Public Works (1898) Department.

Print Exempted

G.O., No. 932 & 933

DATED 2nd Dec. 98

25/11/98

[Despatch Abstract.]

Financial Results of Irrigation & Navigation Works. for 1897-98

Orders that the Statements of ~~Navigation~~ for 1897-98, with note thereon by the Chief Engineer for Irrigation be forwarded to the Govt of India

Financial Results of Irrigation & Navigation Works.

Forwarding Copy of Govt of India Endorsement No. dated the for 1897-98.

[P. W. 38. 1,000-12-4-98.]

Indexed.

BACK PAPERS.

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G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

IRRIGATION.
ACCOUNT.

Government {1898} of Madras.

PUBLIC WORKS.

Recd. } 1898. *Enclosures*

Regd. } *Spare copies*

G.O., Nos. 932, 933 I., 3rd December 1898.

DECEMBER.

Financial Results of Irrigation and Navigation Works

Forwarding copy of Proceedings embodying the statements of — for 1897-98.

ENCLOSURES.

MADRAS.

STATEMENT showing the Financial Results of Irrigation Works for, and up to end of, 1897-98.

TABLE I.—Principal Results of operations for the year ended 31st March 1898.

Irrigation Works.	Mileage in operation.		Direct capital outlay during the year 1897-98 (including cost of establishment and tools and plant).	Gross receipts, direct and indirect, from all sources.	Working expenses.			Net revenue (excluding charges for interest).		Interest at 4 per cent. on direct capital outlay at commencement of year and at 2 per cent. on outlay during the year.
	Main canal.	Distributaries.			Direct.	Indirect.	Total.	Amount.	Percentage on total direct and indirect capital outlay.	
1	2	3	4	5	6	7	8	9	10	11
MAJOR WORKS.	MILES.	MILES.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.
Irrigation Works.										
Gódávari delta system	503	1,905	78,81	31,60,43	6,43,00	32,26	6,75,26	24,85,17	19·15	4,41,45
Kistna do.	329	1,614	3,88,99	24,74,79	7,06,79	29,73	7,36,52	17,38,27	13·18	4,86,25
Pennér anicut system	22	121	11	1,64,60	19,10	1,27	20,37	1,44,23	7·59	65,90
Sangam do.	9	295	18,40	1,87,27	39,88	5,49	45,37	1,41,90	3·68	1,25,67
Kurnool-Cuddapah canal	190	313	4,14	1,56,22	1,19,65	4,40	1,24,05	32,17	·14	8,68,53
Barúr tank	20½	11¼	..	9,62	3,56	14	3,70	5,92	1·39	16,09
Cauvery delta system	844	1,250	1,36,05	9,63,40	62,40	6,11	68,51	8,94,89	44·86	71,92
Srivaikuntam anicut system	28	62	8,22	1,14,49	32,85	1,45	34,30	80,19	5·44	54,66
Periyár project	36	80	1,62,83	1,12,87	87,88	1,69	89,57	23,30	·27	3,28,46
Total	1,981½	5,651¼	7,97,55	73,43,69	17,15,11	82,54	17,97,65	55,46,04	8·40	24,58,93
Protective Works.										
Rushikulya project	80	119	1,44,01	61,98	35,92	86	36,78	25,20	·54	1,67,33
Total, Major Works	2,061½	5,770¼	9,41,56	74,05,67	17,51,03	83,40	18,34,43	55,71,24	7·88	26,26,26
MINOR WORKS AND NAVIGATION.										
Irrigation Works.										
Chembrambakam tank	27	..	2,82	28,53	— 21	— 4	— 25	28,78	3·85	25,32
Pálár anicut system	163	127	6,65	1,47,83	43,71	97	44,68	1,03,15	4·98	78,53
Pelandorai anicut system	39	24	49,51	32,92	14,62	31	14,93	17,99	3·26	19,30
Lower Coleroon anicut system	350	546	90,33	2,98,31	39,51	63	40,14	2,58,17	31·94	29,65
Madras water-supply and Irrigation extension project	10	..	..	28,27	2,58	21	2,79	25,48	1·45	60,63
Shatiatope anicut system	41	149	29,39	1,08,46	18,02	34	18,36	90,10	53·33	6,00
Vriddhachalam do.	33	16	..	16,20	3,72	8	3,80	12,40	24·92	1,94
Mehamattur do.	15	9	..	14,33	2,84	6	2,90	11,43	16·09	2,77
Tirukkóyilúr do.	137	26	..	38,98	15,62	36	15,98	23,00	9·04	9,92

Statement showing the Financial Results of Irrigation Works for, and up to end of, 1897-98—*cont.*

Table I.—Principal Results of operations for the year ended 31st March 1898—*cont.*

Irrigation Works.	Surplus revenue after paying interest on direct capital outlay.		Excess charge including interest on direct capital outlay.		Area of land irrigated during the year.			Gross receipts per acre irrigated, due to new works.	Working expenses (excluding interest) per acre irrigated, due to new works.	Percentage of working expenses on receipts.
	Amount.	Percentage on total sum at charge.	Amount.	Percentage on total sum at charge.	Due to old irrigation works.	Due to new irrigation works.	Total.			
1	12	13	14	15	16	17	18	19	20	21
MAJOR WORKS.	RX.		RX.		ACS.	ACS.	ACS.	RX.	RX.	
Irrigation Works.										
Gódávari delta system	20,43,72	(*a*) ..	..	..	154,560	644,875	799,435	·49	·10	21·37
Kistna do.	12,52,02	(*a*) ..	..	..	71,269	449,104	520,373	·55	·16	29·76
Pennér anicut system	78,33	9·04	..	..	42,136	28,328	70,464	·58	·08	12·37
Sangam do.	16,23	·36	..	..	56,237	20,040	76,277	·93	·23	24·23
Kurnool-Cuddapah canal	..	..	8,36,36	2·39	..	47,008	47,008	·33	·26	79·41
Barúr tank	..	..	10,17	1·75	1,847	2,574	4,421	·87	·14	38·46
Cauvery delta system	8,22,97	(*a*) ..	..	..	777,401	212,407	989,808	·45	·03	71·11
Srivaikuntam anicut system	25,53	1·76	..	..	20,465	21,203	41,668	·54	·16	29·97
Periyár project	..	..	3,05,16	3·00	61,092	28,051	89,143	·41	·32	79·36
Total	30,87,11	37·54	..	..	1,185,007	1,453,590	2,638,597	·50	·12	24·48
Protective Works.										
Rushikulya project	..	..	1,42,13	2·54	39,008	28,310	67,318	·22	·13	59·34
Total, Major Works	29,44,98	21·32	..	..	1,224,015	1,481,900	2,705,915	·50	·12	24·77
MINOR WORKS AND NAVIGATION.										
Irrigation Works.										
Chembrambakam tank	3,46	·45	..	..	11,285	4,406	15,691	·65	..	..
Pálár anicut system	24,62	·86	..	..	67,344	30,476	97,820	·49	·14	30·22
Pelandorai anicut system	..	..	1,28	·12	2,097	8,115	10,212	·41	·18	45·26
Lower Coleroon anicut system	2,28,52	(*a*) ..	..	..	44,637	68,301	112,938	·44	·06	13·46
Madras water-supply and Irrigation extension project	..	..	35,15	1·09	6,340	4,047	10,387	·70	·07	9·87
Shatiatope anicut system	84,10	(*a*) ..	..	..	7,037	26,675	33,712	·41	·07	16·93
Vriddhachalam do.	10,46	(*a*) ..	..	..	2,279	4,243	6,522	·38	·10	23·46
Mehamattur do.	8,66	9·85	..	..	460	3,560	4,020	·40	·08	20·24
Tirukkóyilúr do.	13,08	8·71	..	..	15,790	10,232	26,022	·38	·16	41·00

(*a*) Percentages on *minus* sums have been omitted.

Statement showing the Financial Results of Irrigation Works for, and up to end of, 1897-98—*cont.*

Table I.—Principal Results of operations for the year ended 31st March 1898—*cont.*

Irrigation Works.	Mileage in operation.		Direct capital outlay during the year 1897-98 (including cost of establishment and tools and plant).	Gross receipts, direct and indirect from all sources.	Working expenses.			Net revenue (excluding charges for interest).		Interest at 4 per cent. on direct capital outlay at commencement of year and at 2 per cent. on outlay during the year.
	Main canal.	Distributaries.			Direct.	Indirect.	Total.	Amount.	Percentage on total direct and indirect capital outlay.	
1	2	3	4	5	6	7	8	9	10	11
MINOR WORKS AND NAVIGATION—*cont.*	MILES.	MILES.	RX.	RX.	RX.	RX.	RX.	RX.		RX.
Irrigation Works—cont.										
Cumbum tank	..	24	63	6,65	85	1	86	5,79	9·02	2,49
Valiur anicut system	3	8	74	4,39	1,04	2	1,06	3,33	5·15	2,50
Maradur do.	27	45	1	72,48	14,62	28	14,90	57,58	128·51	1,75
Thadapalli channel	76	..	2,48	29,62	7,54	16	7,70	21,92	17·47	4,59
Arkenkota do.	24	..	..	9,15	5,38	13	5,51	3,64	3·53	4,01
Kalingaroyan channel	61	..	3,32	20,66	7,36	17	7,53	13,13	20·63	2,42
Cheyar anicut system	61	120	3	39,81	15,83	37	16,20	23,61	5·82	15,78
Poiney do.	104	78	— 9	49,13	10,47	22	10,69	38,44	16·59	9,03
Nandyar channel	24	..	..	3,48	4,25	9	4,34	— 86	(*a*) ..	2,14
Ganjám minor rivers system	100	..	12,91	34,12	26,95	66	27,61	6,51	14·64	1,48
Dondapad tank	..	3⅝	5,04	..	65	2	67	— 67	..	5,66
Sagileru project	10	..	54,74	..	..	..	..	..	..	15,78
Munnyeru project	22¾	21	1,47,08	..	..	..	..	..	..	15,03
Chopaud project *	..	..	33,39	..	..	..	..	..	..	2,99
Total	1,327¾	1,196⅝	4,39,00	9,83,32	2,35,32	5,05	2,40,37	7,42,95	8·42	3,19,71
Navigation.										
Buckingham canal	262	..	12,37	99,39	80,41	3,41	83,55	15,84	·18	3,37,99
Chilka lake canal	8	..	..	..	30	1	31	— 31	(*a*) ..	1,21
Ganjám-Gopalpur canal	..	..	..	..	..	..	..	..	..	5,72
Védáranniyam canal	34½	..	..	87	6,39	18	6,57	— 570	(*a*) ..	5,31
Total	304½	..	12,37	1,00,26	87,10	3,33	90,43	9,83	·10	3,50,23
Total, Irrigation and Navigation	1,632¼	1,196⅝	4,51,37	10,83,58	3,22,12	8,38	3,30,80	7,52,78	4·16	6,69,94

(*a*) Percentages on *minus* sums have been omitted.

* This project is under construction.

Statement showing the Financial Results of Irrigation Works for, and up to end of, 1897–98—*cont.*

Table I.—Principal Results of operations for the year ended 31st March 1898—*cont.*

Irrigation Works.	Surplus revenue after paying interest on direct capital outlay.		Excess charge including interest on direct capital outlay.		Area of land irrigated during the year.			Gross receipts per acre irrigated, due to new works.	Working expenses (excluding interest) per acre irrigated, due to new works.	Percentage of working expenses on receipts.
	Amount.	Percentage on total sum at charge.	Amount.	Percentage on total sum at charge.	Due to old irrigation works.	Due to new irrigation works.	Total.			
	12	13	14	15	16	17	18	19	20	21
MINOR WORKS AND NAVIGATION—*cont.*	RX.		RX.		ACS.	ACS.	ACS.	RX.	RX.	
Irrigation Works—cont.										
Cumbum tank	3,00	(*a*) ..	..	..	7,278	914	8,192	·73	·09	12·93
Vallur anicut system	83	·81	..	..	3,909	1,397	5,306	·31	·07	24·15
Maradur do.	55,83	(*a*) ..	..	..	17,355	16,780	34,135	·43	·09	20·56
Thadapalli channel	17,33	(*a*) ..	..	..	10,151	4,626	14,777	·67	·17	26·00
Arkenkota do.	..	..	37	·16	2,655	1,479	4,134	·62	·37	60·22
Kalingaroyan channel	10,71	5·18	..	..	16,648	4,868	21,516	·42	·15	36·45
Gheyar anicut system	7,83	1·87	..	..	15,507	16,998	32,505	·23	·10	40·69
Poiney do.	29,41	(*a*) ..	..	..	18,226	9,981	28,207	·49	·11	21·76
Nandyar channel	..	..	3,00	4·75	5,829	1,347	7,176	·26	·32	124·71
Ganjám minor rivers system	5,03	(*a*) ..	..	..	50,052	12,489	62,541	·27	·22	80·92
Dondapad tank	..	..	6,33	3·89	..	..	..	..	..	..
Sagileru project	..	..	15,78	3·38	..	..	..	..	..	..
Munnyeru project	..	..	15,03	3·17	..	..	..	..	..	..
Chopaud project	..	..	6,68	7·08	..	..	..	..	..	..
Total ..	4,19,55	(*a*) ..	..	..	304,879	230,934	535,813	·43	·11	24·44
Navigation.										
Buckingham canal	..	..	3,22,15	2·20	..	..	..	..	..	84·06
Chilka lake canal	..	..	1,52	2·49	..	..	..	..	..	..
Ganjám-Gopalpur canal	..	..	5,72	2·78	..	..	..	..	..	..
Védáranniyam canal	..	..	11,01	3·12	..	..	..	..	..	755·17
Total ..	..	..	3,40,40	..	..	..	..	..	..	90·20
Total, Irrigation and Navigation ..	79,15	·53	..	..	304,879	230,934	535,813	·47	·14	30·53

(*a*) Percentages on *minus* sums have been omitted.

MADRAS,
16th September 1898.

(Signed) E. A. DENNYS,
Examiner, P.W. Accounts, Madras and Coorg.

