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# MADRAS RECORD OFFICE

## Government of Madras

Public works. DEPARTMENT

| | | |
|---|---|---|
| G.O. No. | 1819A | Press |
| ~~B.P. No.~~ | 1819B | ~~Mis.~~ |
| 122-A | | |
| 122B | | |
| Dated | 2-2-1874 | 195 . |

***Not to be folded or roughly handled***

No. 122A. Read the following letter from Colonel C. H. DICKENS, R.A., Secretary to the Government of India, Public Works Department, (Account—Irrigation.) to Colonel G. W. WALKER, R.E., Secretary to the Government of Madras, Public Works Department, Irrigation Branch, dated Fort William, 1st June 1874, No. 154 A I :—

In continuation of Public Works Department letter, No. 328 A G., dated 7th May 1874, I am directed to forward herewith a draft forecast prepared in this office of the actual and probable expenditure from Loan Funds on Irrigation works under the Government of Madras, and to request that, with the permission of that Government, you will be good enough to fill in to the best approximation that can be arrived at within a few days the grants that will probably be respectively required for expenditure on the works entered in the forecast for each of the years 1875-76, 1876-77, 1877-78, and 1878-79.

2. I am also to ask that the entries under "Amount of estimates" may be carefully checked, and such corrections as are necessary made in red ink. But a memorandum should be attached showing the reasons or authority for the correction. The entries in the column "Add for Establishment and Plant not in Estimate" have been made at the rate of 25 per cent. of the outlay, the figures being altered so as to make the total an even sum. If in any case it is considered probable that there will be an excess of outlay over the sanctioned estimate, the amount of such excess should be entered as a distinct item in red ink against the project concerned. (A statement showing the amounts comprising the entries under mount of estimate is attached for information).

3. Under the heading "Works in contemplation and for which estimates have yet to be sanctioned," such additional works as the Government of Madras may consider likely to be sanctioned within the next four years should be entered. But in such cases an explanation should be furnished of the grounds on which it is expected that the work will be sanctioned, and the present state of the estimates for them should be mentioned.

4. In the entries in the statement of "Estimated outlay, 1873-74" the actual outlay of the year should be substituted in communication with the Controller of Public Works Accounts.

5. Under "Outlay" the outlay from Loan Funds only has been entered. The items noted in the margin have been omitted from the amount of estimate, because they do not form a charge against the Extraordinary grant.

Capitalization of Land Revenue.
Simple interest charge while work is under construction.

6. I am desired to request that the required information may be supplied within a week so far as it can be given, and that if thought desirable a more complete statement may follow at leisure.

*Statement of Estimated Actual and Probable Outlay to end of 1878-79 from Loan Funds on Irrigation Works under the Government of Madras.*

| Item Number. | —— | Amount of Estimate: For works and other items. | Amount of Estimate: Less met from Ordinary grant. | Amount of Estimate: Balance sanctioned from Loan Funds. | Amount of Estimate: Add for Establishment and Plant not in Estimate | Amount of Estimate: Total required. | Actual outlay from Loan Funds to end of 1871-72. | Outlay from Loan Funds during 1872-73. | Actual outlay from Loan Funds 1873-74. | Grant 1874-75. | Probable outlay during: 1875-76. | 1876-77. | 1877-78. | 1878-79. | Total outlay from Loan Funds to end of 1878-79. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Works for which Estimates have been sanctioned.* | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ |
| 1 | Extension of Irrigation in the Eastern and Western Delta of the Godavery, and additions and improvements to existing works ... ... | 340,000 | 38,634 | 255,863 | 84,137 | 340,000 | 81,000 | 31,436 | * 23,458 | 46,474 | 45,000 | 45,000 | 45,000 | 45,000 | 180,000 |
| 2 | Works in connection with the Kistna Delta ... ... | 201,624 | 71,510 | 130,114 | 35,886 | 166,000 | 94,471 | 10,999 | 9,652 | 18,100 | 15,000 | 15,000 | 8,000 | ... | 58,000 |
| 3 | Do. do. Pennair Delta ... | 58,869 | 6,772 | 52,097 | 13,903 | 66,000 | 43,295 | 2,488 | 2,501 | 3,677 | 9,000 | 8,000 | ... | ... | 17,000 |
| 4 | Anicut across the Vellaur river | 19,824 | ... | 19,824 | 5,176 | 25,000 | 9,040 | 6,277 | 6,003 | 2,780 | 5,000 | ... | ... | ... | 5,000 |
| 5 | Improvements and other works connected with the Cauvery Delta... ... ... | 47,838 | 8,997 | 36,851 | 9,149 | 46,000 | 31,692 | 8,712 | 5,178 | ... | ... | ... | ... | ... | ... |
| 6 | Streevigantum Anicut Project. | 83,160 | 3,864 | 79,276 | (a)20,000 / 29,724 | 129,000 | 73,429 | 18,345 | 4,910 | 14,516 | 8,000 | 8,000 | ... | ... | 16,000 |
| | (a) Probable excess outlay on works ... ... | 747,315 | 129,787 | 574,025 | 188,975 | 763,000 | 331,915 | 78,656 | 49,702 | 85,547 | 82,000 | 76,000 | 53,000 | 45,000 | 256,000 |
| | *Works in contemplation and for which Estimates have yet to be sanctioned.* | | | | | | | | | | | | | | |
| 7 | Extension and completion of works in Central Delta, Godavery ... ... | | | | | 160,000 | ... | ... | ... | ... | 20,000 | 30,000 | 30,000 | 40,000 | 120,000 |
| 8 | Completion of works in Kistna Delta ... ... ... | | | | | 100,000 | ... | ... | ... | ... | 20,000 | 30,000 | 27,000 | 25,000 | 102,000 |
| 9 | Rousksoolla Project ... ... ... ... ... ... | | | | | ... | 1,324 | 1,479 | 1,000 | ... | ... | ... | ... | ... | ... |
| 10 | Perryaur do. ... ... ... ... ... ... | | | | | ... | 3,276 | 793 | 1,000 | ... | ... | ... | ... | ... | ... |
| 11 | Sungum do. ... ... ... ... ... ... | | | | | 333,000 | ... | ... | ... | ... | 16,000 | 22,000 | 30,000 | 30,000 | 98,000 |
| | | | | | | ... | 5,310 | 2,265 | 2,000 | ... | 111,000 | 158,000 | 139,000 | 139,000 | 467,000 |
| | | | | | | ... | 326,240 | 78,243 | 54,000 | 80,000 | ... | ... | ... | ... | ... |
| | Add outlay from Loan Funds on Madras Supply Project ... | | | | | ... | 101,775 | 57,000 | ... | 10,000 | ... | ... | ... | ... | ... |
| | Chembrumbaukum Tank Project ... ... | | | | | ... | 31,581 | ... | ... | ... | ... | ... | ... | ... | ... |
| | | | | | | ... | 461,344 | 31,243 | 54,000 | 70,000 | ... | ... | ... | ... | ... |

* On works, exclusive of Establishment charges.

*N. B.*—The probable outlay shown for the four years includes provision for Establishments.



