

1935.
NEW ZEALAND.

DEPARTMENT OF LANDS AND SURVEY.
SWAMP DRAINAGE.

REPORT FOR THE YEAR ENDED 31st MARCH, 1935, TOGETHER WITH STATEMENTS OF ACCOUNTS.

Presented to both Houses of the General Assembly pursuant to Section 13 of the Swamp Drainage Act, 1915.

Department of Lands and Survey,
Wellington, 1st July, 1935.

SIR,— In pursuance of section 13 of the Swamp Drainage Act, 1915, I have the honour to forward the report of the Chief Drainage Engineer covering operations on lands proclaimed under the Swamp Drainage Act and amendments.

I have, &c.,
W. ROBERTSON,
Under-Secretary for Lands.

The Hon. Sir E. A. Ransom, Minister of Lands.

REPORT OF CHIEF DRAINAGE ENGINEER.

SIR,— I have the honour to submit my annual report on the areas proclaimed under the Swamp Drainage Act, 1915, and its amendments.

KAITAIA DRAINAGE AREA (61,430 ACRES), MANGONUI COUNTY.

Maintenance of completed drains, stop-banks, &c., and some repairs to the Whangatane Spillway were the principal works carried out this year. Some fallen trees were removed from the Kaitaia River, and one of the floating Priestman dredges was dismantled and the machinery placed on the river-bank.

Rainfall, &c.—Rainfall and river-gauge readings were taken throughout the year as shown on schedule hereunder :—

RAINFALL AND RIVER-GAUGE READINGS AT KAITAIA FOR YEAR ENDING 31ST MARCH, 1935.

Month.	Rainfall (Inches).	Wet Days.	Highest Rain- fall for Twenty-four Hours (Inches).	Kaitaia River Gauge Reading.	
				Highest.	Lowest.
1934.					
April	2·85	12	0·88	60·4	52·1
May	5·36	12	1·69	61·3	52·8
June	9·54	18	3·43	69·5	52·9
July	8·44	17	2·96	69·4	54·9
August	8·31	13	2·08	69·0	54·8
September	6·33	14	1·60	64·2	54·1
October	5·12	14	1·87	63·2	53·6
November	2·76	14	1·47	65·5	53·4
December	6·92	14	2·90	66·8	53·1
1935.					
January	1·80	6	1·08	53·7	52·8
February	8·55	16	2·38	68·1	52·7
March	5·99	15	2·58	67·2	53·3
Totals	71·97	165			

The year was one of exceptionally heavy rainfall and frequent flooding, but in spite of abnormal rainfalls the flood-levels recorded in the flat portion of the drainage area did not approach the levels reached in previous years. On numerous occasions a large volume of water was passed by the Whangatane Spillway, and this reduced flood-levels generally by approximately 3 ft. Overflow from the Kaitaia River at Johnson's corner occurred on two occasions, but elsewhere on the Kaitaia Flats the river was confined to its channel at these times and throughout the year.

Whangatane Spillway.—This channel was running to capacity on several occasions, and some damage was caused to the concrete floor at the intake. Temporary repairs were effected between floods, but some more extensive work will eventually have to be carried out to arrest scour above and below the intake.

Drains.—40 m. 57 ch. of drains were cleared within the period, mostly during the autumn of 1934, and contracts are now under way for clearing approximately 50 m. of drain, which will be completed in April. No new drains or improvement to drains were undertaken, and clearing of weeds and slips is the only work being carried out.

Kaitaia River.—A small amount of work was carried out above Kaitaia in clearing the river of fallen trees. Many poplars and other trees are growing on the banks, and these fall into the channel as they become top-heavy and where scour takes place. It is essential that they be removed to prevent blockage of the channel, and this work is carried out as required.

Plant.—Dredge No. 7 was dismantled, and machinery stored on the river-bank. The pontoon is in a state of decay, but has been beached and securely moored. Any other plant and tools which could be used on small-farms work have been transferred as required.

