



# WRECI Implementation Strategy

## 1. Background

Soil erosion is a major problem that has been identified for the greater Wellington region. The most significant erosion occurs in the Eastern Wairarapa hill country. Greater Wellington (GW) helps landowners to manage soil erosion on their properties, primarily through producing farm plans, and providing advice and financial assistance for on farm works.

Sustainability Plans have been prepared by GW since 1998. In the last ten years 27 Sustainability Plans have been prepared, the small number reflects the cost and time taken to put the plans together. Recent government funding allows GW to prepare more plans and to offer higher grant rates than previously available. This new programme is known as Wellington Regional Erosion Control Initiative (WRECI)

The WRECI proposal focuses on five selected catchments and isolated hotspots. These areas are located in the Wairarapa hill country and have been selected on the basis of rates of sediment discharge and percentage of erosion prone land in the catchment. The new initiative will focus on the preparation of 100 new WRECI Plans, a works implementation phase as well as the development of community partnerships in two catchments.

WRECI Plans are comprehensive. They contain land resource information, an assessment of erosion risk, a targeted programme of works implementation, and an assessment of the economic impact on the business.

## 2. Planning/Strategy

The aim of the WRECI programme is to increase the amount of erosion control work completed in target catchments. On ground works are expected to decrease sedimentation rates, contribute to improved water quality in the target catchments and maintain pastoral productivity. It is likely that the demand for plans and on-ground works will exceed the resources available for delivery of the programme, given that subsidy rates will be greater than current programmes offered by Greater Wellington. This means a system to prioritise delivery of plans and on ground work is required. How to prioritise this work is discussed below.

The WRECI programme is required to complete ten plans in the first year. All ten initial plans will be delivered in the Whareama catchment to provide a focussed start for the project, and to provide a base for expanding the Whareama catchment scheme. These properties were chosen because existing plans need updating, as well as considering the amount of work required on these farms, and the past history of working with the farmers.

Choices need to be made about which order to deliver plans and on-the-ground works for the project. Consideration has also been given to whether to roll out plans in all the areas at once, or whether to target specific catchments in a concentrated fashion.

There are two separate steps for determining how to roll out the programme:

1. prioritising where and in which order plans will be developed
2. prioritising on farm works for those properties that have had plans developed.

The land management team identified factors that were considered important in determining the priority for delivering the WRECI plans. These factors included: sediment yield, farmer motivation, local champions, the split between farms that already have a plan developed and those that would be covering new ground, potential improvement to water quality, the likelihood of improving or maintaining community resilience, and the productivity of soils protected. These factors were used as the basis for the scoring system discussed later.

Key objectives for the project are increasing the amount of erosion control work completed, reducing sedimentation and contributing to improved water quality. To achieve these objectives basic assumptions are that the WRECI programme will target:

- those farms generating the greatest amount of sediment,
- farms that are part of a catchment that would benefit from a catchment approach
- properties that want to and are able to commit to significant works over a period of time, so that plan development and on ground works start as soon as possible.

Three of the targeted areas (Whareama, Awhea and Upper Taueru catchments) would benefit from adopting an integrated catchment type approach because collective work will be needed to address water quality issues in those catchments. Work in the Whareama and Awhea catchments needs to be carried out throughout the catchment to reduce sediment levels in the river. A collective approach in the Upper Taueru catchment is important because it is a subcatchment of the Ruamahanga River, and the entire Taueru catchment contributes significant volumes of sediment to the Ruamahanga.

The other areas (Flatpoint, Opouawe and hotspots) either do not contribute to a collective catchment, or have little benefit from working collectively as a catchment to address sedimentation issues.

Those areas that would benefit from a catchment approach should be targeted early in the programme as funding for community catchment work is only available during the early stages of the project.

### 3. Scoring procedure for ranking farms

The following process will be used to score farms to choose which order plans will be completed.