*Expenditure from Loan Funds on Irrigation Works at Madras.*

| Works. | Amount of Estimate. | Expenditure already incurred from Ordinary Revenue. | Sum to be provided for from Loan Funds. | Outlay from Loan Funds: Up to 1869-70. | 1870-71. | 1871-72. | 1872-73. | Total. |
|---|---|---|---|---|---|---|---|---|
| *Godavery Anicut and River Improvements.* | £ | £ | £ | £ | £ | £ | £ | £ |
| Raising the Godavery anicut 2 feet throughout its length to increase the depth of water ... ... ... ... ... | 30,000 | 27,818 | 2,182 | 2,200 | ... | ... | ... | 2,200 |
| Removing parapet walls of the under-sluices of the Godavery anicut ... ... ... ... ... ... ... ... | 194 | 194 | ... | ... | ... | ... | ... | ... |
| *Works on Central Delta of Godavery.* | | | | | | | | |
| Aqueduct across Cowsica drain ... ... ... ... ... | 1,650 | ... | 1,650 | 151 | ... | ... | ... | 151 |
| Widening and rebuilding side wall of Gunnaveram aqueduct ... | 2,050 | ... | 2,050 | 1,404 | —2 | ... | ... | 1,402 |
| *Works on Eastern Delta of Godavery.* | | | | | | | | |
| Extension of Irrigation in the Eastern Delta ... ... ... | 108,080 | ... | 108,080 | 12,107 | 3,990 | 9,523 | 12,103 | 37,723 |
| Scouring sluices and ring channel to Cocanada lock ... ... | 100 | 100 | ... | 127 | ... | ... | ... | 127 |
| Aqueduct over Chintapolly calingulah channel ... ... | 357 | 220 | 137 | 155 | ... | ... | ... | 155 |
| *Works on Western Delta of Godavery.* | | | | | | | | |
| Extension of irrigation in Western Delta ... ... ... | 130,464 | ... | 130,464 | 12,029 | 4,134 | 6,400 | 12,210 | 34,773 |
| Improvements to Akeed Canal ... ... ... ... ... | 10,323 | 2,507 | 8,116 | 7,690 | 45 | ... | ... | 7,735 |
| Works for the cross drainage of the Ellore High Level Canal. | 10,549 | A 7,931 | 2,618 | 1,159 | .. | ... | ... | 1,159 |
| Masonry aqueduct over Thopasawaram drain ... ... ... | 54 | 54 | ... | ... | ... | ... | ... | ... |
| Under-tunnel under Oondy channel ... ... ... ... | 110 | 110 | ... | 32 | ... | ... | ... | 32 |
| Sloping down the banks of the Western Delta Main Canal from Vijaishweram to Neddadavole ... ... ... ... | 566 | 566 | ... | ... | ... | ... | ... | ... |
| Total Works... | 294,497 | 38,634 | 255,863 | 37,054 | 8,167 | 15,923 | 24,313 | 85,457 |
| Establishment ... ... ... ... ... ... ... ... | ... | ... | ... | 10,110 | 3,175 | 4,247 | 6,080 | 23,612 |
| Tools and Plant ... ... ... ... ... ... ... ... | ... | ... | ... | 296 | 1,280 | 597 | 610 | 2,783 |
| Survey Establishment ... ... ... ... ... ... ... | ... | ... | ... | ... | ... | 287 | 347 | 720 |
| Total Godavery... | 294,497 | 38,634 | 255,863 | 47,460 | 12,622 | 21,054 | 31,350 | 112,572 |
| Deduct Survey Establishment charge transferred to other works. | ... | ... | ... | ... | .. | 137 | ... | 137 |
| | | | | | | 20,917 | | 112,435 |

*Expenditure from Loan Funds on Irrigation Works at Madras.*—(Continued.)

| Works. | Amount of Estimate. | Expenditure already incurred from Ordinary Revenue. | Sum to be provided for from Loan Funds. | Outlay from Loan Funds. Up to 1869-70 | 1870-71 | 1871-72. | 1872-73. | Total. |
|---|---|---|---|---|---|---|---|---|
| *Works on Northern Delta of Kistna Canal.* | £ | £ | £ | £ | £ | £ | £ | £ |
| Enlarging and improving channels in Masulipatam Section ... | 18,310 | ... | 18,310 | 9,680 | 2,547 | 2,123 | 720 | 15,070 |
| Widening head of Masulipatam canal for 1,400 yards from the anicut to the head of the Ellore Branch, Begwada ... | 11,353 | ... | 11,353 | 1,411 | 833 | 1,092 | 1,461 | 4,797 |
| Excavating Irrigation channels on west side of Masulipatam canal ... ... ... ... ... ... ... ... | 4,986 | ... | 4,986 | 3,861 | 717 | 399 | — 74 | 4,903 |
| Do. do. on east side of do. from 13th mile to Aukumaru ... ... ... ... ... | 1,561 | ... | 1,561 | 1,373 | 56 | ... | — 29 | 1,402 |
| Widening the lower portion of Pollairoo channel ... ... | 10,401 | 9,481 | 934 | 818 | 62 | ... | 24 | 904 |
| Irrigation channel from the 14th mile of Polouranecdoo ... | 618 | ... | 618 | 179 | ... | ... | ... | 179 |
| Excavating channel 11 miles in length from the Masulipatam canal ... ... ... ... ... ... ... | 1,405 | ... | 1,405 | 1,399 | ... | ... | ... | 1,399 |
| Enlargement and improvement of Ryves' canal ... ... | 41,419 | ... | 41,419 | 8,686 | 8,882 | 4,171 | 3,464 | 21,203 |
| Improvements to the Eastern Bank of the Kistna ... ... | 5,091 | ... | 5,091 | 270 | ... | ... | ... | 270 |
| *Works on Southern Delta of Kistna Canal.* | | | | | | | | |
| Enlarging the head of the Main Irrigation channel at Bezwada on the right bank of the Kistna ... ... ... | 27,040 | 12,028 | 15,012 | 3,268 | 783 | 547 | 491 | 5,189 |
| Side channels from Doogeralla to Nizampatam ... | 5,674 | ... | 5,674 | 5,169 | 651 | ... | — 19 | 5,801 |
| Extending the Commamore channels ... ... ... ... | 19,577 | 7,856 | 11,721 | 2,723 | 171 | 4 | 44 | 2,942 |
| Channel from Walabaroram to tide water ... ... ... | 14,048 | 11,077 | 2,971 | 4,267 | ... | — 5 | 2 | 4,264 |
| Constructing first-class lock at Doogeralla ... ... ... | 3,357 | 1,901 | 1,456 | 1,333 | ... | ... | ... | 1,333 |
| Do second do. do. at Jagurlamudy ... ... ... | 1,804 | ... | 1,804 | 2,098 | ... | ... | ... | 2,098 |
| Cutting a new channel from Pedavadlapudy to Nizampatam ... | 23,481 | 23,362 | 119 | 210 | ... | ... | ... | 210 |
| A drainage channel to dispose of 4 drainages which run into the Vellatoor channel ... ... ... ... ... ... | 1,046 | ... | 1,046 | 941 | 82 | ... | ... | 1,023 |
| Drainage channel from outlets across the Ramparao swamps. | 540 | ... | 540 | 502 | ... | ... | ... | 502 |
| Irrigation channel from Nizampatam canal ... ... ... | 282 | ... | 282 | ... | ... | ... | ... | ... |
| Lock on the Commamore channel ... ... ... ... | 467 | ... | 467 | ... | ... | ... | ... | ... |
| Construction of an accommodation bridge across the Commamore channel at Kalapatoor ... ... ... ... ... | 1,365 | ... | 1,365 | 483 | ... | ... | ... | 483 |
| Total Works... | 201,624 | 71,510 | 130,114 | 55,482 | 9,280 | 8,311 | 5,052 | 81,181 |
| Establishment ... ... ... ... ... ... ... ... | ... | ... | ... | 14,251 | 3,553 | 2,771 | 2,422 | 22,961 |
| Tools and Plant... ... ... ... ... ... ... ... | ... | ... | ... | 587 | 70 | 34 | ... | 691 |
| Survey Establishment ... ... ... ... ... | ... | ... | ... | ... | ... | 537 | 405 | 942 |
| Total Kistna... | 201,624 | 71,510 | 130,114 | 70,284 | 12,909 | 11,673 | 10,909 | 105,775 |
| Deduct Survey Establishment charge transferred to other works. | ... | ... | ... | ... | ... | 395 | ... | 395 |
| | ... | ... | ... | ... | ... | 11,278 | ... | 105,380 |
| *Works in the Pennair Delta.* | | | | | | | | |
| Improvements to the Survapully channel in connection with the Pennair anicut ... ... ... ... ... ... | 42,006 | ... | 42,006 | 18,835 | 6,699 | 8,000 | 1,838 | 35,372 |
| Connecting Survapully channel with Jaffer Sahib's channel ... | 9,263 | ... | 9,263 | ... | ... | ... | ... | ... |
| Irrigation canal from Nellore to Kistnapatam ... ... | 5,960 | 5,209 | 751 | 539 | 29 | ... | ... | 568 |
| Improving embankment along the south margins of the Pennair weir at Nellore ... ... ... ... ... ... | 1,640 | 1,563 | 77 | 54 | 23 | ... | ... | 77 |
| Total Works... | 58,869 | 6,772 | 52,097 | 19,428 | 6,751 | 8,000 | 1,838 | 36,017 |
| Establishment ... ... ... ... ... ... ... | ... | ... | ... | 5,898 | 1,707 | 1,199 | 600 | 9,404 |
| Tools and Plant... ... ... ... ... ... ... | ... | ... | ... | 200 | 27 | 3 | ... | 230 |
| Survey Establishment ... ... ... ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total Pennair Delta... | 58,869 | 6,772 | 52,097 | 25,526 | 8,485 | 9,202 | 2,438 | 45,651 |
| Less transfer to other works on account of Establishment... | ... | ... | ... | ... | ... | ... | 18 | 18 |
| | ... | ... | ... | | ... | ... | 2,420 | 45,633 |
| Palandorai weir across Vellaur River in South Arcot District. | 19,824 | ... | 19,824 | ... | 3,774 | 3,426 | 5,917 | 13,117 |
| Establishment ... ... ... ... ... ... ... | ... | ... | ... | ... | 696 | 1,026 | 1,009 | 2,731 |
| Tools and Plant... ... ... ... ... ... ... | ... | ... | ... | ... | 138 | 19 | ... | 157 |
| Survey Establishment ... ... ... ... ... ... | ... | ... | ... | ... | ... | ... | 51 | 51 |
| Total Palandorai Anicut... | 19,824 | ... | 19,824 | ... | 4,608 | 4,471 | 6,977 | 16,056 |
| Deduct Establishment charge transferred to other works... | .. | ... | ... | ... | ... | ... | 39 | 39 |
| | ... | ... | ... | ... | ... | ... | 6,938 | 16,017 |
| *Works in the Delta of the Cauvery in Trichinopoly and Tanjore Districts.* | | | | | | | | |
| Surplus sluices for the Wyacondun channel ... ... ... | 1,650 | 1,467 | 183 | 223 | ... | ... | ... | 223 |
| Ten surplus sluices on the north bank of the Coleroon ... | 1,238 | 1,140 | 98 | 97 | ... | ... | ... | 97 |

