Wairarapa Committee
28 June 2022
Report 22.265

For Decision

WAIRARAPA WATER RESILIENCE IMPLEMENTATION PLAN

Te take mō te pūrongo
Purpose

1. To provide the Wairarapa Committee (the Committee) with a proposed water resilience project map for endorsement that is consistent with the Wairarapa Water Resilience Strategy (WWRS).

He tūtohu
Recommendations

That Committee:

1 **Endorses** the phased work schedule outlined in the accompanying A3 high level project map for Water Resilience (Attachment 1).

2 **Agrees** to the high-level project map being circulated to the Wairarapa territorial authorities for their endorsement.

3 **Supports** the preparation of an implementation action plan 2022-2025 in conjunction with mana whenua partners which would culminate in a water resilience investment programme from 2025 onwards as outlined in the accompanying high level project map for Water Resilience (Attachment 1)

Te tāhū kōrero
Background

Level of Agreement

2. To date, there has been a good level of agreement regarding the various approaches to Wairarapa's climate change-driven water issues and solutions.

Mana whenua input:

3. Both iwi (Ngāti Kahungunu ki Wairarapa and Rangitāne ō Wairarapa) approved the Ruamāhanga Whaitua Implementation Programme (WIP) - noting that further work is required to give effect to the NPS-FM 2020; and

4. Ngāti Kahungunu ki Wairarapa, and both Wairarapa Post Settlement Group Entities (PSGEs) approved the WWRS.

Consistency with the Wairarapa Water Resilience Strategy

5. The proposed approach is consistent with the direction adopted by the WWRS. It also takes cognisance that climate change is already clearly evident in Wairarapa's meteorological data, and its effect is projected to become greater in magnitude.

6. The approach adopted reflects the WWRS by:

   a considering an implementation approach that addresses matters such as:

   - mātauranga Māori;
   - governance, including partnerships;
   - terms of reference and programme scope;
   - operational arrangements;
   - resourcing, including financial; and
   - an indicative investment plan and associated cost estimates.

   b providing a set of recommendations for ongoing action.

Wairarapa Committee's mandate

7. As the Wairarapa Committee's Terms of Reference don't extend to making expenditure or activity commitments on behalf of individual Councils, or for that matter iwi, post settlement governance entities, external agencies or individuals, it is restricted to making recommendations on suggested courses of action.

8. That being the case, a staged process is required to present a set of 'in principle' actions followed by proposals that will need to be prepared for each entity to consider.

Staged process

9. This report represents a first iteration to formulate a set of actions to help mitigate climate change effects being experienced in the Wairarapa. For this to happen, the full spectrum of green through to grey solutions will be required - as per the Strategy's conclusions, any potential solution is in play. But to enact this requires a commitment by key parties to both oversee and resource the project on an ongoing basis.

10. In parallel, irrespective of climate change-driven effects, there's an underlying aspiration to relieve some of the pressures on the valley's environment by restoring some of its natural attributes, especially its water resources. Obviously, some areas, such as urban areas, can't be restored to their pristine state, but instead can provide buffers such as rain tank water, attenuating stormwater flows and minimising water contaminants. The Ruamahanga WIP (subject to additional work to give effect to National Policy Statement Freshwater Management (NPSFM) 2020) addressed much of this especially regarding water quality. Water quantity was also addressed through the settings under which water takes could occur.

11. The other 'staging' factor is the longevity of the resilience process. Firstly, resilience measures are likely on require an adaptable ongoing programme as climate change progressively takes effect.

12. Secondly, green solutions in particular will take years, if not decades, to 'mature' to a point where they have a significant effect on the water resource. In comparison, grey

projects are in theory more immediate, but will take years to negotiate financial, design and consent hurdles. Whatever the measures, their cumulative effect will need to be to be sufficient before meaningful effects result. This will take time to succeed.

13. Inevitably, resilience measures require land to operate on or get access to. In some cases, such measures may result in loss of land or reasonably significant changes from the status quo. It will need to be determined how this will operate e.g. the negotiation, acquisition and compensation process etc. To be effective, many solutions will need scale and a whole-of-catchment approach.

14. The other staging process also involves getting the community on board; for some, implementation of the measures can't happen soon enough, but others may be sceptical no matter what.

Te tātaritanga
Analysis

15. Attachment 1 (A3 sheet) outlines the work schedule to implement measures eventually agreed upon. The phased work schedule comprises:

    a Phase 1 - Committing to a resilience action plan June- September 2022

    b Phase 2 – Learning and Doing 2022-25

    c Phase 2 – Water Resilience Investment Plan 2025

    d Phase 4 – Up and Away 2026 and beyond

Financing

16. In terms of financing the investments required to address climate change effects, for the purpose of this report, it is assumed that Greater Wellington will 'front end' at least some of the costs while momentum and acceptance for the actions is developed. Other parties would subsequently follow with their proportional commitments depending on where the benefits fall e.g. land users collectively would likely be major contributors.

