

The following schools have recently applied for and been awarded grants from the Taranaki Tree Trust to enable them to beautify sections of their school property by planting native plants.

Egmont Village
Newall

Mahoe
Pembroke



Civil Defence News

Reminder to schools that the 'Civil Defence Resource Kit for Primary Schools' contains many useful activities for teachers to use. Schools who attended the Civil Defence presentations in 1999 will have these kits. If you haven't obtained one contact Civil Defence. Likewise, the class set of turtle moulds is also available and can be accessed from Civil Defence.

Schools requiring one-off presentations should continue to contact Civil Defence where assistance will be provided subject to staff resources being available.

Bev Raine

Contact Address
45 Robe Street
New Plymouth
Phone 06 758 1110
or 06 758 1890
Email civil.defence@trc.govt.nz



The Youth Environment Summit 2000 is an opportunity for youth in the Asia Pacific region and NZ to come together to discuss the environmental issues that face us. All local secondary schools should consider nominating a 6th or 7th Form student interested in environmental education to attend this important summit.

For an application form contact:

YES 2000 Organising Committee
PO Box 84
Lincoln University
CANTERBURY Fax 03 325 3840

The summit is to be held at Lincoln University from 19-24 November 2000. Course fee is \$375 and includes all accommodation, meals, field trips and course materials. Rotary International have committed support to this project and local Rotary Clubs may support applicants.

Bits'n'Pieces

Fresh Water Biomonitoring Kit

A considerable number of schools now have copies of the 'Living with the River Te Awa' teaching unit. As a component of this involves invertebrate sampling and many teachers are confident at running this activity themselves, I have been encouraged to purchase another full set of equipment for loan.

Included in a large plastic bin are:
10 trays 10 sieves
10 bug boxes 10 thermometers
10 brushes 10 magnifying glasses
Contact Graeme to borrow a kit.

Volcano workshop

On Monday, 3 April about 30 primary and secondary teachers joined the Civil Defence team for a 'mobile workshop' viewing the volcanic history of Mt Taranaki/Egmont.

Stops on the journey were made at East Egmont; Cardiff walkway; Lincoln Road, Inglewood; Airedale Reef, Waitara; and Sutton Road, Onaero. A fascinating feature of the day was the distinct characteristics of the various volcanic events and how these can be followed across the region and as far north as Auckland.

Technical expertise was provided by Dr Brent Alloway from the Institute of Geological and Nuclear Sciences in Wairakei. Brent completed his doctorate researching Mt Taranaki/Egmont.

AN INVITATION

As mentioned in the editorial I would welcome a visit from your staff or syndicate. We have some wonderful resources you could use in your Environmental Education programme and we would welcome the opportunity to share them with you.

Call Graeme at the Taranaki Regional Council and book a visit to:

- the Environmental Display Room
- the Biology laboratory and fish display
- view resource units for teachers
- learn about the functions of the Taranaki Regional Council
- discover the expertise we can gather to support your programme.

Join us for afternoon tea and see what we can offer you! Call today!

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TARANAKI REGIONAL COUNCIL
NEWSLETTER TO SCHOOLS

Welcome to this edition of SITE.

My first term as Information Officer (Environmental Education) has flown by. I must pay tribute to the wonderful staff at the Taranaki Regional Council for making newcomers feel so welcome and assisting them in coming to terms with the functions of the Council.

I am keen to promote all aspects of Environmental Education to schools, and to try to ensure that you are fully aware of the services available from the Taranaki Regional Council. To facilitate this sharing of information I would like to offer staff the opportunity to visit us here in Stratford to see the range of expertise that is available to support your environmental education programmes. I envisage that we might host your staff meeting one afternoon. Perhaps you could come for afternoon tea, view the freshwater laboratory and aquarium and take the opportunity to become familiar with the services you could access from us. Please don't hesitate to contact me if your school or syndicate is interested.