STATEMENT showing the Financial Results for Irrigation Works for, and up to end of, 1897–98.

TABLE II.—General Financial Results of the several undertakings to 31st March 1898.

Irrigation Works.	Estimated cost of construction (exclusive of all indirect charges)	Date of completion of work.	Capital outlay.				Excess of interest over net revenue in past years.	Total *sum* at charge at end of 1897–98.	Interest at 4 per cent. on total *sum* at charge at end of 1897–98.	Surplus for the year of net revenue over interest on total *sum* at charge.	Excess for the year of interest on total *sum* at charge over net revenue.	Capitalized value at 4 per cent. of net revenue (excluding charges for interest).	Surplus *sum* to credit in excess of total *sum* at charge.	Excess *sum* at charge over capitalized value of net revenue.
			Direct charges.		Indirect charges.	Total capital outlay, both direct and indirect, to end of year.								
			To end of previous year.	To end of year.	To end of year.									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MAJOR WORKS.	RX.		RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.
Irrigation Works.														
Gódávari delta system ..	1,13,17,53	1846–47	1,09,96,98	1,10,75,79	19,02,28	1,29,78,07	—3,30,92,58	—2,01,14,51	— 8,04,58	32,89,75	..	6,21,29,25	8,22,43,76	..
Kistna do. ..	1,23,50,69	1855–56	1,19,61,70	1,23,50,69	8,40,97	1,31,91,66	—1,74,42,48	— 42,50,82	— 1,70,03	19,08,30	..	4,34,56,75	4,77,07,57	..
Penner anicut system ..	16,47,58	1860–61	16,47,47	16,47,58	2,51,61	18,99,19	— 10,32,58	8,66,61	34,66	1,09,57	..	36,05,75	27,39,14	..
Sangam do. ..	33,66,97	1884–85	31,32,55	31,50,95	7,05,06	38,56,01	6,08,13	44,64,14	1,78,57	..	36,67	35,47,50	..	9,16,64
Kurnool-Cuddapah canal ..	2,17,18,54	1882–83	2,17,11,14	2,17,15,28	2,46	2,17,17,74	1,32,88,33	3,50,06,07	14,00,24	..	13,68,07	8,04,25	..	3,42,01,82
Barur tank	4,01,87	1887–88	4,02,18	4,02,18	22,87	4,25,05	1,55,58	5,80,63	23,23	..	17,31	1,48,00	..	4,32,63
Cauvery delta system ..	25,88,27	1836–37	17,29,91	18,65,96	1,28,62	19,94,58	—2,19,14,48	—1,99,19,90	— 7,96,80	16,91,69	..	2,23,72,25	4,22,92,15	..
Srivaikuntam anicut system ..	13,72,26	1870–71	13,62,52	13,70,74	1,01,18	14,71,92	— 25,20	14,46,72	57,87	22,32	..	20,04,75	5,58,03	..
Periyár project	81,30,02	1896–97	81,30,02	82,92,85	2,36,29	85,29,14	16,15,03	1,01,44,17	4,05,77	..	3,82,47	5,82,50	..	95,61,67
Total ..	6,28,96,73	..	6,10,74,47	6,18,72,02	41,91,34	6,60,63,36	—5,78,40,25	82,23,11	3,28,93	52,17,11	..	13,86,51,00	13,04,27,89	..
Protective Works.														
Rushikulya project ..	48,68,00	1891–92	41,11,21	42,55,22	3,89,20	46,44,42	9,48,56	55,92,98	2,23,72	..	1,98,50	6,30,00	..	49,62,98
Total, Major works ..	6,72,64,73	..	6,51,85,68	6,61,27,24	45,80,54	7,07,07,78	—5,68,91,69	1,38,16,09	5,52,65	50,18,61	..	13,92,81,00	12,54,64,91	..
MINOR WORKS AND NAVIGATION.														
Irrigation Works.														
Chembrambakam tank ..	6,34,58	1870–71	6,31,68	6,34,50	1,12,43	7,46,93	8,76	7,55,69	30,23	..	1,45	7,19,50	..	36,19
Palár anicut system ..	19,73,91	1853–54	19,59,97	19,66,62	1,05,34	20,71,96	7,78,07	28,50,03	1,14,00	..	10,85	25,78,75	..	2,71,28
Pelandorai anicut system ..	4,91,19	1875–76	4,57,71	5,07,22	44,80	5,52,02	5,50,67	11,02,69	44,11	..	26,09	4,50,50	..	6,52,19
Madras water-supply and irrigation extension project ..	15,15,83	1870–71	15,15,83	15,15,83	2,38,22	17,54,05	17,27,64	34,81,69	1,39,27	..	1,13,79	6,37,00	..	28,44,69
Lower Coleroon anicut ..	9,45,90	1848–49	6,96,00	7,86,33	21,87	8,08,20	— 81,51,49	— 73,43,29	— 2,93,73	5,51,90	..	64,54,25	1,37,97,54	..
Shatiatope do. ..	1,99,99	1847–48	1,35,28	1,64,67	4,26	1,68,93	— 18,84,67	— 17,15,74	— 68,63	1,58,73	..	22,52,50	39,68,24	..
Vriddhachalam do. ..	48,47	1868–69	48,47	48,47	1,27	49,74	— 1,30,12	— 80,38	— 3,22	15,62	..	3,10,00	3,90,38	..
Mehamattur do. ..	69,23	1872–73	69,24	69,24	1,81	71,05	16,84	87,89	3,52	7,91	..	2,85,75	1,97,86	..
Tirukkóyilúr do. ..	2,47,95	1861–62	2,47,95	2,47,95	6,52	2,54,47	— 1,04,36	1,50,11	6,00	17,00	..	5,75,00	4,24,89	..
Cumbum tank	62,56	1876–77	61,93	62,56	1,63	64,19	— 68,68	— 4,49	— 18	5,97	..	1,44,75	1,49,24	..
Vallur anicut system ..	68,58	1872–73	62,18	62,92	1,65	64,57	37,96	1,02,53	4,10	..	77	83,25	..	19,28
Maradur do. ..	43,66	1872–73	43,65	43,66	1,14	44,80	— 12,29,37	— 11,84,57	— 47,38	1,04,96	..	14,39,50	26,24,07	..

Statement showing the Financial Results for Irrigation works for, and up to end of, 1897-98—*cont.*

Table II.—General Financial results of the several undertakings to 31st March 1898—*cont.*

Irrigation Works.	Estimated cost of construction (exclusive of all indirect charges).	Date of completion of work.	Capital outlay. Direct charges. To end of previous year.	Capital outlay. Direct charges. To end of year.	Capital outlay. Indirect charges. To end of year.	Capital outlay. Total capital outlay, both direct and indirect, to end of year.	Excess of interest over net revenue in past years.	Total *sum* at charge at end of 1897-98.	Interest at 4 per cent. on total *sum* at charge at end of 1897-98.	Surplus for the year of net revenue over interest on total *sum* at charge.	Excess for the year of interest on total *sum* at charge over net revenue.	Capitalized value at 4 per cent. of net revenue (excluding charges for interest).	Surplus *sum* to credit in excess of total *sum* at charge.	Excess *sum* at charge over capitalized value of net revenue.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MINOR WORKS AND NAVIGATION—*cont.*	RX.		RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.
Irrigation Works—cont.														
Thadapalli channel ..	1,14,68	1854-55	1,13,64	1,16,12	9,34	1,25,46	— 3,50,21	— 2,24,75	— 8,99	30,91	..	5,48,00	7,72,75	..
Arkenkota do.	1,00,34	1859-60	1,00,34	1,00,34	2,63	1,02,97	1,21,35	2,24,32	8,97	..	5,33	91,00	..	1,33,32
Kalingarayan channel ..	62,07	1854-55	58,74	62,06	1,63	63,69	1,42,96	2,06,65	8,27	4,86	..	3,28,25	1,21,60	..
Cheyar anicut system ..	3,94,41	1852-53	3,94,38	3,94,41	11,04	4,05,45	12,37	4,17,82	16,71	6,90	..	5,90,25	1,72,43	..
Poiney do.	2,25,62	1855-56	2,25,71	2,25,62	6,07	2,31,69	— 3,90,66	— 1,58,97	— 6,36	44,80	..	9,61,00	11,19,97	..
Nandyar channel	53,49	1895-96	53,49	53,49	2,22	55,71	7,51	63,22	2,53	..	3,39	— 21,50	..	84,72
Ganjám minor rivers system..	69,10	1852-53	(*a*) 30,45	43,36	1,13	44,49	— 4,16,42	— 3,71,93	— 14,88	21,39	..	1,62,75	5,34,68	..
Dondapad tank	1,32,22	..	1,38,92	1,43,96	4,96	1,48,92	14,00	1,62,92	6,52	..	7,19	— 16,75	..	1,79,67
Sagileru project	4,31,00	..	3,67,08	4,21,82	16,98	4,38,80	27,72	4,66,52	18,66	..	18,66	..	..	4,66,52
Chopaud ,, ...	3,65,00	..	57,98	91,37	1,86	93,23	1,16	94,39	3,78	..	3,78	..	..	94,39
Munnyeru project	3,70,49	..	3,02,30	4,49,38	11,59	4,60,97	12,85	4,73,82	18,95	..	18,95	..	..	4,73,82
Total ..	86,20,27	..	77,72,92	8,21,190	6,10,39	88,22,29	— 92,66,12	— 4,43,83	— 17,75	7,60,70	..	1,85,73,75	1,90,17,58	..
Navigation.														
Buckingham canal	84,67,65	1837-38	84,43,45	84,55,83	4,86,49	89,42,32	57,01,75	1,46,44,07	5,85,76	..	5,69,92	3,96,00	..	..
Chilka Lake canal	30,24	..	30,24	30,24	79	31,03	30,06	61,09	2,45	..	2,76	— 7,75	..	..
Ganjam-Gopalpur canal ..	1,43,10	..	1,43,10	1,43,10	12,39	1,55,49	50,38	2,05,87	8,23	..	8,23	..	..	..
Védáranniyam canal ..	1,32,70	1874-75	1,32,70	1,32,70	3,47	1,36,17	2,16,82	3,52,99	14,12	..	19,82	— 1,42,50	..	..
Total ..	87,73,69	..	87,49,49	87,61,87	5,03,14	92,65,01	59,99,01	1,52,64,02	6,10,56	..	6,00,73	2,45,75	.	..
Total Irrigation and Navigation ..	1,73,93,96	..	1,65,22,41	1,69,73,77	11,13,53	1,80,87,30	— 32,67,11	1,48,20,19	5,92,81	1,59,97	..	1,88,19,50	39,99,31	..

(*a*) Includes the outlay of previous years traced during 1897-98.

NOTE.— "This statement includes Kurnool-Cuddapah canal purchased from the late Madras Irrigation Canal Company. The result of taking over this work in 1882-83 was to reduce the percentage of net revenue on capital cost of Irrigation works in Madras for which Capital and Revenue Accounts are kept from 14·9, the average of three years immediately preceding the transfer, to 5·4".

MADRAS,
16th September 1898.

(Signed) E. A. DENNYS,
Examiner, Public Works Accounts.

STATEMENT showing the Financial Results of Irrigation Works for and up to end of 1897-98.

TABLE III.—Main heads of Revenue and Working Expenses for the year ended 31st March 1898.

Irrigation Works.	Revenue. Irrigation. Water-rates directly paid.	Revenue. Irrigation. Share of land revenue.	Revenue. Irrigation. Total.	Revenue. Navigation.	Revenue. Plantation and land.	Revenue. Water power.	Revenue. Miscellaneous.	Revenue. Total.	Revenue. Remission of revenue.	Revenue. Net revenue.	Working Expenses. Revenue management. Establishment charges. Direction.	Executive.	Navigation.	Civil officers.	Total, Revenue management.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAJOR WORKS.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.
Irrigation Works.															
Gódávari delta system	29,13,57	1,50,49	30,64,06	76,58	6,78	..	13,09	31,60,51	8	31,60,43	36,89	1,47,57	..	1,53,20	3,37,66
Kistna do.	22,86,21	1,43,55	24,29,76	28,13	3,50	..	13,59	24,74,98	19	24,74,79	28,84	1,13,35	..	1,21,49	2,63,18
Pennér anicut system	1,43,30	20,92	1,64,22	..	29	..	9	1,64,60	..	1,64,60	1,73	6,91	..	8,21	16,85
Sangam do.	1,62,81	23,15	1,85,96	..	..	..	1,31	1,87,27	..	1,87,27	1,98	7,92	..	9,30	19,20
Kurnool-Cuddapah canal	1,50,12	..	1,50,12	1,28	62	..	4,26	1,56,28	6	1,56,22	1,92	7,70	..	7,51	17,13
Barur tank	9,62	..	9,62	..	..	..	..	9,62	..	9,62	12	46	..	48	1,06
Cauvery delta system	8,48,72	1,11,52	9,60,24	..	63	..	2,72	9,63,59	19	9,63,40	10,25	41,01	..	48,01	99,27
Srivaikuntam anicut system ..	1,10,74	1,78	1,12,52	..	23	..	1,74	1,14,49	..	1,14,49	1,37	5,47	..	5,63	12,47
Periyár project	99,37	12,82	1,12,19	56	3	..	9	1,12,87	..	1,12,87	1,21	4,82	..	5,61	11,64
Total ..	67,24,46	4,64,23	71,88,69	1,06,55	12,08	..	36,89	73,44,21	52	73,43,69	83,81	3,35,21	..	3,59,44	7,78,46
Protective Works.															
Rushikulya project	61,10	10	61,20	1	..	..	77	61,98	..	61,98	2	6	..	3,06	3,14
Total, Major Works ..	67,85,56	4,64,33	72,49,89	1,06,56	12,08	..	37,66	74,06,19	52	74,05,67	83,83	3,35,27	..	3,62,50	7,81,60
MINOR WORKS AND NAVIGATION.															
Irrigation Works.															
Chembrambakam tank	27,62	85	28,47	..	..	..	6	28,53	..	28,53	..	1	..	1,42	1,43
Palar anicut system	1,29,02	16,68	1,45,70	..	..	..	2,13	1,47,83	..	1,47,83	4	17	..	7,29	7,50
Pelandorai anicut system ..	32,48	12	32,60	..	2	..	30	32,92	..	32,92	1	2	..	1,63	1,66
Madras Water-supply and Irrigation Extension project	11,24	49	11,73	..	..	..	16,54	28,27	..	28,27	33	1,32	..	59	2,24
Lower Coleroon anicut	2,42,96	54,37	2,97,33	..	8	..	90	2,98,31	..	2,98,31	2	8	..	14,87	14,97