#### Average farm Sedimentation kg/ha

| Average sedimentation rates | Score |
|-----------------------------|-------|
| 0-15 tonnes /ha/yr          | 1     |
| 15 – 30 tonnes /ha/yr       | 2     |
| 30 – 50 tonnes / ha /yr     | 3     |
| >50 tonnes / ha / yr        | 4     |

#### People factor

|                                       | Score |
|---------------------------------------|-------|
| Local Champion                        | 1     |
| Regular work done in past 10 years    | 2     |
| Brand new, inactive plan or new owner | 1     |

#### Catchment priority (addresses community resilience, water quality)

|                    | Score |
|--------------------|-------|
| Whareama, Awhea,   | 2     |
| Hotspots, Taueru*  | 1     |
| Opouawe, Flatpoint | 0     |

\*Note Taueru may be scored a 2 if the community supports a catchment approach

#### Amount of work likely to be done on farm

|                           |     | Poplar planting |            |
|---------------------------|-----|-----------------|------------|
|                           |     | 2 – 4 ha / yr   | >4 ha / yr |
| Forestry retirement (5ha) | Yes | 2               | 3          |
|                           | No  | 1               | 2          |

## **4. Scoring procedure to prioritise on farm works**

There also needs to be a system to prioritise on farm works, as it is expected that demand for work will be greater than the resources available to deliver the work.

The type of erosion occurring on LUC units will be recorded as part of producing a WRECI plan.

The following LUC units have been identified as having the greatest potential for sedimentation rates and are grouped into two broad groups.

1. High sediment generating units (LUC: 6e1, 6e4, 6e5, 6e7, 6e8, 6e9, 6e10, 6e12, 6e12b 7e0, 7e1, 7e3, 7e4, 7e6, 7e6b, 7e8, )
2. Severely eroding units ( 8e3, 8e5, 8e6, 8e9 )

Pole planting on some of these LUC units will reduce sedimentation rates over the medium to long term, however, the greatest reduction in sediment and most suitable land use long term would occur from having this land in forestry.

### **4.1 Principles for choosing on farm works**

WRECI plans will identify a potential 30-year programme. Within this programme a ten year plan will also be established, with the proviso that WRECI funding rates may not be available after 2019. Within the 10-year programme, areas will be ranked so that subject to funding availability, work will be applied to priority areas first. Work that cannot be funded from the WRECI programme can be carried out with a lower grant rate from existing programmes.

The LMOs will determine annual programmes by allocating the WRECI pool between landowners wanting to do work. The idea is to give LMOs flexibility in their approach, while making sure the WRECI funding is spent where the best outcomes will be achieved.

The principles for choosing areas will be:

- Each property with a plan is entitled to 250 poles per year with WRECI funding.
- If a property does not want to use all the allocation they will become available to other properties and will be allocated by the LMOs.
- Additional areas/poles will be allocated from the pool system so that each farm gets to treat approximately the same percentage of their preferred annual programme.

LMOs will identify priority areas based on the general principles of:

- Targeting land generating the most sediment. These will be areas that have erosion on LUC classes listed above.
- Targeting areas that will result in good establishment

- Targeting slopes that are directly connected to 1st, 2nd or 3rd order streams (i.e. do not have at least a 30m stretch of land < 4 degrees slope between the slope and the stream).

There are different scoring criteria for pole planting and retirement planting funds. Retirement planting will be aimed first at unproductive steep faces and gullies, then at less productive steep faces.

Where the area of conservation planting is greater than 5 ha then the LMO should consider using a lower grant rate associated with previous farm plans, rather than incurring fencing costs for a relatively small block. Alternatively delaying large blocks of conservation forestry until after the AGS programme is completed may allow larger blocks to be completed under the WRECI programme

#### 4.2 Pole Planting scoring system

|   |   |
|---|---|
| Hill slope directly connected to a stream | 1 |
| Active erosion on landform                | 1 |
| Good likelihood of establishment          | 1 |

#### 4.3 Retirement planting score.

It is important to direct retirement planting at unproductive steep faces. Note: there is a maximum of 5ha per property until the AGS scheme is completed.

| For 5ha project   | Score |
|---|-------|
| Protects 8e country and 100% Less productive steep faces    | 3     |
| Protects 8e country and 50-100% less productive steep faces | 2     |
| 50 -100% less productive steep faces.                       | 1     |

#### 4.4 Discretion by LMOs

A new farm plan should be allowed to get some trees (1ha per year) established on less demanding country during year 1 and 2, to incentivise landowner and convince them of the benefits of erosion control planting.

Where a property is partly within a WRECI area and partly outside, only the parts of the farm in the designated WRECI area can be claimed at the WRECI grant rate.

## 5. Summary of important issues for each area, and proposed delivery plan

### Whareama

There are 23 active plans, 23 occasional plans and nine inactive plans in the catchment at the moment. The collective sediment loading in the Whareama River is important. The estuary at the bottom of the catchment is being degraded by sedimentation. There are higher rainfalls at the top of the catchment which suggest that sediment generation may be greater in this part of the catchment.