Last term saw the presentation of Environmental Awards to two schools and I congratulate both Mokoia and Omata schools for their commitment to environmental education and to thank them both for inviting the Regional Council to participate in their assemblies.

The summer term saw many groups utilising Mt Taranaki/Egmont as part of their outdoor education programmes. I have thoroughly enjoyed being able to contribute to these programmes through environmental education. The learning opportunities present in the beautiful environment of the National Park are unsurpassed in our region.

Ka kite ano
Graeme Phillips



Schools in the Environment - Autumn 2000 - No.13

Sustainable Land Management

This edition of SITE focuses on another aspect of the Taranaki Regional Council's responsibility - to ensure the sustainable management of our region's natural and physical resources. The Land Management Section have developed a programme to assist approximately 800 hill country property owners to sustainably use their land.



Environmental Awards

Omata and Mokoia Schools have recently been presented with Environmental Awards. The awards recognised the schools' efforts for increasing awareness and understanding of the environment through their environmental education programmes.

Mokoia School

All of the pupils at Mokoia School have contributed to the establishment of garden areas around the school site. Involvement has included planning the gardens, growing the plants and transplanting them into the prepared garden beds. The children have developed skills and learned about their relationship with the earth and the wise use of resources. Local environmental issues have also been studied including a visit to a farm to look at native revegetation.



Omata School

Omata School's bush area has been developed as a learning resource. The children have been involved in controlling the plant and animal pests, a walkway has been formed through the bush area and an outdoor classroom has been established within the natural amphitheatre. The school has also set up a recycling programme to reduce waste and all the children are involved in the care of the grounds.



▲ Ross Allen presenting an Environmental Award to Omata School.

◀ Ross Allen presenting an Environmental Award to Mokoia School.



The Taranaki Regional Council is pleased to advise schools that it has recently released its web page. Schools can find details of the Council and information about the services and resources available by choosing from the topics on the home page. Visit on <http://www.trc.govt.nz>

Answers from page 3: Number cruncher - 1) \$35 500 2) \$37 500 3) \$73, 000, 4) \$857.50 5) 60km 6) \$5.70, \$57, 000. Match the Definition: A:4, B:8, C:5, D:2, E:7, F:1, G:6, H:3.

Beyond the fertile apron of the volcanic ring plain the eastern hill country begins. The landscape is dominated by rolling hill country becoming steeper as we progress further into it. To the north and south the ring plain becomes coastal terraces characterised by their flattish tops. All of this landscape provides problems and issues that are very different to the concerns of the ring plain farmers. This page looks at how some of these problems and issues can be addressed.

Waterways



In the eastern hill country shallow layers of soil cover the dense mudstone and sandstone bases laid down during the undersea formation of our country. The thin layer of soil is prone to slip away from its base when waterlogged or when the vegetation is removed.

In steep country the debris from slips quickly ends up in the waterways at the bottom of gullies. These waterways carry a very high silt loading because of the erodible nature of the soil. As the waterways slow they deposit this silt along their banks and channels. After heavy rain the waterways sometimes overflow onto the floodplain causing the river banks to become water logged and slump into the channel.

Although this is a natural process it can be reduced by keeping waterways free from obstructions. Allowing stock to graze the waterway edges will help keep vegetation to a minimum along the banks. This is in direct contrast to the swift, short rivers on the ring plain, where fencing and planting of stream banks is encouraged.

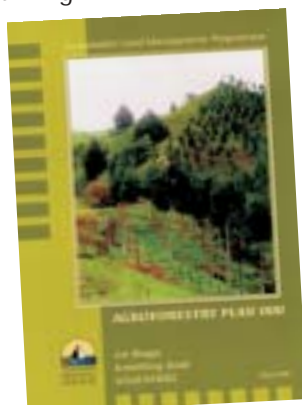
Land Management plans

The Taranaki Regional Council assists hill country farmers to make the best use of different areas of their property. This ranges from increasing stock numbers on flat fertile land to perhaps retiring sections of the farm which are unstable, have inadequate vegetation or are too steep for grazing.

