



# Wanganui Rating District 2023-2026 Asset Management Plan



West Coast Regional Council

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## **1.0 Purpose of this Document**

The purpose of this document is to summarise the management philosophy that is applied to the Wanganui Rating District including the infrastructure assets and services. This approach ensures that acceptable levels of service are provided in the most cost-effective manner and contribute to the achievement of the community outcomes identified in the West Coast Regional Council's Long-Term-Plan (LTP).

This AMP defines the objectives and performance standards of the Wanganui Rating District for which the West Coast Regional Council bears the maintenance responsibility, including providing a basis upon which the effectiveness can be measured. The key purposes of this AMP are to:

- Provide a history of the Wanganui scheme.
- Convey the long-term strategy for the management of the Wanganui Rating District.
- Provide a tool to assist with management assets in a cost effective and sustainable manner.
- Manage the environmental, service delivery and financial risks of asset failure.
- Demonstrate that the service potential of the rivers and drainage assets is being maintained.

## **2.0 Asset Management Objectives**

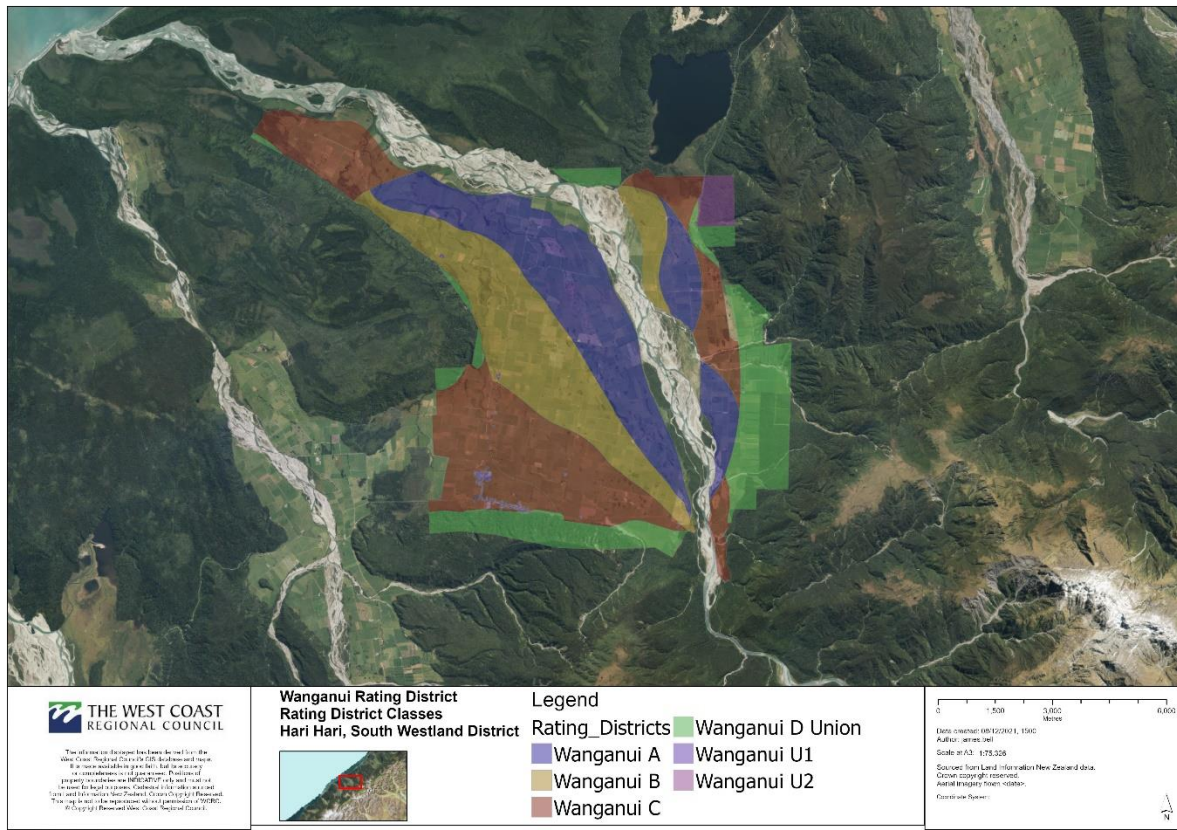
West Coast Regional Council recognises that the Wanganui Asset Management Plan is the fundamental driver of drainage and infrastructure for the scheme. This AMP has been developed in accordance with the Local Government Act 2002, with the first AMP completed in 2003 with three yearly updates or earlier where information indicates a significant change from what is stated in the current AMP.