17. It is proposed that the project will need to tap into three types of funding

    a Proprietary funding – an integral part of what councils and central government do as part of their 'normal' a day-to-day basis e.g. plantings, reticulation, Jobs for Nature etc.

    b Core Funding – funding to support the entity specifically set up to run the project

    c Discretionary funding – allocations for specific trial and full-scale projects

18. If funding from external agencies such as central government is to be sought, regional, local councils and iwi need to demonstrate their full support including a sizable proportion of the of the costs. Without that level of support, its usually extremely difficult to source such funding.

Funding Scale

19. The scale of funding required to buffer climate change effects at a whole of valley scale should not be underestimated; to do so, or for there to be inadequate financial support could render Wairarapa highly vulnerable to climate change effects.

Risks and Uncertainties

Droughts

20. The greatest 'physical' risk in terms of impact is for the Wairarapa to experience severe droughts in consecutive years prior to water resilience solutions being established or coming into effect. Not only would the measures be ineffective, but 'green' measures could be lost if the drought is severe enough. On the plus side, this would serve to emphasise that climate change effects are real and have the potential to impact communities in all respects.

Wet Summers

21. Conversely, if 'mild' or even wet summers are experienced over a number of consecutive years, there's a risk that communities may doubt the effects of climate change, and possibly remove their backing for proactive measures to be taken.

Other climate change impacts

22. Climate change isn't confined to increased heat and drought intensity, but also other extremes such as more violent storms, floods, wind, fire and cold. In addition, the measures to buffer climate change won't be needed every year, but it's projected that they'll will be called upon with increasing frequency as well as intensity.

Three Waters

23. Another risk, as it pertains to the urban water component, are the Three Waters reforms. For example, what role can the Wairarapa communities expect Three Waters to play in improving the reliability of reticulated water in the immediate future i.e. within the next 10 years say? On the other hand, as Three Waters is not yet in train, the status quo remains.

Agriculture

24. Because of changes to water availability, some forms of agriculture may choose to amend either their practices (i.e. the way they go about farming, horticulture etc) or completely alter their activities by reverting to different farming pursuits. The lack of reliable access to water in some areas will force some of this, while averagely higher temperatures may necessitate other actions such as adopting different grape varieties.

25. One of the worst-case scenarios for agriculture is the complete loss of access to water once increased minimum flows are reached at a time when water is most needed, usually January through to March. Spin off effects may be a loss of land value, and even having to walk off the land if alternative avenues can't be pursued or aren't possible.

Potential opportunities

26. Not only does climate change carry with it threats or uncertainties, but the warming climate also provides opportunities. In short, this situation could be taken advantage of by agriculture and tourism, or a combination of the two such as wine trails, and other linked outdoor pursuits or activities such a cycle tours, golf, visitations etc.

27. In terms of agriculture, knowing what the future land use change opportunities are is paramount to adjusting to the increase in Growing Degree Days. This not only needs to

be gauged in terms of the changed climate, but also the local conditions such as soils, slope, water availability etc.

28. One of the prerequisites for being able to take advantage of the warmer temperatures is inevitably access to reliable water whether be for urban living, industrial activities or rural production.

29. The Wairarapa Water Resilience Strategy was adopted by Council in late 2021 (Report 21.186) after being accepted by the three Wairarapa territorial authorities. It was also presented to the Farming Reference Group and other stakeholders.

30. Development work has continued to this point where the programme is ready to take another step forward.

31. Work on an implementation plan has been undertaken and that forms the basis of the presentation to the committee. More detailed work will be necessary once specific water resilience proposals are advanced.

Possible options for implementing the Wairarapa Water Resilience Strategy

32. Any number of options could be adopted in implementing the WWRS. For example, actions to address water availability estimates could include:

    a The SkyTEM hydrogeology aerial survey – now due 2025

    b Ongoing NIWA climate projection updates

    c Efficiency solutions - stocktake of existing or planned projects and monitor/measure progress

    d Water capture solutions – larger and smaller scale dispersed options – review practice (e.g. Northland), define integrated capture options

    e Detention solutions – stocktake, establish experimental projects and monitor/measure

    f Flood Plain solutions – establish experimental projects and monitor/measure

    g Soil management solutions – accelerate region-wide dung beetle uptake and monitor/measure

    h Attenuation solutions – stocktake, erosion, riparian and wetland, accelerate region-wide development, monitor/measure

    i Alternative land use opportunity investigations (refer Northland)

    j Alterative water allocation options

33. Adoption of new technologies and subsequent solutions emerging around the world will also become available to assist in the regard.