Comprehensive Farm Plan. This looks at all the options for a farm's operation including land and stock management.

Agroforestry Plan. This plan provides options for planting forestry on areas less suited to pastoral use.

Conservation Plan. This deals with specific problems such as a slip on a hillside, and does not require long-term planning.



Developing a Land Management Plan



Surveys show that 83% of farmers have adopted their land management plans as they see the advantages of access to free, high quality advice and on-going support for their programmes.

Managing erosion



A major weapon in preventing large-scale erosion in hill country is to plant trees on land prone to slipping. We must accept, however, that some land cannot sustain forestry development as it is too steep to support the long-term growth of large trees.

There are three options for sustainably managing steep or unproductive land.

Open planting - the trees are widely planted to allow continued grazing of stock among the trees.

Production forestry - the area is planted with trees which are then left to mature for milling.

Fence and retire the land - on very steep unproductive land the farmer can avoid wasting financial resources trying to develop it.

Poplar trees are generally used for soil conservation. There are nearly 300 varieties of poplar, which are useful in the fight against erosion.

Poplar trees:

- are deciduous and allow light in
- absorb surface water
- provide falling leaves for stock fodder and also compost
- provide shade for grazing stock
- can provide timber for future use.



Sustainable land management.

Number cruncher

The Stratford Pole Nursery provides poplar trees for use in erosion control. They will grow 10,000 trees for use by local farmers each year. When initially planted the poplar cuttings are 150mm long and take three years to be ready for harvesting. Each nursery tree produces one 3 metre pole and three 1 metre stakes when it is harvested. A 3 metre pole sells for \$3.55 while a 1 metre stake sells for \$1.25.

1. What is the yearly income for 3 metre poles?
\$
 2. What is the yearly income for 1 metre stakes?
\$
 3. What is the total income for the pole nursery in one year?
\$
 4. A farmer needs 150 3 metre poles and 260 1 metre stakes for his farm. What is the total cost?
\$
 5. If one year's supply of poles and stakes were laid end to end, what distance (in kilometres) would they cover?
..... km
 6. The 150mm poplar tree cost \$1.60 when it was planted. What profit did the Pole Nursery make from each tree?
\$
- What is the Nursery total profit each year?
\$

Dictionary

Use your dictionary or the text on page 2 to find the meanings of these words.

- | | |
|---------|------------|
| erosion | deciduous |
| sustain | compost |
| retire | absorb |
| | vegetation |
| | silt |
| | forestry |
| | develop |



T A C B A N K S Y V
N N O G S P R L A E
A O U R W E L H E G
L I N D V U T R E E
P S T I G A U L H T
F O R E S T R Y I A
L R Y L S L E N L T
O E I A I H T D L I
O P P O P L A R S O
D N S I L T W G C N

Word find

Here are 17 words written forward, up, down and diagonally, see if you can find them.

- | | |
|------------|---------|
| country | silt |
| poplar | flood |
| soil | pasture |
| rivers | hill |
| banks | tree |
| forestry | slip |
| water | erosion |
| vegetation | gully |
| plant | |

Tree Activity

Write **three** sentences that tell us why trees are important.

Collect leaf rubbings from **five different** leaf shapes.

Design a device for protecting a tree from possums

Make a mobile of pictures of things that live on or in a tree

List the names of **10** native trees

The answer is tree. How many questions can you make up?

Trees are important because..... Write three sentences that start with this statement.

Match the word to the definition

- | | |
|----------------|--|
| a) ring plain | 1) excellent at producing |
| b) mudstone | 2) section of riverbank which has collapsed |
| c) debris | 3) variety of tree used for slowing erosion |
| d) slump | 4) large area of flat land around a volcano |
| e) sustainable | 5) material brought down by a slip |
| f) fertile | 6) natural process of land collapse |
| g) erosion | 7) maintaining resources for the future |
| h) poplar | 8) type of foundation material in hill country |

Answers on page 4

Your answer ▼

