

Public Works (1898) Department.

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[Despatch Abstract.]

Financial Results of Irrigation & Navigation
Works. 1897-98

Ordered that the Statements of
Expenditure for 1897-98, with note
thereon by the Chief Engineer for Irrigation, be
forwarded to the Secy of India

Financial Results of Irrigation & Navigation
Works

Forwarding Copy of P.W. Sundry

for 1897-98.

BACK PAPERS.

FURTHER PAPERS.

IRRIGATION.
ACCOUNT.

Government (1898) of Madras.
PUBLIC WORKS.

Recd.

Enclosures

Regd.

1898.

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 indirect outlay during the year.										
	Main canal.	Distributaries.			Direct.	Indirect.	Total.	Amount.	Percentage on total direct and indirect capital outlay.											
											2	3	4	5	6	7	8	9	10	11
1																				
MAJOR WORKS.																				
Irrigation Works.																				
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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.	
	Percentage on total sum at charge.		Amount.	Percentage on total sum at charge.	Due to old irrigation works.	Due to new irrigation works.	Total.				
	Amount.	12						13	14	15	16
MAJOR WORKS.											
<i>Irrigation Works.</i>											
Gódkvari delta system ..	..	20,43,72	(a) ..	..	..	184,560	644,875	799,435	49	10	21.37
Kistna do. ..	..	12,62,02	(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	12.87
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
Caavery delta system ..	..	8,22,97	(a) ..	..	..	777,401	212,407	989,808	45	03	71.11
Srivasthnam anicut system ..	..	25,53	1.76	..	..	20,465	21,203	41,668	64	16	29.97
Periyár project ..	..	..	..	3,05,16	3.00	61,092	28,051	89,143	41	32	79.86
Total ..	..	30,87,11	37.54	..	..	1,185,007	1,453,590	2,638,597	50	12	24.48
<i>Protective Works.</i>											
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.											
<i>Irrigation Works.</i>											
Chembrambakam tank ..	..	3.46	..	..	..	11,285	4,406	15,691	65	..	..
Pálar anicut system ..	..	24.62	45	..	..	67,344	30,476	97,820	49	14	30.22
Pelandorai anicut system ..	..	..	86	1.28	..	2,097	8,115	10,212	41	18	45.26
Lower Coleroon anicut system ..	..	..	..	..	..	44,637	68,301	112,983	44	06	13.46
Madras water-supply and Irrigation extension project ..	..	2,28,52	(a) ..	..	..	..	..	..	..	..	..
Shatidatpe anicut system ..	..	84.10	..	35.15	1.09	6,340	4,047	10,387	70	07	9.87
Vridhaachalam do. ..	..	10.46	..	..	..	7,037	26,675	33,712	41	07	16.93
Mehamattur do. ..	..	8.66	9.85	..	..	2,279	4,243	6,522	38	10	22.46
Tirukkóvilár do. ..	..	13.08	8.71	..	..	460	3,560	4,020	40	08	20.24
..	..	..	..	..	..	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.	4	5		Direct.	Indirect.	Total.	Amount.	Percentage on total direct and indirect capital outlay.		
2	3	4	5	6	7	8	9	10	11		
MINOR WORKS AND NAVIGATION—cont.											
Irrigation Works—cont.											
MILES.	MILES.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.		
..	3	63	6.65	85	1	86	5.79	9.02	2.49		
..	8	74	4.39	1,04	2	1,06	3.33	5.15	2.60		
..	45	..	72.48	14,62	28	14,90	57.58	128.51	1.75		
..	76	2.48	29.62	7.54	16	7,70	21.92	17.47	4.59		
..	24	..	9.15	6.38	13	6,51	8.64	3.53	4.01		
..	61	..	20.66	7.36	17	7.53	13.13	20.63	2.42		
..	..	3.32	39.81	15.83	37	16,20	23.61	6.82	15.78		
..	120	3	49.13	10.47	22	10,69	38.44	16.59	9.03		
..	78	9	3.48	4.26	9	4.34	86	(a) ..	2.14		
..	..	..	34.12	26.65	66	27.61	6.51	14.64	1.48		
..	38	12.91	..	66	2	..	..	..	5.66		
..	10	54.71	..	..	..	..	..	..	15.78		
..	22½	147.08	..	..	..	..	..	..	15.03		
..	..	33.39	..	..	..	..	..	..	2.99		
Total ..	1,327½	4,39,00	9,83,32	2,35,32	5,05	2,40,37	7,42,95	8.42	3,19,71		
Navigation.											
..	262	12.37	99.39	80.41	3.41	83.65	15.84	18	3,37.99		
..	8	..	..	30	1	31	31	(a) ..	1.21		
..	..	..	..	..	..	..	..	..	6.72		
..	34½	..	87	6.39	18	6.57	570	(a) ..	6.31		
Total ..	304½	12.37	1,00,26	87.10	3.33	90.43	9.33	10	3,50.28		
Total, Irrigation and Navigation ..	1,632½	4,51,37	10,83,58	3,22,42	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.

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.				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
MINOR WORKS AND NAVIGATION—cont.											
Irrigation Works—cont.											
Cumbum tank	3.00	(a) .. 81	..	..	7,278	914	8,192	..	..	..	12.93
Vallur ancient system	55.83	(a) ..	..	..	3,909	1,397	5,306	..	..	..	24.15
Maradur do.	17.33	(a) ..	..	..	17,355	16,780	34,135	..	..	..	20.68
Thudapalli channel	..	..	..	..	10,161	4,626	14,777	..	..	..	26.00
Arankota do.	..	..	..	..	2,655	1,479	4,134	..	..	..	60.22
Kallagayyan channel	10.71	.. 5.18	..	..	16,648	4,868	21,516	..	..	..	36.45
Choyar ancient system	29.41	(a) .. 1.87	..	..	15,507	16,998	32,505	..	..	..	40.69
Poincy do.	..	..	..	..	18,236	9,981	28,207	..	..	..	21.76
Nandiyar channel	5.03	(a) ..	3.00	.. 4.75	5,829	1,347	7,176	..	..	..	124.71
Ganjum minor rivers system	..	..	..	..	50,052	12,489	62,541	..	..	..	80.92
Dondapad tank	..	..	6.33	.. 3.89	..	..	..	..	..	..	..
Sagileru project	..	..	15.78	.. 3.38	..	..	..	..	..	..	..
Munneyer project	..	..	15.03	.. 3.17	..	..	..	..	..	..	..
Chopaud project	..	..	6.68	.. 7.08	..	..	..	..	..	..	..
Total	4,19.55	(a) ..	..	..	304,879	230,934	535,813	..	..	..	24.44
Navigation.											
Buckingham canal	..	..	..	..	..	..	..	..	..	..	..
Chilka lake canal	..	..	..	..	..	..	..	..	..	..	..
Ganjum-Gopulpur canal	..	..	..	..	..	..	..	..	..	..	..
Vedaramiyam canal	..	..	..	..	..	..	..	..	..	..	..
Total	..	..	..	..	..	..	..	..	..	..	..
Total, Irrigation and Navigation	79.15	.. 53	..	..	304,879	230,934	535,813	..	..	..	90.20
											30.53

MADRAS,
16th September 1898.

(a) Percentages on minus sum have been omitted.

MADRAS,
16th September 1898.

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

(a) Percentages on minus sums have been omitted.

