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Public works Department

Administration Report of
the Sanitary Engineering

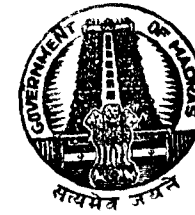
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PUBLIC WORKS DEPARTMENT

ADMINISTRATION REPORT
OF THE
SANTARY ENGINEERING BRANCH
1953-54

(in two parts)

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ADMINISTRATION REPORT OF THE SANITARY
ENGINEERING BRANCH, P.W.D. FOR THE PERIOD
FROM 1ST APRIL 1953 TO 30TH SEPTEMBER 1953
(COMPOSITE MADRAS STATE).

PART I

CHAPTER I.—THE YEAR IN RETROSPECT.

The period under review marks the fourth year of the effective working of the re-organized Sanitary Engineering Branch. The Andhra State came into existence on 1st October 1953 and hence this report is for the Composite State of Madras for the period from 1st April 1953 to 30th September 1953. The expenditure on the execution of schemes during the part year was Rs. 37.80 lakhs as against the expenditure of Rs. 81.47 lakhs during the (full) year 1952-53 and Rs. 82.91 lakhs in 1951-52. There was also good progress in the design of schemes during this half year.

2. The number of schemes of water-supply under execution during the part year was 35 and the number of drainage schemes 11. The preparation of plans and estimates was in progress for 29 water-supply and drainage schemes (municipal and panchayat). Investigation was in progress for 24 schemes (municipal and panchayat).

3. The following schemes received special attention during the part year:—

- (1) Guntur Water-supply Scheme.
- (2) Kurnool Water-supply Scheme.
- (3) Kozhikode Water-supply Scheme (Treatment works—I Stage).

In the last two or three months before the separation of the Andhra State, special attention was paid to the following water-supply schemes relating to Andhra State and detailed plans and estimates for the schemes were got ready:—

- (1) Chittoor Water-supply Scheme—III stage—Distribution system.
- (2) Masulipatnam Water-supply Improvements.
- (3) Cuddapah Water-supply Improvements.
- (4) Nandyal Water-supply—II stage.
- (5) Narasaraopet Water-supply Scheme.

4. During the part year under report the following changes in the administrative set up were given effect to:—

(i) One of the Subdivisions of the Central Public Health Division, viz., Madras Public Health Subdivision which was stationed at Madras was transferred to Cuddalore renaming it as Cuddalore (Public Health) Subdivision.

(ii) The formation of a Special Subdivision at Tuticorin was sanctioned the cost thereof being entirely met by the Municipal Council in order to attend to the investigation and design of the scheme of improvements to Tuticorin Water-supply.

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CHAPTER II.—STATISTICAL PARTICULARS.

The following statistical particulars would convey an idea of the situation in regard to the Municipal and Urban Panchayat Water-supply and Drainage Schemes:—

	Population.	Percentage.
(i) Madras City	1,416,056	25
Municipal towns	5,425,175	93
Over urban areas	4,342,503	76
Rural areas	45,832,268	80.6
Total	57,016,002	100

(ii) *Number of District Municipalities.*—The number of District Municipalities continued to be 98 as in the last year.

(iii) *Water-supply Schemes*—(a) *Municipal.*—Out of the 98 municipal towns, 45 towns are yet to be provided with protected water-supply. Out of the 53 towns where water-supply schemes are in operation, improvements and expansions to the schemes are necessary in most cases in order to make them serve the present requirements in the municipal towns concerned.

Out of the 53 water-supply schemes in operation, 9 are gravitational, 39 involve pumping while the remaining 5 are combined schemes gravitational and pumping.

Again 30 of the 53 schemes depend on ground water sources, 9 on upland impounded water, and 14 on surface waters of rivers and canals.

(b) *Panchayats.* The following twelve panchayats have protected water-supply schemes in operation most of them limited in scope and in need of expansion and improvements:—

(1) Batlagundu.	(7) Tirutani.
(2) Dharmavaram.	(8) Yemmiganur.
(3) Manapparai.	(9) Arantangi.
(4) Ramachandrapuram.	(10) Chodavaram.
(5) Rameswaram.	(11) Arkonam.
(6) Kosgi.	(12) Tirumalai (Tirupati).

