



Pre-feasibility work programme description

Aim

The aim of Wairarapa Water Use Project pre-feasibility investigations is to determine which water scheme/s, if any, show enough viability to proceed to a more detailed full-feasibility study beginning in 2015. Identifying schemes that are not viable from technical, financial, cultural, environmental or social perspectives is a focus of this work.

Overview

Five preferred schemes for further investigation were identified in September 2013, supported by three 'reserve' storage sites. The pre-feasibility work will focus on the five preferred schemes. If any of the storage sites are discounted during pre-feasibility, a 'reserve' site may be brought into the investigations. Any scheme/s within the project found not to be feasible during this phase of work will be discounted and no further investigation conducted on them by the WWUP.

Pre-feasibility tasks

Dates approximate & subject to review as investigations progress

On-going tasks

The following tasks will be undertaken for the duration of the project, or most of it:

Communications – provide project information, progress reports and engage with communities and affected parties.

Water Demand – a second round of interviews and information exchange with farmers to further gauge interest in the supply of a reliable water supply.

Economic assessment of schemes – high-level economic assessments as cost estimates are derived.

Project management – progress investigations and associated tasks efficiently and logically with available resources.

Workstream 1: Assess river conveyancing, distribution area & on-plain storage (March - April 2014)

Distribution area review – refine the distribution area to include in geotechnical assessment of water storage and distribution schemes.

River conveyancing – investigate viability of using the Tauweru and Huangarua rivers to convey water from the Tividale and White Rock Road water storage sites respectively.

On-plain storage – consider at a valley-wide level the concept of on-plain storage ponds; whether water can be viably stored on the valley floor instead of in the hills.

1 **Review Point 1: Confirm storage sites and distribution areas to progress to Workstreams 2 and 3**

Workstream 2: Geotechnical assessment of water storage sites (April - June 2014)

Identify and understand any geotechnical/geological issues that may affect whether a site is suitable for continued investigation.

Gather information on materials available and the dam types possible.

Determine associated cost estimates and risk profile.

2 **Review Point 2: Confirm storage sites to progress to Workstream 3**

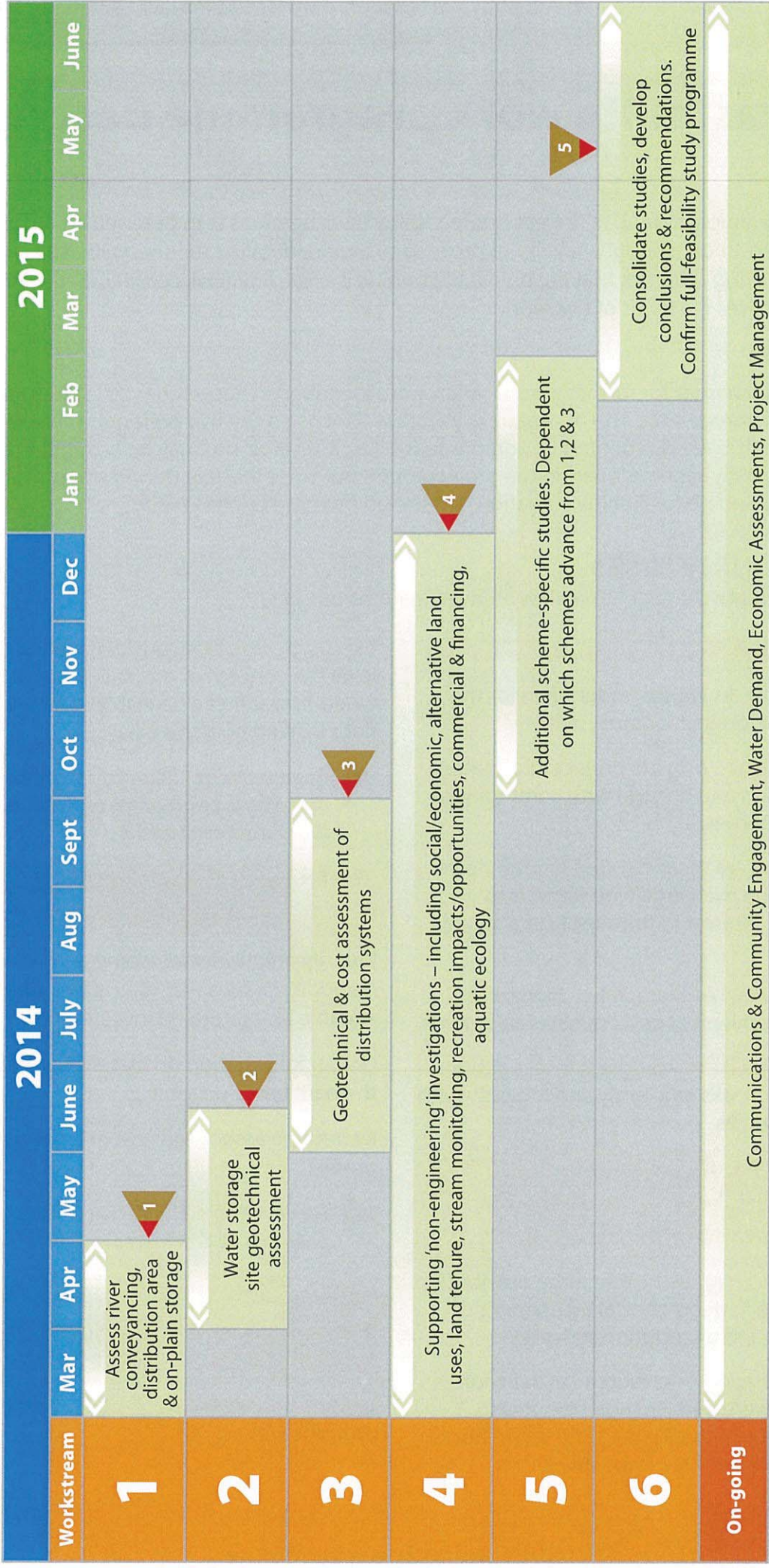
Workstream 3: Geotechnical & cost evaluation of water distribution systems (June - September 2014)