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 of all indirect charges)	Date of completion of work.	Capital outlay.				Total capital outlay, and 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 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.										
			To end of previous year.	To end of 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.															
Irrigation Works.															
Goderi 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	1865-66	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 ancient system	16,47.58	1860-61	16,47.58	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	..	
Saugam do.	33,65.97	1884-85	31,32.55	31,50.95	7,05.06	38,66.01	6,08.13	44,64.14	1,78.57	..	..	35,47.50	..	..	
Kurnool-Cuddapah canal	2,17,18.54	1882-83	2,17,11.14	2,17,16.28	2.46	2,17,17.74	1,32,88.33	3,50,06.07	14,00.24	..	..	8,04.25	..	..	
Baur tank	4,01.87	1887-88	4,02.18	4,02.18	22.87	4,25.05	1,55.58	5,80.63	23.28	..	..	1,48.00	..	..	
Gauvery delta system	25,88.27	1836-37	17,29.91	18,65.96	1,28.62	19,94.68	-2,19,14.48	-1,99,19.90	-7,96.80	16,91.49	..	2,23,72.25	4,22,92.15	..	
Srivaikuntam ancient 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	..	
Fennyar 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	..	..	6,82.50	..	..	
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	..	..	
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.															
Chembabakam tank	6,34.58	1870-71	6,31.68	6,34.90	1,12.43	7,46.98	8.76	7,55.69	30.28	..	1,45	7,19.50	..	..	
Falar ancient system	19,73.91	1853-54	19,59.97	19,66.62	1,05.34	20,71.96	7,78.07	28,50.68	1,14.00	..	..	25,78.75	..	..	
Pelandurai ancient system	4,91.19	1875-76	4,57.71	5,07.22	44.80	5,02.02	5,60.67	11,02.69	44.11	..	26.09	4,50.50	..	..	
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	..	..	
Lower Coleroon ancient	3,45.90	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	..	
Shutlope 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	1,68.73	..	22,52.50	39,08.24	..	
Viduthachalam do.	48.47	1868-69	48.47	48.47	1.27	49.74	1,30.12	80.38	3.22	15.63	..	3,11.00	8,90.38	..	
Melamattur do.	69.23	1872-73	69.24	69.24	1.81	71.05	16.84	87.89	3.92	7.91	..	2,86.75	1,97.86	..	
Trukkoyilur do.	2,47.95	1861-62	2,47.95	2,47.95	6.62	2,54.47	-1,04.38	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	1,50.41	4.10	5.97	..	1,44.75	1,49.24	..	
Vallur ancient system	68.58	1872-73	62.18	62.92	1.65	64.67	37.56	1,02.63	4.10	..	..	83.25	..	..	
Maradur do.	43.66	1872-73	43.65	43.66	1.14	44.80	-12,39.37	11,84.57	47.38	1,04.96	..	14,89.50	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.															
1	2	3	Capital outlay.				7	8	9	10	11	12	13	14	15
			Direct charges.		Indirect charges.	Total capital outlay, both direct and indirect, to end of year.									
			To end of previous year.	To end of year.											
MINOR WORKS AND NAVIGATION—cont.															
Irrigation Works—cont.															
Thadapalli channel ..	1,14,68	1854-55	1,13,64	1,16,12	9,84	1,25,46	— 3,50,21	— 2,24,75	— 8,99	30,91	..	6,48,00	7,72,75	..	1,33,82
Artenkoti 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	..	5,38	91,00	..	..	..
Kalingroyan 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 ..	8,94,41	1852-53	3,94,38	3,94,41	11,04	4,05,45	1,42,37	4,17,82	16,71	6,90	..	5,90,25	1,72,43	..	..
Poincy 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	1,19,97	..	..
Nandyar channel ..	53,49	1895-96	53,49	53,49	2,22	55,71	— 6,12,22	— 3,71,93	2,53	21,39	..	— 21,60	5,34,68	84,72	..
Ganjum minor rivers system ..	69,10	1852-53	30,46	43,36	1,13	44,49	1,48,92	1,48,92	14,00	..	7,19	1,62,75	6,34,68	1,79,67	..
Dondapad tank ..	1,32,22	..	1,38,92	1,43,96	4,96	1,48,92	14,00	1,62,02	6,52	..	18,56	— 16,75	..	4,66,52	..
Sagileru project ..	4,31,00	..	3,67,08	4,21,82	15,98	4,38,80	2,77,2	4,66,52	18,66	..	3,78	..	..	94,39	..
Chopaud ..	3,65,00	..	3,67,08	4,21,82	15,98	4,38,80	2,77,2	4,66,52	18,66	..	3,78	..	..	94,39	..
Munneyeru 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	— 92,96,12	— 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	..	6,69,92	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	2,06,87	8,23	..	8,23	..	..	..	..
Vedaramiyam canal ..	1,32,70	1874-75	1,32,70	1,32,70	3,47	1,36,17	2,16,82	3,62,99	14,12	..	19,82	— 1,42,50	..	..	..
Total ..	87,73,69	..	87,49,49	87,61,87	5,03,14	92,55,01	59,99,91	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	..	1,85,19,50	39,99,31	..	..

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. DENNIS,
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.			Revenue management.			Establishment charges.				Total Revenue management.				
	Water-rates directly paid.	Share of land revenue.	Total.	Navigation.	Plan-tation and land.	Water power.	Miscellaneous.	Total.	Remission of revenue.	Net revenue.		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.															
Irrigation Works.															
Goddavari 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	..	1,63,20	3,37,66
Kistna do. ..	22,86,21	1,43,55	24,29,76	28,13	3,50	..	13,69	24,74,98	19	24,74,99	28,84	1,13,35	..	1,21,49	2,63,18
Pennar anicut system ..	1,43,30	20,92	1,64,22	..	29	..	9	1,64,60	..	1,64,60	1,73	6,91	..	8,21	16,86
Sungum 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	..	..	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
Sriyakuntam anicut system ..	1,10,74	1,78	1,12,52	..	23	..	1,74	1,14,49	..	1,14,49	1,37	5,47	..	6,63	12,47
Pertiyar project ..	99,37	12,82	1,12,19	..	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	12,18	..	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.															
Chembrabakam tank ..	27,62	85	28,47	..	..	..	6	28,53	..	28,53	..	1	..	1,42	1,48
Falar anicut system ..	1,29,02	16,68	1,45,70	..	..	..	2,13	1,47,83	..	1,47,83	..	17	..	7,39	7,60
Pelandurai anicut system ..	32,48	12	32,60	..	2	..	30	32,92	..	32,92	..	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.											Grand Total, Working expenses.				
	Maintenance of works.															
	Establishment charges.					Works.		Repairs.		Tools and plant.			Plantations.	Total maintenance.	Total direct charges.	Indirect charges.
	Direction.	Executive.	Medical.	Total.		EX.	RX.	EX.	RX.	EX.	RX.					
17	18	19	20	21	22	23	24	25	26	27	28					
	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	
MAJOR WORKS.																
Irrigation Works.																
Gōdāvari 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 ancient system	..	33	..	42	276	4.60	—	..	2.25	19.10	1.27	20.37				
Sungam do.	74	2.97	..	3.71	3.78	13.3	4	2	20.68	39.88	5.49	45.37				
Kurnool-Cuddapah canal	..	4.86	..	21.78	7.72	71.87	1.06	9	1,02.52	1,19.65	4.40	1,24.05				
Barur tank	..	..	..	47	66	1.37	..	..	2.50	3.56	..	3.7				
Cauvery delta system	..	6.12	..	7.65	14.42	—	5.71	4	36.87	62.40	6.11	68.51				
Sriekankuntam ancient system	..	2.82	..	3.53	1.07	15.86	8	..	20.38	32.85	1.15	34.30				
Periyar project	..	4.86	..	6.07	2.64	67.00	53	..	76.24	87.88	1.69	89.67				
Total	28.99	1,15.95	..	1,44.94	51.85	6,39.15	1,00.10	1,11	9,36.65	17,15.11	82.54	17,97.65				
PROTECTIVE WORKS.																
Rashikulya project	..	4.85	..	6.06	..	26.35	37	..	32.78	85.92	86	86.78				
Total, Major Works	30.20	1,20.80	..	1,51.00	51.85	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.																
Chembambakam tank	..	23	..	29	238	1.04	—	11	—	1.64	4	—	25			
Palar ancient system	1.35	6.39	..	6.74	8.03	21.44	..	..	36.21	43.71	97	44.68				
Palendur ancient system	45	1.80	..	2.25	2.83	7.88	..	..	12.96	14.92	31	14.93				
Madras Water-supply and Irrigation Extension project	..	..	..	..	..	..	..	..	..	..	..	..				
Lower Coleroon ancient	—	13	..	16	3.60	4.11	—	1	34	9.58	21	9.79				
	89	3.54	..	4.43	2.90	17.21	..	..	24.61	30.53	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.				
	Revenue.										Revenue management.				
	Irrigation.					Water power.		Miscellaneous.		Total.		Remission of revenue.		Net revenue.	
	Water-rates directly paid.	Share of land revenue.	Total.	Navigation.	Plantation and land.	EX.	RX.	EX.	RX.	EX.	RX.	EX.	RX.	EX.	RX.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MINOR WORKS AND NAVIGATION—cont.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.
	92,72	15,38	1,08,10	..	19	..	17	1,08,46	..	1,08,46	1	3	..	6,40	6,44
	15,78	19	15,97	..	2	..	21	16,20	..	16,20	..	2	..	80	82
	14,26	4	14,30	..	1	..	2	14,33	..	14,33	..	..	..	72	72
	36,24	3,17	38,41	..	52	..	5	38,98	..	38,98	1	5	..	1,92	1,98
	6,03	62	6,65	..	..	..	..	6,65	..	6,65	..	..	..	33	33
	3,31	1,09	4,39	..	..	..	..	4,39	..	4,39	..	..	..	22	22
	71,85	24	72,09	..	4	..	35	72,48	..	72,48	1	3	..	3,64	3,64
	26,84	2,62	29,46	..	..	..	16	29,62	..	29,62	..	2	..	1,47	1,49
	8,77	34	9,11	..	..	..	4	9,15	..	9,15	..	..	..	46	46
	19,61	42	20,03	..	..	..	63	20,66	..	20,66	1	5	..	1,00	1,06
	36,06	3,46	39,52	..	..	..	29	39,81	..	39,81	1	2	..	1,97	2,00
	43,63	6,08	49,71	..	..	..	42	49,13	..	49,13	1	3	..	2,44	2,48
	3,37	2	3,39	..	..	..	9	3,48	..	3,48	..	1	..	17	18
	26,99	6,90	33,89	..	..	..	14	34,12	..	34,12	1	2	..	1,69	1,72
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.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.
	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total, Irrigation and Navigation ..	8,47,78	1,12,07	9,59,85	99,37	97	..	23,49	10,83,68	10	10,83,68	2,48	9,91	..	47,99	60,38