34. As climate change is a gradually emerging phenomenon, Wairarapa has chosen not to resort to many of the solutions proposed before now, even though it could be argued that some could be useful already. As a result, a number of these solutions have yet to be proven, especially in the Wairarapa context – such solutions will need reflect the area's geology, hydrology, and settlement patterns etc.

35. In addition, solution option priorities may be set by access to financial resources, legislation, public acceptance, success with measures elsewhere in the country, local issues, plus the exact role that Three Waters eventually plays.

Ngā hua ahumoni
Financial implications

36. There are no financial implications as the Wairarapa Committee has no delegated authority to impose expenditure or actions on councils or other entities.

37. However, to provide a sense of the scale of costs required, the following table provides some context in this regard. For the purpose of this report only, 'WRW' refers to a nominal implementation entity i.e. Water Resilience Wairarapa. The costs presented are just estimates to give an idea of the order of magnitude.

38. The following terms will assist in interpreting the table below:

    a Proprietary – the work organisations conduct internally which is part of their overall resilience effort i.e. integrated into day-today activities

    b WRW core funding – base costs per year for staff resources, premises etc.

    c WRW discretionary funding – seed money as a contribution to an 'experimental' fund to establish project viability, such as pilot scale projects.

    d Investment – cash investment in finally agreed full scale green & grey projects

Funding type	Characteristics	Who	Estimate
Proprietary	• Own projects • Own cost • Aligned with Wairarapa Resilience • Registered as part of Wairarapa resilience	• GWRC • Councils • Iwi • Private companies and individuals	Up to individual organisations Potentially $3-$5m
WRW Core funding	• Base cost for facilitator • Base operating costs of WRW	Contributions from: • All councils on populations basis • DWRC on allocation basis • Central government contribution basis • Other?	Base operating costs per annum Potentially $450k
WRW Discretionary funding	• Base contribution to experiment fund • Potentially augmented by partnerships	• Councils on population basis • GWRC on allocation basis • Central government on application basis	Needs to be enough money to undertake meaningful work Potentially $1m
Investment	• Cash investment in green/grey projects	• Private investors • Council investment • Central government investment	Estimates not possible until real projects emerge from experimental work

Ngā Take e hāngai ana te iwi Māori
Implications for Māori

39. For mana whenua, water is of significant cultural value as reflected by te Mana o te Wai principles. This importance is also reflected in the WWRS, and as such, is not repeated here.

40. The WWRS is built on a partnership statement with iwi involving co-governance.

41. Mana whenua are concerned to protect (and restore) the natural environment, and also favour the use of green resilience solutions where possible.

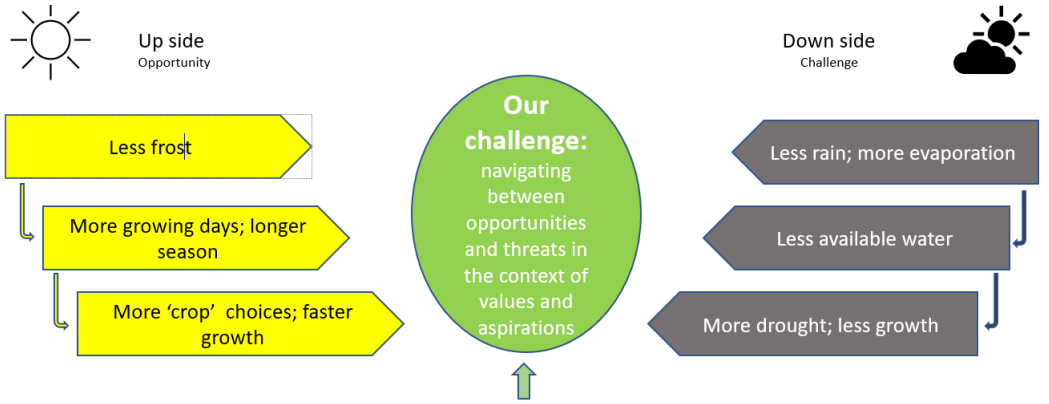
42. With recent iwi settlements, iwi will become increasingly active rural water 'users' partly due to their increased land holdings.

Te huritao ki te huringa o te āhuarangi
Consideration of climate change

43. The whole focus of the WWRS reflects the effects that climate change is projected to have on the Wairarapa and its communities.

44. That focus is more on mitigation against the extremes that the community will experience under progressive climate change and less about addressing the cause of climate change such as emissions. The latter are dealt with separately under central and local government policies.

45. The following diagram summarises some of the effects resulting from climate change:



Ngā tikanga whakatau
Decision-making process

46. The matter requiring decision in this report was considered by officers against the decision-making requirements of Part 6 of the Local Government Act 2002.

Te hiranga
Significance

47. Officers considered the significance (as defined by Part 6 of the Local Government Act 2002) of the matter, taking into account Council's *Significance and Engagement Policy* and Greater Wellington's *Decision-making Guidelines*. Officers consider that the matters are of low significance as the Committee is only endorsing and supporting a work programme.