*Expenditure from Loan Funds on Irrigation Works at Madras.*—(Continued.)

| Works. | Amount of Estimate. | Expenditure already incurred from Ordinary Revenue. | Sums to be provided for from Loan Funds. | Outlay from Loan Funds. | | | | Total. |
|---|---|---|---|---|---|---|---|---|
| | | | | Up to 1869-70. | 1870-71. | 1871-72. | 1872-73. | |
| *Works in the Delta of the Cauvery in Trichinopoly and Tanjore Districts.*—(Concluded.) | £ | £ | £ | £ | £ | £ | £ | £ |
| Completion of Wyacondun Extension Project ... ... ... | 2,586 | 1,500 | 1,086 | 1,075 | ... | ... | ... | 1,075 |
| Additional laterite and rough-stone apron with retaining walls at the advanced portion of three sluices in the south branch of the Lower Coleroon Anicut ... ... ... ... | 1,600 | 1,485 | 115 | 264 | ... | ... | ... | 264 |
| Completion of a front and rear retaining wall and apron along the south branch of the Lower Coleroon Anicut ... ... | 7,040 | 3,395 | 3,645 | 1,775 | 232 | 208 | ... | 2,215 |
| Regulating works for the improvement of the Cauvery ... | 13,779 | ... | 13,779 | 8,744 | 550 | ... | ... | 9,294 |
| Regulators for the principal branches of the river Vennaur ... | 19,945 | ... | 19,945 | 9 | 3,809 | 10,179 | 4,477 | 17,473 |
| Establishment ... ... ... ... ... ... ... | 47,838 | 8,087 | 38,831 | 12,167 | 5,460 | 19,385 | 4,477 | 39,739 |
| Tools and Plant ... ... ... ... ... ... ... | ... | ... | ... | 2,768 | 649 | 1,834 | 1,169 | 6,420 |
| Survey Establishment ... ... ... ... ... ... ... | ... | ... | ... | 140 | 2 | ... | ... | 142 |
| Total Works... | ... | ... | ... | ... | ... | ... | 66 | 66 |
| Total Cauvery... | 47,838 | 8,087 | 38,831 | 15,101 | 6,111 | 21,219 | 5,712 | 48,343 |
| Add charge for Establishment transferred from other works ... | ... | ... | ... | ... | ... | ... | 32 | 32 |
| | ... | ... | ... | ... | ... | ... | 5,744 | 48,375 |
| *Streeviguntum Anicut Project.* | | | | | | | | |
| Anicut on the Tambrapoorny river (Streeviguntum Anicut Project) in the Tinnevelly District ... ... ... ... | 83,169 | 3,884 | 79,278 | 42,174 | 9,731 | 2,693 | 18,668 | 73,276 |
| Establishment ... ... ... ... ... ... ... | ... | ... | ... | 6,163 | 2,343 | 2,709 | 3,439 | 14,654 |
| Tools and Plant ... ... ... ... ... ... ... | ... | ... | ... | 102 | ... | ... | ... | 102 |
| Survey Establishment ... ... ... ... ... ... ... | ... | ... | ... | ... | ... | 96 | 29 | 125 |
| Total Streeviguntum Weir, Tank Project ... | 83,169 | 3,884 | 79,278 | 48,439 | 12,074 | 13,721 | 18,546 | 92,806 |
| Add charge for Establishment transferred from other works... | ... | ... | ... | ... | ... | 134 | ... | 134 |
| | ... | ... | ... | ... | ... | 13,855 | ... | 92,940 |

*Expenditure from Loan Funds on Water-supply Project at Madras.*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Project for water-supply to the town of Madras and for irrigating lands in its vicinity. | 61,176 | 6,070 | 55,106 | 78,347 | 6,215 | ... | —57,000 | 27,562 |
| Establishment ... ... ... ... ... ... ... | ... | ... | ... | 14,649 | 1,363 | ... | ... | 16,012 |
| Tools and Plant ... ... ... ... ... ... ... | ... | ... | ... | 787 | 3 | ... | ... | 790 |
| Survey Establishment ... ... ... ... ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total Water-supply Project... | 61,176 | 6,070 | 55,106 | 93,783 | 7,581 | ... | —57,000 | 44,364 |
| Add charge for Establishment transferred from other works ... | ... | ... | ... | ... | 411 | ... | ... | 411 |
| | ... | ... | ... | ... | 7,992 | .. | ... | 44,775 |

*Expenditure from Loan Funds on Irrigation works at Madras.*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Chembrambaukum Tank Project ... ... ... ... | 35,543 | 2,000 | 33,543 | 17,854 | ... | ... | ... | 17,854 |
| Establishment ... ... ... ... ... ... ... | ... | ... | ... | 3,274 | ... | ... | | 3,274 |
| Tools and Plant ... ... ... ... ... ... ... | ... | ... | ... | 98 | ... | ... | ... | 98 |
| Survey Establishment ... ... ... ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Total Chembrambaukum ... | 35,543 | 2,000 | 33,543 | 21,226 | ... | ... | ... | 21,226 |
| | ... | ... | ... | 55 | ... | ... | ... | 55 |
| Add charge for Establishment transferred from other works... | ... | ... | ... | 21,281 | ... | ... | ... | 21,281 |
| *Perryaur Project, Madura.* | | | | | | | | |
| Investigation of the Perryaur Project in the Madura District. | 450 | ... | 450 | ... | ... | 426 | ... | 426 |
| Establishment ... ... ... ... ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Tools and Plant ... ... ... ... ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Survey Establishment ... ... ... ... ... ... | ... | ... | ... | ... | ... | 3,350 | 795 | 4,145 |
| | 450 | ... | 450 | ... | ... | 3,776 | 795 | 4,571 |