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.

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.	per cent. on outlay at commencement of year and at 2 per cent. on outlay during the year.	
1	2	3	4	5	6	7	8	9	10	11	
	MILES.	MILES.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	
MAJOR WORKS.											
Irrigation Works.											
Godavari 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	4,86,26	
Pennér ancient system	22	121	11	1,64,60	19,10	1,27	20,37	1,44,23	7.69	65,90	
Saugam do.	9	295	18,40	1,87,27	39,88	5,49	45,37	1,41,90	3.68	1,25,67	
Kurool-Cuddapah canal	190	313	4,14	1,56,22	1,19,65	4,40	1,24,05	32,17	1.14	8,68,53	
Barur tank	201	111	..	9,62	5,56	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	
Srivikramam ancient system	28	62	8,22	1,14,49	32,85	1,45	34,30	80,19	5.44	54,06	
Periyár project	36	80	1,62,83	1,12,87	87,88	1,69	89,57	23,30	.27	3,28,45	
Total	1,981½	5,651½	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	5,770½	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.											
Chemburambakam tank	27	..	2,82	28,53	..	..	..	28,78	3.85	26,32	
Falar ancient system	163	127	6,65	1,47,83	43,71	97	44,68	1,03,15	4.98	78,53	
Pelandurai ancient system	39	24	49,51	32,92	14,62	31	14,93	17,99	3.26	19,30	
Lower Coleroon ancient system	350	546	90,33	2,98,31	39,61	63	40,14	2,58,17	31.94	29,65	
Madrass water-supply and Irrigation extension project	10	..	..	28,27	2,58	21	2,79	25,48	1.45	60,63	
Shattatope ancient system	41	149	29,39	1,08,46	18,02	34	18,36	90,10	53.33	6,00	
Vridhachalam do.	33	16	..	16,20	3,72	8	3,80	12,40	24.92	1,94	
Mehamatur do.	16	9	..	14,33	2,84	6	2,90	11,43	16.09	2,77	
Tirukkoyilur 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.*

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.

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.									
Irrigation Works.									
Goddavari delta system ..	20,43,72	(a) ..	..	154,560	644,875	799,435	49	..	21.37
Kistna do. ..	12,52,02	(a) ..	..	71,269	449,104	520,373	55	..	29.76
Ponner anicut system ..	78,33	9.04	..	42,136	28,328	70,464	58	..	12.37
Sangam do. ..	16,23	36	..	56,257	20,040	76,277	93	..	24.23
Kurnool-Cuddapah canal ..	..	..	8,36,36	..	47,008	47,008	38	..	79.41
Barur tank ..	..	..	10,17	1,847	2,574	4,421	37	..	38.46
Canvey delta system ..	8,22,97	(a) ..	..	777,401	212,407	989,808	45	..	71.11
Sriraikuntam anicut system ..	25,53	1.76	..	20,465	21,203	41,668	54	..	29.97
Periyar project ..	..	..	3,05,16	61,092	28,051	89,143	41	..	79.86
Total ..	30,87,11	37.54	..	1,185,007	1,453,590	2,638,597	50	..	24.48
Protective Works.									
Rushikulya project ..	..	..	1,42,13	39,008	28,310	67,318	22	..	59.34
Total, Major Works ..	29,44,98	21.32	..	1,224,015	1,481,900	2,705,915	50	..	24.77
MINOR WORKS AND NAVIGATION.									
Irrigation Works.									
Chembrambakam tank ..	3,46	..	..	11,285	4,406	15,691	65	..	30.22
Pillar anicut system ..	24,62	..	1,53	67,344	30,476	97,820	49	..	45.26
Pelandurai anicut system ..	..	..	..	2,037	8,115	10,212	41	..	13.46
Lower Coleroon anicut system ..	2,28,62	(a) ..	..	44,637	68,301	112,938	44	..	9.87
Madras water-supply and irrigation extension project ..	..	..	35,15	6,340	4,047	10,387	70	..	15.93
Shatidope anicut system ..	81,10	(a) ..	..	7,037	26,675	33,712	41	..	23.46
Vidduhahalam do. ..	1,046	(a) ..	..	2,279	4,243	6,522	38	..	20.24
Mehamattur do. ..	8,66	8.85	..	450	8,560	4,030	40	..	41.00
Tirukkoyilur do. ..	18,08	8.71	..	15,790	10,332	26,022	38	..	..

(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.			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.
Mileage in operation.		Direct.			Indirect.	Total.	Amount.	Percentage on total direct and indirect capital outlay.		
Main canal.	Distributaries.									
1	2	3	4	5	6	7	8	9	10	11
MINOR WORKS AND NAVIGATION—cont.										
Irrigation Works—cont.										
Cumbum tank ..	..	24	63	6.65	85	1	86	5.79	9.02	2.49
Valur anicut system ..	3	8	74	4.39	1.04	2	1.06	3.33	5.16	2.50
Maradur do. ..	27	45	1	72.48	14.62	28	14.90	57.58	128.51	1.75
Thudapalli channel ..	76	..	248	29.62	7.54	16	7.70	21.92	17.47	4.59
Arunkota do. ..	24	..	..	9.15	5.38	13	6.51	3.64	3.63	4.01
Kalingroyan channel ..	61	120	3.32	20.66	7.36	17	7.53	13.13	20.63	2.42
Cheyar anicut system ..	104	78	8	39.81	15.83	37	16.20	23.61	5.82	15.78
Poiley do. ..	100	..	9	49.13	10.47	22	10.69	38.44	16.59	9.03
Nandyar channel ..	..	..	12.91	34.12	4.25	9	4.34	86	(a)	1.48
Ganjum minor rivers system ..	10	38	5.04	..	65	2	67	6.51	14.64	2.14
Dondapad tank ..	24	..	54.74	..	..	..	..	..	..	6.66
Sagileru project ..	22½	21	1,47.08	..	..	..	..	..	..	15.78
Munneyru project ..	..	..	33.39	..	..	..	..	..	..	15.03
Chopaud project * ..	..	..	..	..	..	..	..	..	..	2.99
Total ..	1,327½	1,196½	4,39.00	9,83.32	2,36.32	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	..	3,37.99
Chilka lake canal ..	8	..	..	..	30	1	31	..	(a)	1.21
Ganjam-Gopalpur canal ..	..	..	..	..	..	..	..	..	..	6.72
Vedaramuniyam canal ..	34½	..	..	87	6.39	18	6.57	..	(a)	6.31
Total ..	304½	..	12.37	1,00.26	87.10	3.33	90.43	9.83	..	3,50.23
Total, Irrigation and Navigation ..	1,632½	1,196½	4,51.37	10,83.58	3,22.42	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.				
12	13	14	15	16	17	18	19	20	21		
MINOR WORKS AND NAVIGATION—cont.											
Irrigation Works—cont.											
Cambum tank ..	3,00	(a) .. 81	..	..	7,278	914	8,192	73	..09	12,93	
Vallur ancient system ..	83	..	..	..	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	
Arankota do. ..	..	..	37	.. 16	2,655	1,479	4,134	62	..37	60,22	
Kalingarayan channel ..	10,71	5,18	..	..	16,648	4,868	21,516	42	..15	36,45	
Cheyar ancient system ..	7,83	1,87	..	..	15,507	16,998	32,505	23	..10	40,49	
Potney do. ..	29,41	..	..	..	18,226	9,981	28,207	49	..11	21,76	
Ganjum minor rivers system ..	..	..	3,00	.. 4,75	5,829	1,347	7,176	26	..32	124,71	
Dondapad tank ..	5,03	(a) ..	..	..	50,052	12,489	62,541	27	..22	80,92	
Sagilera project ..	..	..	6,33	.. 3,89	..	..	..	..	..	..	
Munneyra project ..	..	..	15,78	.. 3,38	..	..	..	..	..	..	
Chopand project ..	..	..	15,03	.. 3,17	..	..	..	..	..	..	
..	..	..	6,68	.. 7,08	..	..	..	..	..	..	
Total ..	4,19,55	(a) ..	..	..	301,879	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	..	..	..	..	..	..	
Ganjum-Gopulpur canal ..	..	..	5,72	2,78	..	..	..	..	..	755,17	
Vedaramaniyam canal ..	..	..	11,01	8,12	..	..	..	..	..	..	
Total ..	..	..	3,40,40	..	..	..	..	..	..	80,20	
Total, Irrigation and Navigation ..	79,15	..53	..	..	304,879	230,934	535,813	47	..14	30,63	