48. If the project proceeds, then this would give rise to a new report and be of high significance.

49. The importance of water resilience to the future of the Wairarapa's cultural values, economy and community in general is critical – without water, life is ultimately not possible or at least severely compromised until access to it is restored.

50. Less available water would gradually suppress economic growth and would adversely impact on the social and cultural life of Wairarapa's communities.

51. The bio-physical environment is just as much at risk as all aspects of urban and rural life. The natural environment is also highly prized in itself by people living and working in the Wairarapa.

Te whakatūtakitaki
Engagement

52. The prior WWRS process itself was primarily focused on feedback from Wairarapa Water Resilience Group members.

53. No engagement was undertaken in the preparation of this paper.

54. Subsequent consideration and eventual implementation of the solutions themselves, will involve manu whenua, plus stakeholder engagement such as council Annual Plan and Long Term Plan discussions, the resource consent processes or landowner negotiations.

55. This is the beginning of an ongoing process. Implementation of the strategy will require significant robust partnerships. Engagement with potential partners early is critical to a well-considered set of solutions and ultimately success.

Ngā tūāoma e whai ake nei
Next steps

56. Both iwi have been offered the opportunity to address the Committee at the 28 June 2022 meeting so matters such as their perspective, priorities and values are made clear in respect of Wairarapa's waters.

57. Officers and the consultant will also make a presentation that will help formulate the basis for discussions to follow.

58. Once the implementation principles have been approved by iwi, the respective councils or other entities, an action plan and then investment plan will be required as depicted in the A3 Content map for water resilience.

Ngā āpitihanga
Attachments

Number	Title
1	Content map for water resilience
2	PowerPoint presentation to meeting

Ngā kaiwaitohu
Signatories

Writer	Bruce Geden – Strategic Projects Manager, Environment Management
Approvers	Al Cross – General Manager, Environment Management

He whakarāpopoto i ngā huritaonga Summary of considerations
Fit with Council's roles or with Committee's terms of reference
Yes. The Wairarapa Committee has responsibility for considering issues of strategic importance to the Wairarapa, including natural resource management.
Contribution to Annual Plan / Long Term Plan / Other key strategies and policies
Consistent with the WWRS, the Ruamahanga WIP and the recently reviewed version of the Wairarapa Economic Development Strategy (WEDS)
Internal consultation
Internal consultation with Environmental Management personnel and Te Hunga Whiriwhiri has occurred through the WWRS process and will ramp up through consideration, decision making processes and execution of the implementation phase
Risks and impacts - legal / health and safety etc.
There are no risks or impacts as a direct result of the recommendations proposed in this report. However, there will eventually be implications for Wairarapa as climate change effects progressively impinge on its communities, especially if no or insufficient measures are taken.

WATER RESILIENCE FOR WAIRARAPA

Our Vision

A spring of water from the heart of Papatūānuku

An eternal spring of water, unfailing

An eternal spring supports life

An eternal spring supports longevity

An eternal spring supports eternal well-being

Our Approach

The threats of climate change are gradual and progressive. They can be predicted to some degree, but there are high levels of uncertainty. Similarly, some solutions are better understood than others.

Resilience is a journey. A broad-based approach is required moving multiple solutions forward together on the basis that some will succeed, others less so and our understanding of the threat may change with more knowledge and understanding.

Our Challenge

Up side
Opportunity

- Less frost
- More growing days; longer season
- More 'crop' choices; faster growth

Our challenge: navigating between opportunities and threats in the context of values and aspirations

Down side
Challenge

- Less rain; more evaporation
- Less available water
- More drought; less growth

Treating water as a taonga, meeting the aspiration of all people in Wairarapa and reinforcing cultural and social values set in the context of Te Mana o te Wai principles.

Thinking about funding

Three types of funding:

1. **Proprietary funding** (GWRC, district councils, NGOs, etc)
   - Funding of own projects
   - GWRC funded resilience activity – e.g. riparian, wetland, restoration
   - Council funded resilience activity – e.g. piping infrastructure improvement
   - Central Government – e.g. MfE Jobs for Nature
2. **Core funding for WRW** (GWRC, district councils, central government, private investors)
   - Foundation funding for a facilitator and support (2022/23)
   - Foundation funding for WRW to run itself (2024 +)
3. **Discretionary funding for WRW** (GWRC, district councils, central government, private investors)
   - Funding allocations into a High Priority Experimental Projects Fund – used by WRW to co-fund projects with willing partners
   - Funding allocations for specific projects mounted by WRW – e.g. development of infrastructure

TYPE	CHARACTERISTICS	WHO	ESTIMATE
Proprietary	• Own projects • Own cost • Aligned with Wairarapa Resilience • Registered as part of Wairarapa resilience	• GWRC • Councils • Iwi • Private companies and individuals	Up to individual organisations Potentially $3-$5m per annum
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Attachment 1 to Report 22.265

Partnership Statement

Water is the blood of the earth mother Papatūānuku and the rivers are her veins. It is her who has given us life from time immemorial and it is with her that solutions to climate change lie. All things animate and inanimate have mauri.

