency needed**

- The level of uncertainty around actual contaminant loads in Te Awarua-o-Porirua Whitua could affect the modelling timeline. Methodology for calculating these is important and it's not known how much local calibration is required to apply the best-of-breed contaminant loading models which are from other urban catchments (Auckland).
- → The MLG (especially specialist Jonathan Moores) are very aware of the uncertainty and acknowledge the potentially large influence that contaminant loading has on the entire modelling architecture. The MLG will do whatever possible to increase the confidence in the contaminant loading numbers, and will be transparent about residual uncertainty and its impacts on the scenario results.

**Number of scenarios**

- Sensitivity testing of different management options will be needed to know early whether some have a small impact. Ideally this should be done "offline" so we don't discover this when running scenarios and have to re-do them.  
→ This is being planned for.

**Climate change & predicting storms:**

- The uncertainty around climate change could potentially blow out the number of scenarios. This will be challenging to manage  
→ There are several ways to approach incorporating climate change in the modelling, and the MLG are currently considering their pros and

**doable, further discussion needed**

cons.

- Climate change predictions are often averages; we will need local information surely?  
→ The National Institute of Water and Atmospheric Research Ltd's (NIWA) climate change predictions (e.g. solar energy, rainfall patterns) are at a national level, and we have regional downscaled data on a 5\*5km grid. This is the best information currently available and what we have to use.
- They do provide probabilities for intense rain events, such as (what is currently known as) a 1-in-100-year storm, and this enables their implications (e.g. pulses of sedimentation) to be predicted to some degree.
- They go out to 2080 and we must plan based on this, but will review the Whaitua Implementation Programme (WIP) in ten years' time.
- This is an area where the MLG will have further discussions with the CMP Working Group.

**Assumptions: everywhere, and transparency vital**

- Earthworks projects like Transmission Gully make assumptions about weather when they do sedimentation prevention, and regulators do too when they declare something compliant with the rules. We'll need to know these assumptions, and the level of compliance with them that's assumed, and they're likely to need adjusting.  
→ The CMP WG and other WGs have had this discussion; a level of compliance must be assumed and declared in modelling and in scenarios. One way is to assume that people will do as much as they're allowed to do (e.g. take water / produce sediment) at all times.
- Careful assumptions are a feature of Chris Batstone's work in the economics area, as there are many different ways to do mitigation and adaptation each with associated suites of assumptions.

**Human health –covered, but interpretations**

- It's not clear where exactly human health fits in the modelling architecture, and noting the Hawkes Bay experience we need to be confident it won't fall through gaps. Definitions of human health are also important (the Resource Management Act is relevant) – e.g. recreation opportunities and other things that affect mental health should not be omitted.  
→ Microbiological indicators already in the modelling (three "bugs" identified as attributes to be used) ensure we will see clearly the human health implications of water quality in freshwater, harbour water, coastal water and shellfish gathering, for contact recreation and for drinking.  
The social and cultural models will test the implications of better or worse water quality for various social and cultural values (indicated by attributes). Note, we haven't got attributes for all the values yet (see session 3 tonight).

**Prevention vs mitigation of bad effects**

- Are we assuming that deterioration of water quality will happen everywhere, and we must focus on mitigating the harm?  
→ No, there will be areas where we don't want to allow deterioration at all (e.g. where water quality is already very good)

