

- (1) Number of pages _____
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- (3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras
Public Works DEPARTMENT

G.O. No.	1803	Press
B.P. No.		Mis.
Dated	6-7-	C874 195

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
6th July 1874.*

No. 89. Read the following endorsement of the Chief Engineer for Irrigation, dated Ootacamund, 2nd May 1874, No. 3 :—

From J. H. LATHAM, Esq., Chief Engineer and Manager of the Madras Irrigation and Canal Company, to Lieutenant-Colonel J. MULLINS, R.E., Chief Engineer for Irrigation, dated Kurnool, 23rd April 1874, No. 42.

I HAVE the honour to forward the Upper and Lower Section Reports, together with that of the Chief Engineer's, for the month of March 1874.

MADRAS IRRIGATION AND CANAL COMPANY.

LOWER SECTIONS.

REPORT FOR THE MONTH OF MARCH 1874.

DURING the last week of this month the supply of water in the Main Canal decreased rapidly between Rajahmundry and Pennair, but I have ordered a dam to be made across the head-sluiques at Jutoor, so as to divert all the leakage water into the canal, and by taking other precautions I hope to maintain sufficient water in this part of the canal to secure another fortnight's supply to all the crops, which will save them from injury. All the second crops sown in Nundial and Sirwell Taluqs are now nearly ready to be cut, but in the Preddatoor and Cuddapah Taluqs they are much more backward.

2. In the Pennair or 10th Section we shall have no difficulty in continuing the supply to all the fields under irrigation until April 15th, as the Pennair has gradually risen of late and has made us independent of the Toombudra water-supply.

Irrigation Results.

3. Although there are yet some villages which have received water for second crops in the 9th and 10th Sections from which I have not yet received correct returns, still I think the following table will show, with sufficient accuracy, the final results of our irrigation in the lower sections for the season of 1873-74 :—

Taluqs.	1st Crop.	2nd Crop.	1st Crop by leakage.	Floodings.	1st and 2nd Crops under Government Tanks.	Remarks.
	ACS. CENT.	ACS. CENT.	ACS. CENT.	ACS. CENT.	ACS. CENT.	
Nundial ...	204 70	11 97	97 83	78 08	2,830 75	* Nundial and
Sirwell ...	937 18	147 16	208 70	317 10	29 96	Kanala tanks.
Koilkuntla ...	309 02	6 51	45 0	53 11	30 0	Chintacoota tank.
Jammulamadugu.	85 37			11 84		
Preddatoor ...	1,282 05	751 80		848 13		
Cuddapah ...	1,946 73	290 30		550 12		
Do.				814 69		Flooding in June 1873.
Total...	4,765 05	1,207 83	351 53	2,671 07	2,890 71	

4. From the above table it will be seen that, up to date, the total number of acres of all kinds of irrigation amounts to 11,886.19 acres, which shows a total increase over the amount irrigated

100-443887-1000

[illegible]

6. Yornian has fallen during the month through some storm and frequently being about 100 miles to the east of the Yornian mountains very dangerous crossing and conditions all over Yornian. Laugh not to say serious accident.

14 April 1874

11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847

2. It appears that we may generally calculate on having water 1.5 ft. and 1 ft. above

3. It is intended to clear the silt in the sixth and eighth miles, and to cut down the reeds which have very much impeded the progress of the water; as these reeds increase a quantity of seed similar to that which grows in the large Government tanks.

5. It will be also necessary to remove and replace a portion of the 20th. and old dry rubble wall profile slope* from the end of the new fire wall built last year to the end of the dry rubble wall.

- * About 530 feet.

7. There is some heavy work at Kadrahaq aqueduct, Sultangan, and Terri, especially high
banks. Also important repairs to the Singaram and Redhaurum three-arched culverts.

9. The repairs are scattered throughout this length, and the heaviest must be done during the months of April and May when water is out of the canal. It will be impossible to do much towards extending the irrigation channels until after that time.

10. The irrigation accounts have been prepared in the rough, and are being now fair copied for the settlement which will soon take place.

| | | | | | | | | | | ACRES. |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|
| Wet crops | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4,261 |
| Dry .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | 705 |
| | | | | | | | | | | 4,966 |

| | | | | | | | | |
|-----------|-----|-----|-----|-----|-----|-----|-----|-------|
| Wet crops | ... | ... | ... | ... | ... | ... | ... | 3,753 |
| Dry .. | ... | ... | ... | ... | ... | ... | ... | 327 |
| | | | | | | | | 4,080 |

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12. The falling off in irrigation, observed in the Banikota taluq which has been mentioned in previous reports, is not likely to occur again.