*Abstract Account of Expenditure from Loan Funds from 1867-68 to 1872-73.*

| Projects. | Amount of Estimate. | Expenditure already incurred from Ordinary Revenue. | Sum to be provided for from Loan Funds. | Actual Outlay to end of 1872-73. | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Works. | Establishment. | Survey Establishment. | Tools and Plant. | Total. |
| | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| *Irrigation Works.* | | | | | | | | |
| Godavery Delta works ... ... ... ... | | | | | | | | |
| Kistna do. do. ... ... ... | 2,91,497 | 78,624 | 2,58,869 | 85,477 | 29,772 | 433 | 2,783 | 1,12,465 |
| Pennair do do. ... ... ... | 2,01,624 | 71,310 | 1,56,114 | 81,101 | 23,193 | 400 | 691 | 1,05,385 |
| Pelandoral weir across Vellaur river in the South Arcot District. | 68,829 | 6,772 | 52,057 | 36,617 | 9,360 | ... | 250 | 46,227 |
| Cauvery Delta works ... ... ... ... | 13,824 | ... | 10,824 | 10,117 | 2,000 | 81 | 125 | 12,323 |
| Weir across the Tambraparny river known as the Sivagiri Weir Project ... ... ... | 87,826 | ... | 87,826 | 36,720 | 6,450 | 60 | 100 | 43,330 |
| Project for water-supply to the town of Madras and for irrigating lands in its vicinity ... ... ... | 85,160 | ... | 79,275 | 16,661 | 3,000 | 60 | 100 | 19,821 |
| Chembrambakkum Tank Project ... ... ... | 61,175 | ... | 58,150 | 25,000 | 4,500 | 60 | 100 | 29,660 |
| Perrygaur Project, Madura ... ... ... | 58,543 | ... | 58,543 | 17,444 | 3,000 | 60 | 100 | 20,604 |
| Rondkrolla or Delta boundary project ... ... ... | 450 | ... | 450 | 400 | 80 | ... | ... | 480 |
| ... ... ... ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Grand Total, Madras ... | 8,62,961 | 1,57,867 | 7,03,094 | 3,60,223 | 1,80,674 | 4,110 | 6,629 | 5,51,636 |



No. 122AA. *Note by the Chief Engineer for Irrigation.*

In reply to a telegram from the Government of India, it was reported yesterday that information for the forecast of expenditure from Loan Funds called for in the letter from the Government of India, No. 154 A.I., dated 1st June 1874, was not at present available, but seeing that approximate information is much needed, and that as regards probable outlay in the four years, 1875-76 to 1878 79 inclusive, a sufficiently reliable estimate can be given, the accompanying statement has been prepared for immediate transmission.

2. The Government of India ask that the entries under amount of estimates may be carefully checked and corrected, but this cannot be done without causing delay, except in the case of the Godavery Delta for which the only alteration apparently required is the addition of the amounts recently sanctioned for Tools and Plant, and this correction has accordingly been made. Some excess is likely to occur on the Pennair Delta works in consequence of irregularities connected with contracts there, as already reported to Government. Similarly supplemental sanction will be required for the anicut across the Vellaur river, (Pelandoral Anicut Project,) 1st, for providing additional storage work which has been contemplated from the first; and, secondly, on account of increased cost of work already included in the estimate. Again, on item 5, improvements connected with the Cauvery Delta, the increased rate for cut-stone work recently sanctioned by Government will cause an excess. Definite information as to the amount of supplemental sanction which will be required is in no case available.

3. The column "actual outlay fron Loan Funds in 1873-74" has been corrected from the progress reports furnished to this office, except for item 4, for which particulars are not at the moment ascertainable. The entries are exclusive of establishment charges, which are not shown in the progress reports.

4. With regard to works in contemplation, the following explanations are given with reference to paragraph 3 of Colonel Dickens' letter.

*Item* 7, *completion of Central Delta, Godavery.*—Estimates, amounting to Rupees 7,38,000, have been in this office for some time past, but the works already sanctioned being fully as much as the establishment available for supervision can manage, it is not proposed to commence the improvements before 1876-77; as soon as more pressing papers have been disposed of, these estimates will be reviewed and submitted to Government.

| | | |
|---|---|---|
| As above-mentioned the amount of the estimates is ... | Rs. | 7,38,000 |
| Add for Tools and Plant, 8 per cent. ... ... ... | ,, | 59,040 |
| | ,, | 7,97,040 |
| Add for establishments, 25 per cent. ... ... ... | ,, | 1,99,260 |
| | ,, | 9,96,300 |
| | £ | 99,630 |

And as this agrees sufficiently closely with the £100,000 entered in the column "total required" that sum may stand. Indeed, I am not in a position at the present time to say whether the estimates will require any material revision.

*Item* 8, *completion of works in the Kistna Delta.*—The estimates for some of the sub-sections of the delta have been received, and many of those for other sub-

sections are in a forward state. Some will certainly be brought forward for sanction within the current year. The estimates are entered at £100,000 in the column "total required." I do not think their amount will be less than £750,000, for those originally submitted for one-half of the delta amounted to Rupees 33,61,200, and the drainage works were found to be altogether inadequate. It has been assumed that about 3½ lakhs will be required yearly in this delta, which is about as much as can be spent on New Works with labor available.

*Item* 9, *Rosilkodla Project.*—The revenue report has not yet been received, but so far as anything is known of the financial aspect of the scheme, it is improbable that the returns will justify its execution from Loan Funds, consequently no outlay has been provided for in the statement.

*Item* 10, *Perrgaur Project.*—The estimates are before Government, and I do not know whether any decision has been arrived at with regard to this scheme, consequently no entries for expenditure on its account have been made.

*Item* 11, *Sangum Project.*—The estimates have been submitted, and there has been much subsequent correspondence with regard to the financial merits of the scheme. £95,000 have been entered in the statement as the probable outlay in the four years, pending a final decision of the question whether it is to be carried out from Loan Funds or from the Ordinary grant.

5. The more important information required by the Government of India can be given in a telegram.

(Signed) JOHN MULLINS, Lieut. Colonel, R.E.,
*Chief Engineer for Irrigation.*

No. 122B. ORDER THEREON, 7th July 1874, No. 1,819-A.

| IRRIGATION, No. 13. |
|---|
| *Account.* |

These papers will be communicated to the Controller of Public Works Accounts in continuation of G.O., No. 1,717, of the 25th June 1874, with a view to the examination and revision of the entries in the several columns of the statement received from the Government of India up to and inclusive of that headed "Grant 1874-75" for the works for which estimates have been sanctioned.

2. The entries made by the Chief Engineer for Irrigation to show the probable outlay during the years 1875-1876 to 1878-79 appear to the Government to be reasonable, and are therefore accepted.

3. Ordered that a copy of these Proceedings be transmitted at once for the information of the Government of India.

(True Extract.)

