

STAFF REPORT

TO: Chairman and Members, Engineering Services Committee

FROM: Philip Drummond, Asset Engineer Rivers/Roads

REFERENCE: R600

DATE: 2 October 2006

SUBJECT: **TDC RIVERS RATING REVIEW**

1 PURPOSE

The purpose of this report is to inform Council of the results of the low detail study into the effectiveness of the current river rating system.

2 DATA ACQUISITION AND ANALYSIS

Records of detailed income and expenditure for the last five years have been analysed. Earlier records have not been used due to a lack of confidence in the accuracy of detailed breakdown. The table below records the data used to evaluate the current system. Some of the data is not believed to be highly accurate because, for example, River Z expenditure is based on a cost sharing principle and many of the landowner costs are not monitored through TDC accounting records.

3 FINDINGS OF THE ANALYSIS

- The Targeted Rates are generated based on land values and the adopted split. Fifty percent of the total river rate income comes collectively from the River X and Y rating areas. The other fifty percent of the river rate comes from the River Z rating area.
- The current River Z rating areas are expected to transfer a portion of the target rate to be expended on activities along the X and Y classified river lengths. This is in recognition of the principle that people in those areas away from the major classified rivers gain a benefit from the X and Y classified river works programme. There is clear evidence that Z rates are transferred in this direction.
- The X rated areas and X classified rivers appear to have received little or no transfer from Z rates in earlier years. More recently land values have tipped the situation the other way and the X rated areas have generated more income than expenditure going back into the X classified rivers. Expenditure in the X classified rivers has ranged from 72% up to 102% of the X rate income during the period of analysis. In 2006/2007 up to 25% of X rate income is now being transferred to other activities within river works programme.

- The Y rated areas appear to have received a consistent transfer of other river rates throughout the period of analysis. Expenditure in the Y classified rivers has exceeded the Y rate income by 130% to 170% in the last 5 years, and is projected to be 136% in 2006/2007.

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07 (budgets only)
River X Income	260,000*	270,000*	291,034	304,434	417,957	475,558
River X Expenditure	229,836	275,791	296,068	293,307	298,997	355,770
River Y Income	235,535	238,000	258,584	272,267	376,934	403,932
River Y Expenditure	545,841	569,943	699,353	701,940	882,254	953,059
River Z Income	495,535	508,000	549,617	576,701	794,891	879,490
River Z Expenditure	39,636	73,098	95,771	117,816	80,864	102,750
Total Income	991,070	1,016,000	1,099,235	1,153,402	1,589,782	1,758,980
Total Expenditure	815,312	918,832	1,091,191	1,113,062	1,262,115	1,411,579
Comparison of Income & Expenditure 2001 - 2007						

* Proportioning of X & Y Income figures (alone) for 2001-02 and 2002-03 are of lower reliability

4 DISCUSSION

Council is requested to consider;

- There are sections of private land within stopbanks that have a River Y rating as they do not receive the benefit of the stopbank protection. There are other areas within stopbanked rivers that are classified as River X. (*Appendix 1 shows the current River Classification lengths.*)
- Individual catchments have not yet been analysed and will require detailed information from the Rating database to complete a GIS based tool to achieve this. The process is time consuming but has been successfully trialled.
- There is a need to evaluate whether there is a difference between large River Y rated berms (Lower & Upper Motueka, Takaka) as compared with smaller River Y rated berms (Tadmor, Sherry, Waingarō), and whether this should be reflected by a separate rating differential.
- The additional 58 km of river lengths proposed to be included in a review of the Classified River system fall into the smaller River Y category. The reasons for considering these additional areas were detailed in staff information reports at the last two committee meetings.
- The GIS based analysis tool is the most cost effective way to run a number of River Rating Boundary scenarios to provide information that will allow us to

meet the current (or any variation of) rating apportioning the River Rate Targets for future years.

Work is continuing to produce robust comprehensive analysis of improved rating options. However, realistically this will not be achieved before next year's Draft Annual Plan timetable. At best, Council may be able to give consideration to amending the X, Y and Z rating differentials.

5 RECOMMENDATION

THAT this report be accepted by the Engineering Services Committee as a preliminary analysis of the recent performance of the river rating system.

Philip Drummond
Asset Engineer Rivers/Roads

APPENDIX 1

Table 1 Classified Rivers Network From AMP 2006

River / Stream / Drainage System	Class	Maintained Length (km)	Stopbank length (km)
Waimea			
Redwoods Valley Stm.	Y	5.75	-
Redwoods Valley Overflow.	Y	3.0	-
Eves Valley Stm.	Y	9.5	-
O'Connors Crk	Y	5.0	-
Wairoa R.	Y	-	-
Wai iti R.	Y	30.15	1.4
Waimea R. (incl Wairoa)	X	13.25	18.1
Upper Motueka			
Motupiko R.	Y	14.5	-
Tadmor R.	Y	33	-
Sherry R (including Wangapeka).	Y	14.5	-
Upper Motueka R.	Y	20	-
Lower Motueka			
Dove R.	Y	18.6	-
Brooklyn Stm.	X	3.0	5.0
Lower Motueka R.	X	28.0	26.2
Riwaka Delta			
Little Sydney D.	Y	4.25	-
Scotts D.	Y	0.8	-
Hamilton D.	Y	3.0	-
Riwaka R.	X	5.0	8.25
Moutere			
Moutere R.	Y	12.0	-
Moutere Crk Ditch	Y	7.0	-
Pawley Crk.	Y	2.25	-
Aorere			
Kaituna R.	Y	5.75	-
Aorere R.	Y	12.0	-
Takaka			
Waingarō R.	Y	5.25	-
Anatoki R.	Y	5.25	-
Takaka R.	Y	28.0	-
Buller			
Buller R.	Z	-	-

The balance of the main waterways in the Tasman District are the general Z classifications which are not part of the managed catchment.