We need to restore natural processes to repair, free up and empower natural processes of rivers, supporting flows and retaining natural ecosystems

As iwi of Wairarapa see real progress is possible when we are equal partners with Councils and Crown, respecting contributions for the benefit of all.

We want to be equal partners not only in law, but in co-management, co-monitoring of water and environmental restoration, together. Restoration of the mauri of the water will lead to the restoration of the mana of our people.

Who does what?

Iwi partnership – iwi, Councils, Crown

Leadership, oversight, integration – the Wairarapa Committee of GWRC

Environmental data, information and science – GWRC

Operational data and information – Water Resilience Wairarapa (a new entity)

Management and facilitation of grey/green solutions – Water Resilience Wairarapa

Management of stakeholder interface – The Wairarapa Committee

Community engagement – through River Management and Catchment Groups

Water Resilience Wairarapa

- A social investment entity – CCO, trust?
- Shareholders: Councils, mana whenua, Kānoa, water users
- Directors appointed by shareholders
- Operate to an investment plan
- Capital-raising entity

TIMELINE

Wairarapa Water Resilience STRATEGY 2021

Wairarapa Water Resilience ACTION Plan 2022

Wairarapa Water Resilience INVESTMENT Plan 2025

Learning: Data Gathering and Analysis

Data, information gathering
- SkyTEM – ground/surface water availability
- NIWA Updates – ongoing climate change projects and impact analysis
- Matauranga Maori input – ongoing input from iwi as part of the partner arrangement

Modelling
- Population use – 20, 30, 50 years
- Non-domestic use – 20, 30, 50 years
- Environment requirement – 20, 30, 50 years

Framework building
- Create/update a region-wide (mainly the valley) water use model
- Build a framework for inputting and analysing information for decision-making and solution evaluation subject to Te Mana o te Wai principles.

Doing: Trial and Experimentation

Building knowledge and experience of solutions through action research:

Efficiency solutions – water meters, infrastructure improvements

Water capture – large scale an dispersed options, MAR

Retention/detention solutions – initiate experimental projects

Flood management solutions – explore options, introduce experimentation

Soil management solutions – e.g. dung beetles

Attenuation solutions – hill country, wetlands, riparian

Enabling: Adapting Policy Frameworks

Land use and water reliability:
- Land use change options
- Water profiles of differing land uses

Land use and water allocation:
- Review allocation policies
- Spatial, temporal, efficiency, water transfers

Optimum water uses
- Modelling optimum water use / land use combinations
- Allocation reform from Government – iwi rights and interests
- Land use and spatial planning – Regional Plan, Combined District Plan, Spatial Planning Act

Phase 1 – Committing to a resilience action plan June-September 2022

1. **Agree the fundamentals of a Resilience Action Plan** – June 22
2. **Finalise the Resilience Action Plan with councils** – July/August 22
3. **Final WaiComm approval of Resilience Action Plan** – Sept 22

Phase 2 – Learning and doing activities September 2022 – December 2025

1. **Water availability estimates** – SkyTEM and NIWA
2. **Water availability estimates** – from investigation and experimentation
3. **Policy inputs into modelling** – land use opportunities, allocation options

Phase 3 – Committing to a Resilience INVESTMENT Plan May-September 2025

1. **Consolidate all information** from learning and doing activities
2. **Prepare a Water Resilience Investment Plan** – 30-50 years.

A grey/green asset development plan across all solutions. Reflected in LTPs of Councils and the capital requirements for Water Resilience Wairarapa

Phase 4 – Up and away – commence the mature stage of long term resilience building - 2026 and beyond

1. Governance – all elements in place for robust governance and capital raising
2. Delivery system – Water Resilience Wairarapa a mature organisation
3. Engagement, monitoring and measurement – tracking, problem-solving, keeping the community engaged

Attachment 2 to Report 22.265

Presentation to the Wairarapa Committee

Presented by:
Alastair Smaill, Bruce Geden, Geoff Henley

28 June 2022


Attachment 2 to Report 22.265
Our Vision
A spring of water from the heart of Papatūānuku
An eternal spring of water, unfailing
An eternal spring supports life
An eternal spring supports longevity
An eternal spring supports eternal well-being