Statement showing the Financial Results of Irrigation Works for and up to end of 1897-98—*cont.*

Table III.—Main heads of Revenue and Working Expenses for the year ended 31st March 1898—*cont.*

Irrigation Works.	Working Expenses—*cont.*											
	Maintenance of works.											
	Establishment charges.				Works.	Repairs.	Tools and plant.	Plantations.	Total maintenance.	Total direct charges.	Indirect charges.	Grand Total, Working expenses.
	Direction.	Executive.	Medical.	Total.								
	17	18	19	20	21	22	23	24	25	26	27	28
MAJOR WORKS.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.
Irrigation Works.												
Gódávari delta system	9,19	36,77	..	45,96	12,56	1,99,64	46,22	96	3,05,34	6,43,00	32,26	6,75,26
Kistna do.	14,13	56,52	..	70,65	11,26	3,03,65	58,05	..	4,43,61	7,06,79	29,73	7,36,52
Pennér anicut system	9	33	..	42	— 2,76	4,60	— 1	..	2,25	19,10	1,27	20,37
Sangam do.	74	2,97	..	3,71	3,78	13, 3	4	2	20,68	39,88	5,49	45,37
Kurnool-Cuddapah canal	4,36	17,42	..	21,78	7,72	71,87	1,06	9	1,02,52	1,19,65	4,40	1,24,05
Barur tank	9	38	..	47	66	1,37	..	..	2,50	3,56	14	3,70
Cauvery delta system	— 1,53	— 6,12	..	— 7,65	14,42	— 37,97	— 5,71	4	— 36,87	62,40	6,11	68,51
Srívaikuntam anicut system ..	71	2,82	..	3,53	1,07	15,86	— 8	..	20,38	32,85	1,45	34,30
Periyár project	1,21	4,86	..	6,07	2,64	67,00	53	..	76,24	87,88	1,69	89,57
Total ..	28,99	1,15,95	..	1,44,94	51,35	6,39,15	1,00,10	1,11	9,36,65	17,15,11	82,54	17,97,65
Protective Works.												
Rushikulya project	1,21	4,85	..	6,06	..	26,35	37	..	32,78	35,92	86	36,78
Total, Major Works ..	30,20	1,20,80	..	1,51,00	51,35	6,65,50	1,00,47	1,11	9,69,43	17,51,03	83,40	18,34,43
MINOR WORKS AND NAVIGATION.												
Irrigation Works.												
Chembrambakam tank	— 6	— 23	..	— 29	— 2,28	1,04	— 11	..	— 1,64	— 21	— 4	— 25
Palar anicut system	1,35	5,39	..	6,74	8,03	21,44	..	..	36,21	43,71	97	44,68
Pelandorai anicut system	45	1,80	..	2,25	2,83	7,88	..	..	12,96	14,62	31	14,93
Madras Water-supply and Irrigation Extension project	— 3	— 13	..	— 16	— 3,60	4,11	— 1	..	34	2,58	21	2,79
Lower Coleroon anicut	89	3,54	..	4,43	2,90	17,21	..	..	24,54	39,51	63	40,14

Statement showing the Financial Results of Irrigation Works for, and up to end of, 1897-98—*cont.*

Table III.—Main heads of Revenue and Working Expenses for the year ended 31st March 1898—*cont.*

Irrigation Works.	Revenue.										Working Expenses.				
	Irrigation.			Navigation.	Plantation and land.	Water power.	Miscellaneous.	Total.	Remission of revenue.	Net revenue.	Revenue management.				Total, Revenue management.
	Water-rates directly paid.	Share of land revenue.	Total.								Establishment charges.				
											Direction.	Executive.	Navigation.	Civil officers.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINOR WORKS AND NAVIGATION—*cont.*	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.
Irrigation Works—cont.															
Shatiatope anicut	92,72	15,38	1,08,10	..	19	..	17	1,08,46	..	1,08,46	1	3	..	5,40	5,44
Vriddachalam anicut	15,78	19	15,97	..	2	..	21	16,20	..	16,20	..	2	..	80	82
Mehamattur do.	14,26	4	14,30	..	1	..	2	14,33	..	14,33	..	..	..	72	72
Tirunkóyilúr do.	35,24	3,17	38,41	..	52	..	5	38,98	..	38,98	1	5	..	1,92	1,98
Cumbum tank	6,03	62	6,65	..	..	..	..	6,65	..	6,65	..	..	..	33	33
Vallur anicut system	3,31	1,08	4,39	..	..	..	..	4,39	..	4,39	..	..	..	22	22
Maradur do.	71,85	24	72,09	..	4	..	35	72,48	..	72,48	1	3	..	3,60	3,64
Thadapalli channel	26,84	2,62	29,46	..	..	..	16	29,62	..	29,62	..	2	..	1,47	1,49
Arkenkota do.	8,77	34	9,11	..	..	..	4	9,15	..	9,15	..	..	..	46	46
Kalingarayan channel	19,61	42	20,03	..	..	..	63	20,66	..	20,66	1	5	..	1,00	1,06
Cheyar anicut system	36,06	3,46	39,52	..	..	..	29	39,81	..	39,81	1	2	..	1,97	2,00
Poiney do.	43,63	5,08	48,71	..	..	..	42	49,13	..	49,13	1	3	..	2,44	2,48
Nandyar channel	3,37	2	3,39	..	..	..	9	3,48	..	3,48	..	1	..	17	18
Ganjám minor rivers system ..	26,99	6,90	33,89	..	9	..	14	34,12	..	34,12	1	2	..	1,69	1,72
Dondapad tank	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	8,47,78	1,12,07	9,59,85	..	97	..	22,50	9,83,32	..	9,83,32	47	1,88	..	47,99	50,34
Navigation.															
Buckingham canal	..	..	..	98,51	..	..	98	99,49	10	99,39	1,99	7,96	..	..	9,95
Chilka lake canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ganjám-Gopalpur canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Védaranniyam canal	..	..	..	86	..	..	1	87	..	87	2	7	..	..	9
Total ..	..	..	..	99,37	..	..	99	1,00,36	10	1,00,26	2,01	8,03	..	..	10,04
Total, Irrigation and Navigation ..	8,47,78	1,12,07	9,59,85	99,37	97	..	23,49	10,83,68	10	10,83,58	2,48	9,91	..	47,99	60,38

Statement showing the Financial Results of Irrigation Works for, and up to end of, 1897-98—*cont.*

Table III.—Main heads of Revenue and Working Expenses for the year ended 31st March 1898—*cont.*

Working Expenses—*cont.*

Irrigation Works.	Maintenance of works.						Establishment charges.				Indirect charges.	Grand Total, Working expenses.
	Works.	Repairs.	Tools and plant.	Plantations.	Total maintenance.	Total direct charges.	Direction.	Executive.	Medical.	Total.		
	21	22	23	24	25	26	17	18	19	20	27	28
	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
MINOR WORKS AND NAVIGATION—*cont.*												
Irrigation Works—cont.												
Shatiatope anicut	86	9,37	..	..	12,68	18,02	47	1,88	..	2,35	34	18,36
Vriddhachalam anicut	16	2,20	..	..	2,90	3,72	11	43	..	54	8	3,80
Mehanattur do.	12	1,60	..	..	2,12	2,84	8	32	..	40	6	2,90
Tirukkóyilúr do.	3,03	8,08	..	..	13,64	15,62	51	2,02	..	2,53	36	15,98
Cumbum tank ..	— 4	53	..	..	52	85	1	2	..	3	1	86
Vallur anicut system	20	47	..	..	82	1,04	3	12	..	15	2	1,06
Maruádur do.	14	8,91	..	..	10,98	14,62	39	1,54	..	1,93	28	14,90
Thadapalli channel	40	4,53	..	..	6,05	7,54	22	90	..	1,12	16	7,70
Arkenkóta do.	1,00	3,00	..	..	4,92	5,38	18	74	..	92	13	5,51
Kalingarayan channel	13	4,99	..	..	6,30	7,36	24	94	..	1,18	17	7,53
Cheyar anicut system	2,00	9,24	..	..	13,83	15,83	62	2,07	..	2,59	37	16,20
Poiney do.	2,60	4,00	..	..	7,99	10,47	30	1,19	..	1,49	22	10,69
Nandyar channel	..	3,40	4	..	4,07	4,25	13	60	..	63	9	4,34
Ganjam minor rivers system	..	20,51	..	..	25,23	26,95	94	3,78	..	4,72	66	27,61
Dondapad tank	..	53	..	..	65	65	2	10	..	12	2	67
Total ..	18,38	1,33,04	— 8	..	1,84,98	2,35,32	6,75	26,89	..	33,64	5,05	2,40,37
Navigation.												
Buckingham canal	59	54,10	3,11	8	70,46	80,41	2,50	10,02	..	12,52	3,14	83,55
Chilka lake do.	..	23	..	..	30	30	1	6	..	7	1	31
Ganjám-Gopalpur canal	..	5,11	.. 2	..	6,30	6,39	.. 23	.. 94	..	1,17	.. 18	6,67
Vedaranniyam canal	59	59,50	3,13	8	77,06	87,10	2,74	11,92	..	13,76	3,33	90,43
Total ..	18,97	1,92,54	3,05	8	2,62,04	3,22,42	9,49	37,91	..	47,40	8,38	3,30,80
Total, Irrigation and Navigation ..												

(Signed) E. A. DENNYS,
Examiner, Public Works Accounts.

MADRAS,
16th September 1898.

IRRIGATION.
ACCOUNT.

Government {1898} of Madras.

PUBLIC WORKS.

Recd.
Regd. } 1898.

Enclosures
Spare copies

G.O., No. 932 I., 3rd December 1898.

DECEMBER.

Financial Results of Irrigation and Navigation Works

Ordered that the statements of — for 1897-98, with note thereon by the Chief Engineer for Irrigation, be forwarded to the Government of India.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Irrigation.
Account.

READ—the following papers:—

Office-note from the Examiner of P.W. Accounts, dated 16th Sept. 1898, No. 3201 B./B.
" to the " " " 4th Nov. " " 332.
" from the " " " 11th " " " 3836 B./B.
Reminder from the Government of India, dated 7th November 1898, No. 52 A.I.

No. 295 I.

Note by the Chief Engineer for Irrigation.

With his office-notes read above, the Examiner of Public Works Accounts forwards the statements of financial results of Irrigation and Navigation works for 1897-98 for submission to the Government of India.

2. To prevent misconception it should be stated that in many cases the increase of revenue is not all derived from new irrigation. The Periyár project, for instance, the accounts of which were misunderstood last year, is as much a project for the irrigation of old precariously supplied wet land as for the irrigation of new land. In the estimates on which the financial forecasts were based, the increase of assessment on old wet land was entered at over Rs. 2 per acre for each crop, while the charge for irrigation of dry occupied land was entered at Rs. 5. The areas in the forecast statement represent the old and new land taken together, and the revenue entered is the average revenue from both. The cause of the smallness of the credits to the project is being enquired into.

21st November 1898.

(Signed) W. HUGHES,
Chief Engineer for Irrigation.

ORDER—No. 932 I., dated 3rd December 1898.

Ordered that a copy of these proceedings, with the statements received from the Examiner of Public Works Accounts, be forwarded to the Government of India with reference to its circular No. 23 of 1881.

[Here enter No. 933 I., dated 3rd December 1898.]

(True Extract.)

(Signed) W. HUGHES,
Joint Secy. to Government,
Irrigation Branch.

To the Chief Engineer for Irrigation.
" Superintending Engineers of Circles.
" the Superintending Engineer on special duty, Cauvery Completion Estimates.
" the Examiner of Public Works Accounts.
" the Revenue Department.

Exd. T. K. Narayana Aiyangar.

ENCLOSURES.
MADRAS.

STATEMENT showing the Financial Results of Irrigation Works for, and up to end of, 1897-98.

TABLE I.—Principal Results of operations for the year ended 31st March 1898.