(iv) *Drainage Schemes*—(a) *Municipal.*—Thirteen municipal towns continue to have drainage schemes of a sort most of them being of the open drains type and serving part of the towns only.

(b) *Panchayats.*—There is no panchayat having a regular drainage scheme in operation.

CHAPTER III.—PROGRESS IN THE YEAR ON EXECUTION OF SCHEMES.

1. As many as 27 municipal water-supply schemes (including improvements to existing schemes) and eight panchayat water-supply schemes (including one composite rural water-supply scheme) were under execution during the year. The estimated cost of all the works was Rs. 50,77,79 lakhs and the outlay of expenditure during the part year was about Rs. 25.5 lakhs.

2. As for drainage, eleven municipal and panchayat drainage schemes were under execution during the year. Their total estimated cost was Rs. 56.5 lakhs; and the expenditure during the part year was Rs. 12.3 lakhs.

3. Only one scheme was under execution by the local body concerned under the supervision of the Public Health Engineering Department, the expenditure on the scheme however, during the part year is nil. The remaining schemes were being executed by the department itself.

4. The total expenditure on schemes (including improvements scheme) during the part year under report was Rs. 37.80 lakhs as against Rs. 81.47 in the full year 1952-53 and Rs. 82.91 lakhs in the year 1951-52.

NOTES ON SCHEMES UNDER EXECUTION DURING THE HALF-YEAR.

The following notes will indicate the progress made on the execution of the different schemes during the half-year as well as their stages at the end of the half-year.

WATER-SUPPLY.

1. *Bellary Water-supply Scheme*—*Estimate, Rs. 1,03,000.*—The works relating to the Booster Pumping Station and the masonry sump are nearing completion. The pump sets have been received, and they have to be erected in position. Pipe connections to the masonry sump remain to be done.

2. *Chittoor Water-supply Scheme*—*Estimate, Rs. 14,25,000.*—The works relating to the pumping main were completed for a total length of 25,600 r.ft. The departmental execution of the gallery and other components of the scheme remain to be taken up; laying of 12 inches pumping main for an extended length of 2,000 feet is in progress.

3. *Kurnool Water-supply Scheme*—*Estimate, Rs. 1,04,000.*—Works completed.

4. *Guntakal Water-supply Scheme*—*I Stage—Estimate, Rs. 72,840.*—Works completed.

5. *Nandyal Water-supply Scheme*—*Estimate, Rs. 24,33,000.*—Some C.I. pipes and specials have been received, and the work relating to the 12 inches pumping main is to be taken up for execution shortly. Tenders for the construction of staff quarters and laying and jointing of 12 inches pumping main have been accepted.

6. *Tirumalai Water-supply Scheme*—*Estimate, Rs. 7,10,000.*—All works completed except for a small gap of 250 feet of 6 inches C.I. Feeder main in the distribution system.

7. *Voyalpad Water-supply Scheme*—*Estimate, Rs. 1,67,500.*—All the works other than the distribution system have been completed.

8. *Chodavaram Water-supply Scheme*—*Estimate, Rs. 1,97,700.*—The laying and jointing of 3 inches A.C. pipes for the extension of the distribution system and opening of new public fountains is in progress.

9. *Guntur Water-supply Scheme*—*Revised Estimate, Rs. 77,67,000.*—The pumping main from the summer storage tank at Sangamjagarlamudi to Guntur Town has been completed. The Distribution system in the high

level area including the public fountains and the three high level service reservoirs were also completed. Erection of Booster plant completed. The laying of pipe line in the distribution system of the low level area is in progress. The main pump house at Sangamjagarlamudi and also the filtration plants have to be taken up after the tenders for these works are decided.

To tide over the acute water scarcity in the town, a pilot scheme of water-supply to the areas where in the distribution system was completed, was brought into operation in April 1953.