**Proposed roll out** Start programme in Whareama catchment in year 1 with ten plans. Organise two community meetings in first year. Continue the focus in the Whareama in year 2 to capitalise on the community meetings. In year 2 a minimum of six more plans will be completed. Additional plans may also be produced in the catchment based on the ranking system.

### Awhea

Awhea is the other catchment which is required to expand the current catchment scheme and should therefore be targeted with a catchment approach. This will mean running a series of catchment meetings. There are currently nine active plans, four occasional plans and five inactive plans in the catchment. The priority for sedimentation issues is likely to be gravels rather than fine sediment.

**Proposed roll out** In year 2 complete two plans for selected properties. Select local champions as long as the farms meet minimum criteria for the work to be done. These plans will act as a pilot for the Awhea and Opouawe catchments. In year 3 there will be catchment community meetings and the catchment will enter the pool system. A minimum of six additional plans will be completed in years 3 and 4. Additional plans may be completed based on the ranking system.

### Opouawe

There are a limited number of farms, with only a loose catchment affiliation. Within the catchment there are a number of significant erodible areas which contribute large proportions of the sediment into the catchment. No general approach into the catchment. Higher rainfalls at the top of the catchment suggest a higher priority for working in these areas.

**Proposed roll out** Farms should be included in the general pool alongside the Awhea catchment. It is likely that the first plans should be completed in year 4 of the programme, unless they score particularly highly under the general pool system.

### Flat point

The five farms in the Flat point area do not contribute water into one watershed. There are a number of small short catchments that flow out to the sea. There are two active plans and three inactive plans in the area. In this area it may make sense to target on farm works into one on farm catchment to achieve maximum benefit in water quality, but there are no obvious benefits from taking a combined catchment approach.

**Proposed roll out** Flatpoint farms will enter the general pool in year 2 assessed by the ranking system, however there will be no minimum number of plans completed.

### **Upper Taueru**

This catchment has 15 active plans, six occasional plans and four inactive plans. There is likely to be good demand for the WRECI programme and potential for a community catchment approach. This catchment has lower sediment generation rates than the other areas with only a small area of land with high sedimentation rates within the catchment. Properties are likely to score lower in the property assessment compared to other areas. The aim is to complete a minimum number of plans in years 3 and 4 of the programme.

**Proposed roll out** There will be one catchment meeting in year 2 (end of financial year). The catchment meeting will introduce the WRECI programme and discuss the catchment management approach. The community will consider developing a catchment approach, and if they choose then more points will be assigned during the assessment process. The farms will be assessed as part of the general pool from year two onwards, however it is not until year three that it is certain plans will be completed in the catchment. A minimum of three plans will be completed in year 3 and four plans completed in year 4.

### **Hot spots**

There are five active plans and four occasional plans in this group, as well as a number of properties that have part of the farm in one of the identified WRECI catchments. There is no need for an integrated catchment approach and no advantage of doing a pilot to encourage neighbouring farmers to participate. Hotspot farms will be entered into the programme on the basis of the score they receive. These areas have been identified as hotspots because of the level of sediment being generated so it makes sense to bring them into the programme as early as possible. From year two onwards they will go into the general pool to be assessed by the ranking system. A minimum of one plan per year (highest score) will be completed.





## 6. Four-year targets per catchment

The following table contains targets for the minimum number of plans completed for each area by the end of four years.

| Year                          | # Plans required | Whareama | Awhea / Opouawe | Taueru | Hotspots | Flatpoint | Allocated by Score |
|-------------------------------|------------------|----------|-----------------|--------|----------|-----------|--------------------|
| 1                             | 10               | 10       |                 |        |          |           | 0                  |
| 2                             | 15               | 6        | 2               |        | 1        | 0         | 6                  |
| 3                             | 15               | 2        | 4               | 3      | 1        | 0         | 5                  |
| 4                             | 15               | 2        | 2               | 4      | 1        | 0         | 6                  |
| Min plans completed by year 4 | 55               | 20       | 8               | 7      | 3        | 0         | 17                 |
| Properties in catchment       |                  | 65       | 30              | 26     | 17       | 5         | 138                |
| Min % of catchment properties |                  | 31%      | 27%             | 27%    | 18%      | 0%        |                    |

## 7. Communication with communities

The WRECI project includes expanding current catchment schemes, e.g. the Whareama and Awhea catchments, and introducing these two groups to a total catchment management approach. This will involve engaging the community in these catchments and working towards developing a five year plan for the catchment.