MADRAS,
16th September 1898.

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

(Signed) E. A. DENNIS,
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.	Capital outlay.						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 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 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 previous year.	To end of year.										
						4								5
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MAJOR WORKS.														
Irrigation Works.														
Goddavari 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	..
Kisna 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 ancient 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	..
Sungam do.	33,65,97	1884-85	31,32,55	31,30,95	7,05,06	38,56,01	6,08,13	44,64,14	1,78,57	..	36,67	35,47,50	..	..
Karnool-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	..	9,16,64
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	..	3,42,01,82
Cauvery delta system	25,88,27	1836-37	17,29,91	18,95,96	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	4,32,63
Sivakuntam ancient 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	..
Petiyar project	81,39,02	1896-97	81,39,02	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.														
Chembumbakam 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
Palar ancient 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
Pelandurai ancient 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	1,37,97,54	28,44,69
Lower Coleroon ancient	9,45,90	1848-49	6,99,00	7,86,33	21,87	8,08,20	-81,51,49	-73,43,29	-2,93,73	5,51,90	..	64,54,25	39,68,34	..
Statuape do.	1,99,99	1847-48	1,35,28	1,64,67	4,26	1,68,98	-18,84,67	-17,15,74	-68,63	1,58,73	..	22,52,60	3,11,00	..
Vridhachalam do.	48,47	1868-69	48,47	48,47	1,27	49,74	1,30,12	80,38	3,22	16,62	..	2,85,75	1,97,86	..
Mehauattur do.	65,23	1872-73	69,24	69,24	1,81	71,05	16,84	87,89	3,52	7,91	..	5,75,00	4,24,89	..
Tirukkoyilur 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	..	1,44,75	1,49,24	..
Cumbam tank	62,56	1876-77	61,93	62,56	1,63	64,19	68,68	4,49	1,18	5,97	..	83,25	..	19,28
Vallur ancient system	68,58	1872-73	62,18	62,92	1,65	64,57	37,96	1,02,53	4,10	..	..	14,39,50	26,24,07	..
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	..	..	..	..

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 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 net revenue over interest on total sum at charge.	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 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.											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
MINOR WORKS AND NAVIGATION—cont.															
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	..	6,48,00	7,72,75	..	1,33,32
Arunkota 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	..	5,83	91,00	1,33,32	..	..
Kalingarayan channel ..	62,07	1854-55	62,07	62,07	1,63	63,69	1,42,96	2,06,55	8,27	..	..	8,28,25	1,21,60	..	..
Cheyar ancient system ..	8,94,41	1852-53	8,94,41	8,94,41	11,04	4,05,45	12,37	4,17,82	16,71	6,90	..	6,90,25	1,72,43	..	..
Poincy 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	..	..
Nandiyar channel ..	63,49	1856-96	63,49	63,49	2,22	65,71	— 7,51	— 6,12	— 2,63	..	3,39	— 21,50	84,72	..	..
Gandam minor rivers system ..	69,10	1852-53	69,10	69,10	1,13	70,23	— 4,16,43	— 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	14,09	1,62,92	6,52	..	7,19	— 16,75	1,79,67	..	..
Sagileru project ..	4,31,00	..	3,67,08	4,21,82	13,98	4,86,80	2,72	4,66,53	18,66	..	18,66	..	4,66,52	..	..
Chopaud ..	3,65,00	..	57,98	91,87	1,86	4,83,23	1,16	94,39	3,78	..	3,78	..	94,39	..	..
Munneyru 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	82,11,90	6,10,39	88,22,29	— 92,06,12	— 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	84,55,53	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 ..	80,24	..	80,24	80,24	79	81,03	30,08	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	..	..	..	..
Vedharaniyam canal ..	1,82,70	1874-75	1,82,70	1,82,70	3,47	1,86,17	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	59,99,91	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	89,99,31	..	..

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.

Revenue.															Working Expenses.																					
Irrigation.				Navigation.		Plan-tation and land.		Water power.		Miscellaneous.		Total.		Remission of revenue.		Revenue management.																				
Water-rates directly paid.		Share of land revenue.		Total.		Navigation.		Plan-tation and land.		Water power.		Miscellaneous.		Total.		Remission of revenue.		Net revenue.		Establishment charges.																
		3		4		5		6		7		8		9		10		11		12		13		14		15		16								
															R.X.		R.X.		R.X.		R.X.		R.X.		R.X.		R.X.		R.X.		R.X.					
MAJOR WORKS.																																				
Irrigation Works.																																				
Gólavari delta system		29,13,57		1,50,49		30,64,06		76,58		6,78		R.X.		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		R.X.		24,74,28		19		24,74,09		28,34		1,13,35		..		1,21,49		2,63,18								
Penner ancient system		1,43,30		20,82		1,64,22		..		29		R.X.		1,64,60		..		1,64,60		1,78		6,91		..		8,21		16,55								
Sangam do.		1,62,81		23,15		1,85,96		..		..		R.X.		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		..		R.X.		1,56,28		6		1,56,22		1,92		7,70		..		17,13		19,20								
Barur tank		9,62		..		9,62		..		..		R.X.		9,62		..		9,62		12		46		..		48		1,06								
Cauvery delta system		8,48,72		1,11,52		9,60,24		..		63		R.X.		9,63,59		19		9,63,40		10,55		41,01		..		48,01		99,27								
Srirachundam ancient system		1,10,74		1,78		1,12,52		..		28		R.X.		1,14,49		..		1,14,49		1,87		5,47		..		5,63		12,47								
Periyar project		99,37		12,82		1,12,19		56		3		R.X.		1,12,87		..		1,12,87		1,21		4,82		..		6,61		11,64								
Total		67,24,46		4,64,23		71,88,69		1,06,55		12,08		R.X.		73,44,21		52		73,43,69		83,81		3,35,21		..		3,69,44		7,78,46								
Protective Works.																																				
Rushikulya project		61,10		10		61,20		1		..		R.X.		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		R.X.		74,06,19		52		74,05,67		83,83		3,35,27		..		3,62,50		7,81,60								
MINOR WORKS AND NAVIGATION.																																				
Irrigation Works.																																				
Chembambakam tank		27,62		85		28,47		..		..		R.X.		28,53		..		28,53		..		1		..		1,42		1,42								
Palar ancient system		1,25,02		16,68		1,41,70		..		..		R.X.		1,47,83		..		1,47,83		4		17		..		7,29		7,60								
Pelanderai aicut system		32,48		12		32,60		..		2		R.X.		32,92		..		32,92		1		2		..		1,63		1,66								
Madras Water-supply and Irrigation Extension project		11,24		49		11,73		..		..		R.X.		16,54		..		16,54		33		1,32		..		59		2,34								
Lower Coleroon aicut		2,42,96		54,37		2,97,33		..		8		R.X.		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.