- Open coast vs harbour and spatial considerations**
- Wording in the presentation omits the open coast – how is this being dealt with?  
→ It is being properly covered – the wording in slides 5-6 should be different to reflect that the estuarine / harbour and the open coastal areas are being specifically addressed in the modelling. They are importantly different – e.g. much more physically vigorous and deeper water on the open coast.
  - There are particularly sensitive and particularly challenged areas of the whitua (e.g. Titahi Bay with the wastewater outfall). How will we get information to make decisions about these?  
→ The Freshwater Management Units (FMUs) will be ready mid-October and will be presented for Committee approval at the 1<sup>st</sup> December meeting. The FMU work is incorporating the information on special places in the whitua that the Committee identified in July, as well as mahinga kai and other areas already identified. The scenarios' inputs and their outputs are done geographically. In other words, the Committee will receive information on the FMU-specific impact of a certain scenario done in that FMU.
  - There are also specific points in the FMUs where water quality assessments are most usefully done – e.g. places where people like to swim (Plimmerton Beach etc.).
  - The wastewater treatment plant's outfall at Titahi Bay does seem to be a special case. While it has analogies with stream flows, it's not a natural / catchment-defined flow so needs some special consideration. The MLG will take this on board.
- TAOP vs Ruamāhanga work**
- How different is Te Awarua-o-Porirua Whitua from Ruamāhanga Whitua in the modelling process and content?  
→ The two catchments are chalk and cheese.
  - The heart of Ruamāhanga modelling (and a source of significant complexity) is a major groundwater/surface water interaction model, which is not relevant in Porirua.
  - The modelling process is also different: the CMP MLG for Te Awarua-o-Porirua Whitua is a lead modelling group rather than a single lead modeller (lessons learned from Ruamāhanga process).
  - Te Awarua-o-Porirua Whitua have almost caught up with Ruamāhanga although Ruamāhanga are well into their scenario development and selection of management options.
- Decision**
- The Committee is comfortable with the modelling work proceeding as discussed.

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### Session 3 – Values and Attributes update

(Sheryl Miller, GWRC)

See presentation on Te Awarua-o-Porirua Whitua Committee [webpage](#)

This session had three purposes:

1. To inform the Committee about work to date identifying attributes, and seek their approval for the proposed process for identifying further attributes;
2. To inform the Committee about the wording for the mana whenua value and seek their endorsement
3. To seek Committee approval for wording for the economic value.

**Gap analysis of attributes' development**

- Refer to Attribute Gap analysis (slide 1) – in combination with the Hauora Kaiao - Ecological Health attributes, this shows the full picture of whaitua attributes developed so far. Hauora Kaiao - Ecological Health was not included in the table as the attributes have already been approved by the Committee.
- The Project Team brought together all attributes currently developed and plotted them against the whaitua values as a gaps analysis to make this table, for the Committee's information.

Key points from the discussion included:

- The Hauora Kaiao - Ecological Health has by far the most attributes, with some of these attributes able to be used for other values e.g. Kai kete – food basket and Ka taea e te tangata – accessibility and recreation.
- Stream habitat quality scoring (see Te Awa Wairua o te Wai – pathway of the water's spirit) is a known methodology, with a repeatable protocol that is nationally used.
- Under Whanaketanga Tauwhiro o te Whenua – Sustainable Development of Land, Chris Batstone's macroeconomics work will also pick up the benefits as well as costs (e.g. of upgrading infrastructure systems and capacity)
- Human health is covered by attributes for Recreation/Accessibility - Ka Taea e te Tangata, and to Kai Kete / foodbasket.
- There are processes in place for identifying taonga species whose presence/absence is an attribute for Ko Te Awarua o Porirua he Taonga Tuku Iho a Ngāti Toa Rangatira.

Attributes development will also be informed by scenario development work

**Process for attributes development**

- Work on the attributes will be low-key but ongoing, iterating the attributes as further information comes from other processes (e.g. scenario development, and development of the modelling architecture).
- The V&A WG will reconvene when necessary.
- It's envisaged that the project team will bring any proposed enhancements of attributes back to Committee for approval, as they occur.

**...and decision**

- The Committee were comfortable with the coverage of attributes, and with the proposed process for future work.