10. *Kakinada Water-supply Scheme—Part I—Estimate, Rs. 21,95,000.* The C.I. pipes and specials required for the gravitation main are being received. The construction of the summer storage tank has to be taken up shortly and tenders for the eastern bund of the tank were called for.

10-A. *Kakinada Water-supply Improvements Scheme—Part II—Estimate, Rs. 2,89,000.*—Almost all the works were completed.

11. *Kakinada Water-supply Scheme—Part III—Estimate, Rs. 14,04,000.*—Laying and jointing of pipes in the distribution system is in progress; and the work on zones 1, 2 and 3 is to be taken up.

12. *Peddapuram Water-supply Scheme—Estimate, Rs. 16,80,000 (awaiting sanction)*—Sanction of the Government for the plans and estimate is awaited.

13. *Rajahmundry Water-supply Improvements—Estimate, Rs. 1,60,000.* All works including the installation of low and high lift pumping plants, the R.C.C. trough for the mechanical filter and also the erection of transformers were completed. Minor works relating to the relaying of filter media alone remain to be done.

14. *Salur Water-supply Scheme—Part I—Estimate, Rs. 11,900.*—Plans and estimates for the sinking of the infiltration well are being finalised for proceeding with the execution of the work.

15. *Vijayavada Water-supply Improvements (1951)—Estimate, Rs. 99,500.* All the works have been completed, except the supply and erection of the submersible pump set for well No. 1.

16. *Vijayavada Water-supply—Emergency Scheme (1952) Estimate, Rs. 89,760.*—The construction of the pump house over C.W. 2 was completed; and the 6 inches deep well pump set received from R.P.S. Surplus stores was also erected. Two more units of turbine and submersible pump sets are awaited.

17. *Visakhapatnam Water-supply Improvements—Estimate, Rs. 3,38,000.*—Electrical pump units for replacing two sets of the existing low lift pumps driven by oil engines at Gosthani were received and the erection of the same has been taken up. Erection of III pumping set in T.S.R. compound was completed.

18. *Coimbatore Water-supply Scheme—Partial duplication of gravitation main—Estimate, Rs. 42,69,000.*—Duplication of about 15½ miles of the gravitation main was completed. Construction of low level reservoir was completed. Overflow and scour connections of L.L. reservoirs remain to be done. Laying of feeder mains from the low reservoirs to the low level distribution system is in progress.

19. *Coimbatore Water-supply Scheme—Duplication of remaining length of gravitation main—Estimate, Rs. 13,42,000.*—Most of the pipes required for the work have already been received and the work is to be taken up shortly for execution.

20. *Karamadai (Panchayat) Water-supply Scheme—Estimate, Rs. 50,000.*—Work as per sanctioned estimate have been completed.

21. *Mangalore Water-supply Scheme (New)—Netravathi source—Estimate Rs. 82,85,000.*—The Technical sanction of the Chief Engineer for the first stage of the work comprising laying of pumping main was accorded. Twenty thousand r.ft. of 20" diameter 'C' class pipes were received even during the previous year. The laying and jointing of 20,000 r.ft. of 20" C.class pumping main is to be taken up after the monsoon period.

22. *Mettupalayam Water-supply Scheme—Estimate, Rs. 43,460.*—Work completed in all respects.

23. *Salem (Mettur) Water-supply Scheme—Estimate, Rs. 36,67,000.*—Most of the scheme works were completed and the scheme was put into operation during the year 1952-53 itself. Certain minor works such as formation of approach road to Booster station, watchman's quarters at Ammapet, etc. remain to be completed.

24. *Salem Water-supply Scheme—Temporary connexion of Panamarathupatti main with Nangaralli main—Estimate, Rs. 4,00,000.*—All the works have been completed, except the provision of pressure release valve at Hastham-patti reservoir.

25. *Sivaganga Water-supply Scheme—Estimate, Rs. 1,38,370.*—Improvement to the chetti urani under the first stage have been completed, except for providing revetment to the inner slope of the bund. The execution of the other items of works contemplated in the scheme estimate will have to be taken after a decision is taken in regard to the nature of filtration works and distribution system.