Working Expenses—cont.													
Maintenance of works.													
Irrigation Works.	Establishment charges.				Works.		Repairs.	Tools and plant.	Plantations.	Total maintenance.	Total direct charges.	Indirect charges.	Grand Total, Working expenses.
	Direction.	Executive.	Medical.	Total.	21	22							
	17	18	19	20	21	22	23	24	25	26	27	28	
MAJOR WORKS.													
Irrigation Works.													
Gódvári delta system	9,19	36,77	..	45,96	12,56	1,99,64	46,22	96	3,05,34	6,43,00	32,36	6,75,26	
Kistna do.	14,13	56,52	..	70,65	11,26	3,05,65	58,05	..	4,43,61	7,06,79	29,73	7,36,52	
Penner ancient system	..	33	..	33	..	4,60	..	..	2,25	19,10	1,27	20,37	
Saugan do.	74	2,97	..	3,71	3,78	18,3	1,06	2	20,68	39,88	5,49	45,37	
Kurnool-Cuddapah canal	4,36	17,42	..	21,78	7,72	71,87	1,37	9	1,02,52	1,19,65	4,40	1,24,05	
Barur tank	..	38	..	47	66	1,37	..	..	2,50	3,56	14	3,70	
Cauvery delta system	..	6,12	..	7,65	14,42	37,97	5,71	4	36,87	62,40	6,11	68,51	
Brivaikuniam ancient system	..	2,52	..	3,53	1,07	15,86	8	..	20,88	32,55	1,15	34,80	
Periyár project	1,21	4,86	..	6,07	2,94	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	85,54	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.													
Chembambakam tank	6	23	..	29	2,28	1,04	11	..	1,64	21	4	25	
Palar ancient system	1,35	5,39	..	6,74	8,03	21,44	..	..	36,21	43,71	97	44,68	
Polandora ancient system	45	1,80	..	2,25	2,83	7,88	..	..	12,96	14,62	31	14,93	
Madras Water-supply and Irrigation Extension project	..	13	..	16	3,60	4,11	1	..	34	2,58	21	2,79	
Lower Coleroon ancient	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.				Total, Revenue manage- ment.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Irrigation.		Navigation.		Plantation and land.		Water power.		Miscel- laneous.		Total.			Remission of revenue.		Net revenue.		Revenue management.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
Share of land revenue.		Total.		Navigation.		Plantation and land.		Water power.		Miscel- laneous.			Total.		Remission of revenue.		Net revenue.		Revenue management.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
2	3	4	5	6	7	8	9	10	11	12	13		14	15	16	17	18	19	20	21	22	23	24	25																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
MINOR WORKS AND NAVIGATION—cont.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Irrigation Works—cont.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Shatdope ancient	92,72	15,38	1,98,10	..	..	19	..	..	17	1,08,46	..	..	1,08,46	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

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.												
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.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.
17	18	19	20	21	22	23	24	25	26	27	28	
MINOR WORKS AND NAVIGATION—cont.												
Irrigation Works—cont.												
Shattatope anicut ..	47	1,88	..	2,35	86	9,37	..	12,58	18,02	34	18,36	
Vidhachalam anicut ..	11	43	..	54	16	2,20	..	2,20	3,72	8	3,80	
Mehamattur do. ..	8	32	..	40	12	1,60	..	2,12	2,84	6	2,90	
Tirukkoyilur do. ..	51	2,02	..	2,53	3,03	8,08	..	13,64	15,62	36	15,98	
Cumbum tank ..	1	2	..	3	4	58	..	62	86	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	
Arankota 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	
Ponney do. ..	30	1,19	..	1,49	2,50	7,99	..	4,07	10,47	22	10,69	
Nandiyar channel ..	13	50	..	63	..	3,40	4	20,51	4,25	9	4,34	
Ganjam minor rivers system ..	94	3,78	..	4,72	..	53	..	25,23	26,95	66	27,61	
Dondapad tank ..	2	10	..	12	..	53	..	55	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	8	70,46	80,41	3,14	83,55	
Chilka lake do. ..	1	6	..	7	..	23	..	30	30	1	31	
Ganjam-Gopalpur canal ..	..	94	..	1,17	..	5,11	2	6,30	6,39	18	6,57	
Vedaramnyam canal ..	23	..	..	..	..	..	..	..	..	..	..	
Total ..	2,74	11,92	..	13,76	59	59,50	8	77,06	87,10	3,33	90,43	
Total, Irrigation and Navigation ..	9,49	37,91	..	47,40	18,97	1,92,54	8	2,62,04	3,22,42	8,38	3,30,80	

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

MADRAS,
16th September 1898.

recd
25/9/98

Print & issue
emergently.

HS
25/9

PROCEEDINGS OF THE MADRAS GOVERNMENT.

PUBLIC WORKS DEPARTMENT,
IRRIGATION BRANCH.

Financial results of irrigation and
navigation works for 1897-98, note
forwarding— for submission to the
Govt of India.

Under date the

Read the following

Office Note from the Engrs P.W.D. (N.E. No 3201 B of 16th Sept 1898)

do do do do (N.E. No 332 of 14th November 1898)

do from do do (N.E. No 3836 B of 11th Nov 1898)

Reminder from the Govt of India (N.E. No 62. A.D. of 7th Nov 1898)

Note by the Chief Engineer for Irrigation (N.E. No 295 J of 21st Nov 1898)

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 or all derived from new irrigation. The Periyar Project for instance, the accounts of which

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 will be ordered that the statements received from the Examiners of Public Works Accounts be forwarded to the Government of India with reference to its Circular no 23 of 1887

HS
23/4/88

Draft approved by I
hms on trans. 10/12/87

Endorsement - No 933 I d/3rd
December 198.
Forwarded.

Endorsement

- To
- The Chief Engineer for Suez
 - Supp. Engineers of Suez
 - Supp. Engineer on Special duty, Canal Completion Estimates.
 - Ex of P. W. Accts
 - Revenue Dept.

9/12/94

HS

Public Works (1898) Department.

CURRENT No. 9788
9396

From The Chief Engineer
for Irrigation

Order

No. 2950

Dated 21st Nov 98.

Received
Registered } 25-11-98

Enclosures 5

Spare copies

SUBJECT.

Financial results of
Irrigation and navigation
works for 1897-98. Date
for forwarding the statement
of— for submission to the
Govt. of India.

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.

Sir, 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,

[Signature]

Under Secy. to the Govt. of India.

118.

Documents accompanying:-

Nil.

3.11.98.

Public Works (1898) Department.

CURRENT No. 263

From

The Examiner P. W. Accounts
Madras Coy

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. V.

14/11

10/11
14/11/98

10/11/98

No. 3836^B dated 11th November 1898.

To

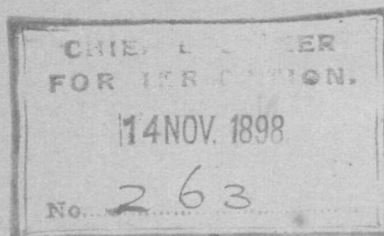
E.I.

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

W. 11. 98

C.

11/11/98



Public Works (1898) Department.

CURRENT No. 209

From The Engineer, P. H. Acet,
Madras

Order

No. 3201^{B/B}

Dated 16 September 1898

Received 17 Sept 98

Registered

Enclosures 3

Spare copies

SUBJECT.

Statements of financial results
of Irrigation & Navigation works
for 1897-98 — Submit to the —

781

W. 11/5/98

18/11/98

BACK PAPERS.

FURTHER PAPERS.

KEEP-WITH

CURRENT No.

dated

189 .

GOVT. }
OF MADRAS. }

1892.

E. No .27.
1,000—6-2-97

{ P. W.
{ DEPT.