In order to fulfil the outcomes, vision, goals and objectives of these assets, the West Coast Regional Council have adopted a systematic approach to the long-term management of its assets and services on the Wanganui Rating District by preparing this AMP.

West Coast Regional Council is committed to best appropriate practice asset management in order to achieve the following key objectives:

- Meet the service expectations of the Wanganui community.
- Ensure maintenance activities achieve efficient results with optimal benefits.
- Demonstrate Council's approach to managing risk and meeting growth requirements towards a sustainable future.
- Comply with all statutory requirements.

### 3.0 Wanganui Rating District



### 4.0 Wanganui Rating District Background

#### Wanganui River – Left Bank

Severe flooding of the Hari Hari Flat during the early part of 1913 resulted in the first protection works being carried out on the Wanganui River. A stopbank with wire gabion basket protection was constructed from a point on the hill 200 metres west of the old main road bridge abutment and extended downstream for 400 metres to prevent further flood overflows from causing damage to developed farmland downstream.

There is no record of any further work being carried out until 1958 when Mr. V. Berry constructed a low stopbank on his frontage approximately 8 kilometres below the state highway bridge to prevent overflows from the river ruining his pasture.

In 1960 approximately 5 kilometres below the state highway bridge on Ford Brothers frontage a boulder gabion stronghead was constructed and a stopbank extended upstream for 750 metres to prevent flooding of their property.

In 1962 the Hari Hari Flat Protection Scheme which involved the construction of 4.4 kilometres of stopbanking and 18,000 tonnes of rock protection was approved by Soil Conservation and Rivers Control Council. The estimated cost of the scheme was 36,000 Pounds. A loan of 9,000 Pounds to finance the local share of the scheme work was granted in July 1963. A special rate to pay back the loan and maintain the scheme works was adopted in May 1964.

The new stopbank extended downstream from the old bank completed in 1913 for 4.4 kilometres and involved 52,000 cubic metres of earthworks. Rock protection for this bank was carried out during 1965 and involved approximately 18,000 tonnes of rock placed in various protection works.

The access road up to the Wanganui Quarry was completed during the contract for the acquisition of rock for the scheme.

Approximately 9.5 kilometres below the state highway bridge on Mr V. Berry's frontage a hook groyne and 2.3 kilometres of stopbanking was constructed during 1966. This work was subsidised but was not part of the scheme works at that time.

2.5 kilometres below the state highway bridge 650 metres of stopbanking, hook groyne and training wall was constructed in 1972 to prevent erosion to the main scheme stopbank. 700 metres below the Wanganui Flat Road a stopbank, hook groyne and training wall extending downstream for 1.7 kilometres was constructed in 1974 for the La Fontaine Farm Settlement and others. A stopbank 2.5 kilometres in length connecting V. Berry's bank and the La Fontaine Farm Settlement bank was completed in 1975.

In January 1982, 1.8 kilometres below Ford Brothers stronghead, 200 metres of stopbanking was washed out and was replaced by a hook groyne and training wall. The stronghead of this hook groyne was destroyed by a flood in January 1994.

A stopbank 1.6 kilometres in length connecting Ford Brothers stopbank and V. Berry's stopbank was completed in 1982.

600 metres below the state highway bridge a rock retard was constructed in 1984 to provide protection to the main stopbank.

#### Wanganui River - Right Bank

In 1966 severe erosion on the right bank 2 kilometres below the state highway bridge resulted in 5,000 tonnes of rock being placed on the McGrath frontage. Below the confluence of Evan's Creek, a 100-metre hook groyne with rock protection was constructed in 1969. A rock training wall extending approximately 1 kilometre downstream from the end of the hook groyne was constructed in 1971 and a rail groyne extending a further 700 metres downstream was constructed in 1972. A second hook groyne and stopbank extending downstream for 1.1 kilometres from the one built in 1969 was constructed in 1974.