26. *Manapparai Water-supply Scheme—Estimate, Rs. 31,000.*—Further action in regard to the improvements to the quality of the water will have to be taken after the issue is finally considered by the Water and Sewage Purification Committee.

27. *Kodaikanal Water-supply Scheme (extension to Observatory area)—Estimate, Rs. 45,780.*—All the works have been completed.

28. *Kumbakonam Water-supply Scheme—II Stage—Revised Estimate, Rs. 16,81,000.*—All the works as per the scheme estimate, except the construction of quarters for the Water Works Superintendent at the headworks, have been completed and handed over to the Municipality. About 6,000 r.ft. of 3" old pipes from the existing system remain to be removed and relaid.

29. *Palayamkottai Water-supply Scheme—Estimate, Rs. 28,18,000.*—Works relating to the pumping main as also the distribution system are in good progress. The R.C.C. service reservoir was completed. The construction of the pump house and the supply and erection of pumpset have to be taken up after the orders of the Government are received on the joint scheme of water-supply to Melapalayam and Palayamkottai.

30. *Srivilliputtur Water-supply Scheme—Estimate, Rs. 15,70,000.*—The construction of the infiltration gallery and the manhole well at the headworks has been completed. Laying and jointing of 16" pipes for the gravitation main and laying and jointing of C.I. pipes in the first and second reaches of

North and South Zones of the distribution system are in progress. The service reservoir within the town is nearing completion.

31. *Composite Water-supply Scheme for Kavalpatnam, etc., villages, Tirunelveli district—Estimate, Rs. 37.50 lakhs—I Stage—Head Works.*—Offtake arrangements at Head works and the Summer storage tank have been completed. The works relating to the clear water reservoir and filter beds are in good progress.

II Stage.—Except a length of 2,500' of 12" C.I. mains, all the other works relating to the pumping main were completed.

III Stage—Reservoirs.—The works are to be taken up for execution shortly.

IV Stage—Distribution System.—The asbestos cement pipes and specials required for the work are being received.

32. *Tiruchirappalli Water-supply—II Instalment of I-Year Programme—Estimate, Rs. 2,61,418.*—Works nearing completion. Some C.I. specials remain to be fixed.

33. *Tiruchirappalli Water Works—I Instalment of II Year Programme—Estimate, Rs. 11,31,500.*—Laying and jointing of C.I. pipes and specials for improvements to the distribution system in Zones I to IV of Rock Fort Area is to be taken up for execution shortly.

34. *Tiruchirappalli Water Works—I instalment of I-Year Programme—Revised Estimate, Rs. 21,376.*—All the works completed excepting cover slab for well No. 6. Training the yield in the wells 5 and 6 will have to be continued.

35. *Mayuram Water-supply Scheme—I Stage—Estimate, Rs. 17,000.*—Further work in completing the infiltration well, will be taken up after a decision is taken on the results obtained in the yield tests already conducted.

36. *Cuddalore Water-supply Scheme—Estimate—Rs. 7,78,000.* The work will be taken up for execution, shortly. Orders for the supply of 18" C.I. pipes required for the pumping main have been placed.

37. *Karur Water-supply Scheme—Extension of mains—Estimate, Rs. 26,000.*—The A.C. pressure pipes are being received.

38. *Tiruvivanam Water-supply Scheme—I Stage—Estimate, Rs. 25,000.*—Action has been taken for the acquisition of land at the head works and arrangements are in progress for the confirmatory boring to be put in before taking up the experimental well for execution.

39. *Tiruvettipuram Water-supply Scheme—Estimate, Rs. 4,85,000.*—Tenders have been called for the construction of the infiltration well and suction well at the headworks.

40. *Karaikudi Water-supply Scheme—Estimate, Rs. 89,660.* Further work on the scheme will be taken up for execution, after the revised estimate is sanctioned by the competent authority.

41. *Kozhikode Water-supply Scheme—Revised Estimate, Rs. 17,65,500.*—All the works as per the scheme estimate have been completed. Formation of path-way along pumping main, and provision of 12 Public fountains remain to be completed.