Proposals for Ensuing Year.—Maintenance of drains is the only work proposed to be carried out next year, but the position at Whangatane Spillway intake requires watching and may necessitate some further work at any time, depending on the frequency and volume of flooding.

Works Expenditure.—The total expenditure for the year was £1,279 1s. 4d.

Drainage Rates.—Rates struck amounted to £3,969 10s. 7d., and £1,929 4s. 3d. was collected.

HIKURANGI DRAINAGE AREA (50,000 ACRES), WHANGAREI COUNTY.

Rainfall.—The rainfall throughout the year was in excess of that usually experienced. The year's total recorded at the Apotu Camp gauge was 83.67 in., and on seven separate days rain in excess of 2 in. was recorded.

Floods.—On five occasions the Jordan Bridge stage reached an elevation of 31 ft., and early in March a maximum stage of 32 ft. was experienced, being the highest for five years. These floods have been simultaneous generally with the severe flooding that has occurred in the Northern Peninsula during the past twelve months.

Data.—Data of precipitation at various stations of water, stages, &c., have been collected continuously and have been plotted in graph form.

Construction Work.—Construction work through the year has been on the Wairua River near Lewis's Bridge, and also in improvement to the Lower Okarika diversion. This work ceased towards the middle of November.

Excavator Work.—Wairua River.

Main Diversions.—No work has been carried out on these.

Main Diversion and Spillways.—No work has been carried out on same.

Up-river Diversions.—Nos. 12 and 14 drag-lines have carried out improvement by deepening and by widening to No. 5 diversion.

River-improvement.—(a) Purua to Lewis's Bridge. No. 12 Bucyrus has carried out improvements to the river-channel from 5 m. 77 ch. to 6 m. 51 ch. to Lewis's Bridge.

(b) Lewis's Bridge to Jordan Bridge. No. 14 Bucyrus has carried out improvements to the river-channel from 6 m. 30 ch. to 8 m., and No. 12 Bucyrus has eased back the right bank at 7 m. 26 ch. near the entrance to No. 6 diversion.

Canal-improvement.—No. 14 Bucyrus has improved, by widening and deepening, the first 20 ch. of the Okarika diversion.

Hand Work.

Okarika Diversion.—Hand work has been done from 20 ch. to 38 ch. to carry the effect of the drag-line work up to the outlet through Sections 7, 12, and 11.

Ngararatunua Canal.—Hand work was done in removal of poaquatica grass, and minor improvements where required.

Maintenance.—Contracts for drain-maintenance have been advertised, and work will commence early in April, 1935.

Plant and Machinery.

Bucyrus Plant.—Nos. 12 and 14 excavators have been working as drag-lines on river-improvement, &c. Wear-and-tear has been excessive only in respect of buckets and wire rope in grappling with timber and rock under water.

No. 13 Bucyrus.—This excavator is parked at Apotu Camp.

No. 26 Dipper.—This excavator is stored at Apotu.

No. 3 Priestman.—The machinery, &c., of this excavator is stored at Apotu. The pontoon is used on the river for transport of the drag-lines.

Drilling and Compressor Plant.—This plant remains stored at Apotu.

Trucking Plant.—No use of this plant has been made.

Trucks and Cars.—One 30 cwt. truck and two cars have been used and serviced through the year.

Workshops.—These have been staffed, as occasion has demanded, to facilitate bucket and machinery repairs, &c.

Other Works.

Survey Work.—Levels, cross-sections, &c., have been taken as required.

Relief Works.—For the first few days of the year some sixty Hikurangi men were still on the Otonga, Riponui, and Okarika areas. Arrangements have recently been completed for some twelve No. 5 Scheme Hikurangi men to commence improvements to the stream that traverses Storrar's, Palmer's, and Munro's, near Hikurangi Mountain.

Closing-down of Works.—All items of plant and tools, save boats and punts, which are moored in the river, have been returned to Apotu Camp for storage. Some workmen's quarters have been dismantled and all usable corrugated iron transported to Kaitaia for use on small-farm buildings. Comprehensive lists of all plant and stores have been compiled for the purposes of possible disposal of these items.