	Mileage in operation.		Direct capital outlay during the year 1897-98 (including cost of establishment and tools and plant).	Working expenses.			Gross receipts, direct and indirect, from all sources.	Net revenue (excluding charges for interest).		Interest at 4 per cent. on direct capital outlay at commencement of year and at 2 per cent. on outlay during the year.
	Main canal.	Distributaries.		Direct.	Indirect.	Total.		Amount.	Percentage on total direct and indirect capital outlay.	
	2	3	4	6	7	8	5	9	10	11
	MILES.	MILES.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.
Irrigation Works.										
MAJOR WORKS.										
Irrigation Works.										
Gódávari delta system	503	1,906	78,81,61	6,43,00	32,26	6,75,26	31,60,43	24,85,17	19·15	4,41,45
Kistna do.	329	1,614	3,88,99,79	7,06,79	29,73	7,36,52	24,74,79	17,38,27	13·18	4,86,26
Pennér anicut system	22	121	11,64,60	19,10	1,27	20,37	1,64,60	1,44,23	7·59	65,90
Sangam do.	9	296	18,40,10	39,88	5,49	45,37	1,87,27	1,41,90	3·68	1,25,67
Kurnool-Cuddapah canal	190	813	4,14,14	1,19,65	4,40	1,24,05	1,56,22	32,17	·14	8,68,53
Barúr tank	20½	11½	..	3,66	14	3,70	9,62	5,92	1·39	16,09
Cauvery delta system	844	1,260	1,36,05,06	62,40	6,11	68,51	9,63,40	8,94,89	44·86	71,92
Srivaikuntam anicut system	28	62	8,22,22	32,85	1,45	34,30	1,14,49	80,19	5·44	64,66
Periyár project ..	36	80	1,62,83,63	87,88	1,69	89,57	1,12,87	23,30	·27	3,28,46
Total ..	1,981½	5,651¼	7,97,55,56	17,11,11	82,54	17,97,65	73,43,69	55,46,04	8·40	24,58,93
Protective Works.										
Rushikulya project ..	80	119	1,44,01,91	35,92	86	36,78	61,98	25,20	·54	1,67,33
Total, Major Works ..	2,061¾	5,770¼	9,41,56,66	17,51,03	83,40	18,34,43	74,05,67	55,71,24	7·88	26,26,26
MINOR WORKS AND NAVIGATIONS.										
Irrigation Works.										
Chembrambakam tank ..	27	..	2,82,69	28,53	..	28,53	61,98	33,45	3·65	25,32
Pálár anicut system ..	163	127	6,65,51	1,68,46	21	1,47,83	74,05,67	43,71	4·98	78,63
Pelandorai anicut system ..	39	24	49,61,61	16,20	3,72	19,92	74,05,67	14,62	7·59	19,30
Lower Coleroon anicut system ..	850	546	90,33,63	14,33	2,84	17,17	74,05,67	39,61	3·26	29,65
Madras water-supply and Irrigation extension project ..	10	..	..	28,27	2,58	30,85	74,05,67	28,27	1·45	60,63
Shatirtope anicut system ..	41	149	29,39	1,08,46	18,02	1,26,48	74,05,67	1,08,46	63·33	6,00
Vriddhachalam do. ..	33	16	..	16,20	3,72	19,92	74,05,67	16,20	24·92	1,94
Mehamattur do. ..	15	9	..	14,33	2,84	17,17	74,05,67	14,33	16·09	2,77
Tirukkóyilúr do. ..	137	26	..	38,98	15,62	54,60	74,05,67	38,98	9·04	9,92

Statement showing the Financial Results of Irrigation Works for, and up to end of, 1897-98—*cont.*

Table I.—Principal Results of operations for the year ended 31st March 1898—*cont.*

Irrigation Works.	Surplus revenue after paying interest on direct capital outlay.		Excess charge including interest on direct capital outlay.		Area of land irrigated during the year.			Gross receipts per acre irrigated, due to new works.	Working expenses (excluding interest) per acre irrigated, due to new works.	Percentage of working expenses on receipts.
	Amount.	Percentage on total sum at charge.	Amount.	Percentage on total sum at charge.	Due to old irrigation works.	Due to new irrigation works.	Total.			
	12	13	14	15	16	17	18	19	20	21
MAJOR WORKS.	RX.		RX.		ACS.	ACS.	ACS.	RX.	RX.	
Irrigation Works.										
Gódávari delta system	20,43,72	(a) ..	..	..	154,560	644,875	799,435	·49	·10	21·37
Kistna do.	12,52,02	(a) ..	..	..	71,269	449,104	520,373	·55	·16	29·76
Pennér anicut system	78,33	9·04	..	..	42,136	28,328	70,464	·58	·08	12·37
Sangam do.	16,23	·36	..	..	56,237	20,040	76,277	·93	·23	24·23
Kurnool-Cuddapah canal	..	..	8,36,36	2·39	..	47,008	47,008	·33	·26	79·41
Barúr tank	..	..	10,17	1·75	1,847	2,574	4,421	·37	·14	38·46
Cauvery delta system	8,22,97	(a) ..	..	..	777,401	212,407	989,808	·45	·03	71·11
Srivaikuntam anicut system	25,53	1·76	..	..	20,465	21,203	41,668	·54	·16	29·97
Periyár project	..	..	3,05,16	3·00	61,092	28,051	89,143	·41	·32	79·36
Total ..	30,87,11	37·54	..	..	1,185,007	1,453,590	2,638,597	·50	·12	24·48
Protective Works.										
Rushikulya project	..	..	1,42,13	2·54	39,008	28,310	67,318	·22	·13	59·34
Total, Major Works ..	29,44,98	21·32	..	..	1,224,015	1,481,900	2,705,915	·50	·12	24·77
MINOR WORKS AND NAVIGATION.										
Irrigation Works.										
Chembrambakam tank	3,46	·45	.	..	11,285	4,406	15,691	·65	..	..
Pálár anicut system	24,62	·86	..	..	67,344	30,476	97,820	·49	·14	30·22
Pelandorai anicut system	..	..	1,28	·12	2,097	8,115	10,212	·41	·18	45·26
Lower Coleroon anicut system	2,28,52	(a) ..	..	..	44,637	68,301	112,938	·44	·06	13·46
Madras water-supply and Irrigation extension project	..	..	35,15	1·09	6,340	4,047	10,387	·70	·07	9·87
Shatiatope anicut system	84,10	(a) ..	..	..	7,037	26,675	33,712	·41	·07	16·93
Vriddhachalam do.	10,46	(a) ..	..	..	2,279	4,243	6,522	·38	·10	23·46
Mehamattur do.	8,66	9·85	..	..	460	3,560	4,020	·40	·08	20·24
Tirukkóyilúr do.	13,08	8·71	..	..	15,790	10,232	26,022	·38	·16	41·00

(a) Percentages on *minus* sums have been omitted.

Statement showing the Financial Results of Irrigation Works for, and up to end of, 1897-98—*cont.*

Table I.—Principal Results of operations for the year ended 31st March 1898—*cont.*

Irrigation Works.	Mileage in operation.		Direct capital outlay during the year 1897-98 (including cost of establishment and tools and plant).	Gross receipts, direct and indirect from all sources.	Working expenses.			Net revenue (excluding charges for interest).		Interest at 4 per cent. on direct capital outlay at commencement of year and at 2 per cent. on outlay during the year.
	Main canal.	Distributaries.			Direct.	Indirect.	Total.	Amount.	Percentage on total direct and indirect capital outlay.	
1	2	3	4	5	6	7	8	9	10	11
MINOR WORKS AND NAVIGATION—*cont.*	MILES.	MILES.	RX.	RX.	RX.	RX.	RX.	RX.		RX.
Irrigation Works—cont.										
Cumbum tank	..	24	63	6,65	85	1	86	5,79	9·02	2,49
Vallur anicut system	3	8	74	4,39	1,04	2	1,06	3,33	5·15	2,50
Maradur do.	27	45	1	72,18	14,62	28	14,90	57,58	128·51	1,75
Thadapalli channel	76	..	2,48	29,62	7,54	16	7,70	21,92	17·47	4,59
Arkenkota do.	24	..	..	9,15	5,38	13	5,51	3,64	3·53	4,01
Kalingarayan channel	61	..	3,32	20,66	7,36	17	7,53	13,13	20·63	2,42
Cheyar anicut system	61	120	3	39,81	15,83	37	16,20	23,61	5·82	15,78
Poiney do.	104	78	— 9	49,13	10,47	22	10,69	38,44	16·59	9,03
Nandyar channel	24	..	..	3,48	4,25	9	4,34	— 86	(a) ..	2,14
Ganjám minor rivers system	100	..	12,91	34,12	26,95	66	27,61	6,51	14·64	1,48
Dondapad tank	..	3⅝	5,04	..	65	2	67	— 67	..	5,66
Sagileru project	10	..	54,74	..	..	..	..	..	..	15,78
Munnyeru project	22¾	21	1,47,08	..	..	..	..	..	..	15,03
Chopaud project *	..	..	33,39	..	..	..	..	..	..	2,99
Total ..	1,327⅜	1,196⅝	4,39,00	9,83,32	2,35,32	5,05	2,40,37	7,42,95	8·42	3,19,71
Navigation.										
Buckingham canal	262	..	12,37	99,39	80,41	3,41	83,55	15,84	·18	3,37,99
Chilka lake canal	8	..	..	..	30	1	31	— 31	(a) ..	1,21
Ganjám-Gopalpur canal	..	..	..	..	..	..	..	..	..	5,72
Védáranniyam canal	34½	..	..	87	6,39	18	6,57	— 570	(a) ..	5,31
Total ..	304½	..	12,37	1,00,26	87,10	3,33	90,43	9,83	·10	3,50,23
Total, Irrigation and Navigation ..	1,632¼	1,196⅝	4,51,37	10,83,58	3,22,12	8,38	3,30,80	7,52,78	4·16	6,69,94

(a) Percentages on *minus* sums have been omitted.

* This project is under construction.

Statement showing the Financial Results of Irrigation Works for, and up to end of, 1897-98—*cont.*

Table I.—Principal Results of operations for the year ended 31st March 1898—*cont.*

Irrigation Works.	Surplus revenue after paying interest on direct capital outlay.		Excess charge including interest on direct capital outlay.		Area of land irrigated during the year.			Gross receipt-per acre irrigated, due to new works.	Working expenses (excluding interest) per acre irrigated, due to new works.	Percentage of working expenses on receipts.
	Amount.	Percentage on total sum at charge.	Amount.	Percentage on total sum at charge.	Due to old irrigation works.	Due to new irrigation works.	Total.			
1	12	13	14	15	16	17	18	19	20	21
MINOR WORKS AND NAVIGATION—*cont.*	RX.		RX.		ACS.	ACS.	ACS.	RX.	RX.	
Irrigation Works—cont.										
Cumbum tank	3,00	(*a*) ..	..	..	7,278	914	8,192	·73	·09	12·93
Vallur anicut system	83	·81	..	..	3,909	1,397	5,306	·31	·07	24·15
Maradur do.	55,83	(*a*) ..	..	..	17,355	16,780	34,135	·43	·09	20·56
Thadapalli channel	17,38	(*a*) ..	..	..	10,151	4,626	14,777	·67	·17	26·00
Arkenkota do.	..	..	37	·16	2,655	1,479	4,134	·62	·37	60·22
Kalingaroyan channel	10,71	5·18	..	..	16,648	4,868	21,516	·42	·15	36·45
Cheyar anicut system	7,83	1·87	..	..	15,507	16,998	32,505	·23	·10	40·69
Poiney do.	29,41	(*a*) ..	..	..	18,226	9,981	28,207	·49	·11	21·76
Nandyar channel	..	..	3,00	4·75	5,829	1,347	7,176	·26	·32	124·71
Ganjám minor rivers system	5,03	(*a*) ..	..	..	50,052	12,489	62,541	·27	·22	80·92
Dondapad tank	..	..	6,33	3·89	..	..	..	..	..	..
Sagileru project	..	..	15,78	3·38	..	..	..	..	..	..
Munnyeru project	..	..	15,03	3·17	..	..	..	..	..	..
Chopaud project	..	..	6,68	7·08	..	..	..	..	..	..
Total	4,19,55	(*a*) ..	..	..	304,879	230,934	535,813	·43	·11	24·44
Navigation.										
Buckingham canal	..	..	3,22,15	2·20	..	..	..	..	..	84·06
Chilka lake canal	..	..	1,52	2·49	..	..	..	..	..	..
Ganjám-Gopalpur canal	..	..	5,72	2·78	..	..	..	..	..	..
Védáranniyam canal	..	..	11,01	3·12	..	..	..	..	..	755·17
Total	..	..	3,40,40	..	..	..	..	..	..	90·20
Total, Irrigation and Navigation	79,15	·53	..	..	304,879	230,934	535,813	·47	·14	30·53

(*a*) Percentages on *minus* sums have been omitted.

MADRAS,
16th September 1898.

(Signed) E. A. DENNYS,
Examiner, P.W. Accounts, Madras and Coorg.

STATEMENT showing the Financial Results for Irrigation Works for, and up to end of, 1897-98.

TABLE II.—General Financial Results of the several undertakings to 31st March 1898.