2.5 kilometres below the state highway bridge a hook groyne and training wall 500 metres in length was completed in 1976. Flooding during 1980 washed the riverbank out on the inside of the hook groyne and a second hook groyne was constructed in 1981. The hook groyne and training wall completed in 1976 was destroyed by flooding during 1985 and replaced by a stopbank.

1.5 kilometres below the state highway bridge on McGrath's frontage a stopbank 240 metres in length with rock protection was completed in 1987.

A revised classification to finance maintenance work in part of the Poerua Valley, Wanganui River, La Fontaine, Hari Hari township and lower La Fontaine drainage schemes was adopted by the Westland Catchment Board in May 1985.

The classification was further revised with the Poerua Valley taken out of the area. This classification was adopted by the Regional Council in April 1993

### Drainage

At the request of the Hari Hari branch of Federated Farmers, an economic assessment of potential areas for development in the Poerua Valley, Evans Creek and Hari Hari areas was carried out by farm management research officers of the Department of Agriculture.

As a result of the assessment the Westland Catchment Board prepared a drainage scheme for the La Fontaine Stream catchment.

The scheme included the reconstruction of La Fontaine Stream and major tributaries as well as internal farm drainage. The estimated cost of the scheme was 9225 Pounds. This scheme was approved by Soil Conservation and Rivers Control Council in November 1959.

The classification for the La Fontaine Drainage Scheme was adopted in April 1961 by the Westland Catchment Board. In 1966 the drainage scheme was extended up to Robertson's Road and including land adjacent to the state highway and the Hari Hari Township. This area was classified as the Hari Hari Township Drainage Scheme.

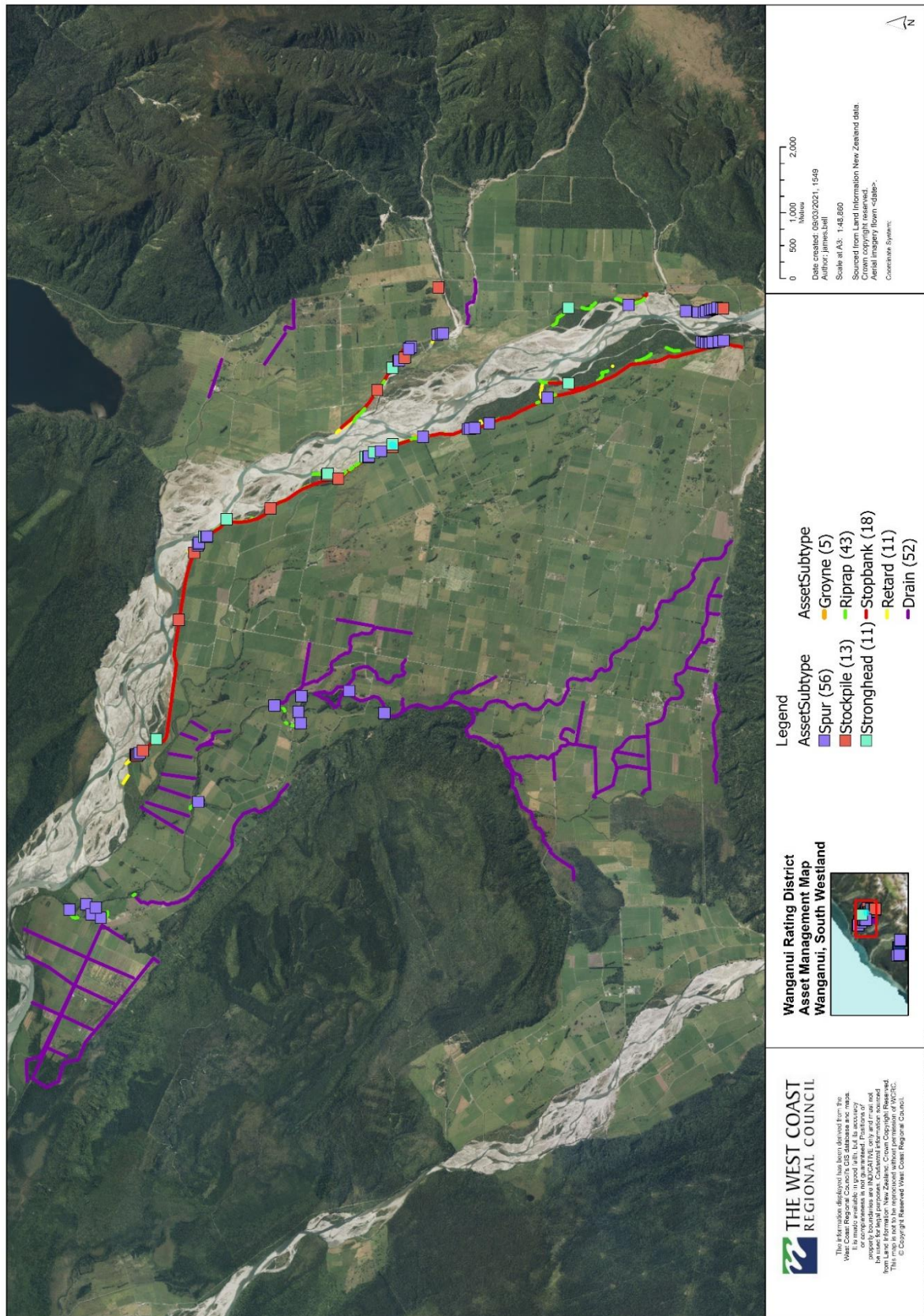
A revised classification to finance maintenance work in part of the Poerua Valley, Wanganui River, La Fontaine, Hari Hari Township and Lower La Fontaine Drainage Schemes was adopted in May 1985.