Works Expenditure.—The expenditure for the year totalled £4,182 0s. 6d.

WAIHI DRAINAGE AREA (20,000 ACRES), TAURANGA COUNTY.

Work in this area was again confined exclusively to the maintenance of existing drainage outfalls, stop-banks, and flood-gates.

A Monighan dredge was employed for a short period removing an accumulation of silt from the southern portion of the Wharere Canal, sufficient depth being dredged to provide a basin to trap the silt from the higher reaches. The distance dredged was 12 ch., and 5,280 cubic yards of spoil was moved.

The hand drains, totalling 37 m. 73 ch., were cleaned during the year, and the growth was removed from several lengths of dredged canals. A short length of stop-bank on the west bank of the Wharere Canal was raised.

Improvements to the drains and the clearing of growth was proceeded with by the flax company leasing the area east of the Wharere Canal, but no milling was done during the year.

Development work was proceeded with by the Department on the areas of surrendered flax lease west of the Wharere Canal, totalling 930 acres. The progress made in grassing these areas is very encouraging. A total of 402 acres has been grassed, and these farms are being fully equipped for dairying in the coming season. Stock to assist consolidation are being grazed on the balance of the area.

Expenditure for the year totalled £536 14s. 2d. Drainage rates struck totalled £1,537 1s. 4d., and £745 8s. 2d. was collected.

POUKAWA DRAINAGE AREA (13,567 ACRES), HAWKE'S BAY.

The work for the past year was confined to the completion of deepening the formed outlet from the lake, and, late in the period, the cleaning of drains at the south end of the lake was commenced.

Expenditure was £176 10s. 8d. Rates struck totalled £1,389 1s., and £882 2s. 1d. was collected by the District Office, Napier.

I have, &c.,

R. G. MACMORRAN,

Chief Drainage Engineer.

The Under-Secretary for Lands, Wellington.

SWAMP LAND DRAINAGE SCHEMES.

RATE ACCOUNTS FOR THE YEAR ENDED 31ST MARCH, 1935.

KAITAIA DRAINAGE AREA.

Special Rate Accounts : Capital.

<i>Dr.</i>	Rural Subdivision.		Town Subdivision.		<i>Cr.</i>	Rural Subdivision.		Town Subdivision.	
	£	s. d.	£	s. d.		£	s. d.	£	s. d.
To Transfer to Reserve Fund	364	13 6	49	16 9	By Balance	567	10 9	12	15 2
Interest charge	2,335	6 6	401	3 3	Rates levied	3,325	9 3	460	3 3
Remissions	13	4 3	17	13 1	Less rebate	600	5 5	..	..
Balance	786	9 4	25	7 2		2,725	3 10	21	1 10
					Penalty, 10 per cent. unpaid rates	206	19 0	..	..
						£3,499	13 7	£494	0 3

General Rate Accounts : Maintenance.

<i>Dr.</i>	Rural Subdivision.		Town Subdivision.		<i>Cr.</i>	Rural Subdivision.		Town Subdivision.	
	£	s. d.	£	s. d.		£	s. d.	£	s. d.
To Balance	40	18 8	..	..	By Balance .. .. .	..	..	53	4 0
Cost of maintenance (less subsidy) ..	580	0 0	49	10 2	Rates levied (less subsidy)	684	14 3	99	3 2
Remissions	3	6 3	4	13 11	Penalty, 10 per cent. unpaid rates ..	49	5 3	4	11 3
Balance	109	14 7	102	14 4		£733	19 6	£156	18 5

NOTE.—Gross maintenance costs (£1,094 10s. 2d.) were subsidized from Consolidated Fund by £465.

WAIHI DRAINAGE AREA.

Special Rate Accounts : Capital.

