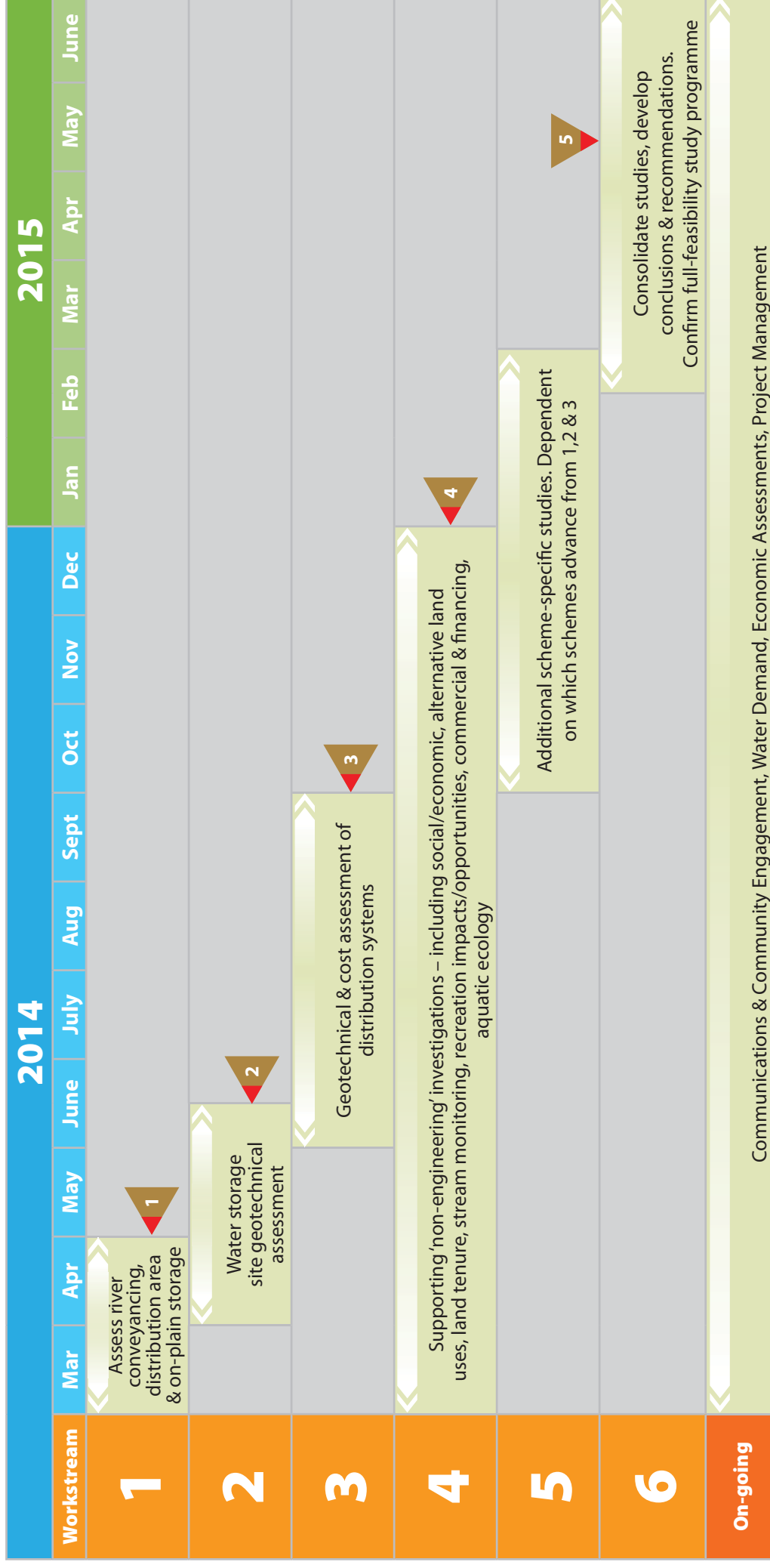


## Indicative pre-feasibility work programme: March 2014 to June 2015

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 **71**
- 4** Review budget and remaining studies required (between April and June 2015): confirm scheme/s for full feasibility study
- 5**



# 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.



**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**