EXAMINER, P. W. ACCOUNTS.

Madras, 16-September

1897

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.

W/16.9.98
C.
2/16.9.98

ENCLOSURE
MADRAS.

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

Irrigation Works.	Mileage in operation.		Direct capital outlay during the year (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.										
Irrigation Works.										
Godavari 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	614	3,88.99	24,74.79	7,06.79	29.73	7,36.52	17,38.27	13.18	4,86.25
Penapur ancient system	32	121	11	1,64.80	19.10	1.27	20.37	1,44.23	7.59	6,61.80
Sungun do.	9	257	18.40	1,87.27	39.88	5.49	45.37	1,41.90	3.68	1,26.67
Kurnool-Chuddapur canal	199	373	4.14	1,56.22	1,19.65	4.40	1,24.05	32.17	1.14	8,68.53
Barur tank	262	114	1,38.05	9.62	3.56	1.14	3.70	5.92	1.39	16.09
Gauvery delta system	844	1250	8.22	9,63.40	62.40	6.11	68.51	2,94.89	44.86	71.92
Sivaikuntam ancient system	28	62	1,14.49	1,14.49	32.85	1.45	34.30	80.19	5.44	54.66
Poniyur project	36	80	1,62.83	1,12.87	87.88	1.69	89.57	23.30	1.19	3,28.46
Total	1481 1/2	5651 1/4	7,97.55	73,43.69	17,15.11	82.54	17,97.65	55,46.04	8.40	24,58.93
Protective Works.										
Ruszhikalya project	80	119	1,44.01	61.98	35.92	86	36.78	25.20	5.4	1,67.33
Total, Major Works	2061 1/2	5770 1/4	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.										
Chembambakam tank	27	..	2.82	28.53	..	..	..	28.78	3.85	25.32
Padar ancient system	163	..	6.65	1,47.83	43.71	97	44.68	1,03.15	4.98	78.63
Pedandur ancient system	39	..	49.51	32.92	14.59	31	18.02	14.90	3.26	19.30
Lower Coleroon ancient system	350	546 2/3	90.33	2,98.31	39.51	63	40.14	2,68.17	31.94	29.65
Madrass water-supply and Irrigation Extension project	10	..	..	28.27	2.58	21	2.79	25.48	1.45	60.63
Shantipoie ancient system	41	..	29.39	1,08.46	18.02	34	18.36	30.10	53.33	6.00
Vridhachalam do.	33	..	..	16.20	8.72	8	12.40	12.40	24.92	1.94
Mehamattur do.	9	..	..	14.33	2.84	6	2.90	11.43	16.09	2.77
Tirukoyilur do.	137	..	..	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.										Interest at 4 per cent. on direct capital outlay at commencement of year and at 2 per cent. on outlay during the year.
1	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).		11
	Main canal.	Distributaries.			Direct.	Indirect.	Total.	Amount.	Percentage on total direct and indirect capital outlay.	
MINOR WORKS AND NAVIGATION—cont.										
Irrigation Works—cont.										
Cumbum tank ..	.. 3	.. 24	63	6,65	85	1	86	5,79	9.02	2.49
Vallur anicut system ..	.. 8	.. 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 ..	.. 24	.. 24	..	29,62	7,54	16	7,70	21,92	17.47	4.59
Arankota do. ..	.. 24	.. 24	..	9,15	5,38	13	5,51	3,64	3.53	4.01
Kalingarayan channel ..	.. 61	.. 120	3	20,66	7,36	17	7,53	13,13	20.63	2.42
Cheyar anicut system ..	.. 104	.. 78	9	39,81	15,83	37	16,20	23,61	5.82	15.78
Poinney do. ..	.. 10	.. 35	..	43,13	10,47	22	10,69	38,44	16.59	9.03
Ganjam minor rivers system ..	.. 10	.. 35	..	3,48	4,25	9	4,34	86	(a)	2.14
Pondapud tank ..	.. 22 1/4	.. 2 1/4	..	84,12	26,95	66	27,61	6,51	14.64	1.48
Sagileru project ..	.. 22 1/4	.. 2 1/4	..	..	..	2	67	67	..	5.66
Munneyeru project ..	.. 22 1/4	.. 2 1/4	..	..	..	..	..	..	..	15.78
Chopaud project ..	.. 22 1/4	.. 2 1/4	..	..	..	..	..	..	..	15.03
Total ..	1327 3/4	1196 5/8	4,39,00	9,83,32	2,35,32	5,05	2,40,37	7,42,95	8.42	2,98,40
Navigation.										
Buckingham canal ..	.. 2 1/2	..	12,37	93,39	80,41	3,14	83,55	15,84	18	3,37,99
Chulka lake canal ..	.. 8	..	..	..	30	1	31	..	(a)	1.21
Ganjam-Gopalpur canal ..	.. 3 1/2	..	..	..	..	..	..	..	(a)	5.72
Vedramuniyam canal ..	.. 3 1/2	..	..	..	6,39	18	6,57	..	(a)	5.31
Total ..	304 1/2	..	12,37	1,00,26	87,10	3,33	90,43	9,83	10	3,50,23
Total, Irrigation and Navigation ..	1632 1/4	1196 5/8	4,51,37	10,83,58	3,22,42	8,38	3,30,80	7,52,78	4.16	6,48,63

(a) Percentages on minor sums have been omitted.

& This project is under construction

249 31971 66994 P Ramana

Rs. 5788/50

Irrigation Works	Estimated cost of construction (exclusive of all indirect charges)	Date of completion of work.	Direct charges.		Indirect charges.		Total capital outlay, both direct and indirect, to end of year.		Total sum at end of 1897-98.	Interest at 4 per cent. on total sum 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 over net revenue.	Capitalized value at 4 per cent. of net revenue (excluding charges for interest).	Surplus sum to credit in total sum at charge.	Excess sum at charge over capitalized value of net revenue.
			To end of previous year.	To end of year.	To end of year.	To end of year.	To end of year.	To end of year.							
MAJOR WORKS.	Rx.		Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
Irrigation Works.															
Goddavari 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	1865-56	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	..	..
Ponner anicut system	16,47,57	1860-61	16,47,57	16,47,58	2,51,61	18,99,19	-10,32,58	8,66,61	34,66	1,09,57	..	36,06,75	27,39,14	..	..
Sangam do.	33,66,97	1884-85	31,32,55	31,50,93	7,05,08	38,56,01	1,32,88,33	3,50,06,07	1,73,67	..	36,67	35,47,50	..	..	9,16,64
Kurnool-Caddapah canal	2,17,11,14	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	2,287	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	1,38,62	19,94,68	-2,19,14,48	-1,99,19,90	-7,98,80	16,91,69	..	2,23,72,25	4,22,92,15	..	..
Sivaikuntam anicut system	13,72,26	1870-71	13,62,52	13,70,74	1,01,18	14,71,92	-2,20,20	14,46,72	57,87	22,32	..	20,04,75	5,58,03	..	..
Periyar project	81,30,02	1896-97	81,30,02	82,92,85	2,36,29	86,29,14	-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	6,60,83,36	-5,78,40,25	82,23,11	3,28,93	52,17,11	..	13,86,51,00	13,04,27,89	..	..
Protective Works.															
Rashikulya project	43,68,00	1891-92	41,11,21	42,55,22	3,89,20	46,44,42	9,45,56	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	-5,33,91,99	1,38,16,09	5,52,65	50,18,61	..	13,92,81,00	12,54,64,91	..	..
MINOR WORKS AND NATI- GATION.															
Irrigation Works.															
Chembabakam 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
Palar anicut system	19,73,21	1853-54	19,59,97	1,05,34	1,05,34	20,71,96	7,78,07	28,50,63	1,14,00	..	10,85	25,78,75	..	..	2,71,28
Polandora anicut system	4,91,19	1875-76	4,91,19	5,07,22	44,80	5,62,02	5,60,67	11,02,69	4,411	..	26,09	4,50,50	..	..	6,52,19
Madras water-supply and irri- gation 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	9,45,90	9,45,90	21,87	8,08,20	-81,51,43	73,43,29	-2,93,73	5,51,90	..	64,54,25	1,37,97,54	..	..
Shataste do.	1,99,99	1847-48	1,35,28	1,64,67	4,26	1,68,83	-18,84,67	17,15,74	-68,63	1,58,73	..	22,52,50	39,68,24	..	..
Vridhichalam do.	48,47	1868-69	48,47	48,47	1,27	49,74	1,30,12	80,38	3,22	1,63	..	3,11,00	3,80,38	..	..
Mehamattur do.	69,23	1872-73	69,23	69,24	6,52	71,05	16,84	87,89	3,52	7,91	..	2,56,75	1,97,86	..	..
Cumbam tank	62,56	1876-77	61,93	62,56	1,63	64,57	64,19	1,02,53	4,10	6,97	..	1,44,75	1,49,24	..	19,28
Vallur anicut system	68,58	1872-73	62,18	69,92	1,65	64,57	37,96	1,02,53	4,10	1,04,96	..	83,25	26,24,07	..	..
Marudur do.	43,66	1872-73	43,66	43,66	1,14	44,80	-19,29,37	11,94,57	-47,38	..	..	14,39,50	..	..	..