The classification was further revised with the Poerua taken out of the area. This classification was adopted by the Regional Council in April 1993.

## 5.0 Description of Assets

<b>Asset</b>	<b>Quantity</b>	<b>Unit</b>	<b>Rate</b>
Rock	305,465	Tonne	\$40.00
Rubble	1,200	Tonne	\$37.23
Fill	681,225	m <sup>3</sup>	\$26.00
Stockpiled rock	10,395	Tonne	\$40.00
Excavation	183,440	M <sup>3</sup>	\$8.00
Cleanout	23520	M	\$11.00
<b>Asset Value</b>			<b>\$32,117,166.00</b>
<i>On-costs (15%)</i>			\$4,817,574.90
<i>Resource Consents (2%)</i>			\$738,694.82
<b>Replacement Cost</b>			<b>\$37,673,435.72</b>
<b>Depreciating Assets</b>			
Culverts			\$13,072.90
<b>All Assets Replacement Cost</b>			<b>\$37,686,508.62</b>

## 5.2 Asset Map



**Note: Not all assets have been added to the asset map due to having no spatial data to represent them.**



## 6.0 Existing Standard

The objectives of the Wanganui Rating District are:

1. To reduce bank erosion and flooding on the existing structures between the State Highway Bridge and the end of the stopbank 13 kilometres downstream.
2. To maintain existing creeks and drains included in the La Fontaine and Lower La Fontaine and Hari Hari Township Drainage Schemes to their original plan specifications.

The historic "Existing Standard" was 900mm above the highest known flood. The Council has suggested that an analysis be commissioned to quantify the actual level of protection that the scheme currently provides. However, the rating district has decided that they do not wish to have any new analysis undertaken. Given that there has been no analysis carried out the scheme structures will continue to be maintained to the dimensions that they were originally constructed.

### 6.1 Service Level

The Levels of Service represented in this AMP are described and aligned with community values including affordability, quality, safety, community engagement, reliability, and sustainability. The scheme structures will be maintained to the dimensions that they were originally constructed.

Councils in New Zealand will generally adopt one of three methods for determining the level of service provided by a scheme:

- Agreeing on a scope of physical works with the community without reference to a target capacity or return period (low risk schemes)
- Providing physical works with a level of performance provided in terms of a target capacity (medium risk schemes)
- Providing physical works with a level of performance in terms of a target return period (high risk schemes)

Each of the three methods for determining the level of service may be suitable for a given scheme, provided that communities understand event likelihood, scheme and property vulnerability, potential consequences, and residual risk.