Irrigation Works.	Estimated cost of construction (exclusive of all indirect charges)	Date of completion of work.	Capital outlay.				Excess of interest over net revenue in past years.	Total *sum* at charge at end of 1897-98.	Interest at 4 per cent. on total *sum* at charge at end of 1897-98.	Surplus for the year of net revenue over interest on total *sum* at charge.	Excess for the year of interest on total *sum* at charge over net revenue.	Capitalized value at 4 per cent. of net revenue (excluding charges for interest).	Surplus *sum* to credit in excess of total *sum* at charge.	Excess *sum* at charge over capitalized value of net revenue.
			Direct charges.		Indirect charges.	Total capital outlay, both direct and indirect, to end of year.								
			To end of previous year.	To end of year.	To end of year.									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MAJOR WORKS.	RX.		RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.
Irrigation Works.														
Gódávari delta system	1,13,17,53	1846-47	1,09,96,98	1,10,75,79	19,02,28	1,29,78,07	−3,30,92,58	−2,01,14,51	−8,04,58	32,89,75	..	6,21,29,25	8,22,43,76	..
Kistna do.	1,23,50,69	1855-56	1,19,61,70	1,23,50,69	8,40,97	1,31,91,66	−1,74,42,48	−42,50,82	−1,70,03	19,08,30	..	4,34,56,75	4,77,07,57	..
Penner anicut system	16,47,58	1860-61	16,47,47	16,47,58	2,51,61	18,99,19	−10,32,58	8,66,61	34,66	1,09,57	..	36,05,75	27,39,14	..
Sangam do.	33,56,97	1884-85	31,32,55	31,50,95	7,05,06	38,56,01	6,08,13	44,64,14	1,78,57	..	36,67	35,47,50	..	9,16,64
Kurnool-Cuddapah canal	2,17,18,54	1882-83	2,17,11,14	2,17,15,28	2,46	2,17,17,74	1,32,88,33	3,50,06,07	14,00,24	..	13,68,07	8,04,25	..	3,42,01,82
Barur tank	4,01,87	1887-88	4,02,18	4,02,18	22,87	4,25,05	1,55,58	5,80,63	23,23	..	17,31	1,48,00	..	4,32,63
Cauvery delta system	25,88,27	1836-37	17,29,91	18,65,96	1,28,62	19,94,58	−2,19,14,48	−1,99,19,90	−7,96,80	16,91,69	..	2,23,72,25	4,22,92,15	..
Srivaikuntam anicut system	13,72,26	1870-71	13,62,52	13,70,74	1,01,18	14,71,92	−25,20	14,46,72	57,87	22,32	..	20,04,75	5,58,03	..
Periyár project	81,30,02	1896-97	81,30,02	82,92,85	2,36,29	85,29,14	16 15,03	1,01,44,17	4,05,77	..	3,82,47	5,82,50	..	95,61,67
Total	6,28,96,73	..	6,10,74,47	6,18,72,02	41,91,34	6,60,63,36	−5,78,40,25	82,23,11	3,28,93	52,17,11	..	13,86,51,00	13,04,27,89	..
Protective Works.														
Rushikulya project	43,68,00	1891-92	41,11,21	42,55 22	3,89,20	46,44,42	9,48,56	55,92,98	2,23,72	..	1,98,50	6,30,00	..	49,62,98
Total, Major works	6,72,64,73	..	6,51,85,68	6,61,27,24	45,80,54	7,07,07,78	−5,68,91,69	1,38,16,09	5,52,65	50,18,61	..	13,92,81,00	12,54,64,91	..
MINOR WORKS AND NAVIGATION.														
Irrigation Works.														
Chembrambakam tank	6,34,58	1870-71	6,31,68	6,34,50	1,12,43	7,46,93	8,76	7,55,69	30,23	..	1,45	7,19,50	..	36,19
Palár anicut system	19,73,91	1853-54	19,59,97	19,66,62	1,05,34	20,71,96	7,78,07	28,50,03	1,14,00	..	10,85	25,78,75	..	2,71,28
Pelandorai anicut system	4,91,19	1875-76	4,57,71	5,07,22	44,80	5,52,02	5,50,67	11,02,69	44,11	..	26,09	4,50,50	..	6,52,19
Madras water-supply and irrigation extension project	15,15,83	1870-71	15,15,83	15,15,83	2,38,22	17,54,05	17,27,64	34,81,69	1,39,27	..	1,13,79	6,37,00	..	28,44,69
Lower Coleroon anicut	9,45,90	1848-49	6,96,00	7,86,33	21,87	8,08,20	−81,51,49	−73,43,29	−2,93,73	5,51,90	..	64,54,25	1,37,97,54	..
Shatiatope do.	1,99,99	1847-48	1,35,28	1,64,67	4,26	1,68,93	−18,84,67	−17,15,74	−68,63	1,58,73	..	22,52,50	39,68,24	..
Vriddhachalam do.	48,47	1868-69	48,47	48,47	1,27	49,74	−1,30,12	−80,38	−3,22	15,62	..	3,10,00	3,90,38	..
Mehamattur do.	69,23	1872-73	69,24	69,24	1,81	71,05	16,84	87,89	3,52	7,91	..	2,85,75	1,97,86	..
Tirukkóyilúr do.	2,47,95	1861-62	2,47,95	2,47,95	6,52	2,54,47	−1,04,36	1,50,11	6,00	17,00	..	5,75,00	4,24,89	..
Cumbum tank	62,56	1876-77	61,93	62,56	1,63	64,19	−68,68	−4,49	−18	5,97	..	1,44,75	1,49,24	..
Vallur anicut system	68,58	1872-73	62,18	62,92	1,65	64,57	37,96	1,02,53	4,10	..	77	83,25	..	19,28
Maradur do.	43,66	1872-73	43,65	43,66	1,14	44,80	−12,29,37	−11,84,57	−47,38	1,04,96	..	14,39,50	26,24,07	..

Statement showing the Financial Results for Irrigation works for, and up to end of, 1897-98—*cont.*

Table II.—General Financial results of the several undertakings to 31st March 1898—*cont.*

Irrigation Works.	Estimated cost of construction (exclusive of all indirect charges).	Date of completion of work.	Capital outlay.				Excess of interest over net revenue in past years.	Total *sum* at charge at end of 1897-98.	Interest at 4 per cent. on total *sum* at charge at end of 1897-98.	Surplus for the year of net revenue over interest on total *sum* at charge.	Excess for the year of interest on total *sum* at charge over net revenue.	Capitalized value at 4 per cent. of net revenue (excluding charges for interest).	Surplus *sum* to credit in excess of total *sum* at charge.	Excess *sum* at charge over capitalized value of net revenue.
			Direct charges.		Indirect charges.	Total capital outlay, both direct and indirect, to end of year.								
			To end of previous year.	To end of year.	To end of year.									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MINOR WORKS AND NAVIGATION—*cont.*	RX.		RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.
Irrigation Works—cont.														
Thadapalli channel ..	1,14,68	1854-55	1,13,64	1,16,12	9,34	1,25,46	— 3,50,21	— 2,24,75	— 8,99	30,91	..	5,48,00	7,72,75	..
Arkenkota do.	1,00,34	1859-60	1,00,34	1,00,34	2,63	1,02,97	1,21,35	2,24,32	8,97	..	5,33	91,00	..	1,33,32
Kalingarayan channel ..	62,07	1854-55	58,74	62,06	1,63	63,69	1,42,96	2,06,65	8,27	4,86	..	3,28,25	1,21,60	..
Cheyar anicut system ..	3,94,41	1852-53	3,94,38	3,94,41	11,04	4,05,45	12,37	4,17,82	16,71	6,90	..	5,90,25	1,72,43	..
Poiney do. ..	2,25,62	1855-56	2,25,71	2,25,62	6,07	2,31,69	— 3,90,66	— 1,58,97	— 6,36	44,80	..	9,61,00	11,19,97	..
Nandyar channel	53,49	1895-96	53,49	53,49	2,22	55,71	7,51	63,22	2,53	..	3,39	— 21,50	..	84,72
Ganjám minor rivers system ..	69,10	1852-53	(a) 30,45	43,36	1,13	44,49	— 4,16,42	— 3,71,93	— 14,88	21,39	..	1,62,75	5,34,68	..
Dondapad tank	1,32,22	..	1,38,92	1,43,96	4,96	1,48,92	14,00	1,62,92	6,52	..	7,19	— 16,75	..	1,79,67
Sagileru project	4,31,00	..	3,67,08	4,21,82	15,98	4,38,80	27,72	4,66,52	18,66	..	18,66	..	..	4,66,52
Chopaud ,, ...	3,65,00	..	57,98	91,37	1,86	93,23	1,16	94,39	3,78	..	3,78	..	..	94,39
Munnyeru project	3,70,49	..	3,02,30	4,49,38	11,59	4,60,97	12,85	4,73,82	18,95	..	18,95	..	..	4,73,82
Total ..	86,20,27	..	77,72,92	8,21,190	6,10,39	88,22,29	— 92,66,12	— 4,43,83	— 17,75	7,60,70	..	1,85,73,75	1,90,17,58	..
Navigation.														
Buckingham canal	84,67,65	1837-38	84,43,45	84,55,83	4,86,49	89,42,32	57,01,75	1,46,44,07	5,85,76	..	5,69,92	3,96,00	..	..
Chilka Lake canal	30,24	..	30,24	30,24	79	81,03	30,06	61,09	2,45	..	2,76	— 7,75	..	..
Ganjam-Gopalpur canal ..	1,43,10	..	1,43,10	1,43,10	12,39	1,55,49	50,38	2,05,87	8,23	..	8,23	..	..	..
Védáranniyam canal ..	1,32,70	1874-75	1,32,70	1,32,70	3,47	1,36,17	2,16,82	3,52,99	14,12	..	19,82	— 1,42,50	..	..
Total ..	87,73,69	..	87,49,49	87,61,87	5,03,14	92,65,01	59,99,01	1,52,64,02	6,10,56	..	6,00,73	2,45,75	..	..
Total Irrigation and Navigation ..	1,73,93,96	..	1,65,22,41	1,69,73,77	11,13,53	1,80,87,30	— 32,67,11	1,48,20,19	5,92,81	1,59,97	..	1,88,19,50	39,99,31	..

(a) Includes the outlay of previous years traced during 1897-98.

NOTE.— "This statement includes Kurnool-Cuddapah canal purchased from the late Madras Irrigation Canal Company. The result of taking over this work in 1882-83 was to reduce the percentage of net revenue on capital cost of Irrigation works in Madras for which Capital and Revenue Accounts are kept from 14·9, the average of three years immediately preceding the transfer, to 5·4".

MADRAS,
16th September 1898.

(Signed) E. A. DENNYS,
Examiner, Public Works Accounts.

STATEMENT showing the Financial Results of Irrigation Works for and up to end of 1897-98.

TABLE III.—Main heads of Revenue and Working Expenses for the year ended 31st March 1898.

Irrigation Works.	Revenue.										Working Expenses.				
	Irrigation.			Navigation.	Plantation and land.	Water power.	Miscellaneous.	Total.	Remission of revenue.	Net revenue.	Revenue management.				
	Water-rates directly paid.	Share of land revenue.	Total.								Establishment charges.				Total, Revenue management.
											Direction.	Executive.	Navigation.	Civil officers.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAJOR WORKS.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.
Irrigation Works.															
Gódávari delta system	29,13,57	1,50,49	30,64,06	76,58	6,78	..	13,09	31,60,51	8	31,60,43	86,89	1,47,57	..	1,53,20	3,37,66
Kistna do.	22,86,21	1,43,55	24,29,76	28,13	3,50	..	13,59	24,74,98	19	24,74,79	28,34	1,13,35	..	1,21,49	2,63,18
Pennér anicut system	1,43,30	20,92	1,64,22	..	29	..	9	1,64,60	..	1,64,60	1,73	6,91	..	8,21	16,85
Sangam do.	1,62,81	23,15	1,85,96	..	..	..	1,31	1,87,27	..	1,87,27	1,98	7,92	..	9,30	19,20
Kurnool-Cuddapah canal	1,50,12	..	1,50,12	1,28	62	..	4,26	1,56,28	6	1,56,22	1,92	7,70	..	7,51	17,13
Barur tank	9,62	..	9,62	..	..	..	..	9,62	..	9,62	12	46	..	48	1,06
Cauvery delta system	8,48,72	1,11,52	9,60,24	..	63	..	2,72	9,63,59	19	9,63,40	10,25	41,01	..	48,01	99,27
Srivaikuntam anicut system ..	1,10,74	1,78	1,12,52	..	23	..	1,74	1 14,49	..	1,14,49	1,37	5,47	..	5,63	12,47
Periyár project	99,37	12,82	1,12,19	56	3	..	9	1,12,87	..	1,12,87	1,21	4,82	..	5,61	11,64
Total ..	67,24,46	4,64,23	71,88,69	1,06,55	12,08	..	36,89	73,44,21	52	73,43,69	83,81	3,35,21	..	3,59,44	7,78,46
Protective Works.															
Rushikulya project	61,10	10	61,20	1	..	..	77	61,98	..	61,98	2	6	..	3,06	3,14
Total, Major Works ..	67,85,56	4,64,33	72,49,89	1,06,56	12,08	..	37,66	74,06,19	52	74,05,67	83,83	3,35,27	..	3,62,50	7,81,60
MINOR WORKS AND NAVIGATION.															
Irrigation Works.															
Chembrambakam tank	27,62	85	28,47	..	..	..	6	28,53	..	28,53	..	1	..	1,42	1,43
Palar anicut system	1,29,02	16,68	1,45,70	..	..	..	2,13	1,47,83	..	1,47,83	4	17	..	7,29	7,50
Pelandorai anicut system ..	32,48	12	32,60	..	2	..	30	32,92	..	32,92	1	2	..	1,63	1,66
Madras Water-supply and Irrigation Extension project	11,24	49	11,73	..	..	..	16,54	28,27	..	28,27	33	1,32	..	59	2,24
Lower Coleroon anicut	2,42,96	54,37	2,97,33	..	8	..	90	2,98,31	..	2,98,31	2	8	..	14,87	14,97

Statement showing the Financial Results of Irrigation Works for and up to end of 1897–98—*cont.*

Table III.—Main heads of Revenue and Working Expenses for the year ended 31st March 1898—*cont.*

Irrigation Works.	Working Expenses—*cont.*											
	Maintenance of works.										Indirect charges.	Grand Total, Working expenses.
	Establishment charges.				Works.	Repairs.	Tools and plant.	Plantations.	Total maintenance.	Total direct charges.		
	Direction.	Executive.	Medical.	Total.								
	17	18	19	20	21	22	23	24	25	26	27	28
MAJOR WORKS.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.
Irrigation Works.												
Gódávari delta system	9,19	36,77	..	45,96	12,56	1,99,64	46,22	96	3,05,34	6,43,00	32,26	6,75,26
Kistna do.	14,13	56,52	..	70,65	11,26	3,03,65	58,05	..	4,43,61	7,06,79	29,73	7,36,52
Pennér anicut system	9	33	..	42	— 2,76	4,60	— 1	..	2,25	19,10	1,27	20,37
Sangam do.	74	2,97	..	3,71	3,78	13, 3	4	2	20,68	39,88	5,49	45,37
Kurnool-Cuddapah canal	4,36	17,42	..	21,78	7,72	71,87	1,06	9	1,02,52	1,19,65	4,40	1,24,05
Barur tank	9	38	..	47	66	1,37	..	..	2,50	3,56	14	3,70
Cauvery delta system	— 1,53	— 6,12	..	— 7,65	14,42	— 37,97	— 5,71	4	— 36,87	62,40	6,11	68,51
Srivaikuntam anicut system ..	71	2,82	..	3,53	1,07	15,86	— 8	..	20,38	32,85	1,15	34,30
Periyár project	1,21	4,86	..	6,07	2,64	67,00	53	..	76,24	87,88	1,69	89,57
Total ..	28,99	1,15,95	..	1,44,94	51,35	6,39,15	1,00,10	1,11	9,36,65	17,15,11	82,54	17,97,65
Protective Works.												
Rushikulya project	1,21	4,85	..	6,06	..	26,35	37	..	32,78	35,92	86	36,78
Total, Major Works ..	30,20	1,20,80	..	1,51,00	51,35	6,65,50	1,00,47	1,11	9,69,43	17,51,03	83,40	18,34,43
MINOR WORKS AND NAVIGATION.												
Irrigation Works.												
Chembrambakam tank	— 6	— 23	..	— 29	— 2,28	1,04	— 11	..	— 1,64	— 21	— 4	— 25
Palar anicut system	1,35	5,39	..	6,74	8,03	21,44	..	..	36,21	43,71	97	44,68
Pelandorai anicut system	45	1,80	..	2,25	2,83	7,88	..	..	12,96	14,62	31	14,93
Madras Water-supply and Irrigation Extension project	— 3	— 13	..	— 16	— 3,60	4,11	— 1	..	34	2,58	21	2,79
Lower Coleroon anicut	89	3,54	..	4,43	2,90	17,21	..	..	24,54	39,51	63	40,14