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**Wording for mana whenua**

See slide 2

- This item followed up on discussion at the previous Committee meeting where it was not clear what the finalised, approved wording was for the

<b>value description:</b>	value / its description.
<b>process</b>	<ul style="list-style-type: none"> <li>• Jennie Smeaton spoke to the process:</li> <li>• Te Rūnanga o Ngāti Toa Rangatira felt that the original was very holistic, too long, and hard to translate.</li> <li>• The original wording also failed to capture the aspirational or normative element of the relationship between Ngāti Toa and the catchment. Under the old wording (which translated to “the mauri of the harbour is the mauri of the people”), the mauri of people might be relatively strong but the harbour’s mauri was weak and this is what needs to be strengthened.</li> <li>• The final wording better captures the normative and aspirational element of the whaitua’s state in the “ancestral treasure” status.</li> <li>• It is agreed to be more easily understood, shorter, and easier to translate</li> </ul>
<b>Process</b>	<ul style="list-style-type: none"> <li>• Te Rūnanga o Toa Rangatira drew on some specialist linguists to help develop this wording.</li> <li>• The Rūnanga have approved the final wording.</li> </ul>
<b>...and decision</b>	<ul style="list-style-type: none"> <li>• The Committee were happy to receive this wording and confirm it for the whaitua’s mana whenua value.</li> </ul>

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<b>Wording for economic uses - ohaoha o te wai value description:</b>	<ul style="list-style-type: none"> <li>• This item followed up on discussion at the previous Committee meeting where the rationale for including “cultural” in the value description was questioned, and no-one could readily clarify its provenance.</li> <li>• See slide 3 (wording from last Committee meeting)</li> <li>• Sheryl has collated the nine different versions of the value description’s wording since February (slide 4).</li> <li>• The Project Team considered the wording of the most recent version and recommended some wording based on Committee’s earlier versions, which would make the value description more fit for purpose. The principal difference was that latest version was considered too narrow, particularly due to its focus on water supply.</li> <li>• Slide 5 has suggested re-wording.</li> </ul>
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<b>Discussion</b>	<ul style="list-style-type: none"> <li>• Committee considered that this was a good fit, but decided that the wording after “benefits” was not necessary and the attributes will define this much better than (contested) wording in the value description could do.</li> </ul>
<b>...and decision</b>	<ul style="list-style-type: none"> <li>• The Committee agreed to confirm this wording (with that modification) for the whaitua’s value Economic Uses of Water / Ohaoha o te Wai.</li> </ul>

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<b>Values poster</b>	<ul style="list-style-type: none"> <li>• The updated Values Poster (slide 6) was also shown, with changes made following Committee feedback at the last meeting.</li> <li>• After brief discussion it was agreed that: <ul style="list-style-type: none"> <li>○ The photo is much better than the original graphic</li> <li>○ The suburb names should be changed to reflect the northern</li> </ul> </li> </ul>
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- and southern most points of the whaitua
  - The wording should be updated to reflect this evening's progress
- Decision**
- With those changes the Committee were satisfied that the poster is good to go.
  - The Project Team will reactivate the communication planned around the values (see Te Awarua-o-Porirua Whaitua Committee [Communications Plan](#)).
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#### Session 4 –Take Charge pollution prevention programme

(Paula Hammond, Take Charge programme coordinator, GWRC)

See presentation on Te Awarua-o-Porirua Whaitua Committee [webpage](#)

Session purpose:

- Committee are informed about GWRC's Take Charge programme, understand pros / cons, as example of a management option and a policy option.

Paula presented for about ten minutes, followed by ten minutes of Q&A with the Committee.

Note: These notes only include information additional to the presentation slides. Numbers indicate the slides readers should refer to.