Today

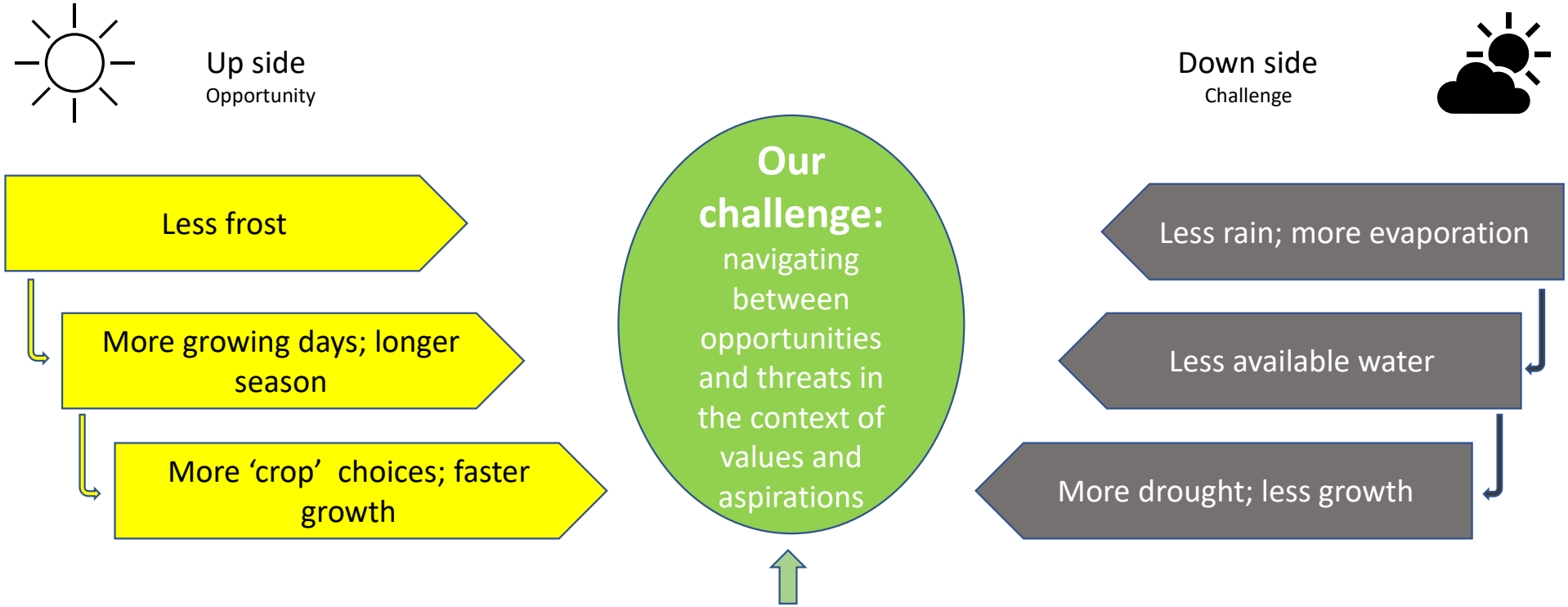
- Partnership Statement
- We know the issues we have to deal with
- Governance – agencies and roles
- Learning and doing
- Development Phases – what needs to be done
- Taking Wairarapa with us
- The Iwi relationship
- What we need for the Wairarapa Committee (WaiComm) in June?

We know the issues

In short

Up side
Opportunity

Down side
Challenge



Treating water as a taonga, meeting the aspiration of all people in Wairarapa and reinforcing cultural and social values

Gearing up: Entities and Roles

Agencies and roles

ROLE	ENTITY
Iwi partnership	**IWI entities**
High level leadership, oversight and integration	**The Wairarapa Committee of the GWRC** (plus staff support)
Data and information • SkyTEM and modelling	**Greater Wellington Regional Council** (plus staff support)
Data and information • Developmental and experimental projects	**Water Resilience Wairarapa** (a new entity)
Management/facilitation of grey/green development	**Water Resilience Wairarapa**
Management of stakeholder interface: • Strategy and direction • Implementation	**The Wairarapa Committee** (plus staff support)

Water Resilience Wairarapa – the entity

What is it?

- A social investment entity
  - CCO, Company, Trust?
  - E.g. Wellington Water, Great South

- Potential shareholders:
  - GWRC
  - District councils
  - Mana whenua
  - Central Government – Kānoa
  - Water users

- Develop concepts, test feasibility and build water resilience assets in the context of the Wairarapa Water Resilience Investment Plan
  - Green/grey options
  - Retention and attenuation solutions

What needs to be done?