13. The loss to those who gave up sowing paddy in this year has been clearly felt, and as the strike had no effect, we may expect next year that this part of the canal will take water again as much as in 1872-73, and probably more.

14. In the 4th, 5th, and 6th Sections a steady increase of irrigation may be expected. The increase will be all the more rapid if channels are made leading to some villages in the 6th Section hitherto not included in our scheme, but where rice cultivation would be certain to find favour. These villages lie to the west of the Banakacherla Vaga, and include part of the large village of Yellokode.

15. There has been a little fever during the month, but generally the health of the staff was good, March being one of the healthiest months in this part of India. Towards the end of the month the heat was growing severe.

KURNOOL,
7th April 1874.

(Signed) C. H. WILKS,
Conservancy Engineer.

CHIEF ENGINEER'S REPORT TO ACCOMPANY THE DIVISIONAL REPORTS FOR MARCH 1874.

I AM happy to report that the canal and channels have worked efficiently during the irrigating season now closed. All demands for water have, wherever channels were practicable, been met up to the end of the season. Early in April, I may add, the supply in the Toombudra failed.

2. *Works of irrigation.*—The Main Canal and its distributing channels are in good order and only require a moderate expenditure in maintenance. These channels are in a transition state; for the original scheme contemplated full wet irrigation of a limited area of about 200,000 acres, whereas it is now intended rapidly to place all land commanded by the canal within reach of water, so that dry crops may be irrigated over many times that area. Before making this extension, it was desired by the Revenue Officers—a desire with which I fully concurred—to try these modified channels in above a dozen villages, in order to determine positively whether they would prove a nuisance, interfere with the tillage, or flood and damage the dry

*Proceedings of the Madras Government, Public Works Department,
6th July 1874.*

crop. The experiment has proved successful; and it is evident that if such channels be in future carried out in the regular way upon Company's land and with sufficient bridge accommodation, they will prove convenient to the villagers, economical to construct and maintain, and a perfect security against local famine.

3. *Works of Navigation.*—So long as the only and complete means of first-class communication is held in reserve, in order to try how fast and how far the waterways and thereby scattered half a million of inhabitants under the canal will advance in commerce without it, anything but the strictest economy of maintenance would soon run out of harness. All work and everything is about to be again tarred; but I do not replace caulked, nor for the Sanction, bridge wood plank, the loss of which injures nothing else.

4. *Revenue.*—The details of the irrigation for the season, 1st April 1873 to 31st March 1874, are shown in the accompanying table A, and the amount of revenue may be estimated as follows:—

TABLE B.
Approximate Revenue of 1873-74.

| Quantities. | Kind. | Rate. | Amount. | Total. |
|---|--|-------|-----------|-----------|
| <i>I.—Irrigation.</i> | | | | |
| 10,051-53 | Wet, 1st and 2nd crops | 6 | 60,309-18 | |
| 6,499-91 | Dry crops, irrigation for which no rate is fixed | 1 | 6,499-91 | 66,809-09 |
| 2,890-71 | Under tanks | 3 | 8,672-13 | |
| 351-53 | By leakage | 3 | 1,054-59 | 9,726-72 |
| Less 5 per cent. remissions, Rs 3,820-74. | | | | 72,709-07 |
| <i>II.—By sale of water-rights.</i> | | | | |
| | Town supply | | | 4,100-00 |
| | Miscellaneous | | | 1,000-00 |
| Grand Total, Revenue, 1873-74. | | | | 77,809-07 |

This will within a fraction cover the cost of the Company's staff engaged in the divisions, including Engineers, Surveyors, Clerks, Overseers, and Bankers, but will leave special repairs and general management unprovided for.

5. *Future prospects.*—As to all those local influences of a deterrent character, which would vanish like chaff were the country opened out to trade, but which doubtless vastly influence revenue now, I will merely assume that on the average they will continue as they are, and I will, therefore, exclude them from consideration now. Meantime I must not omit to say that everything that is possible is being done locally to meet these hindrances. Difficulties have been yearly removed, processes simplified, fears and prejudices met, and the works rendered more suitable for use; and the coming year is not likely to yield to its predecessors in such improvements, since it has become evident that the ryots feel no inclination to engage in rice cultivation exclusively, or even chiefly. A meeting of the leading Revenue Officers and Engineers associated with the canal was held in January, at which rules were agreed on for submission to Government, with a view to make it easy and safe for ryots to cultivate all kinds of crop at a fair rate for each. The experience brought to bear on these rules justifies the hope that they will be found practicable and beneficial, and that if the Madras Government promptly authorize their application to the season now commencing, my estimate of the revenue will be exceeded considerably.