Statement showing the Financial Results of Irrigation Works for, and up to end of, 1897–98—*cont.*

Table III.—Main heads of Revenue and Working Expenses for the year ended 31st March 1898—*cont.*

Irrigation Works.	Revenue.									Working Expenses.				
	Irrigation.			Navigation.	Plantation and land.	Water power.	Miscellaneous.	Total.	Remission of revenue.	Net revenue.	Revenue management.				Total, Revenue management.
											Establishment charges.				
	Water-rates directly paid.	Share of land revenue.	Total.								Direction.	Executive.	Navigation.	Civil officers.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINOR WORKS AND NAVIGATION—*cont.*	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.
Irrigation Works—cont.															
Shatiatope anicut	92,72	15,38	1,08,10	..	19	..	17	1,08,46	..	1,08,46	1	3	..	5,40	5,44
Vriddachalam anicut	15,78	19	15,97	..	2	..	21	16,20	..	16,20	..	2	..	80	82
Mahamattur do.	14,26	4	14,30	..	1	..	2	14,33	..	14,33	..	..	..	72	72
Tirunkóyilúr do.	35,24	3,17	38,41	..	52	..	5	38,98	..	38,98	1	5	..	1,92	1,98
Cumbum tank	6,03	62	6,65	..	..	..	..	6,65	..	6,65	..	..	..	33	33
Vallur anicut system	3,31	1,08	4,39	..	..	..	..	4,39	..	4,39	..	..	..	22	22
Maradu do.	71,85	24	72,09	..	4	..	35	72,48	..	72,48	1	3	..	3,60	3,64
Thadal channel	26,84	2,62	29,46	..	..	..	16	29,62	..	29,62	..	2	..	1,47	1,49
Arker do.	8,77	34	9,11	..	..	..	4	9,15	..	9,15	..	..	..	46	46
Kalingal channel	19,61	42	20,03	..	..	..	63	20,66	..	20,66	1	5	..	1,00	1,06
Cheyar anicut system	36,06	3,46	39,52	..	..	..	29	39,81	..	39,81	1	2	..	1,97	2,00
Poiney do.	43,63	5,08	48,71	..	..	..	42	49,13	..	49,13	1	3	..	2,44	2,48
Nandyar channel	3,37	2	3,39	..	..	..	9	3,48	..	3,48	..	1	..	17	18
Ganjám minor rivers system ..	26,99	6,90	33,89	..	9	..	14	34,12	..	34,12	1	2	..	1,69	1,72
Dondapad tank	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	8,47,78	1,12,07	9,59,85	..	97	..	22,50	9,83,32	..	9,83,32	47	1,88	..	47,99	50,34
Navigation.															
Buckingham canal	..	..	..	98,51	..	..	98	99,49	10	99,39	1,99	7,96	..	..	9,95
Chilka lake canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ganjám-Gopalpur canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Védaranniyam canal	..	..	..	86	..	..	1	87	..	87	2	7	..	..	9
Total ..	..	..	..	99,37	..	..	99	1,00,36	10	1,00,26	2,01	8,03	..	..	10,04
Total, Irrigation and Navigation ..	8,47,78	1,12,07	9,59,85	99,37	97	..	23,49	10,83,68	10	10,83,58	2,48	9,91	..	47,99	60,38

Statement showing the Financial Results of Irrigation Works for, and up to end of, 1897-98—*cont.*

Table III.—Main heads of Revenue and Working Expenses for the year ended 31st March 1898—*cont.*

Irrigation Works.	Working Expenses—*cont.*											
	Maintenance of works.										Indirect charges.	Grand Total, Working expenses.
	Establishment charges.				Works.	Repairs.	Tools and plant.	Plantations.	Total maintenance.	Total direct charges.		
	Direction.	Executive.	Medical.	Total.								
	17	18	19	20	21	22	23	24	25	26	27	28
MINOR WORKS AND NAVIGATION—*cont.*	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.
Irrigation Works—cont.												
Shatiatope anicut	47	1,88	..	2,35	86	9,37	..	..	12,58	18,02	34	18,36
Vriddhachalam anicut	11	43	..	54	16	2,20	..	..	2,90	3,72	8	3,80
Mehamattur do.	8	32	..	40	12	1,60	..	..	2,12	2,84	6	2,90
Tirukkóyilúr do.	51	2,02	..	2,53	3,03	8,08	..	..	13,64	15,62	36	15,98
Cumbum tank	1	2	..	3	— 4	53	..	..	52	85	1	86
Vallur anicut system	3	12	..	15	20	47	..	..	82	1,04	2	1,06
Maradur do.	39	1,54	..	1,93	14	8,91	..	..	10,98	14,62	28	14,90
Thadapalli channel	22	90	..	1,12	40	4,53	..	..	6,05	7,54	16	7,70
Arkenkota do.	18	74	..	92	1,00	3,00	..	..	4,92	5,38	13	5,51
Kalingarayen channel	24	94	..	1,18	13	4,99	..	..	6,30	7,36	17	7,53
Cheyar anicut system	52	2,07	..	2,59	2,00	9,24	..	..	13,83	15,83	37	16,20
Poiney do.	30	1,19	..	1,49	2,50	4,00	..	..	7,99	10,47	22	10,69
Nandyar channel	13	50	..	63	..	3,40	4	..	4,07	4,25	9	4,34
Ganjám minor rivers system ..	94	3,78	..	4,72	..	20,51	..	..	25,23	26,95	66	27,61
Dondapad tank	2	10	..	12	..	53	..	..	65	65	2	67
Total ..	6,75	26,89	..	33,64	18,38	1,33,04	— 8	..	1,84,98	2,35,32	5,05	2,40,37
Navigation.												
Buckingham canal	2,50	10,02	..	12,52	59	54,16	3,11	8	70,46	80,41	3,14	83,55
Chilka lake do.	1	6	..	7	..	23	..	..	30	30	1	31
Ganjám-Gopalpur canal	..	..	..	..	..	..	..	..	..	..	..	..
Védáranniyam canal	23	94	..	1,17	..	5,11	2	..	6,30	6,39	18	6,57
Total ..	2,74	11,92	..	13,76	59	59,50	3,13	8	77,06	87,10	3,33	90,43
Total, Irrigation and Navigation ..	9,49	37,91	..	47,40	18,97	1,92,54	3,05	8	2,62,04	3,22,42	8,38	3,30,80

MADRAS,
16th September 1898.

(Signed) E. A. DENNYS,
Examiner, Public Works Accounts.

10

PUBLIC WORKS DEPARTMENT,
IRRIGATION BRANCH.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the

READ the following

which were misunderstood last year, is as much a project for the irrigation of old precariously supplied wet land as for the irrigation of new land. In the estimates on which the financial forecasts were based, the increase of assessment on old wet land was entered at over Rs 2 per acre for Each crop, while the charge for irrigation of dry occupied land was entered at Rs 5. The areas in the forecast statement represent the old and new land taken together and the revenue entered is the average revenue from both. The cause of the smallness of the credits to the project is being enquired into.

order thereon No: 932 dated 3.12.98

Copy of these proceedings with

ordered that the statements received from the Examiner of Public Works Accounts be forwarded to the Government of India with reference to its Circular n° 23 of 1881

23/11/98

Draft approved by I hon or tons. 26/11/98

Endorsement - N° 9331 d/5-12-98

Forwarded.

To

The Chief Engineer for Irrign
" Supg. Engineers of Circles
" Supg. Engineer on Special duty, Canvay Completion Estimates.
" Exr of P. W. Accts
" Revenue dept.

9/12/98

E. I. Form No. 1 (a)—500—21-4-98.

Public Works (1898) Department.

L.

CURRENT No. 97/88
.9396

From The Chief Engineer for Irrigation

Order

No. 295 I.

Dated 21st Nov 98.

Received

Registered 25-11-98

Enclosures 5

Spare copies

SUBJECT.

Financial results of Irrigation and Navigation works for 1897-98. Forwarding the statement of — for submission to the Govt. of India.

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

Public Works (189 8) Department.

CURRENT No. 9396

From The Govt of India

No. 52 A.D.

Dated 7. November 98

Received

Registered 314

Enclosures

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SUBJECT

Financial results of Irrigation operations

Requests the submission of the returns showing the for 1897-98 as early date

F. E. I.

17/11

[P. W. 29. 1,000—5-9-98.]

Secs 16/11/98

BACK PAPERS.

G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

All communications should be addressed to the Secretary.

No. 52 A.I.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

ACCOUNT.

IRRIGATION.

TO

THE SECRETARY TO THE GOVERNMENT OF MADRAS,

Public Works Department.

Simla, the 7th November 1898.

Sir,

I am directed to invite your attention to Public Works Department Circular No. XXIII of 1881, and to request that the returns, showing the financial results of Irrigation operations for 1897-98, now over due, may be submitted on an early date.

I have the honour to be,

Sir,

Your most obedient servant,

Under Secy. to the Govt. of India.

Documents accompanying:-

Nil.

3.11.98.

Public Works (1898) Department.

CURRENT No. 263

From The Examiner P. W. Accounts, Madras & Coorg

Order

No. 3836 B/13

Dated 11th November 1898

Received } 14 Nov 98

Registered }

Enclosures 1 bundle of proof sheets

Spare copies

SUBJECT.

Statements showing the financial results of the Irrigation Works for 1897-98 — Returns the with necessary Corrections — Carried out.

F. E. I. 14/11

14/11/98

14/11/98

No. 3836 B/B dated 11th November 1898.

To

E.I.

Herewith the proof sheets received with the above duly examined and necessary corrections carried out.

CD/11.11.98.

C.

11/11/98

CHIEF ENGINEER FOR IRRIGATION.
14NOV. 1898
No. 263

Public Works (1898) Department.

CURRENT No. 209

From The Examiner, P. W. Accts, Madras

Order

No. 3201 B/B

Dated 16 September 1898

Received 17 Sept 98

Registered

Enclosures 3

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SUBJECT.

Statements of financial results of Irrigation & Navigation Works for 1897-98 — Submits the —

FEJ

Copy 17/9/98

19-9-98

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.
1332	4-12-98
R 263	11-12-98

E. No .27.
1,000—6-9-97.

KEEP-WITH CURRENT No.

dated 189 .

GOVT. OF MADRAS. } 1898 { P. W. DEPT.

EXAMINER, P. W. ACCOUNTS.

CHIEF ENGINEER FOR IRRIGATION.
17 SEP. 1898
No. 209

Madras, 16 September 1898

OFFICE NOTE No. 3201 B/B

To

I

Herewith the statements of financial results of Irrigation and Navigation works for 1897-98 for submission to the Government of India.

2. Columns 2 and 3 of table I and the entries against Kurnool Canal in columns 16 to 20 of the same table have been left blank, as necessary particulars are not available in my office.

3. Please send proofs for corrections in this office as was done last year.

16.9.98
C.
16/9/98

ENCLOSURE

MADRAS.

STATEMENT showing the Financial Results of Irrigation Works for, and up to end of, 1897-98.

TABLE I.—Principal Results of operations for the year ended 31st March 1898.

Irrigation Works.	Mileage in operation.		Direct capital outlay during the year 1897-98 (including cost of establishment and tools and plant).	Gross receipts, direct and indirect, from all sources.	Working expenses.			Net revenue (excluding charges for interest).		Interest at 4 per cent. on direct capital outlay at commencement of year and at 2 per cent. on outlay during the year.
	Main canal.	Distributaries.			Direct.	Indirect.	Total.	Amount.	Percentage on total direct and indirect capital outlay.	
1	2	3	4	5	6	7	8	9	10	11
MAJOR WORKS.	MILES.	MILES.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.
Irrigation Works.										
Godávari delta system	503	1905	78,81	31,60,43	6,43,00	32,26	6,75,26	24,85,17	19·15	4,41,45
Kistna do.	829	1614	3,88,99	24,74,79	7,06,79	29,73	7,36,52	17,38,27	13·18	4,86,25
Pennér anicut system	22	121	11	1,64,60	19,10	1,27	20,37	1,44,23	7·59	65,90
Sangam do.	9	295	18,40	1,87,27	39,88	5,49	45,37	1,41,90	3·68	1,25,67
Kurnool-Cuddapah canal	190	313	4,14	1,56,22	1,19,65	4,40	1,24,05	32,17	·14	8,68,53
Barúr tank	26½	11	..	9,62	3,56	14	3,70	5,92	1·39	16,09
Cauvery delta system	844	1250	1,36,05	9,63,40	62,40	6,11	68,51	2,94,89	44·86	71,92
Srivaikuntam anicut system	28	62	8,22	1,14,49	32,85	1,45	34,30	80,19	5·44	54,66
Periyár project	36	80	1,62,83	1,12,87	87,88	1,69	89,57	23,30	·16	3,28,46
Total	1981½	5651¼	7,97,55	73,43,69	17,15,11	82,54	17,97,65	55,46,04	8·40	24,58,93
Protective Works.										
Rushikulya project	80	119	1,44,01	61,98	35,92	86	36,78	25,20	·54	1,67,33
Total, Major Works	2061½	5770¼	9,41,56	74,05,67	17,51,03	83,40	18,34,43	55,71,24	7·88	26,26,26
MINOR WORKS AND NAVIGATION.										
Irrigation Works.										
Chembrambakam tank	27	..	2,82	28,53	— 21	— 4	— 25	28,78	3·85	25,32
Pálár anicut system	163	127	6,65	1,47,83	43,71	97	44,68	1,03,15	4·98	78,53
Pefsandorai anicut system	39	24	49,51	32,92	14,59	31	14,90	18,02	3·26	19,30
Lower Coleroon anicut system	350	546	90,33	2,98,31	39,51	63	40,14	2,58,17	31·94	29,65
Madras water-supply and Irrigation extension project	10	..	..	28,27	2,58	21	2,79	25,48	1·45	60,63
Shatiatope anicut system	41	149	29,39	1,08,46	18,02	34	18,36	90,10	53·33	6,00
Vriddhachalam do.	33	16	..	16,20	3,72	8	3,80	12,40	24·92	1,94
Mahamattur do.	15	9	..	14,33	2,84	6	2,90	11,43	16·09	2,77
Tirukkoyilúr do.	137	26	..	38,98	15,62	36	15,98	23,00	9·04	9,92