<i>Dr.</i>	Pukehina Ward.		Kaikokopu Ward.		<i>Cr.</i>	Pukehina Ward.		Kaikokopu Ward.	
	£	s. d.	£	s. d.		£	s. d.	£	s. d.
To Balance .. .. .	..	..	48	0 8	By Balance	607	3 11	..	..
Remissions .. .. .	..	..	2	3 10	Rates levied	374	2 0	389	17 0
Transfer to Reserve Fund	31	18 2	47	17 3	Penalty, 10 per cent. unpaid rates ..	37	8 2	32	0 8
Interest charge	243	1 10	364	12 9	Balance .. .. .	..	..	40	16 10
Balance	743	14 1	..	..		£1,018	14 1	£462	14 6

General Rate Accounts : Maintenance.

<i>Dr.</i>	Pukehina Ward.		Kaikokopu Ward.		Central Ward.		<i>Cr.</i>	Pukehina Ward.		Kaikokopu Ward.		Central Ward.	
	£	s. d.	£	s. d.	£	s. d.		£	s. d.	£	s. d.	£	s. d.
To Cost of maintenance	15	9 0	329	15 6	255	3 0	By Balance	655	3 8	604	13 1	209	15 2
Remissions .. .. .	..	..	2	2 3	451	11 7	Rates levied	122	4 4	290	12 10	364	18 8
Balance	774	3 6	585	9 11	..	..	Penalty, 10 per cent. unpaid rates ..	12	4 6	22	1 9	26	8 11
							Balance .. .. .	..	..	..	..	105	11 10
								£789	12 6	£917	7 8	£706	14 7

POUKAWA DRAINAGE AREA.

Special Rate Account : Capital.

<i>Dr.</i>	£		s. d.		<i>Cr.</i>	£		s. d.	
	£	s. d.	£	s. d.		£	s. d.	£	s. d.
To Remissions	19	15 10	By Balance .. .. .	..	..	131	13 3
Transfer to Reserve Fund	122	15 11	Rates levied .. .. .	..	..	1,233	3 10
Interest charge	1,062	9 1	Penalty, 10 per cent. unpaid rates ..	..	..	55	5 0
Balance	215	1 3					
			£1,420	2 1				£1,420	2 1

General Rate Account : Maintenance.

<i>Dr.</i>	£		s. d.		<i>Cr.</i>	£		s. d.	
	£	s. d.	£	s. d.		£	s. d.	£	s. d.
To Remissions	2	3 6	By Balance .. .. .	..	..	150	16 6
Balance	290	10 9	Rates levied .. .. .	..	..	135	17 2
			£292	14 3	Penalty, 10 per cent. unpaid rates ..	..	..	6	0 7
								£292	14 3

SWAMP LAND DRAINAGE SCHEMES—*continued.*

BALANCE-SHEET AS AT 31ST MARCH, 1935.