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6th July 1874.*

It will be seen that Mr. Dodson's efforts to open up Proddatoor taluq have been highly successful. The increase of wet crop in that taluq is more than double—the next best increase—

| | ACRES. |
|----------------|----------|
| In Nandikotkur | 2,734-75 |
| Cuddapah | 2,530-47 |
| Proddatoor | 2,030-54 |
| Ramalakota | 1,315-93 |

the Nandikotkur, and in actual quantity it ranks third.* I think that the taluqs of Ramalakota, Proddatoor, and Cuddapah which, being a manifest source of supply in the Tanjore, Kaveri, and Pennair rivers, respectively, ventured on cultivating second crop, are fair examples of what the other taluqs will do next year, now that all have seen the supply maintained in the canal for the double crop. The chief flooding is in Cuddapah District, where the crops are concentrated too much to supply the repeated moistening necessary for dry crops during the whole time of growth. Notwithstanding this source of revenue in the south, Nandikotkur ranks first in the total revenue from irrigation of all kinds. On the whole therefore I should expect the revenue derived from irrigation to maintain its increase of 75 per cent. next year.

6. Mr. Dodson's success speaks for itself, but I can add that it has been attained by constant personal attention and good management.

7. I have suffered from periodic fever since January, and for the last twenty-six days have been quite prostrated in strength and appetite. I am now having smart fever every evening. It must be borne in mind that my power of taking work will be certainly vastly reduced for several months.

8. I append a "nil" rain register for March.

(Signed) J. H. LATHAM,
Chief Engineer and Manager.

Rainfall for March 1874.

(Signed) J. H. LATHAM,
Chief Engineer and Manager.

TABLE A.
Comparison of Irrigation of 1873-74 and 1872-73, in accordance with the most recent advice to accompany Chief Engineer's report for March 1874.

| Taluqs. | SEASON, 1873-74. | | | | SEASON, 1872-73. | | | |
|------------------------|------------------|-----------|------------|-----------|------------------|-----------|------------|----------|
| | 1st Crop. | 2nd Crop. | Floodings. | Total. | 1st Crop. | 2nd Crop. | Floodings. | Total. |
| Ramalakota | 912-51 | 300-35 | 11-72 | 1,224-58 | 1,360-23 | 361-43 | 8-61 | 1,611-20 |
| Nandikotkur | 2,630-66 | 92-92 | 748-33 | 3,471-91 | 1,002-97 | 50-49 | 323-99 | 2,377-45 |
| Nandial Upper Division | 91-79 | 23-30 | 210-95 | 326-04 | 92-61 | | 5-39 | 92-61 |
| Do. Lower do. | 204-70 | 11-07 | 76-08 | 291-85 | 219-30 | | 182-60 | 224-45 |
| Sirwell | 960-42 | 147-16 | 377-32 | 1,484-90 | 747-85 | | 24-66 | 224-29 |
| Koilkontla | 309-02 | 7-73 | 64-60 | 381-35 | 199-54 | | 454-78 | 997-38 |
| Proddatoor | 1,282-05 | 751-89 | 1,523-28 | 3,557-22 | 542-00 | | | |
| Jummalamadugu | 35-37 | | 18-04 | 53-41 | | | 884-08 | 2,469-26 |
| Cuddapah | 1,946-17 | 290-30 | 3,470-33 | 5,706-80 | 1,585-15 | | | |
| Total | 8,422-89 | 1,628-61 | 6,489-91 | 16,541-41 | 6,095-30 | 411-92 | 1,879-11 | 8,917-33 |
| Add tanks supplied | | | | 2,500-00 | | | | |
| Irrigated by leakage | | | | 97-23 | | | | |
| | | | | 19,138-64 | | | | |

NOTE.—Where my office returns differ from those of the divisions, the larger errors being almost exclusively those of omission.

(Signed) J. H. LATHAM,
Chief Engineer and Manager.

SUBMITTED for the information of

The reports of the Chief Engineer Government. Company, and of the Conservancy Engineer and Manager, Madras Irrigation and Canal and the extension of cultivation, especially in the lower half of the canal, is very satisfactory. Mr. Latham estimates that at over 10,000 acres, and that by flood 10,000 acres more, and this area is a year. The canal revenue is estimated

2. It is hoped that the new rules pany's Canal will shortly be introduced

3. The rushes referred to in the Upper Sections should be rooted up, as this obstructive vegetation is being su by persistent rooting up.