- Coverage and impact**
- Take Charge visits have been done, meeting every business backing onto Porirua Stream. This has taken about two years.
  - Some of these visits are one-offs due to low relative likelihood that the business type (e.g. accountant) will be polluting.
  - Others have had to be left to enable focus on higher-stakes businesses (e.g. panel & paint shops).
  - Take Charge is currently just 0.5 FTE (Paula).
  - WWL are now joining forces to do joint trade waste inspection visits to businesses
  - Take Charge will likely take about five years to work through the whole area.
  - See slide 6 – since its inception the southernmost red area (Porirua Stream) has had visits; Broken Hill industrial area (to the west) is not very complex (the tip is the main operation). However, all of the northern red area drains into one outfall at Semple St and is still to be done.
  - Take Charge is a behaviour change programme. It is often most effective to build relationships and try to make good behaviour easier.
- Compliance**
- Take Charge coordinator has powers under warrant to enter property to do inspections, and can issue abatement notices (though this has only been needed in a couple of instances of serious recalcitrance).
  - Evidence is required of someone actually doing non-compliant activity, which must be “smoking gun” (e.g. extensive time- and location-specific photographic evidence).
  - There are different infrastructure schemes in place. For example, businesses can have their own wastewater infrastructure which (aims

to) keep their waste out of the municipal wastewater system. This can include direct discharges to streams (for which they need consent).

**Structural and human challenges**

- GWRC has power to establish land use rules for hazardous substances but this was considered to be the city councils' jurisdiction. There is little formal data on Take Charge's effectiveness but the records of the work show a significant preventative benefit and (e.g. with the case study and enforcement) cessation of known point-source pollution.
- See slide 18
- The Proposed Natural Resources Plan for the Wellington Region has no rules requiring (e.g.) secondary containment of polluting substances. Under the Regional Policy Statement for the Wellington Region, it is the responsibility of district and city councils to have means for the prevention and mitigation of adverse effects of hazardous substances on land (see Policy 63).
- The Hazardous Substances and New Organisms Act (HSNO) does have rules for secondary containment of polluting substances but only in volumes greater than 1000L. Small businesses are likely to have quantities of substances onsite which are not subject to this requirement.
- People are often ignorant and / or prone to taking short cuts that can reduce their effectiveness. For example, secondary containment vessels often fill with rainwater so people will leave drainage valves open. Preventative measures are poorly applied or not maintained.
- There are several common issues found (see slide 7) and small businesses will often prioritise avoiding the cost / effort over environmental protection against a potential harm.
- Complexity of land use is a challenge. For example, changes in tenancy and ignorant landlords / tenants mean land uses inappropriate to the infrastructure can start up. Tangles of historical drainage infrastructure (and limited plan information) are often hard for even well-intentioned land users to understand (see case study in slides).

**Whaitua connection**

- The Committee could consider other rules for preventing pollution as part of their Whaitua Implementation Programme (WIP) (under the Resource Management Act), and using policy tools such as Take Charge's behaviour change programme.
- The Committee would like to have another opportunity to hear from and talk with Paula / Take Charge.

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**Session 5 Wellington Water's stocktake of community education initiatives**

(Jonathan Gulland, Wellington Water)

See presentation and handout on *Te Awarua-o-Porirua Whaitua Committee* [webpage](#)

This session aimed to inform the Committee with a taster of the extensive project. The previous session ran over due to lively discussion, so the stocktake presentation was only ten minutes including Q&A. Key points are below but Committee members were referred to the fuller presentation.

- Challenge**
- Public understanding of the three waters in Te Awarua-o-Porirua Whaitua Committee is very poor (as it is elsewhere in Wellington).
  - Across the various councils and WW around \$800,000 is being spent annually on education. This is a very small amount in the context of overall spending.
- Opportunity**
- More informed users make better use of the network (e.g. don't create cross-connections) and appreciate more the risks, costs and benefits of spending and activity.
  - WW are designing a strategy for community education about the three waters which aims to get the most bang for buck from this spending.
  - See [diagram](#)– education strategy.
  - WW is currently building a shared view of the issues and actions, and will develop this further with a view to being implemented in 2018
  - This project is ongoing and the Committee are welcome to seek further information from WW.

## Session 6 – Scenarios and management options

(Alastair Smail, GWRC)

Session purposes:

- to deepen understanding of scenarios and how management options might look in different scenarios.