<i>Liabilities.</i>				<i>Assets.</i>			
		£	s. d.			£	s. d.
Capital Account, Public Works Fund	..	689,541	9 2	Kaitaia Drainage Area—			
Reserve : Repayment capital costs—				Allocated cost of works on which			
Kaitaia Drainage District—				rates are levied—			
Rural subdivision	£ s. d.			Rural subdivision ..	60,000	0 0	
Town subdivision	1,657 14 3			Town subdivision ..	8,200	0 0	
		1,884	5 4				68,200 0 0
Waihi Drainage District—				Excess cost of works not recoverable ..	155,518	9 1	
Pukehina subdivision ..	170 1 0			Interest Account : Proportion chargeable to district ..	123,145	8 9	
Kaikokopu subdivision ..	255 1 7						278,663 17 10
		425	2 7	Waihi Drainage Area—			
Poukawa Drainage District ..	343 13 8			Allocated cost of works on which			
		2,653	1 7	rates are levied—			
				Pukehina subdivision ..	5,000	0 0	
Rate Accounts—				Kaikokopu subdivision ..	7,500	0 0	
Special Rate Accounts : Capital—				Central subdivision ..	50,000	0 0	
Kaitaia Drainage District—							62,500 0 0
Rural subdivision	£ s. d.			Excess cost of works not recoverable ..	23,809	3 1	
Town subdivision	786 9 4			Interest Account : Proportion chargeable to district ..	39,058	14 3	
	25 7 2						62,867 17 4
		811	16 6	Poukawa Drainage Area—			
Waihi Drainage District : Pukehina subdivision ..		743	14 1	Drainage works ..	15,872	8 5	
Poukawa Drainage District ..		215	1 3	Interest Account : Proportion chargeable to district ..	2,868	15 11	
		1,770	11 10				18,741 4 4
General Rate Accounts : Maintenance—				Hikurangi Drainage Area—			
Kaitaia Drainage District—				Drainage works ..	245,656	5 10	
Town subdivision ..	£ s. d.			Interest Account : Proportion chargeable to district ..	110,434	18 10	
Rural subdivision ..	102 14 4						356,091 4 8
	109 14 7			Mangawai Drainage Area—			
		212	8 11	Drainage works ..	1,877	19 3	
Waihi Drainage District—				Interest Account : Proportion chargeable to district ..	1,206	7 0	
Pukehina subdivision ..		774	3 6				3,084 6 3
Kaikokopu subdivision ..		585	9 11	Harihari Drainage Area—			
		1,359	13 5	Drainage works ..	4,355	2 11	
Poukawa Drainage District ..		290	10 9	Interest Account : Proportion chargeable to district ..	2,441	6 5	
		1,862	13 1				6,796 9 4
Sundry creditors—				Buildings ..			1,505 0 0
Miscellaneous ..		381	12 7	Wharves ..			62 11 11
Departmental ..		1	12 10	Plant and machinery ..			29,779 15 1
		383	5 5	Loose tools ..			334 11 11
Rents charged in advance ..		223	0 0	Live-stock ..			2 0 0
Payments in advance—				Fuel ..			11 10 3
Rent ..		2	0 3	Stores on hand ..			4,290 6 2
Rates ..		3	12 2	Sundry debtors for rates—			
		5	12 5	Drainage District.			
Suspense Account ..			0 6 0	Capital.			
Writings-off in Suspense ..			171 1 0	£ s. d.			
Treasury Adjustment Account ..		231,971	19 4	Kaitaia ..	10,323	3 9	3,095 15 7
				Waihi ..	4,115	19 3	5,908 17 3
				Poukawa ..	1,619	18 8	176 9 0
							1,796 7 8
		£928,582	19 10	Sundry debtors—			
				Rent under section 4 (2), Swamp Land Drainage Amendment Act, 1926 ..			1,015 18 3
				House-rent ..			27 15 10
				Law-costs ..			341 10 7
				Miscellaneous ..			72 8 6
				Departmental ..			87 4 10
							1,544 18 0
				Rate Account—			
				Special Rate Account—Capital—			
				Waihi Drainage District : Kaikokopu subdivision ..			40 16 10
				General Rate Account—Maintenance—			
				Waihi Drainage District : Central subdivision ..			105 11 10
				Postponed rent ..			17 19 10
				Premiums on conversion ..			204 0 0
				Revenue Account : Waihi Drainage District, central ward ..			8,314 6 5
				Losses in Suspense ..			171 1 0
				Cash in transit from Post-office ..			13 7 4
							£928,582 19 10

W. ROBERTSON, Under-Secretary for Lands.
WM. E. SHAW, Accountant.

I hereby certify that the Rate Accounts and Balance-sheet have been duly examined and compared with the relative books and documents submitted for audit, and correctly state the position as disclosed thereby, subject to the comment that no charge for the cost of exchange on payments made in London is included in the Account, and to the accounts of the Auckland Office and Chief Drainage Engineer, the audit of which has not yet been completed by the local Audit Inspector, being in agreement with the Head Office books.—J. H. FOWLER, Deputy Controller and Auditor-General.

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