Statement showing the Financial Results of Irrigation Works for, and up to end of, 1897-98—*cont.*

Table I.—Principal Results of operations for the year ended 31st March 1898—*cont.*

Irrigation Works.	Mileage in operation.		Direct capital outlay during the year 1897-98 (including cost of establishment and tools and plant).	Gross receipts, direct and indirect, from all sources.	Working expenses.			Net revenue (excluding charges for interest).		Interest at 4 per cent. on direct capital outlay at commencement of year and at 2 per cent. on outlay during the year.
	Main canal.	Distributaries.			Direct.	Indirect.	Total.	Amount.	Percentage on total direct and indirect capital outlay.	
1	2	3	4	5	6	7	8	9	10	11
MINOR WORKS AND NAVIGATION—*cont.*	MILES.	MILES.	RX.	RX.	RX.	RX.	RX.	RX.		RX.
Irrigation Works—cont.										
Cumbum tank	..	.. 24	63	6,65	85	1	86	5,79	9·02	2,49
Vallur anicut system	.. 3	.. 8	74	4,39	1,04	2	1,06	3,33	5·15	2,50
Maradur do.	.. 27	.. 45	1	72,43	14,62	28	14,90	57,58	128·51	1,75
Thadapalli channel	.. 76	..	2,48	29,62	7,54	16	7,70	21,92	17·47	4,59
Arkenkota do.	.. 24	..	..	9,15	5,38	13	5,51	3,64	3·53	4,01
Kalingaroyan channel	.. 61	..	3,32	20,66	7,36	17	7,53	13,13	20·63	2,42
Cheyar anicut system	.. 61	.. 120	3	39,81	15,83	37	16,20	23,61	5·82	15,78
Poiney do.	.. 104	.. 78	— 9	49,13	10,47	22	10,69	38,44	16·59	9,03
Nandyar channel	.. 24	..	..	3,48	4,25	9	4,34	— 86	(a) ..	2,14
Ganjám minor rivers system	.. 100	..	12,91	34,12	26,95	66	27,61	6,51	14·64	1,48
Dondapad tank	..	.. 35	5,04	..	65	2	67	— 67	..	5,66
Sagileru project	.. 10	.. 8	54,74	..	..	..	..	..	..	15,78
Munnyeru project	.. 22¾	.. 21	1,47,08	..	..	..	..	..	..	15,03
Chopaud project	..	..	33,39	..	..	..	..	..	..	6,68
Total ..	1327¾	1196⅝	4,39,00	9,83,32	2,35,32	5,05	2,40,37	7,42,95	8·42	3,29,40
Navigation.										
Buckingham canal	.. 262	..	12,37	99,39	80,41	3,14	83,55	15,84	·18	3,37,99
Chilka lake canal	.. 8	..	..	..	30	1	31	— 31	(a) ..	1,21
Ganjám-Gopalpur canal	..	..	..	..	..	..	..	..	..	5,72
Védáranniyam canal	.. 34½	..	..	87	6,39	18	6,57	— 570	(a) ..	5,31
Total ..	304½	..	12,37	1,00,26	87,10	3,33	90,43	9,83	·10	3,50,23
Total, Irrigation and Navigation ..	1632¼	1196⅝	4,51,37	10,83,58	3,22,42	8,38	3,30,80	7,52,78	4·16	6,79,63

(a) Percentages on *minus* sums have been omitted.

& This project is under construction

Review of the punctuation adopted in the Statement and Table II

STATEMENT showing the Financial Results for Irrigation Works for, and up to end of, 1897-98.

TABLE II.—General Financial Results of the several undertakings to 31st March 1898.

Irrigation Works.	Estimated cost of construction (exclusive of all indirect charges).	Date of completion of work.	Capital outlay.				Excess of interest over net revenue in past years.	Total *sum* at charge at end of 1897-98.	Interest at 4 per cent. on total *sum* at charge at end of 1897-98.	Surplus for the year of net revenue over interest on total *sum* at charge.	Excess for the year of interest on total *sum* at charge over net revenue.	Capitalized value at 4 per cent. of net revenue (excluding charges for interest).	Surplus *sum* to credit in excess of total *sum* at charge.	Excess *sum* at charge over capitalized value of net revenue.
			Direct charges.		Indirect charges.	Total capital outlay, both direct and indirect, to end of year.								
			To end of previous year.	To end of year.	To end of year.									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MAJOR WORKS.	RX.		RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.
Irrigation Works.														
Gódávari delta system ..	1,13,17,53	1846-47	1,09,96,98	1,10,75,79	19,02,28	1,29,78,07	—3,30,92,58	—2,01,14,51	— 8,04,58	32,89,75	..	6,21,29,25	8,92,43,76	..
Kistna do. ..	1,23,50,69	1855-56	1,19,61,70	1,23,50,69	8,40,97	1,31,91,66	—1,74,42,48	— 42,50,82	— 1,70,03	19,08,30	..	4,34,56,75	4,77,07,57	..
Penner anicut system ..	16,47,58	1860-61	16,47,47	16,47,58	2,51,61	18,99,19	— 10,32,58	8,66,61	34,66	1,09,57	..	36,05,75	27,39,14	..
Sangam do. ..	33,66,97	1884-85	31,32,55	31,50,95	7,05,06	38,56,01	6,08,13	44,64,14	1,78,57	..	36,67	35,47,50	..	9,16,64
Kurnool-Cuddapah canal ..	2,17,18,54	1882-83	2,17,11,14	2,17,15,28	2,46	2,17,17,74	1,32,88,33	3,50,06,07	14,00,24	..	13,68,07	8,04,25	..	3,42,01,82
Barur tank	4,04,87	1887-88	4,02,18	4,02,18	22,87	4,25,05	1,55,58	5,80,63	23,23	..	17,31	1,48,00	..	4,32,63
Cauvery delta system ..	25,88,27	1836-37	17,29,91	18,65,96	1,28,62	19,94,58	—2,19,14,48	—1,99,19,90	— 7,96,80	16,91,69	..	2,23,72,25	4,22,92,15	..
Srívaikuntam anicut system ..	13,72,26	1870-71	13,62,52	13,70,74	1,01,18	14,71,92	— 25,20	14,46,72	57,87	22,32	..	20,04,75	5,58,03	..
Periyár project	81,30,02	1896-97	81,30,02	82,92,85	2,36,29	85,29,14	16,15,03	1,01,44,17	4,05,77	..	3,82,47	5,82,50	..	95,61,67
Total ..	6,28,96,73	..	6,10,74,47	6,18,72,02	41,91,34	6,60,63,36	—5,78,40,25	82,23,11	3,28,93	52,17,11	..	13,86,51,00	13,04,27,89	..
Protective Works.														
Rushikulya project ..	43,68,00	1891-92	41,11,21	42,55,22	3,89,20	46,44,42	9,48,56	55,92,98	2,23,72	..	1,98,50	6,30,00	..	49,62,98
Total, Major works ..	6,72,64,73	..	6,51,85,68	6,61,27,24	45,80,54	7,07,07,78	—5,68,91,69	1,38,16,09	5,52,65	50,18,61	..	13,92,81,00	12,54,64,91	..
MINOR WORKS AND NAVIGATION.														
Irrigation Works.														
Chembrambakam tank ..	6,34,58	1870-71	6,31,68	6,34,50	1,12,43	7,46,93	8,76	7,55,69	30,23	..	1,45	7,19,50	..	36,19
Palár anicut system ..	19,73,91	1853-54	19,59,97	19,66,62	1,05,34	20,71,96	7,78,07	28,50,63	1,14,00	..	10,85	25,78,75	..	2,71,28
Pelandorai anicut system ..	4,91,19	1875-76	4,57,71	5,07,22	44,80	5,52,02	5,50,67	11,02,69	44,11	..	26,09	4,50,50	..	6,52,19
Madras water-supply and irrigation extension project ..	15,15,83	1870-71	15,15,83	15,15,83	2,38,22	17,54,05	17,27,64	34,81,69	1,39,27	..	1,13,79	6,37,00	..	28,44,69
Lower Coleroon anicut ..	9,45,90	1848-49	6,96,00	7,86,33	21,87	8,08,20	— 81,51,43	— 73,43,29	— 2,93,73	5,51,90	..	64,54,25	1,37,97,54	..
Shatiatope do. ..	1,99,99	1847-48	1,35,28	1,64,67	4,26	1,68,93	— 18,64,67	— 17,15,74	— 68,63	1,58,73	..	22,52,50	39,68,24	..
Vriddhachalam do. ..	48,47	1868-69	48,47	48,47	1,27	49,74	— 1,30,12	— 80,38	— 3,22	15,62	..	3,10,00	3,90,38	..
Mehamattur do. ..	69,23	1872-73	69,24	69,24	1,81	71,05	16,84	87,89	3,52	7,91	..	2,85,75	1,97,86	..
Tirukkóyilúr do. ..	2,47,95	1861-62	2,47,95	2,47,95	6,52	2,54,47	— 1,04,36	1,50,11	6,00	17,00	..	5,75,00	4,24,89	..
Cumbum tank	62,56	1876-77	61,93	62,56	1,63	64,19	— 68,68	— 4,49	— 18	5,97	..	1,44,75	1,49,24	..
Vallur anicut system ..	68,58	1872-73	62,18	62,92	1,65	64,57	37,96	1,02,53	4,10	..	77	83,25	..	19,28
Maradur do. ..	43,66	1872-73	43,65	43,66	1,14	44,80	— 12,29,37	— 11,84,57	— 47,38	1,04,96	..	14,39,50	26,24,07	..

Statement showing the Financial Results for Irrigation works for, and up to end of, 1897-98—*cont.*

Table II.—General Financial results of the several undertakings to 31st March 1898—*cont.*

Irrigation Works.	Estimated cost of construction (exclusive of all indirect charges).	Date of completion of work.	Capital outlay.				Excess of interest over net revenue in past years.	Total *sum* at charge at end of 1897-98.	Interest at 4 per cent. on total *sum* at charge at end of 1897-98.	Surplus for the year of net revenue over interest on total *sum* at charge.	Excess for the year of interest on total *sum* at charge over net revenue.	Capitalized value at 4 per cent. of net revenue (excluding charges for interest).	Surplus *sum* to credit in excess of total *sum* at charge.	Excess *sum* at charge over capitalized value of net revenue
			Direct charges.		Indirect charges.	Total capital outlay, both direct and indirect, to end of year.								
			To end of previous year.	To end of year.	To end of year.									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Minor Works and Navigation—*cont.*	Rx.		Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	x.	Rx.
***Irrigation Works*—cont.**														
Thadapalli channel ..	1,14,68	1854–55	1,13,64	1,16,12	9,34	1,25,46	— 3,50,21	— 2,24,75	— 8,99	30,91	..	5,48,00	7,72,75	..
Arkenkota do.	1,00,34	1859–60	1,00,34	1,00,34	2,63	1,02,97	1,21,35	2,24,32	8,97	..	5,33	91,00	..	1,31,32
Kalingaroyan channel ..	62,07	1854–55	58,74	62,06	1,63	63,69	1,42,96	2,06,65	8,27	4,86	..	3,28,25	1,21,60	..
Cheyar anicut system ..	3,94,41	1852–53	3,94,38	3,94,41	11,04	4,05,45	12,37	4,17,82	16,71	6,90	..	5,90,25	1,72,43	..
Poiney do. ..	2,25,62	1855–56	2,25,71	2,25,62	6,07	2,31,69	— 3,90,66	— 1,58,97	— 6,36	44,80	..	9,61,00	11,19,97	..
Nandyar channel	53,49	1895–96	53,49	53,49	2,22	55,71	7,51	63,22	2,53	..	3,39	— 21,50	..	4,72
Ganjám minor rivers system(*a*)	69,10	1852–53	(*a*) 30,45	43,36	1,13	44,49	— 4,16,42	— 3,71,93	— 14,88	21,39	..	1,62,75	5,34,68	..
Dondapad tank	1,32,22	..	1,38,92	1,43,96	4,96	1,48,92	14,00	1,62,92	6,52	..	7,19	— 16,75	..	1 9 67
Sagileru project	4,31,00	..	3,67,08	4,21,82	15,98	4,38,80	27,72	4,66,52	18,66	..	18,66	..	..	4 5 52
Chopaud ,, ...	3,65,00	..	57,98	91,37	1,86	93,23	1,16	94,39	3,78	..	3.78	..	..	94 3
Munnyeru project	3,70,49	..	3,02,30	4,49,38	11,59	4,60,97	12,85	4,73,82	18,95	..	18,95	..	..	4,73,82
Total ..	86,20,27	..	77,72,92	8,21,190	6,10,39	88,22,29	— 92,66,12	— 4,43,33	— 17,75	7,60,70	..	1,85,73,75	1,90,17,58	..
Navigation.														
Buckingham canal	84,67,65	1837–38	84,43,45	84,55,83	4,86,49	89,42,32	57,01,75	1,46,44,07	5,85,76	..	5,69,92	3,93,00	..	..
Chilka Lake canal	30,24	..	30,24	30,24	79	31,03	30,06	61,09	2.45	..	2,76	— 7,75	..	..
Ganjam-Gopalpur canal ..	1,43,10	..	1,43,10	1,43,10	12,39	1,55,49	50,38	2,05,87	8,23	..	8,23	..	..	..
Védáranniyam canal ..	1,32,70	1874–75	1,32,70	1,32,70	3,47	1,36,17	2,16,82	3,52,99	14,12	..	19,82	— 1,42,50	..	..
Total ..	87,73,69	..	87,49,49	87,61,87	5,03,14	92,65,01	59,99,11	1,52,64,02	6,10,56	..	6,00,73	2,15,75	..	..
Total Irrigation and Navigation ..	1,73,93,96	..	1,65,22,41	1,69,73,77	11,13,53	1,80,87,30	— 32,67,11	1,48,20,19	5,92,81	1,59,97	..	1,88,19,50	39,99,31	..