Colonel, R.E.,
*Secretary to Government.*

To the Officiating Controller of Public Works Accounts.
" Chief Engineer for Irrigation.
Exd. E. C. Shunker.
Spare Copies

Statement of estimated actual and probable outlay to end of 1878-79 from Loan Funds on Irrigation Works under the Government of Madras.

| Item No. | Amount of Estimate for sanctioned and other ordinary items grant | Balance required from Loan Funds to complete estimate | Add for establishment & Interest | Total | Actual Outlay from Loan Funds to end of 1870-71 | Actual Outlay from Loan Funds during 1871-72 | Actual Outlay from Loan Funds during 1872-73 | Actual Outlay from Loan Funds during 1873-74 | Grant required 1874-75 | Probable outlay during 1875-76 | 1876-77 | 1877-78 | 1878-79 | Total outlay from Loan Funds to end of 1878-79 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ | £ |
| **Works for which Estimates have been sanctioned** | | | | | | | | | | | | | | |
| 1 Extension of irrigation in the Godavery & Kistna Delta of the Godavery & additions & improvements to existing works | 294,497 | 38,634 | 25,863 | 84,137 | 34,0000 | 81,000 | 31,436 | 23458 ~~23,500~~ * | 46,474 | 45,000 | 45,000 | 45,000 | 45,000 | 1,80,000 |
| 2 Works in connection with the Kistna Delta | 201,624 | 71,510 | 130,114 | 35,886 | 1,66,000 | 94,471 | 10,909 | 2652 ~~10,000~~ | 13,190 | 15,000 | 15,000 | 8,000 | — | 38,000 |
| 3 " Penner Delta | 58,869 | 6772 | 52,097 | 13,903 | 66,000 | 43,295 | 2,438 | 2601 ~~11,000~~ | 3,077 | 9,000 | 8000 | — | — | 17,000 |
| 4 Anicut across the Pollaur River | 19,824 | — | 19,824 | 6,176 | 26,000 | 9,040 | 6,977 | 6,000 | 2,700 | 5,000 | — | — | — | 8,000 |
| 5 Improvement & other works Connected with the Cauvery Delta | 47,088 | 8,957 | 38,861 | 9,149 | 46,000 | 31,692 | 5,712 | 3178 ~~4,000~~ | — | — | — | — | — | — |
| 6 Structure across Anicut Project | 93,160 | 3,884 | 79,276 | (a) 20,000 / 20,724 | 1,20,000 | 73,420 | 18,546 | 4910 ~~6,000~~ | 14,569 | 8000 | 2,000 | — | — | 10,000 |
| (a) Probable Excess outlay on works | 705,812 | 129,757 | 574,025 | 188,975 | 7,63,000 | 3,32,918 | 76,018 | 49,599 ~~63,500~~ | 80,000 | 82,000 | 70,000 | 53,000 | 45,000 | 2,50,000 |
| **Works in Contemplation & for which Estimates have yet to be sanctioned** | | | | | | | | | | | | | | |
| 7 Extension & completion of works in Central Delta Godavery | 1,00,000 | — | — | — | — | — | — | — | — | 20,000 | 20,000 | 20,000 | 60,000 | |
| 8 Completion of works in Kistna Delta | 100,000 | — | — | — | — | — | — | — | — | 20,000 | 20,000 | 27,000 | 35,000 | 1,02,000 |
| 9 Rosenkoolia Project | — | 1594 | 1470 | 1,000 | — | — | — | — | — | — | — | — | — | — |
| 10 Penjaur Project | — | 3776 | 795 | 1,000 | — | — | — | — | — | — | — | — | — | — |
| 11 Lengam Project | 323,000 | — | — | — | — | — | — | — | — | 10,000 | 25,000 | 30,000 | 30,000 | 95,000 |
| | — | 5370 | 2265 | 2000 | — | — | — | — | — | 112,000 | 135,000 | 130,000 | 130,000 | 507,000 |
| | | | | | | | 3,38,288 | 78,783 | 54,000 | 80,000 | | | | |
| Add outlay from Loan funds on Madras anicut project | — | | | | | | 1,01,775 | -67,000 | | -10,000 | | | | |
| Chembrambakkum Tank Project | — | | | | | | 21,281 | — | — | — | | | | |
| | | | | | | | 4,61,344 | 21,283 | 54,000 | 70,000 | | | | |

* On works, exclusive of establishment charges

N.B. The probable outlay shewn for the 4 years includes provision for establishments

Item No. 1

Expenditure from Loan Funds on Irrigation works at Nizamabad.

| Works | Amount of Estimate | Expenditure already incurred from Ordinary Revenue | Sum likely to be provided for from Loan funds | Outlay from Loan funds 1869-70 | 1870-71 | 1871-72 | 1872-73 | Total |
|---|---|---|---|---|---|---|---|---|
| **Godavery Anicut & River improvements** | | | | | | | | |
| Raising the Godavery Anicut 2' throughout its length to increase the depth of water | 30,000 | 27,818 | 2,182 | 2,200 | - | - | - | 2,200 |
| Removing parapet walls of the under sluices of the Godavery Anicut | 194 | 194 | - | - | - | - | - | - |
| **Works on Central Delta of Godavery** | | | | | | | | |
| Aqueduct across Correia Drain | 1650 | - | 1650 | 157 | - | - | - | 157 |
| Widening & rebuilding side walls of Gunnaveram Aqueduct | 2050 | - | 2050 | 1404 | -2 | - | - | 1402 |
| Carried over | 33,894 | 28012 | 5,882 | 3753 | -2 | - | - | 3753 |

| Works | Amount of Expenditure to 31st March 1869 Estimate | Amount of Expenditure to 31st March 1869 incurred from Ordinary Annual Grant | Amount of Expenditure to 31st March 1869 provided from Loan funds | Outlay from Loan Funds 1869-70 | 1870-71 | 1871-72. | 1872-73 | Total |
|---|---|---|---|---|---|---|---|---|
| Brought forward | 33894 | 29012 | 3882 | 3753 | -2 | - | - | 3753 |
| Works on Eastern Delta of Godavery | | | | | | | | |
| Extension of Irrigation in the Eastern Delta | 108000 | - | 108000 | 12107 | 3090 | 9523 | 12103 | 37723 |
| Scouring sluices and ring Channel to Coconada | | | | | | | | |
| Locks | 100 | 100 | - | 127 | - | - | - | 127 |
| Aqueduct over Chantapilly Calingulah | | | | | | | | |
| Channel | 357 | 220 | 137 | 185 | - | - | - | 185 |
| Works on Western Delta of Godavery | | | | | | | | |
| Extension of irrigation in Western Delta | 130464 | - | 130464 | 12729 | 4136 | 6400 | 12210 | 34473 |
| Improvements to Aiyeru Canal | 10323 | 2207 | 8116 | 7890 | 45 | - | - | 7935 |
| Works for the cross drainage of the Gillers High Level Canal | 10549 | 7931 | 2618 | 1159 | - | - | - | 1159 |
| Masonry aqueduct over Thopasawaram Drain | 54 | 54 | - | - | - | - | - | - |
| Under Tunnel under Andy Channel | 110 | 110 | - | 32 | - | - | - | 32 |
| Sloping down the banks of the Western Delta Drain Canal from Vegaishweram to Neddadvole | 566 | 566 | - | - | - | - | - | - |
| Total Works | 294497 | 38634 | 255863 | 37054 | 8167 | 15923 | 24313 | 85457 |
| Establishment | " | " | " | 10110 | 3175 | 4247 | 6080 | 23612 |
| Tools and Plant | " | " | " | 296 | 1200 | 597 | 610 | 2783 |
| Survey Establishment | " | " | " | " | " | 287 | 347 | 720 |
| | | | | | | | 66 | |
| Total Godavery | 294497 | 38634 | 255863 | 47460 | 12622 | 21054 | 31350 | 112572 |
| Deduct Survey Establishment charged transferred to Works | " | " | " | " | " | 137 | " | 137 |
| | | | | | | 20917 | | 112435 |