- Target operational date: end 2023
  - Set-up process required

- Capital raising:
  - Shareholding programme
  - Production disclosure statement (prospectus)
  - Operational funding

- Ownership:
  - Shareholders
  - Public and private
  - Mana whenua
  - Water users

Getting started

Governance

Gear the Wairarapa Committee to governance of this programme:

- Iwi partnership
- Review workload impact
  - Sub-committees, etc?
- Review procedures
- Review membership and participation
  - to ensure committed governance
- Review support required from GWRC

Operations

Establish an interim facilitation capability:

- A full-time facilitator from September 2022 to December 2023
  - Funded by the councils together
  - In association with WellingtonNZ

- Tasks:
  - Establish Water Resilience Wairarapa
  - Recruit shareholders
  - Oversee the whole programme on behalf of the Wairarapa Committee
  - Stakeholder engagement – water management and catchment groups
  - Public communication

Learning and Doing

Parallel Development

- "For the environment, people, enterprise"
- "Learning and doing together"
- "Green and grey"

50%
"Doing stuff"

Doing the obvious things **now**
Trying things out
Building momentum and commitment
Showing willing

- Experimental common sense activity -

PLUS

50%
"Learning stuff"

Learning and understanding
Linking into other initiatives
Getting everyone involved on the learning journey

- Evidence-based analytical models and frameworks -

EQUALS

RESILIENCE

Learning: Data Gathering and analysis

Building Analytical Tools

Data, information gathering

- **SkyTEM:**

  Ground/surface water availability/

  collection plus analysis – 2022-25

- **NIWA Update**

  Projection updates (using IPCC 2022)

- **Mātauranga Māori input**

Modelling

- **Population use modelling:**
  - demand scenarios over 20, 30, 50 years
- **Non-domestic use modelling:**
  - demand scenarios over 20, 30, 50 years
- **Environmental modelling:**
  - demand scenarios to preserve environmental status over 20, 30, 50 years

Framework building

- Build a water use model
- Build a framework for input of information and modelling – 2024
- Build-in mātauranga and other iwi frameworks

Doing: Trial and Experimentation

Estimating resilience capacity of solutions

Building real world knowledge and experience

- **Efficiency solutions:**
  - Assessment of the returns from installation of meters and infrastructure improvements – 2024
- **Water capture:**
  - Review larger scale and smaller dispersed options (e.g. Northland), explore experimental dispersed options – 2022/23
  - Review New Zealand MAR trials
- **Retention/Detention solutions**:
  - Explore options, experimental projects identified, introduced and monitored – 2022-2024
- **Flood management solutions:**
  Explore options, experimental projects identified, introduced and monitored – 2022-2024
- **Soil Management solutions:**
  E.g. Dung Beetles
- **Attenuation solutions:**
  Hill country and riparian planting
  Wetland restoration

Enabling solutions

Adapting policy frameworks

Land Use/Reliability equation:

- Review potential land use change options (e.g. Leftfield Innovation)
- Water profile of alternative land uses:
  - Reliability profile
  - Growing period
  - Access to water

Optimum water use in a constrained environment

(water as a taonga - doing more with less)

Land use/Allocation equation:

- Review allocation policies
  - Spatial and temporal
  - Allocation efficiency
  - Transfers
  - Iwi rights and interests
- Criteria:
  - Reliability profile
  - Efficiency profile
  - Value profile

Policy overlay:

- Planning impacts on land and water use – regional plan implications
- Allocation reform from government – iwi rights and interests
- Land use and spatial planning – implications of the Combined District Plan, Natural Resources Plan and Spatial Planning Act (still to come)

Development Phases

Phase One – Committing to a resilience action plan

Purpose – to build direction, engagement and momentum
Timing – June-September 2022

1. **Agree the fundamentals of a Resilience Action with the WaiComm - June 2022**
    - Action plan for 2022-25 including:
        - stocktake of existing or planned projects
        - integrated schedule of learning and doing activities and agencies
    - Convert into a reporting progress Dashboard – pathway towards Resilience

2. **Finalise Resilience Action Plan with councils – July/August 2022**
    - Prepare a visual action plan, with support document
    - Engage, negotiate and onboard all the partners, including manu whenua
    - Work through the governance and operational challenges (with WaiComm and other parties)

3. **Final WaiComm Approval and Public Launch of Action Plan – September 2022**
    - All agencies presentation to demonstrate support
    - Website

Phase Two – Learning and Doing

Purpose – to build action, knowledge and commitment based on the Resilience Action Plan
Timing – 2022-25

1. **Water availability estimates** - data
   - SkyTEM – 2025
   - NIWA Updates

2. **Water availability estimates** – from investigation and experimentation
   - Efficiency solutions - stocktake of existing or planned projects and monitor/measure progress
   - Water capture solutions – larger and smaller scale dispersed options – review practice (Northland), define integrated capture options
   - Detention solutions – stocktake, establish experimental projects and monitor/measure
   - Flood Plain solutions – establish experimental projects and monitor/measure
   - Soil management solutions – accelerate region-wide dung beetle uptake and monitor/measure
   - Attenuation solutions – stocktake, erosion, riparian and wetland, accelerate region-wide development, monitor/measure

3. **Policy inputs into modelling**
   - Land use opportunities
   - Allocation options
   - Mātauranga