The funding available for the WRECI plantings is an important tool to help the community achieve some likely outcomes for the catchment programmes. Other tools and strategies will also be needed, but the WRECI funding is a good start.

Communication with the communities in the WRECI programme will be important to achieve the outcomes for the project. Good communication will create a flow of information between the communities and GW. Opportunities for this information flow to occur will include newsletters and catchment meetings. From GW's viewpoint, newsletters and community meetings will also be an opportunity to promote one of the tools (i.e. WRECI) that will be available for the catchment projects.

The year before each WRECI area is eligible to join the programme a newsletter will be sent out to landowners. The newsletter will introduce the WRECI programme, what it is hoping to achieve, what assistance is available to landowners, and invite landowners to get in contact with their LMO to register an interest in joining the programme. LMOs will also let landowners they are currently working with know when their area will be included in the WRECI programme.

This strategy will also be presented to the WHCAC at the February meeting, to obtain feedback and hopefully approval for the approach. Opportunities are also available for existing catchment scheme groups to be kept informed and provide feedback on the programme.

The following table outlines the minimum requirements for newsletters and catchment meetings. It is likely that in some years additional newsletters or catchment meetings may be required, particularly if the Taueru landowners show interest in working towards a catchment approach.

### Outline of proposed newsletters and community meetings

| Year           | Catchment meetings required | Catchment meetings projected      | Newsletters required | Newsletters projected               |
|----------------|-----------------------------|-----------------------------------|----------------------|-------------------------------------|
| 1<br>(2009/10) | 3                           | 2 Whareama                        | 2                    | 1 general WRECI,<br>1 Whareama      |
| 2<br>(2010/11) | 3                           | 1 Whareama<br>1 Taueru<br>1 Awhea | 2                    | 1 Awhea,<br>1 Taueru,<br>1 Whareama |

| Year           | Catchment meetings required | Catchment meetings projected      | Newsletters required | Newsletters projected             |
|----------------|-----------------------------|-----------------------------------|----------------------|-----------------------------------|
| 3<br>(2011/12) | 3                           | 1 Awhea<br>1 Whareama<br>1 Taueru | 2                    | 1 Whareama<br>1 Awhea<br>1 Taueru |
| 4<br>(2012/13) | 3                           | 1Awhea<br>1 Taueru<br>1 Whareama  | 2                    | 1 Whareama<br>1 Awhea<br>1 Taueru |

## **8. Monitoring**

Pole planting works as part of WRECI will be mapped as a shapefile on the GIS system. Information recorded in the attribute table will include:

- number of poles planted within mapped area
- the year of planting
- the species (poplar/willow), and if possible
- the variety of poplar and willow planted in the area.

Gully planting will be mapped as a polyline with a 10m buffer created around it. The same attributes will be recorded.

Retirement plantings will be recorded as a shapefile also. Attributes recorded will be:

- number of seedlings
- species
- Year planted

Additional funding has been received from MAF to trial vegetation mapping. This will take place in the Whareama catchment, and will provide a baseline picture of the extent of poplar and willow plantings in the catchment.

Additional monitoring that will take place as part of the WRECI programme will include:

- Mapping of any AGS blocks within the WRECI areas. The attributes will be those set out for the AGS programme.
- A record of plantings and the location carried out will be recorded each year within the plan.

It is not considered likely to be able to demonstrate any noticeable changes in water quality in any of the catchments as a result of the programme because approximately 3% of each catchment will be treated. Therefore monitoring water quality as part of the programme is not considered useful. Monitoring water quality may be suitable as part of the catchment schemes, but with a view to establishing some baseline data for long term trends.

## **9. Reporting**

### **MAF**

Reporting requirements for MAF are stipulated in the contract.

These include:

- six-monthly reports and agreed milestones
- shapefiles for any planting or retirement areas established
- farmer attitude survey completed by May 2012.

### **Internal**

Produce a one page summary of WRECI to inform other sections of GW what the project is about. This will be completed after the implementation strategy is finalised.

Summaries of the amount of erosion prone land that is treated will be produced. This will contribute to reporting on LTCCP targets.

### **Community**

There needs to be regular feedback on the progress of the programmes with the communities involved in catchment programmes. The form and frequency of the reporting should be decided in conjunction with the communities. Ongoing information flow will occur through the use of newsletters and community meetings as outlined in the previous section. This may be sufficient for some catchment communities.