Where council staff have recommended physical works or analysis that did not proceed due to community resistance to cost, then councils are only able to track their service delivery through measures around maintenance works programmes or a general description of channel condition.

### 6.2 Maintenance Programme

An annual maintenance report is prepared each year in consultation with the Wanganui Rating District to adoption by the Council for inclusion in its annual budgets.

In preparing the annual maintenance report the following will be considered:

- An inspection to identify works requiring immediate repair.
- Works anticipated as being required given a 'normal' season.
- Flexibility to meet unbudgeted damages.

An annual report will be presented to the Rating District outlining the condition of the scheme assets and maintenance works and expenditure required for the coming financial year.

### 6.3 Damage Exposure

Erosion works are constructed in a very high energy environment with the purpose of resisting and absorbing some of that energy. It is considered that no matter what the standard of maintenance carried, it is likely that damage will occur from time to time.

An assessment of maximum damage potential was estimated as below:

Event size (AEP)	Value	Damage ratio	Damage exposure	Prudent Reserve	Prudent reserve contribution
10%	\$37,686,509	5%	\$1,884,325	\$1,884,325	100%
5%	\$37,686,509	10%	\$3,768,651	\$2,638,056	70%
2%	\$37,686,509	20%	\$7,537,302	\$3,768,651	50%

It has been deemed, within reason, that all Rating Districts have a prudent reserve target balance that contributes to at least 100% of the damage exposure for a 10% AEP event, 70% for a 5% AEP event and 50% for a 2% AEP event. These percentages define what is an appropriate and acceptable level of risk for Council and the community.

### 6.4 Prudent Reserve

Why do we need a prudent reserve?

- Minimise the financial impact of unplanned works, such as those caused by weather events
- Ensure the rating district is able to contribute funding that is sustainable and affordable
- Ensure Council's debt level is managed, and that borrowing is still available when required
- Ensure the debt levels of the rating district do not exceed the ability to fund the repayments

This target balance for the 'prudent reserve' for this rating district is \$500,000 as agreed by council. This prudent reserve is immediately available. It is likely the current reserve will only cover a portion of the actual cost of the potential damage that could occur.

If an event were to occur and the prudent reserve does not cover the full repair and rebuild cost of the assets, it is understood by the community that the remaining costs will be paid by loan, or the rating district accounts will be in overdraft. In the instance of extreme weather events, NEMA funding and the Councils private insurance will be accessed for cost recovery if the criteria are met. The West Coast Regional Council's insurance policy has a \$250,000 excess. 40% of eligible rebuild costs will be met by this policy.

Below are the key criteria that needs to be met to access the NEMA funding, which can cover up to 60% of eligible rebuild costs

*The provisions for government financial support to local authorities apply whether or not a state of emergency is, or has been, in force*

*Government assistance will not normally be available for assets which receive a subsidy from any other source, unless:*

- *the local authority has adequately protected itself through asset and risk management including mitigation, where appropriate, and the proper maintenance of infrastructure assets, or*
- *the local authority has made sound financial provisions (such as the provision of reserve funds, effective insurance, or participation in a mutual assistance scheme with other local authorities) to a level sufficient to ensure that the local authority could reasonably be expected to meet its obligation to provide for its own recovery*

### **Threshold**

*Threshold for reimbursement; As with other response claims, Government policy is to reimburse 60 percent of the combined eligible costs (response and essential infrastructure costs), above the following thresholds:*

- *0.0075 percent of the net capital value of the city council, district council or unitary authority involved*
- *0.002 percent of the net capital value of unitary authorities where the assets in question are of a type that ordinarily are managed by regional councils, or*
- *0.002 percent of net capital value in the case of regional councils*

## 7.0 Funding

### 7.1 Maintenance

Maintenance is funded by targeted rates, the level of rating being determined each year in the Annual Plan process. This involves:

- a) Preparation of an annual works programme and corresponding budget.
- b) Adoption of the annual works programme and budget.
- c) Discussion of the works report and budget with the ratepayers.
- d) Adoption of final budget in the Council's Annual Plan.

The aim of maintenance is to ensure the infrastructure assets are kept at a standard where they can always perform to their service level. Where rock is required to be placed on an existing infrastructure under direct attack from the river, the protection required to maintain the existing infrastructure at its same service potential would be charged to the scheme maintenance account.