Alastair talked through how a particular management option could be used in different scenarios (15 minutes), then there was discussion for 20 minutes.

Key points from the discussions are below.

- Scenarios for modelling – content**
- The Committee's scenarios to be created by the end of the year will need to have:
    - management options (the things we will do that will improve water quality / flow), described as narratives. A scenario could be a combination of 20-odd management options.
  - In any scenario, the narrative description of each management option must include elements of:
    - time – how quickly we want it to be implemented
    - space – the spatial extent of the implementation
- Purpose of scenarios: maximum information first**
- The purpose of scenarios at this stage is to give the Committee the greatest possible amount of information.
  - Therefore the scenarios must cover the widest possible range of actions: "the gold scenarios really should be gold". Options which are ridiculous (e.g. "platinum scenario") are not useful to include, but "gold needs to be 24-carat improvement".
  - *After* this information the Committee will make decisions about which management options to do and not do.
- Whaitua scenarios: pick & mix**
- The eventual gold, silver and bronze scenarios for the whaitua will be created by a "pick and mix" approach. For example, the whaitua "gold"

scenario may include management options selected from gold, silver and bronze scenarios.

**Non-modellable management options**

- The conversation about management options will include discussion of management options that are not numerically able to be modelled.
- The general scale of their impact will be assessed as far as possible (there will be less information available), and the Committee may decide that they wish to build some policy around these options.

*Below is an example of a management option under different scenarios*

	<b>Management option: Riparian planting (RP)</b>	<i>Some general specifications for RP will be needed.</i>
Gold scenario	RP on all streams All trees planted by 2040	<i>For biophysical effects of RP, need to know only width (e.g. 5m- vs 10m-wide), and vegetation type (trees / woody shrubs vs grass / small shrubs).</i>
Silver scenario	RP on all streams All trees planted by 2080	
Bronze scenario	RP on 1 <sup>st</sup> and 2 <sup>nd</sup> order streams All trees planted by 2040	<i>For cultural effects of RP, need to know species (native vs exotic)</i>
Business As Usual (BAU) scenario	Assume no action (current RP is too little to be significant)	

**Scenarios: intended change and pace**

- The difference between scenarios is in the difference that we want our water and land management actions to make in the whaitua.
- E.g.: gold scenario – principally comprised of actions that we believe will achieve a lot of change, and are likely to be costly.
- Scenarios’ timeframes could be out to 2080 but need to be cut into chunks – e.g. 2020-2040, 2040-2080 (note also the 10-year review cycle for the WIP).
- Management options can then have percentages of achievement in each stage or phase. Activity can ramp up (e.g. do 20% of the total in the first phase and 40% in each subsequent phase).
- There is no set limit on the timeframe – it is the Committee’s judgment call.
  - To illustrate: Waikato Healthy Rivers had an obligation (in Treaty settlement) to achieve a certain water quality by 2080. When modelling showed that with current knowledge and capability this would be difficult to achieve, their committee decided to go for 2080 anyway, as they thought new innovations will be discovered between now and then which will boost capability to improve water quality.

**Sequence of work and information**

- Working Groups will generate scenarios with expert advice on which management options are effective for the various scenarios' outcomes the working groups are seeking.
- Working Groups will bring their scenarios back to the 1<sup>st</sup> December Committee meeting and there will be a mix-and-match exercise to start building the overall whitua scenarios.
- Over the first half of 2017, the modelling will provide Committee with results.

This will be as:

*Under a given scenario (assuming the management options are applied as specified),*

these **changes to the attributes** are predicted (thereby the impact on whitua values)

at particular **locations** in the catchment.