Review of the punctuation adopted with the above method

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.	Capital outlay.						Total sum at end of 1897-98.	Interest at 4 per cent. on total sum 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 over net revenue.	Capitalized value at 4 per cent. of net revenue (excluding charges for interest).	Surplus sum to credit in 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.		Excess of interest over net revenue in past years.								
	To end of previous year.	To end of 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.														
Goddavari 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	..
Ponner anicut system	16,47,57	1860-61	16,47,57	16,47,58	2,51,61	18,99,19	-10,32,58	8,66,61	34,66	1,09,57	..	36,06,75	27,39,14	..
Sangam do.	33,66,97	1884-85	31,32,55	31,50,93	7,05,08	38,56,01	1,32,88,33	6,08,13	1,78,57	..	36,67	35,47,50	..	9,16,64
Kurnool-Caddapah canal	2,17,11,14	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	2,287	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	1,38,62	19,94,68	-2,19,14,48	-1,99,19,90	-7,96,80	16,91,69	..	2,23,72,25	4,22,92,15	..
Sivaikuntam anicut system	13,72,26	1870-71	13,62,52	13,70,74	1,01,18	14,71,92	-2,20,20	14,46,72	57,87	22,32	..	20,04,75	5,58,03	..
Periyar project	81,30,02	1896-97	81,30,02	82,92,85	2,36,29	86,29,14	-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	6,60,83,36	-5,78,40,25	82,23,11	3,28,93	52,17,11	..	13,86,51,00	13,04,27,89	..
Protective Works.														
Rashikulya project	49,68,00	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	-5,33,91,99	1,38,16,09	5,52,65	50,18,61	..	13,92,81,00	12,54,64,91	..
MINOR WORKS AND NATI- GATION.														
Irrigation Works.														
Chembabakam 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
Palar anicut system	19,73,21	1853-54	19,59,97	1,05,34	1,05,34	20,71,96	7,78,07	28,50,63	1,14,00	..	10,85	25,78,75	..	2,71,28
Polandora anicut system	4,91,19	1875-76	4,91,71	5,07,22	44,80	5,62,02	5,60,67	11,02,69	4,411	..	26,09	4,50,50	..	6,52,19
Madras water-supply and irri- gation 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	9,45,90	9,45,90	21,87	8,08,20	-81,51,43	73,43,29	-2,93,73	5,51,90	..	64,54,25	1,37,97,54	..
Shataste do.	1,99,99	1847-48	1,35,28	1,64,67	4,26	1,68,83	-18,84,67	17,15,74	-68,63	1,58,73	..	22,52,50	39,68,24	..
Vridhichalam do.	48,47	1868-69	48,47	48,47	1,27	49,74	1,30,12	80,38	3,22	1,63	..	3,11,00	3,80,38	..
Mohamattur do.	69,23	1872-73	69,24	69,24	6,52	71,05	16,84	87,89	3,52	7,91	..	2,56,75	1,97,86	..
Tirakkoyilar 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	..	6,75,00	4,24,89	..
Cumbam tank	62,56	1876-77	61,93	62,56	1,63	64,57	64,19	1,02,53	4,10	6,97	..	1,44,75	1,49,24	19,28
Vallur anicut system	68,58	1872-73	62,18	69,92	1,65	64,57	37,96	1,02,53	4,10	1,04,96	..	83,25	26,24,07	..
Marudur do.	43,66	1872-73	43,65	43,66	1,14	44,80	-12,29,37	11,84,57	-47,38	..	..	14,39,50	..	..

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.				Total sum at charge at end of 1897-98.	Interest at 4 per cent. on total sum at end of 1897-98.	Surplus for the year of net revenue over interest on total sum at charge.	Excess for the year of net revenue over interest on total sum at charge.	Capitalized value at 4 per cent. of net revenue (excluding charges for interest).	Surplus to credit in excess of total sum at charge.	Excess sum over capitalized value of sum at charge.	
			Direct charges.		Indirect charges.	Total capital outlay, both direct and indirect, to end of year.								
			To end of previous year.	To end of year.										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
EX.	EX.		EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.
MINOR WORKS AND NAVIGATION—cont.														
Irrigation Works—cont.														
Thadapalli channel ..	1,14.68	1854-55	1,13.64	1,16.12	9.34	1,24.46	— 3,50.31	— 2,24.75	— 8.99	30.91	.. 5.33	5,48.00	7,72.75	1,3.32
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	..	..	91.00	..	..
Kalingarayan channel ..	62.07	1854-55	62.07	62.06	1.63	63.69	1,12.96	2,06.65	8.27	4.85	..	3,28.25	1,21.00	..
Chayur 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	..
Poorey do. ..	2,25.62	1855-56	2,25.71	2,25.62	6.07	2,31.69	— 3,90.63	— 1,55.97	— 6.36	44.80	.. 3.39	— 21.50	11,19.97	..
Nandiyar channel ..	53.49	1855-96	53.49	53.49	2.22	55.71	7.51	63.22	2.53	..	..	..	..	..
Ganjam minor rivers system (a) ..	69.10	1852-53	1,38.92	43.86	1.13	44.49	— 4,16.42	— 3,71.93	— 14.88	21.39	.. 7.19	1,62.75	5,34.68	..
Dondapad tank ..	1,32.22	..	1,32.22	1,43.96	4.96	1,48.92	14.00	1,62.92	6.52	..	..	..	..	..
Saglera project ..	4,21.00	..	3,67.08	4,21.82	15.98	4,38.80	27.72	4,66.52	18.66	..	..	..	..	..
Chopaud " ..	3,65.00	..	3,67.98	91.37	1.86	393.23	1.16	94.39	3.78	..	..	..	..	..
Munneyeru project ..	3,70.49	..	3,02.30	4,49.38	11.59	4,60.97	12.85	4,73.82	18.95	..	..	..	..	..
Total ..	86,20.27	..	77,72.92	8,21.190	6,10.39	88,22.29	— 92,66.12	— 4,43.33	— 17.75	7,00.70	..	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	5,55.76	..	5,69.92	3,91.00	..	..
Chilka Lake canal ..	30.24	..	30.24	30.24	79	31.03	30.05	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	30.38	2,05.87	8.23	..	8.23	..	..	..
Vedarammyam canal ..	1,32.70	1874-75	1,32.70	1,32.70	3.47	1,36.17	2,16.82	3,62.99	14.12	..	19.82	— 1,42.50	..	..
Total ..	87,73.69	..	87,49.49	87,61.87	5,03.14	92,65.01	59,99.71	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	..

Note.—(a) 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. DENNY, Examiner, Public Works Accounts.

Madras
16th Sept 98

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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.