Expenditure from Loan Funds on Irrigation works at Anakapalle

| Works | amount of Estimate | Expenditure already incurred from Ordinary Revenue | Sum to be provided for from Loan funds | Outlay from Loan funds up to 1869/70 | 1870/71 | 1871/72 | 1872/73 | Total |
|---|---|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | £ | £ | £ | £ |
| For Works on Northern delta of Kistna Canal- | | | | | | | | |
| Enlarging and improving Channels in Masulipatam Section | 18,310 | " | 18,310 | 9686 | 3547 | 2123 | 720 | 15,076 |
| Widening head of Masulipatam Canal for 1000 yards from the Anicut to the head of the Collare Branch Bezwada | 11,353 | " | 11,353 | 1411 | 833 | 1092 | 1461 | 4797 |
| Excavating Irrigation Channels on west side of Masulipatam Canal | 4986 | " | 4986 | 3863 | 717 | 399 | -74 | 4905 |
| do do on east side of do from 13th mile to Ankamarru | 1561 | " | 1561 | 1375 | 56 | " | -29 | 1402 |
| Widening the lower portion of Collairu Channel | 10405 | 9481 | 924 | 818 | 64 | " | 22 | 904 |
| Irrigation Channel from the 14th mile of Palakaracodu | 613 | " | 613 | 179 | " | " | " | 179 |
| Excavating Channel 11 miles in length from the Masulipatam Canal | 1405 | " | 1405 | 1399 | " | " | " | 1399 |
| Enlargement and improvement of Pyrus Canal | 41,419 | " | 41,419 | 8088 | 3882 | 4171 | 5464 | 21,605 |
| Improvements to the Eastern Bank of the Kistna | 5691 | " | 5691 | 270 | " | " | " | 270 |
| Carried forward | 95,763 | 9481 | 86262 | 27,089 | 8099 | 7785 | 7564 | 50,537 |

Work Co

| | Amount of Expenditure already provided for in Estimate carried from Ordinary Revenue | Sum to be provided from Loan funds | Outlay from Loan funds 1869/70 | 1870/71 | 1871/72 | 1872/73 | Total |
|---|---|---|---|---|---|---|---|
| Brought forward | £ 95,413 | £ 9481 | £ 86,262 | £ 24,089 | £ 8079 | £ 4785 | £ 4564 | £ 50,557 |

Work on Southern Delta of Kistna Canal.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Enlarging the head of the main Irrigation Channel at Bezwada on the right bank of the Kistna | 27,641 | 13038 | 13,613 | 3365 | 703 | 547 | 441 | 5056 |
| Tide channels from Dosgarla to Nizampatam | 5676 | " | 5676 | 5169 | 161 | " | 19 | 5349 |
| Prosetending the Commamoor Channel | 19,577 | 7,626 | 11951 | 9733 | 171 | 6 | 46 | 9956 |
| Channel from Kalakoporam to tide water | 14648 | 11,092 | 3556 | 4307 | " | 53 | 91 | 4504 |
| Constructing first class lock at Dosgaralla | 3357 | 1901 | 1456 | 1535 | " | " | " | 1535 |
| Do second do " at Jaguramoody | 1806 | " | 1806 | 2078 | " | " | " | 2078 |
| Cutting a new channel from Kedavadapady to Nizampatam | 29,481 | 29,322 | 159 | 210 | " | " | " | 210 |
| A drainage channel to dispose of 4 drainages which run into the Vellatoor Channel | 1046 | " | 1046 | 941 | 82 | " | " | 1023 |
| Drainage Channel from outlets across the Ramparao Swamps | 540 | " | 540 | 562 | " | " | " | 562 |
| Irrigation channel from Nizampatam Canal | 282 | " | 282 | " | " | " | " | " |
| Lock on the Commamore channel | 467 | " | 467 | " | " | " | " | " |
| Construction of an accommodation bridge across the Commamore Channel at Kalapatam | 1365 | " | 1365 | 483 | " | " | " | 483 |
| Total Work | 201,624 | 71,510 | 130,114 | 55,482 | 9286 | 8331 | 8082 | 81181 |
| Establishment | " | " | " | 14,251 | 3553 | 2771 | 2422 | 22961 |
| Tools and Plant | " | " | " | 587 | 70 | 34 | " | 691 |
| Survey establishment | " | " | " | " | " | 537 | 405 | 942 |
| Total Kistna | 201,624 | 71,510 | 130,114 | 70384 | 12,909 | 11,673 | 10,909 | 105775 |
| Deduct Survey Estabt charge transferred to other works | " | " | " | " | " | 395 | " | 395 |
| | | | | | | 11,278 | | 105380 |

Works

Amount of Expenditure from other sources already provided for from Loan Funds

Outlay from Loan Funds up to

Total

Expenditure from Loan Funds on Irrigation works at Sundries

| Works | Amount of Estimate | Expenditure already incurred from Ordy Revenue | Sum still to be provided for from Loan Funds | Outlay from Loan Funds up to 1869/70 | 1870/71 | 1871/72 | 1872/73 | Total |
|---|---|---|---|---|---|---|---|---|
| **Works in the Pennair Delta** | £ | £ | £ | £ | £ | £ | £ | £ |
| Improvements & the Suruapully Channel in connection with the Pennair Anicut | 42,706 | " | 42,706 | 18,835 | 6699 | 8000 | 1838 | 35,372 |
| Connecting Suruapully Channel with Jaffir Sahib's Channel | 9263 | " | 9,263 | " | " | " | " | " |
| Irrigation Canal from Nellore to Kistnapatam | 5,960 | 5209 | 751 | 539 | 29 | " | " | 568 |
| Improving Embankment along the South margin & the Pennair weir at Nellore | 1640 | 1563 | 77 | 54 | 23 | " | " | 77 |
| Total works | 58,869 | 6,772 | 52,097 | 19,428 | 6751 | 8,000 | 1,838 | 36,017 |
| Establishment | " | " | " | 5898 | 1707 | 1179 | 600 | 9,384 |
| Tools and Plant | " | " | " | 200 | 27 | 3 | " | 230 |
| Survey Establishment | " | " | " | " | " | | " | |
| Total Pennair Delta | 58,869 | 6,772 | 52,097 | 25,526 | 8485 | 9202 | 2438 | 45,651 |
| Less transfers to other works on account of Establt | " | " | " | " | " | " | 18 | 18 |
| | | | | | | | 2,420 | 45,633 |

Colaconmand
July 18/74.

I Brae Caffrain
Lieut R.E.
Joint Secretary to Government
S.A.

To the Honble -
The Secretary to Government of
the Colonies
with the honour to forward
the Estimate of Expenditure
from Loan Funds
for the year
1874-75
Public Works Department
Colaconmand

14

## Expenditure from Loan Funds to 31st March 1875

| Works | Amount of Estimate sanctioned by Legislature | Amount of Estimate sanctioned by Legislature, but not included in Loan | Sum this year provided from Loan Fund | Outlay from Loan Funds 1873-74 | 1874-75 | 1875-76 | 1876-77 | Total |
|---|---|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | £ | £ | £ | £ |
| Kalandorai weir across Vellore River in Chittoor District | 19,824 | " | 19,824 | " | 374 | 3426 | 5917 | 13,117 |
| Establishments | " | " | " | " | 696 | 1,026 | 1,009 | 2,731 |
| Tools and Plant | " | " | " | " | 138 | 19 | " | 157 |
| Survey Establishments | " | " | " | " | " | " | 51 | 51 |
| Total Kalandorai Anicut | 19,824 | " | 19,824 | " | 4,608 | 4,471 | 6,977 | 16,056 |
| Deduct Establishment charged towards Water Works | " | " | " | " | " | " | 39 | 39 |
| | | | | | | | 6,938 | 16,017 |