Phase Three – Water Resilience Investment Plan

Purpose – to agree the long term resilience investment plan to govern and fund the resilience journey based on three years of learning and experimentation
Timing – 2025

1. **Consolidate all information**
    - From all the activities that have taken place

2. **Wairarapa Water Resilience Investment Plan**
    - Prepare investment plan looking 30-50 years incorporating the favoured solutions. An investment plan primarily for Water Resilience Wairarapa (but not only):
        - Efficiency solutions
        - Water capture solutions
        - Detention solutions
        - Flood Plain solutions
        - Soil management solutions
        - Attenuation solutions
        - Policy solutions

- Also including investments by GWRC and other bodies:
    - Investment in policy and planning solutions
    - Allocation solutions
    - Land use solutions
    - Mana whenua capacity-building

Phase Four – Up and Away

Purpose – Commence the mature stage of long term resilience-building
Timing – 2026 and beyond

1. **Governance - capital raising**
   - Engage shareholders/stakeholders
   - Strengthen iwi partnership

2. **Delivery systems – mature infrastructure and efficiency**
   - Able to deliver the programme

3. **Engagement, monitoring and measurement**
   - Tracking
   - Problem-solving
   - Keeping the community engaged

Taking Wairarapa with us

Engagement - with communities and sectors

Sub-catchment implementation:

- Whole-of-catchment thinking is required
- **Sub-catchment** implementation is a more practical and a "people-scale" level of intervention – engage in experimental work.
- Links with **river/catchment** groups and local communities will be vital
- Also mana whenua catchment **partnerships**

Project implications:

- **Sector** initiative – a discussion process will be necessary with relevant sector groups to identify their interests and role
- The link between **3 Waters** especially relevant in urban settings
- The link with **WEDS**

Public information – a programme of ongoing communication

Purpose – to build and retain a consensus and momentum on action for water resilience in Wairarapa
Timing – 2022 onwards

1. **Monitoring and Measurement of Progress**
   - Consolidated and independent monitoring and measurement
   - Public access to information

2. **Resilience dashboard**
   - A regularly updated dashboard (website) of:
     - The progress of climate change and impacts
     - The progress of resilience actions and solutions

3. **Annual 'Town Halls'**
   - Annual reporting meetings to explain the programme, demonstrate progress and outline forward plans

Thinking about funding

Three types of funding:

1. **Proprietary funding** (GWRC, district councils, NGOs, etc)
   - Funding of own projects
   - GWRC funded resilience activity – e.g. riparian, wetland, restoration
   - Council funded resilience activity – e.g. piping infrastructure improvement
   - Central Government – e.g. MfE Jobs for Nature

2. **Core funding for WRW** (GWRC, district councils, central government, private investors)
   - Foundation funding for a facilitator and support (2022/23)
   - Foundation funding for WRW to run itself (2024 +)

3. **Discretionary funding for WRW** (GWRC, district councils, central government, private investors)
   - Funding allocations into a High Priority Experimental Projects Fund – used by WRW to co-fund projects with willing partners
   - Funding allocations for specific projects mounted by WRW – e.g. development of infrastructure

Thinking a bit more about funding

Funding type	Characteristics	Who	Estimate
Proprietary	• Own projects • Own cost • Aligned with Wairarapa Resilience • Registered as part of Wairarapa resilience	• GWRC • Councils • Iwi • Private companies and individuals	Up to individual organisations Potentially $3-$5m per annum
WRW Core funding	• Base cost for facilitator • Base operating costs of WRW	Contributions from: • All councils on populations basis • DWRC on allocation basis • Central government contribution basis • Other?	Base operating costs per annum Potentially $450k
WRW Discretionary funding	• Base contribution to experiment fund • Potentially augmented by partnerships	• Councils on population basis • GWRC on allocation basis • Central government on application basis	Needs to be enough money to undertake meaningful work Potentially $1m (over two years)
Investment	• Cash investment in green/grey projects	• Private investors • Council investment • Central government investment	Estimates not possible until real projects emerge from experimental work

Thinking further about funding

Detailed cost estimates will be made during the June to September 2022 period

Phase 1

- Support for the preparation of Action Plan
- Negotiation of investment in the Action Plan
- Agreement of iwi partnership arrangement
- Funding of comms capability
- Recruit and resource facilitator
- Pre-work for Water Resilience Wairarapa

Phase 2

- Establishment costs of Water Resilience Wairarapa
- Resourcing of facilitator
- Recruit contributions to experimental project fund
- Website, dashboard, communication support

Phase 3

- Ongoing funding of WRW, Experimental project fund and communication support
- Negotiation of investment plan with stakeholders and shareholders
- Write up of Investment plan
- Endorse with Government (regarding potential funding)

Phase 4

- Steady state programme funding
- Equity/debt ratios
- Co-ordination of contributions

Take a break for a “cup of tea”