Engineering assumptions – review critical or high-profile issues.



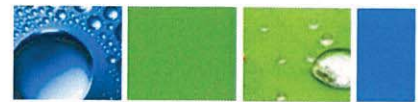
Indicative pre-feasibility work programme: March 2014 to June 2015

Dates are approximate and subject to review as investigations progress. Schemes may be discounted at any point during this period.



REVIEW POINTS

- 1 Confirm storage sites and distribution areas to progress to Workstreams 2 and 3
- 2 Confirm storage sites to progress to Workstream 3
- 3 Confirm the preferred combination of schemes for further investigation
- 4 Review budget and remaining studies required
- 5 (between April and June 2015): confirm scheme/s for full feasibility study



Supply-demand modelling – refine relationship between storage size and the extent of the respective distribution areas.

Distribution arrangement options & prioritisation

Distribution geotechnical arrangement

Identify risks

Estimate costs of distribution arrangements

3 Review Point 3: Confirm the preferred combination of schemes for further investigation

Workstream 4: Supporting 'non-engineering' investigations (March - December 2014)

Concurrent activities will be undertaken during the pre-feasibility phase, either in line with other progress and outcomes or on a one-off basis.

The following areas are listed for study:

- Alternative land uses
- Ruamahānga River catchment – water resource assessment
- Land tenure to access preferred storage and possibly distribution sites
- Stream monitoring permanent & spot gauging
- Social/Economic implications and opportunities
- Commercial & financing
- Iwi liaison
- Recreation impacts & opportunities, combined with storage lake summer levels
- Aquatic ecology values and investigations
- Information exchange with Regional Plan development and Ruamahānga Whaitua catchment committee
- Implications for WWUP of the Ruataniwha or other relevant decisions

4 Review Point 4: review budget and remaining studies required

Workstream 5: Additional scheme-specific studies (Oct 2014 - Feb 2015)

The outcome of Workstreams 1-4 will largely determine which schemes will advance through to Workstream 5. More specifically, it will determine the scheme-specific studies needed.

Prioritisation will depend on which schemes are still involved in the pre-feasibility phase. Detailed scheme-specific investigations will mostly be deferred until the full-feasibility stage.

Possible study areas (in no order of priority) include:

- Terrestrial ecology values, significance, effects & mitigation
- Archaeology/historic values and issues
- Sedimentation issues identification & implications
- Quality of stored water
- Flow variability & flushing flow regimes
- Hydro-electricity generation potential
- Water race integration issues - opportunities & options
- Landscape modification impacts & mitigation measures
- Treated municipal waste integration issues, opportunities & options
- Climate change predictions and implications

Workstream 6: Consolidate studies, reporting, planning (March - June 2015)

Consolidate studies

Liaise with affected/interested parties

Develop conclusions and recommendations

Confirm programme for full-feasibility study

5 Review Point 5 (between April and June 2015): confirm scheme/s for full feasibility study