Expenditure from Loan funds on Irrigation works at Madras. 10

Works

| Works | From Estimate | Expenditure incurred from Ordinary Revenue. | Sums to be provided for from Loan funds | Expenditure from Loan funds 1869-70 | 1870-71. | 1871-72 | 1872-73 | Total |
|---|---|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | £ | £ | £ | £ |
| **Works on the Delta of the Cauvery in Trichinopoly and Tanjore Districts.** | | | | | | | | |
| Surplus sluices for the Vyacondum Channel | 1,650 | 1467 | 183 | 223 | " | " | " | 223 |
| Do Surplus sluices on the North bank of the Coleroon | 1,238 | 1140 | 98 | 97 | " | " | " | 97 |
| Completion of Vyacondum & Veneion project | 2,506 | 1,570 | 1,086 | 1,075 | " | " | " | 1,075 |
| Additional laterite and rough stone Apron with retaining walls at the advanced portion of these sluices in the South Branch of the Lower Coleroon Anicut | 1,600 | 1,485 | 115 | 264 | " | " | " | 264 |
| Completion of a front and rear retaining wall and Apron along the South Branch of the Lower Coleroon Anicut | 7,040 | 3,395 | 3,645 | 1,775 | 332 | 206 | " | 2,313 |
| Regulating works for the improvement of the Cauvery | 13,779 | " | 13,779 | 8,744 | 330 | " | " | 9,294 |
| Carried Over | 27,813 | 8,997 | 18,906 | 12,178 | 882 | 206 | " | 13,266 |

| Works | Amount of Estimate | Expenditure already incurred from Loan Funds on 31st March, 1869 | Sum to be expended from Loan Funds | Outlay from Loan funds 1869-70 | 1870-71 | 1871-72 | 1872-73 | Total |
|---|---|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | £ | £ | £ | £ |
| Works on the Cauvery Delta (Contd.) | | | | | | | | |
| Brought forward | 27,893 | 8,987 | 18,906 | 12,178 | 882 | 266 | . | 13,226 |
| Regulators for the principal Branches of the river Vennaur | 19,945 | . | 19,945 | 9 | 2,808 | 10,179 | 4477 | 17,473 |
| Total Works | 47,838 | 8,987 | 38,851 | 12,187 | 3,690 | 10,305 | 4,477 | 30,739 |
| Establishment | . | . | . | 2768 | 649 | 1834 | 169 | 5,420 |
| Tools and Plant | . | . | . | 126 | 2 | . | . | 128 |
| Survey Establishment | . | . | . | . | . | . | 66 | 66 |
| Total Cauvery | 47,838 | 8,987 | 38,851 | 15,701 | 4,341 | 12,219 | 4,712 | 37,373 |
| Add Charges for Establishment transfd. from Steam | . | . | . | . | . | . | 32 | 32 |



Expenditure from Loan Funds on Irrigation Works at Madras.

| Works | Amount of Estimate | Expenditure already incurred from Loan Funds on 31st March, 1869 | Sum to be expended from Loan Funds | Outlay from Loan funds 1869-70 | 1870-71 | 1871-72 | 1872-73 | Total |
|---|---|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | £ | £ | £ | £ |
| Streeyguntum Anicut Project | | | | | | | | |
| Anicut on the Tambraparuny River (Streeyguntum Anicut Project) in the Tinnivelly District | 83,160 | 3,884 | 79,276 | 42,174 | 9757 | 9,895 | 15,758 | 76,878 |
| Establishment | . | . | . | 6163 | 2345 | 2730 | 3459 | 14,697 |
| Tools and Plant | . | . | . | 132 | . | . | . | 132 |
| Survey Establishment | . | . | . | . | . | 96 | 29 | 125 |
| Total Streeyguntum Anicut Project | 83,160 | 3,884 | 79,276 | 48,469 | 12,096 | 12,721 | 18,546 | 91,832 |
| Add. Charges for Establishment transfd from other works | . | . | . | . | . | 134 | . | 134 |
| | | | | | | 12,855 | . | 91,966 |

Expenditure from Loan Funds on Irrigation Works at Khandesh. 26

| Projects | Estimated Cost | Expenditure already provided for from Ordinary Revenue | Balance required from Loan funds | Outlay to 1869-70 | Outlay from Loan funds 1870-71 | 1871-72 | 1872-73 | Total |
|---|---|---|---|---|---|---|---|---|
| | £ | £ | £ | £ | £ | £ | £ | £ |
| Khandesh Irrigation Canal Project | 35543 | 2000 | 33543 | 17854 | - | - | - | 17854 |
| Establishment | - | - | - | 3274 | - | - | - | 3274 |
| Tools and Plant | - | - | - | 98 | - | - | - | 98 |
| Survey Establishment | - | - | - | - | - | - | - | - |
| Total Khandesh Irrigation | 35543 | 2000 | 33543 | 21226 | - | - | - | 21226 |
| Add charge for Establishment transf. from other works | - | - | - | 55 | - | - | - | 55 |
| | 35 | 5 | 35 | 21281 | 5 | 5 | 5 | 21284 |
| | | | | 5 | | | | 5 |

Expenditure from Loan Funds on account of Irrigation Works at Madras.

| Head | Amount of Estimate | Expenditure Limited where it will be provided -exceed for from from Est. Ordinary Grants | Loan funds | Outlays from Loan Funds 1869-70 | 1870-71 | 1871-72 | 1872-73 | Total |
|---|---|---|---|---|---|---|---|---|
| **Periyaur Project Madura** | | | | | | | | |
| Investigation of the Periyaur Project in the Madura District | 450 - | 450 | - - | | | 426 - | | 426 |
| Establishment | - | - | - | - | - | - | | |
| Tools and Plant | - | - | - | - | - | - | | |
| Survey Establishment | - | - | - | - | - | 3350 | 795 | 4145 |
| | 450 - | 450 | - - | | | 3776 | 795 | 4571 |

Abstract accounts of Expenditure from Loan Funds from 1867-68 to 1872-73.

| Projects | Amount of Estimate | Expenditure already incurred from ordinary Revenues | Amount still required for from Loan Funds | Actual Outlay to End of 1872-73. Works | Establishment | Survey Establishment | Tools & Plant | Total |
|---|---|---|---|---|---|---|---|---|
| **Irrigation Works** | | | | | | | | |
| Godavery Delta works | 294,497 | 38,634 | 255,863 | 85,457 | 23702 | 433 | 2783 | 112,435 |
| Kistna do do | 201,624 | 71,670 | 130,114 | 81,181 | 23,183 | 405 | 691 | 105,380 |
| Pennair do do | 80,000 | 6,772 | 52,097 | 36,017 | 9,386 | - | 238 | 45,633 |
| Palandoray weir across Vellore River on the Nellore Road | 19,024 | - | 19,024 | 13,117 | 2,692 | 57 | 151 | 16,017 |
| Cauvery Delta works | 47,838 | 3,997 | 28,857 | 30,730 | 6,452 | 66 | 148 | 37,405 |
| Weir across the Tambraparny River known as the Sheyenkulum weir Project | 83,163 | 3,884 | 79,276 | 76,879 | 14,027 | 29 | 132 | 91,066 |
| Project for water supply to the Town of Madras and for irrigating lands in the vicinity | 61,170 | 6,370 | 53,710 | 27,562 | 10,423 | - | 790 | 45,775 |
| Tambrabarnum Tank Project | 33,543 | 2,000 | 33,543 | 17,854 | 3329 | - | 98 | 21,281 |
| Ferryaur Project Madura | 450 | - | 450 | 426 | - | 4145 | - | 4571 |
| Poyglam Project or Delta boundary Project | - | - | - | - | - | 3064 | - | 3064 |
| Grand Total Madras | 812,981 | 137,857 | 665,124 | 369,231 | 100,074 | 8193 | 5029 | 482,527 |

No

Lieut Lytton Chief Engineer for Irrigation

In reply to a telegram from this office dated Simla 10th instant reported yesterday the information further necessary expenditure from Orissa Funds Calcutta on the Cotton from the 3rd of 1874 dated 1 June 1874 was not at present available but seeing that approximate information is much wished, and the 4 years 1875-76 to 1878-79 inclusive, a sufficiently reliable estimate can be given, the accompanying statement has been prepared for immediate transmission

2. The Cost of Irrigation at the entire under Agreement, estimates may be carefully checked Correctly, but the Cannot be done without some delay, except in the Case of the Sonepur Subdivision of Cuttack which the only alteration required is the addition of the amounts recently sanctioned for Tools & Plant and this Correction has accordingly been made. Some excess is likely to occur on the Canal Estimates when the Completion of Irrigation Connected with Contingencies, as already reported to Govt. Similarly Supplemental Estimates will be required

Lutte Amient acup the Vellar river Colerdam Amient project / 1st for providing additional storage, work which has been contemplated from the first, and will in account of which some early work included in the estimate - Cyanamide item 5, Improvement Connected with the Cauvery Delta, the increased rate per cent have recently sanctioned by Govt with Cause and exp - Definite information as to the amount of supplemental sanction which will be required is not ascertainable.