TABLE III.—MAIN HEADS OF REVENUE AND WORKING EXPENSES.																
Irrigation Works.	Revenue.										Working Expenses.					
	Irrigation.			Navi- gation.	Plan- tation and land.	Water power.	Miscel- laneous.	Total.	Remission of revenue.	Net revenue.	Revenue management.					
	Water- rates directly paid.	Share of land revenue.	Total.								Direction.	Executive.	Navi- gation.	Civil officers.	Total, Revenue manage- ment.	
																2
I	EX.	(EX.)	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.
MAJOR WORKS.																
Irrigation Works.																
Godavari 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	
do.	22,88,21	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	
Kistna	1,43,30	20,92	1,64,22	..	29	..	1,31	1,87,27	..	1,87,27	1,73	6,91	..	8,21	16,85	
Pennar ancient system	1,62,81	23,15	1,85,96	..	..	..	4,26	1,90,22	6	1,87,27	1,98	7,92	..	9,30	19,20	
do.	1,50,12	..	1,50,12	1,28	62	..	..	1,56,28	..	1,56,22	1,92	7,70	..	7,51	17,13	
Sangam	9,62	..	9,62	..	..	..	..	9,62	19	9,62	12	4,01	..	48,01	99,27	
Kurnool-Cuddapah canal	8,48,72	1,11,52	9,60,24	..	63	..	2,72	9,63,59	..	9,63,40	10,25	41,01	..	48,01	99,27	
Barur tank	1,10,74	1,78	1,12,52	..	23	..	1,74	1,14,49	..	1,14,49	1,37	6,47	..	5,63	12,47	
Cauvery delta system	99,37	12,82	1,12,19	56	3	..	9	1,12,87	..	1,12,87	1,21	4,82	..	5,61	11,64	
Srivakuntam ancient system																
Periyar project	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	
Total																
Protective Works.																
Rashtakulya 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.																
Chembrahakam tank	27,62	85	28,47	..	..	..	6	28,53	..	28,53	..	1	..	1,42	1,43	
Palar ancient system	1,29,02	16,68	1,45,70	..	..	..	2,13	1,47,83	..	1,47,83	..	17	..	7,29	7,50	
Pelandurai ancient system	32,48	12	32,60	..	2	..	30	32,92	..	32,92	..	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 ancient	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.

Working Expenses—cont.

Maintenance of works.											
Establishment charges.				Works.		Tools and plant.		Plantations.		Total maintenance.	Total direct charges.
Direction.		Executive.	Medical.	Total.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.
17	18	19	20	21	22	23	24	25	26	27	28
MAJOR WORKS.											
Irrigation Works.											
Godavari delta system	9.19	38.77	45.96	12.56	199.64	46.22	96	3,05.31	6,43.00	32.96	6,75.26
do.	14.13	56.52	70.65	11.23	303.65	58.05	..	4,43.61	7,08.79	29.73	7,38.52
Pennar anicut system	..	33	42	2.76	4.60	1	..	2.25	19.10	1.37	20.37
Sangam do.	74	2.97	3.71	3.78	13.13	1.06	2	20.68	39.88	5.49	45.37
Kurnool-Cuddapah canal	4.36	17.42	21.78	7.72	71.87	..	9	1,02.52	1,19.05	4.40	1,24.05
Barur tank	..	38	47	66	1.37	..	..	2.50	3.56	14	3.70
Cauvery delta system	..	6.12	..	14.42	37.97	5.71	4	36.87	62.40	6.11	68.51
Sriyankuntam anicut system	1.63	2.82	3.63	1.07	15.86	8	..	20.38	32.86	1.15	34.30
Periyar project	1.21	4.86	6.07	2.64	67.00	53	..	70.21	87.88	1.69	89.57
Total ..	23.99	1,15.95	1,44.94	51.35	6,39.15	1,09.10	1,11	9,36.65	17,15.11	82.54	17,97.65
Protective Works.											
Rushikulya project	1.21	4.85	6.06	96.65	263.67	..	..	32.78	35.92	86	36.78
Total, Major Works ..	30.20	1,20.80	1,51.00	77.70	6,99.52	1,09.10	1,11	9,69.43	17,51.03	83.40	18,34.43
MINOR WORKS AND NAVIGATION.											
Irrigation Works.											
Chembambakam tank	6	23	29	2.98	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
Pelandurai anicut system	45	1.77	2.22	2.83	7.88	..	..	12.98	14.99	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	3.64	4.43	2.90	17.21	..	..	24.51	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.

Revenue.																Working Expenses.				
Irrigation Works.	Irrigation.			Navigation.	Plan- tation and land.	Water power.	Miscel- laneous.	Total.	Remission of revenue.	Net revenue.	Revenue management.				Total, Revenue manage- ment.					
	Water- rates directly paid.	Share of land revenue.	Total.								Direction.	Executive.	Navi- gation.	Civil officers.						
				2	3	4	5	6	7	8					9	10	11	12	13	14
	1	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.	EX.		
MINOR WORKS AND NAVIGATION—cont.																				
Irrigation Works—cont.																				
Shariatpore ancient	92,72	15,38	1,08,10	..	19	..	17	1,08,46	..	1,08,46	1	3	..	5,40	5,44	82	82			
Vridhachalam ancient	15,78	19	16,97	..	2	..	21	16,20	..	16,20	..	2	..	80	80	72	72			
Mohamattur do.	14,26	4	14,30	..	1	..	2	14,33	..	14,33	..	..	..	72	72	1,98	1,98			
Trakkayilur do.	35,24	3,17	38,41	..	52	..	5	38,98	..	38,98	1	5	..	1,92	1,92	33	33			
Cumbum tank	6,03	62	6,65	..	..	..	..	6,65	..	6,65	..	..	..	22	22	3,60	3,60			
Vallur ancient system	3,31	1,08	4,39	..	..	..	..	4,39	..	4,39	1	3	..	1,47	1,47	1,49	1,49			
Thadapalli channel	71,85	24	72,09	..	4	..	35	72,48	..	72,48	..	2	..	46	46	1,06	1,06			
Arankota do.	26,84	2,62	29,46	..	..	..	16	29,62	..	29,62	..	..	..	46	46	2,48	2,48			
Kalingarayan channel	8,77	34	9,11	..	..	..	4	9,15	..	9,15	1	5	..	1,00	1,00	1,97	1,97			
Cheyyar ancient system	19,61	42	20,03	..	..	..	63	20,66	..	20,66	1	1	..	2,44	2,44	1,72	1,72			
Pooney do.	36,06	3,46	39,52	..	..	..	29	39,81	..	39,81	1	3	..	1,69	1,69	..	..			
Nandiyar channel	43,63	5,08	48,71	..	..	..	42	49,13	..	49,13	..	..	..	..	..	..	..			
Ganjion minor rivers system	3,37	2	3,39	..	9	..	14	3,48	..	3,48	1	2	..	..	..	..	..			
Dondapad tank	26,99	6,90	33,89	..	..	..	..	34,12	..	34,12	..	..	..	..	..	..	..			
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	9,95			
Chilka lake canal	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
Ganjion-Gopalpur canal	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..			
Veldramaniyam canal	..	..	..	86	..	..	..	87	..	..	2	7	..	..	..	10,04	10,04			
Total	..	..	..	99,37	..	..	99	1,00,86	10	1,00,26	2,01	8,03	..	..	..	..	..			
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	69,38	..	..			

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.											Grand Total, Working expenses.	
	Maintenance of works.												
	Establishment charges.				Works.	Repairs.	Tools and plant.	Plantations.	Total maintenance.	Total direct charges.	Indirect charges.		
	Direction.	Executive.	Medical.	Total.									
17	18	19	20	21	22	23	24	25	26	27	28		
Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.	Rx.		
MINOR WORKS AND NAVIGATION—cont.													
Irrigation Works—cont.													
Shattatope anicut ..	47	1,88	..	2,35	86	9,37	..	..	12,58	18,02	34	18,26	
Vridhachalam 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	
Tirukkoyilur do., ..	51	2,92	..	2,53	3,03	8,08	..	..	13,64	15,62	36	13,98	
Cumbun tank ..	51	2	..	53	4	53	..	..	52	85	1	85	
Vallur anicut system ..	53	12	..	65	20	47	..	..	82	1,04	2	1,06	
Marudur 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	
Arkonkota 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	16,00	
Pomey 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	..	4,25	4,31	9	4,34	
Ganjām minor rivers system ..	94	3,78	..	4,72	..	20,51	..	..	25,23	26,95	66	27,91	
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	54,15	3,1E	8	70,46	80,41	3,14	83,55	
Chilka lake do., ..	1	6	..	7	..	23	..	..	30	30	1	31	
Ganjām-Gopalpur canal ..	..	..	..	..	..	..	..	..	..	..	..	..	
Vedarammyam canal ..	..	..	..	..	..	..	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. DENNIS,
Examiner, Public Works Accounts.