4. With regard to the notice, in the 10th Section canal from the Pennair, to have been passed on for the Nellore

* Perhaps not in excess of 400,000 cul yards an hour.

tity as may be furnished from the T anicut on the Koondar, unless the L water is not required in his district. This subject, and this will be looked up in the meantime it is necessary that on the Pennair, and also those passing and the District Engineer of Nellore claims of the irrigation under his charge

5. It will be convenient if field 100 cubic inches, which is the standard instead of in local measures, such quantities.

(Signed) J

JOHN MULLINS, Lieut.-Colonel, R.E.,
Chief Engineer for Irrigation.

No. 90. ORDER THEREON,

IRRIGATION, No. 10.

gation and Canal Company for the mo account than any previous reports of gratifying if in 1874-75 the appreciation spread in an equal or increased degree

2. The remarks in paragraphs Engineer for Irrigation will be comm and Manager, and the important sub

early and full report by the Chief Engineer for Irrigation in communication with the District Engineer, Nellore, and the Chief Engineer and Manager of the Company, in order that the requirements of the irrigation from the Pennair in that district may be duly considered and adequately provided for, so far as the natural supply in that river will allow.

(True Extract.)

Lieut.-Colonel, R.E.,
Joint Secretary to Government.

To the Chief Engineer for Irrigation.
" Chief Engineer and Manager, Madras Irrigation and Canal Company.
" District Engineer, Nellore.

Exd. E. C. Shunker.

Spare Copies

No 3

Submitted for the information of
Government.

The reports of the Chief Engineer
and Manager, Madras Irrigation and
Canal Company, and of the Conservancy
Engineers contain much interesting
information, and the extension of
cultivation, especially in the lower
half of the canal, is very satisfac-
tory. Mr. Latham estimates the
area of ordinary irrigation of 1873-74
at over 10,000 acres, and that by
flooding, under Tanks, and by leakage
at nearly 10,000 acres more, and this
area is a very great improvement
on the preceding year. The canal
revenue is estimated at Rupees 77,809.

2 It is hoped that the new rules
relating to the irrigation under the
Company's Canal will shortly be in-
troduced.

3 The rushes referred to in the
report

x Perhaps, not
in excess of
400,000 C. yrs.
an hour.

will

5 It will be convenient if field produce be stated in Madras measures of 100 Cubic inches, which is the standard used in all Revenue settlement papers, instead of in local measures such as Putties which give no indication of the quantities

2^d May 1894

Wilmington Lantz C. R. E.
Chief Engineer for Irrigation

To The Secretary to Government
D. P. W.

Paul to Hook's Departure

From
The Chap. lxxv

Where are the Chiles of the
facilitate extension of
in person at the
23/8

With the Ave. Dept.
they shall be
of spirit even as the
people, if they are ready
M

MBL
28/5

1/27/15

His Excellency the Governor in Council has perused with much satisfaction the reports of the Madras Irrigation and Canal Company for the month of March. They give a more favourable account than any previous reports of the irrigation of the canal, and it will be gratifying if in 1874-75 the appreciation of the value of canal water continues to spread

S. D. W. 1874
Chas. H. W. 1874
J. W. 1874
J. W. 1874
J. W. 1874

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Antal 2nd
Herald 18th May - 75
Society ✓

Induct with re-
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of January
4-0-24 1805-6-7-74

2789

1889
in an equal or increased
degree.

The remarks in pa-
ras 3 & 4 and 5 of the endow-
ment of the Chief Engineer
for Irrigation will be com-
mended to the attention
of the Chief Engineer and
Manager, and the impor-
tant subject of para 4
should receive an early
settlement. These Proceedings
will be communicated to
the Chief Engineer, Bellows Falls
order that the requirements
of the irrigation from
the River in that Dis-
trict may be duly con-
sidered and adequately
provided for, so far
as

The subject of the
Chief Engineer for Irrigation
is submitted
to the D. C.
M. H. C. &
Manager of the
Comp. Co.

13
as the natural supply in
that river will allow.

13/5/74
Comp. Co.

To The Chief Engineer for Irrigation ✓
" do & Manager M. H. C. & ✓
" do & Engineer Bellows Falls ✓
S. Capins depts to all 13/7/74.

2954

Govt. of 1874 Madras

PUBLIC WORKS.



The Chief Insp.
for Engrs.

Dated

Recd.

1874

1st July 1874

Nos. 89-90.

Madras Irrigation and
Canal Company -

Passing orders on the
reports of the Madras
Irrigation & Canal
Company for the
month of March 1874.

89-90