3. The column "actual outlay from Loan funds in 1873-74" has been corrected from Accts reports furnished to this office, except for Item 4, for which particulars are not at present ascertainable. The entries are exclusive of establishment charges, which are not shown in the Accts reports

4 - With regard to Works in Contemplation, the following explanations are given with reference to para 3 of Colonel Dickens' letter.

Item 7 - Completion of Central Delta Regulating Estimate amounting to ——— Rupees 7,35,000
Leave being in this office for some time past, but the works already sanctioned being fully as much as the establishment available for supervision

Cauvery, it is not proposed to commence the improvements before 1876-77 - In case as much progress has been made during, the estimate will be revised and submitted to Govt. An abstract of the amounts the estimates is

| | |
|---|---|
| | 7,35,000 |
| add for Loan Plant 8 per cent | 59,000 |
| | 7,94,040 |
| add for Establishment 25 per cent | 1,99,200 |
| Rupees | 9,93,300 |
| £ | 99,330 |

And as this agrees sufficiently closely with the £100000 entered in the column "total required" that sum may stand - Indeed as we do not at present time to say whether the estimates will require any material revision Item 8, Completion of works in the Trichinopoly The estimates for carrying out the sanctioned of the Delta have been received, and as many of them provide subsections as in afforward state - Some will certainly be brought forward for execution within the current year - The estimates are entered at 4 crores in the Column "Total required". I do not think their amount will help them at for the 750,000 for three originally estimated for only half the Delta amounted to Rupees 33,61,200 as after deducting works

It has been proposed that about 12 lakhs will be required yearly in this District, which is about one hundred and ten thousand more than the Loan available.

Item 9 Rushikulia project. The Revised report has not been received, but so far as anything is known of the financial aspect of the scheme, it is improbable that the returns will justify the sanction of a loan from Loan funds, consequently no outlay has been provided for in the Statement.

Item 10 Pennair Project. The estimate is before Government, and I do not know whether any decision has been arrived at with regard to the scheme. Consequently no entries for expenditure in the account have been made

Item 11 - Tungabhadra project. The estimates have been submitted, and there has been much subsequent Correspondence with regard to the financial merits of the scheme. £95,000 has been entered in the Statement as the probable outlay in the 12 years, pending a final decision of the question whether this should not be transferred from Loan Funds to the Ordinary Grant.

122 A.A.

5. The more important misstatements required by the Government of India were given in a telegram

All communications should be addressed to the Secretary.

No. 154 A J

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

Account

Irrigation

To

The Secretary to the Government of Madras

Public Works Department

Irrigation Branch.

Fort William 1st June 1874.

Sir

In continuation of Public Works Department letter No. 328 A.J. dated 7th May 1874. I am directed to forward herewith a Draft forecast prepared in this Office of the actual and probable expenditure from loan funds on Irrigation works under the Government of Madras and to request that with the permission of that Government you will be good enough

enough to fill in to the last approximation that can be arrived at within a few days the grants that will probably be respectively required for expenditure on the works entered under forecast for each of the years 1875-76, 1876-77 1877/78 and 1878/79.

2. I am also to ask that the entries under "Amount of estimate" may be carefully checked and such corrections as are necessary made in red ink But a memo should be attached shewing the reasons or authority for the correction. The entries in the column "Add for Establishment and Plant not "in estimate" have been made at the rate of 25 per cent of the outlay the figures being altered so as to make the total an even sum. If in any case it is considered probable that there will be an excess of outlay over the sanctioned estimate the amount of such excess should be entered as a distinct item in red ink against the project concerned.

Returns required

(A statement shewing the amounts comprising the entries under amount of estimate is attached for information)

3 Under the heading "Works in contemplation and for which estimates have not to be sanctioned" such additional works as the Government of Madras may consider likely to be sanctioned within the next four years should be entered. But in such cases an explanation should be furnished of the grounds on which it is expected that the work will be sanctioned, and the present state of the estimates for them should be mentioned.

4 In the entries in the statement of "Estimated outlay 1873.74" the actual outlay of the year should be substituted in communication with the Controller of Public Works Accounts.

5 Under "Outlay" the outlay from loan funds only has been entered.

The

The items noted in the margin have been omitted from the amount of Estimate because they do not form a charge against the Extraordinary grant.

Capitalization of Land Revenue simple interest charge while work is under construction

6. I am desired to request that the required information may be supplied within a week, so far as it can be given; and that if thought desirable a more complete statement may follow at leisure.

I have the honor to be
Sir,
Your most obed. servt.
(H. Wichum) Coll. R.A.
Secretary to the Govt. of Sudan.
Gaby

Pub: Works 1874 Dept.
Proc: of Govt for India
No: 3442

From

The Govt of India

Dated 1st June 1874
Received 8th —"— }

No 154 A. I.
Encls. 11.

Gen-No: 1819 A. 7-7-74.

Forwarding a Draft pro-cast of probable expenditure from Loan funds on Irrigation works in the Madras Presidency, & requesting that it may be checked and corrected where necessary and returned with a Memo: of such alterations &c as may be made—

J-0-18-1907-1819-5-7-74—

No 122 A

Proceedings of the Government of India
Read the following

from the Govt of India (No. 154 A.I. of 1st June /74

Copies forthwith will be communicated to the Comptroller of Public Works Accounts, and communicated to the Accountant General of the Presidency of Fort St. George, with a view to the communication and receipt in the Public Works Office of the several columns of the statement received from the Govt of India, up to and including

of

of that headed "Grant 1874-75" for the works for which estimates have been sanctioned -

2- The entries made by the Chief Engineer for Irrigation show the probable outlay during the years 1875-76 to 1878-79 appear to the Govt to be reasonable and are therefore accepted -

3- Ordered that a copy of these Proceedings be transmitted at once for the information of the Govt of India -

S.G. Dep 1813 dated

Copy of the above forwarded to the Govt

To The Controller E.Pr. A/c
" Chief Engr for Irrign
S. copies despd 1/8/74.
MS. Drafts to the Auth 7/7/74.
I.C. " — " — 27/7/74

MS. entd 7/8/74
I.S.C. " 27/7/74

Government of India -

Orders

These papers will be communicated to the Controller of P.W.A. in continuation of his No. 1717 of the 24th June 1874, with a view to the ~~Grant~~ Examination and revision of the entries in the second column of the Statement recently submitted by him, inclusive of that headed "Grant 1874-75" for public works previously estimated but not sanctioned

2. The entries made by the Collectors for Irrigation to show the Probable outlay during the years 1875-76 to 1878-79 appear to the Government to be reasonable and will therefore accepted.

3 - Communicate a copy of these Proceedings to Mr. with an enquiry

Mr. 1/7/74

122 A - 122 C

To Calendar

" Water.

Year one hundred and fifty four

Forecast down from mtao for

4 years. Total five hundred and

seven thousand namely: one

hundred and twelve, one hundred

and fifty five, one hundred and

thirty one one hundred and fifty

thousand.

Draft 2/7

Eng 4/12

507000

112000
155000
130000
150000
507000

3442

Govt. of Madras.

PUBLIC WORKS.

To

The Offg. Secy. to Govt.
of India.
Secy. to Govt. Mily. Dept.

Dated.

Read.

Encl. 1/1X

1879.

G. O. 7 July 1879. No. 1879

Nos. 122 Act 3.

Forecast of outlay

Passing orders on a letter from the Govt of India forwarding a draft forecast of probable expenditure from Loan Funds on Govt works in the Madras Presidency and requesting that it may be checked & corrected & returned accordingly with a memo: of such alterations