Capital works are generally defined as works which increase the service level of the scheme. Such work would include increasing the design standard or the area covered by a scheme and works to increase security or performance of an erosion control system or structure over and above that identified in the asset plan.

### 7.2 Damage Repairs

Routine damage repairs are funded by a combination of:

- a) Carrying out work as scheduled in annual works programme.
- b) Reprioritising works identified in the annual works programme.
- c) Use of financial reserves.

Major damage repairs would be funded by loans raised by the Council and repaid by targeted rating over a number of years.

### 7.3 Financial Reserves

Financial reserves are held within the rating district account to provide the following:

- a) Meet the costs of unscheduled works.
- b) Enable an immediate response to flood damage repairs.
- c) Prevent major fluctuation in rating levels annually.

The levels of financial reserves held in the rating account are determined by the estimated damage exposure and the likely need for un-programmed works.

## 7.4 Depreciation

The bulk of WCRC's assets comprise bulk formation of excavation, fill and heavy rock protection. These assets are considered to have an infinite Useful Life (UL) with a strategy to maintain in perpetuity. The predominant mechanisms for deterioration are slumping and or storm or flood event damage. In these circumstances the performance and level of service is brought back to specification by remedial and / or emergency works from operational and maintenance budgets. Otherwise, these assets do exist in perpetuity.

From 2023 WCRC have recognized the difference between operational and maintenance expenditure (typically to remediate after an event) and capital expenditure that improves performance or level of service, or reduces risk. The former are not capitalised, the latter are capitalised and are added to the asset register and valuation.

Assets with an infinite Useful Life do not depreciate, so these assets are valued separately as non-depreciating.

Asset components in this category include:

- Excavation
- Cleanout (of natural water courses for utilisation as drains)
- Fill
- Rock protection
- Top course, differentiated from normal road assets in that life and deterioration mechanisms are the same as for the stopbanks they traverse
- Bedding gravel and filter fabric noting that even if fabric deteriorates it would not be replaced unless the stopbank itself was being replaced, or it was being replaced as part of an event remedy operation and maintenance.

Around 3.4%, by replacement cost value, of WCRC's assets are of a nature that will deteriorate, have a limited useful Life, and hence are depreciating. These include:

- Culverts and associated assets
- Constructed assets such as concrete flood walls in Greymouth
- Miscellaneous assets.

## 8.0 Performance Measures

The following procedures may be adopted to ensure the adequacy of maintenance.

Period	Procedure	Performance Measure
Annually	Produce annual works report for the rating district assets to include type of work to be undertaken, quantities, location, and costs.	No reports of channel or creek requiring repairs without an agreed programme of remedial work in progress. Asset maintenance is current as per level of service.
	Organise contracts for agreed scheme work, oversee contract completion and report to Council.	
	Report on works undertaken during the previous financial period to the rating district ratepayers and Council.	
Triennially	Re-measure cross section river profiles to determine whether the riverbed is stable, or aggrading, and to identify management issues or options.	Report to Council and ratepayers on revaluation of assets and the Plan review.
	Revaluation of the asset schedule to include any additional excavation and channel clearance and bank protection works over the three-year period.	
	Review this Asset Management Plan	
10-yearly	Flood modelling will be undertaken to identify a range of level of services.	Report to council and ratepayers.

## 8.1 AMP Review and Monitoring

This plan is a living document, which is relevant and integral to daily activity. To ensure the plan remains useful and relevant the following on-going process of AMP monitoring and review activity will be undertaken:

- Formal adoption of the AMP by the West Coast Regional Council.
- Review and formally adopt Levels of Service to comply with the Rating District committee.
- Revise this AMP three yearly prior to Long Term Plan (LTP) to incorporate and document changes to works programmes and outcome of service level reviews.
- Quality assurance audits of asset management information to ensure the integrity and cost effectiveness of data collected.
- Peer review and external audits will be undertaken to assess the effectiveness with which this plan meets corporate objectives. Periodic internal audits will be undertaken to assess the adequacy of asset management processes, systems and data and external audits will be undertaken to measure asset management and performance against 'best practice'.