(*a*) Includes the outlay of previous years traced during 1897–98.

Note.—"This statement includes Kurnool-Cuddapah canal purchased from the late Madras Irrigation Canal Company. The result of taking over this work in 1882–83 was to reduce the percentage of net revenue on capital cost of Irrigation works in Madras for which Capital and Revenue Accounts are kept from 14·9, the average of three years immediately preceding the transfer, to 5·4".

(Signed) E. A. DENNYS,
Examiner, Public Works Accounts.

Madras
16th Septr 98

Statement showing the Financial Results of Irrigation Works for and up to end of 1897-98.

Table III.—Main heads of Revenue and Working Expenses for the year ended 31st March 1898.

Irrigation Works.	Revenue.										Working Expenses.				
	Irrigation.			Navigation.	Plantation and land.	Water power.	Miscellaneous.	Total.	Remission of revenue.	Net revenue.	Revenue management.				Total, Revenue management.
											Establishment charges.				
	Water-rates directly paid.	Share of land revenue.	Total.								Direction.	Executive.	Navigation.	Civil officers.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Major Works.															
Irrigation Works.															
Gódávari delta system	29,13,57	1,50,49	30,64,06	76,58	6,78	..	13,09	31,60,51	8	31,60,43	36,89	1,47,57	..	1,53,20	3,37,66
Kistna do.	22,86,21	1,43,55	24,29,76	28,13	3,50	..	13,59	24,74,38	19	24,74,79	28,34	1,13,35	..	1,21,49	2,63,18
Pennár anicut system	1,43,30	20,92	1,64,22	..	29	..	9	1,64,60	..	1,64,60	1,73	6,91	..	8,21	16,85
Sangam do.	1,62,81	23,15	1,85,96	..	..	..	1,31	1,87,27	..	1,87,27	1,98	7,92	..	9,30	19,20
Kurnool-Cuddapah canal	1,50,12	..	1,50,12	1,28	62	..	4,26	1,56,28	6	1,56,22	1,92	7,70	..	7,51	17,13
Barur tank	9,62	..	9,62	..	..	..	..	9,62	..	9,62	12	46	..	48	1,06
Cauvery delta system	8,48,72	1,11,52	9,60,24	..	63	..	2,72	9,63,59	19	9,63,40	10,25	41,01	..	48,01	99,27
Srivaikuntam anicut system ..	1,10,74	1,78	1,12,52	..	23	..	1,74	1,14,49	..	1,14,49	1,37	5,47	..	5,63	12,47
Periyár project	99,37	12,82	1,12,19	56	3	..	9	1,12,87	..	1,12,87	1,21	4,82	..	5,61	11,64
Total ..	67,24,46	4,64,23	71,88,69	1,06,55	12,08	..	36,89	73,44,21	52	73,43,69	83,81	3,35,21	..	3,59,44	7,78,46
Protective Works.															
Rushikulya project	61,10	10	61,20	1	..	..	77	61,98	..	61,98	2	6	..	3,06	3,14
Total, Major Works ..	67,85,56	4,64,33	72,49,89	1,06,56	12,08	..	37,66	74,06,19	52	74,05,67	83,83	3,35,27	..	3,62,50	7,81,60
Minor Works and Navigation.															
Irrigation Works.															
Chembrambakam tank	27,62	85	28,47	..	..	..	6	28,53	..	28,53	..	1	..	1,42	1,43
Palar anicut system	1,29,02	16,68	1,45,70	..	..	..	2,13	1,47,83	..	1,47,83	4	17	..	7,29	7,50
Pelandorai anicut system ..	32,48	12	32,60	..	2	..	30	32,92	..	32,92	1	2	..	1,63	1,66
Madras Water-supply and Irrigation Extension project	11,24	49	11,73	..	..	..	16,54	28,27	..	28,27	33	1,32	..	59	2,27
Lower Coleroon anicut	2,42,96	54,37	2,97,33	..	8	..	90	2,98,31	..	2,98,31	2	8	..	14,87	14,94

Statement showing the Financial Results of Irrigation Works for and up to end of 1897-98—*cont.*

Table III.—Main heads of Revenue and Working Expenses for the year ended 31st March 1898—*cont.*

Irrigation Works.	Working Expenses—*cont.*											
	Maintenance of works.											
	Establishment charges.				Works.	Repairs.	Tools and plant.	Plantations.	Total maintenance.	Total direct charges.	Indirect charges.	Grand Total, Working expenses
	Direction.	Executive.	Medical.	Total.								
	17	18	19	20	21	22	23	24	25	26	27	28
Major Works.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Irrigation Works.												
Gódávari delta system	9,19	36,77	..	45,96	12,56	1,99,64	46,22	96	3,05,34	6,43,00	32,26	6,75,26
Kistna do.	14,13	56,52	..	70,65	11,26	3,03,65	58,05	..	4,43,61	7,06,79	29,73	7,36,52
Pennér anicut system	9	33	..	42	— 2,76	4,60	— 1	..	2,25	19,10	1,27	20,37
Sangam do.	74	2,97	..	3,71	3,78	13,13	4	2	20,68	39,88	5,49	45,37
Kurnool-Cuddapah canal	4,36	17,42	..	21,78	7,72	71,87	1,06	9	1,02,52	1,19,65	4,40	1,24,05
Barur tank	9	38	..	47	66	1,37	..	..	2,50	3,56	14	3,70
Cauvery delta system	— 1,53	— 6,12	..	— 7,65	14,42	— 37,97	— 5,71	4	— 36,87	62,40	6,11	68,51
Srívaikuntam anicut system ..	71	2,82	..	3,53	1,07	15,86	— 8	..	20,38	32,85	1,45	34,30
Periyár project	1,21	4,86	..	6,07	2,64	67,00	53	..	76,24	87,88	1,69	89,57
Total ..	28,99	1,15,95	..	1,44,94	51,35	6,39,15	1,00,10	1,11	9,36,65	17,15,11	82,54	17,97,65
Protective Works.												
Rushikulya project	1,21	4,85	..	6,06	~~26,65~~ 2635	~~37~~	37	..	32,78	35,92	86	36,78
Total, Major Works ..	30,20	1,20,80	..	1,51,00	~~77,70~~	~~6,39,52~~	~~1,00,10~~	1,11	9,69,43	17,51,03	83,40	18,34,43
Minor Works and Navigation.												
Irrigation Works.												
Chembrambakam tank	— 6	— 23	..	— 29	— 2,28	1,04	— 11	..	— 1 64	— 21	— 4	— 25
Palar anicut system	1,35	5,39	..	6,74	8,03	21,44	..	..	36,21	43,71	97	44,68
Pelandorai anicut system	45	1,77	..	2,22	2,83	7,88	..	..	12,93	14,59	31	14,99
Madras Water-supply and Irrigation F-tension project	— 3	— 13	..	— 16	— 3,60	4,11	— 1	..	34	2,58	21	2,79
Lower Coleroon anicut	89	3,54	..	4,43	2,90	17,21	..	..	24,54	39,51	63	40,14

Statement showing the Financial Results of Irrigation Works for, and up to end of, 1897-98—*cont.*

Table III.—Main heads of Revenue and Working Expenses for the year ended 31st March 1898—*cont.*

Irrigation Works.	Revenue.										Working Expenses.				
	Irrigation.			Navigation.	Plantation and land.	Water power.	Miscellaneous.	Total.	Remission of revenue.	Net revenue.	Revenue management.				Total, Revenue management.
											Establishment charges.				
	Water-rates directly paid.	Share of land revenue.	Total.								Direction.	Executive.	Navigation.	Civil officers.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINOR WORKS AND NAVIGATION—*cont.*	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.
Irrigation Works—cont.															
Shatiatope anicut	92,72	15,38	1,08,10	..	19	..	17	1,08,46	..	1,08,46	1	3	..	5,40	5,44
Vriddachalam anicut	15,78	19	15,97	..	2	..	21	16,20	..	16,20	..	2	..	80	82
Mehamattur do.	14,26	4	14,30	..	1	..	2	14,33	..	14,33	..	..	..	72	72
Tirukkóyilúr do.	35,24	3,17	38,41	..	52	..	5	38,98	..	38,98	1	5	..	1,92	1,98
Cumbum tank	6,03	62	6,65	..	..	..	..	6,65	..	6,65	..	..	..	33	33
Vallur anicut system	3,31	1,08	4,39	..	..	..	..	4,39	..	4,39	..	..	..	22	22
Maradur do.	71,85	24	72,09	..	4	..	35	72,48	..	72,48	1	3	..	3,60	3,64
Thadapalli channel	26,84	2,62	29,46	..	..	..	16	29,62	..	29,62	..	2	..	1,47	1,49
Arkenkota do.	8,77	34	9,11	..	..	..	4	9,15	..	9,15	..	..	..	46	46
Kalingarayan channel	19,61	42	20,03	..	..	..	63	20,66	..	20,66	1	5	..	1,00	1,06
Cheyar anicut system	36,06	3,46	39,52	..	..	..	29	39,81	..	39,81	1	2	..	1,97	2,00
Poiney do.	43,63	5,08	48,71	..	..	..	42	49,13	..	49,13	1	3	..	2,44	2,48
Nandiyar channel	3,37	2	3,39	..	..	..	9	3,48	..	3,48	..	1	..	17	18
Ganjám minor rivers system ..	26,99	6,90	33,89	..	9	..	14	34,12	..	34,12	1	2	..	1,69	1,72
Dondapad tank	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	8,47,78	1,12,07	9,59,85	..	97	..	22,50	9,83,32	..	9,83,32	47	1,88	..	47,99	50,34
Navigation.															
Buckingham canal	..	..	..	98,51	..	..	98	99,49	10	99,39	1,99	7,96	..	..	9,95
Chilka lake canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ganjám-Gopalpur canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Védáranniyam canal	..	..	..	86	..	..	1	87	..	87	2	7	..	..	9
Total ..	..	..	..	99,37	..	..	99	1,00,36	10	1,00,26	2,01	8,03	..	..	10,04
Total, Irrigation and Navigation ..	8,47,78	1,12,07	9,59,85	99,37	97	..	23,49	10,83,68	10	10,83,58	2,48	9,91	..	47,99	60,38

Statement showing the Financial Results of Irrigation Works for, and up to end of, 1897-98—*cont.*

Table III.—Main heads of Revenue and Working Expenses for the year ended 31st March 1898—*cont.*

Irrigation Works.	Working Expenses—*cont.*											
	Maintenance of works.										Indirect charges.	Grand Total, Working expenses.
	Establishment charges.				Works.	Repairs.	Tools and plant.	Plantations.	Total maintenance.	Total direct charges.		
	Direction.	Executive.	Medical.	Total.								
	17	18	19	20	21	22	23	24	25	26	27	28
MINOR WORKS AND NAVIGATION—*cont.*	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.	RX.
Irrigation Works—cont.												
Shatiatope anicut	47	1,88	..	2,35	86	9,37	..	..	12,58	18,02	34	18,36
Vriddhachalam anicut	11	43	..	54	16	2,20	..	..	2,90	3,72	8	3,80
Mehamattur do., ...	8	32	..	40	12	1,60	..	..	2,12	2,84	6	2,90
Tirukkóyilúr do.	51	2,02	..	2,53	3,03	8,08	..	..	13,64	15,62	36	15,98
Cumbum tank	1	2	..	3	— 4	53	..	..	52	85	1	86
Vallur anicut system	3	12	..	15	20	47	..	..	82	1,04	2	1,06
Maradur do.	39	1,54	..	1,93	14	8,91	..	..	10,98	14,62	28	14,90
Thadapalli channel	22	90	..	1,12	40	4,53	..	..	6,05	7,54	16	7,70
Arkenkota do.	18	74	..	92	1,00	3,00	..	..	4,92	5,38	13	5,51
Kalingaroyen channel	24	94	..	1,18	13	4,99	..	..	6,30	7,36	17	7,53
Cheyar anicut system	52	2,07	..	2,59	2,00	9,24	..	..	13,83	15,83	37	16,20
Poiney do.	30	1,19	..	1,49	2,50	4,00	..	..	7,99	10,47	22	10,69
Nandyar channel	13	50	..	63	..	3,40	4	..	4,07	4,25	9	4,34
Ganjám minor rivers system ..	94	3,78	..	4,72	..	20,51	..	..	25,23	26,95	66	27,61
Dondapad tank	2	10	..	12	..	53	..	..	65	65	2	67
Total ..	6,75	26,89	..	33,64	18,38	1,33,04	— 8	..	1,84,98	2,35,32	5,05	2,40,37
Navigation.												
Buckingham canal	2,50	10,02	..	12,52	59	54,16	3,11	8	70,46	80,41	3,14	83,55
Chilka lake do.	1	6	..	7	..	23	..	..	30	30	1	31
Ganjám-Gopalpur canal	..	..	..	..	..	..	..	..	..	..	..	..
Védáranniyam canal	23	94	..	1,17	..	5,11	2	..	6,30	6,39	18	6,57
Total ..	2,74	11,02	..	13,76	59	59,50	3,13	8	77,06	87,10	3,33	90,43
Total, Irrigation and Navigation ..	9,49	37,91	..	47,40	18,97	1,92,54	3,05	8	2,62,04	3,22,42	8,38	3,30,80

MADRAS,
16th September 1898.

(Signed) E. A. DENNYS,
Examiner, Public Works Accounts.

EXAMINER
P. W. ACCOUNTS
15 NOV 1898

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