- There will follow a series of iterative conversations with Committee, informed by expert advice, refining the scenarios and adding in the layer of policy options.
- At this stage (for 2016) the scenarios do not need Committee to identify the policy options (how we would implement or roll out the management option).
- The a later conversation about policy options may reveal ways to do a given management option with more or less net cost or benefit (such as supporting communities' volunteers to do plant supply and planting for riparian strips, rather than professionals).
  - This will include the social costs and benefits – it's not limited to financial costs.

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## **Session 7 – Rural Issues Working Group report back**

(Diane Strugnell, Rural Issues Working Group (RIWG))

Session purpose:

- Committee are informed and comfortable with the WG's direction of travel

Diane spoke to the latest work on behalf of the RIWG, and answered questions from Committee. Key points are below.

**Rural Issues' gold scenario**

- Everything is on the table – the RIWG is taking a “no ifs or buts” approach for now.
- The group has generated a longlist of management options and working group leaders are helping filter this down.
- The gold scenario is very fledgling but currently includes management options like
  - riparian planting on all streams
  - stock exclusion on all streams
  - 100% compliance by septic tank owners

- The group is also thinking about the impacts on the values and attributes in the rural area, and generating some working objectives.
- Following the success of the last field trip, the RIWG is visiting a lifestyle block up the Horokiri Stream (Paekakariki Hill Road), meeting at 5.30 on 13<sup>th</sup> October. All Committee are invited.

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## Session 8 – combined Stormwater / Wastewater Working Group and Urban Development Working Group update

(Stu Farrant, SW/WW WG and UD WG)

This session aimed to update the Committee so they are informed and comfortable with the WGs' directions of travel.

Stu Farrant spoke to the WGs' work, and there were some Q&A from Committee. Key points are below.

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| <b>Scenarios work: Stormwater / Wastewater Working Group</b> | <ul style="list-style-type: none"> <li>• The SW/WW WG has largely finished identifying the principal issues or stressors on the catchment from stormwater and wastewater</li> <li>• They are creating a longlist of management objectives, and to this end are receiving useful input from WWL's Steve Hutchison on the draft PCC Wastewater Master Plan.</li> <li>• An interesting consideration has been the difference between a risk-management approach to wastewater operations and infrastructure investment, versus one focussed on the number of overflow days per year.</li> <li>• A field trip is being planned to various wastewater destinations including the Titahi Bay plant and the Tangere Drive pump station.</li> <li>• There will be a wastewater master plan update in early November which will provide some ideas for management options</li> </ul> |
| <b>Scenarios work: Urban Development Working Group</b>       | <ul style="list-style-type: none"> <li>• The UD WG has started work on scenarios, using input from Wellington City Council (WCC) on the components of the BAU scenario.</li> <li>• Live questions include:             <ul style="list-style-type: none"> <li>- Greenfields developments' construction-phase sediment</li> <li>- The burden of new greenfields development versus the capacity of stormwater and wastewater infrastructure (including dry-weather vs wet-weather issues in the current, "unsealed" wastewater system)</li> </ul> </li> </ul>  |
| <b>Stakeholder engagement</b>                                | <ul style="list-style-type: none"> <li>• Jon Gabites from GWRC has met with both working groups and is working with them to identify the potential benefits and risks to the whitua process from focussed stakeholder engagement.</li> <li>• The groups have developed a tentative list of stakeholders for more targeted (e.g. focus group) engagement, and a list of those with whom to keep a watching brief on whitua work.</li> <li>• The WGs have yet to discuss techniques for engaging.</li> </ul>  |
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## Session 9 Any other business

Stu Farrant outlined the topics for the next meeting:

- Scenarios – main session
- Water Management Units (WMUs) for Te Awarua-o-Porirua Whaitua
- Update on WW Master Plan
- Opportunities in Parks (PCC and GWRC)

There were no requests for additional items at this stage.

Stu wished everyone good luck with the challenging work ahead over the next seven weeks. He observed that this was potentially the final meeting for some councillor members, and led the Committee in a round of applause to thank those councillors for their contributions so far.

The meeting closed at 9.00pm.