42. *Kozhikode Water-supply Scheme—Treatment Works—Estimate, Rs. 4,59,000.*—Masonry works relating to the construction of sludge wells and flocculation wells are in progress. The low lift turbine pumpsets are to be imported from abroad.

DRAINAGE SCHEMES.

1. *Tirupati Drainage Scheme—VI Instalment—Estimate, Rs. 1,35,000.*—All the works completed and handed over to the municipality.

2. *Partial Drainage Scheme, Visakhapatnam—Estimate, Rs. 3,66,500.*—The laying and jointing of C.I. intercepting sewers is in progress. The construction of the pump-house has been completed.

3. *Coimbatore Drainage Scheme—Estimate, Rs. 25,00,000.*—Most of the scheme works have been completed. The erection of pumps for pumping the digested sludge and the supernatant liquor were completed. The pre-treatment plant will be put into operation shortly.

4. *Coimbatore Drainage Scheme—Under-ground sewer line to Okkiliyar lane in 'D' Block—Estimate, Rs. 13,100.*—Sewering on the Okkiliyar lane has been nearly completed.

5. *Madurai Extension of Storm Water Drain in Proposal No. I.—Estimate, Rs. 42,000.*—Work completed.

6. *Madurai Drainage Scheme—Providing sewerage to Block 7—Estimate, Rs. 2,78,900.*—Nearly 70 per cent of the stone ware pipe materials required for the work has been received. The sewer laying work has just been taken up for execution.

7. *Madurai Municipality—Electrification of the main Pumping Station—Estimate, Rs. 6,48,000.*—Tenders for the Supply and erection of pumping plant have been called for.

8. *Nagapattinam Drainage Scheme—Estimate, Rs. 7,04,100.*—All the scheme work (except the laying of 14" C.I. pumping main across the Koduvayar river) have been completed. The decision relating to the Koduvayar river crossing of the pumping main has to be finalized.

9. *Paramakudi Drainage Scheme—Estimate, Rs. 29,100.*—Works have been completed, except for disposal arrangements for the sullage in 2 new streets and regrading of existing drain in a main road.

10. *Srirangam Drainage Scheme—II Stage—Estimate, Rs. 4,77,000.*—Works relating to the construction of veranda to the pump house, as also the supply and erection of pumping plants remain to be done. The construction of pump-house is in progress. Tenders for the supply and erection of pump sets have been called for. The work relating to the laying of intercepting sewers is in progress.

11. *Tiruchirappalli Partial Drainage Scheme—Diversion of sullage—Estimate, Rs. 2,94,000.*—The laying of the sewers and the C.I. pumping main have been completed. Other works relating to the scheme, viz., pump-house and provision of pump sets remain to be taken up.

12. *Virudunagar Restricted Drainage Scheme—Revised Estimate, Rs. 75,000.*—The works are almost completed except for regrading the 24" open drain, and the installations of pumping plants.

13. *Ambur Drainage Scheme—Estimate, Rs. 14,240.*—Works relating to the outfall channel remain to be completed.

14. *Tirupattur—Improvements to Vellaivaikal Drainage—Estimate, Rs. 72,000.*—Orders of Government on certain objections raised by certain Municipal Councillors are awaited for proceeding with the execution of the work.

CHAPTER IV.—PROGRESS IN THE PART-YEAR ON THE DESIGN OF SCHEMES.

I. Detailed plans and estimates for the following schemes were under preparation during the part year (1st April 1953 to 30th September 1953):—

WATER-SUPPLY.

- (1) Nandyal Water-supply Scheme—II Stage.
- (2) Mannargudi Water-supply (Pilot) Scheme.
- (3) Chittoor Water-supply Scheme—III Stage.
- (4) Chittoor Water-supply Scheme—IV Stage.
- (5) Cuddalore Water-supply Scheme—I Stage.
- (6) Madurai Water-supply Improvements Scheme—Augmentation of supply with infiltration works at Melakkal.
- (7) Dindigul Water-supply Scheme—I Stage (18" conveying main).
- (8) Tiruchirappalli Water-supply Improvements Scheme—Connecting infiltration wells 5 and 6.
- (9) Melapalayam Water-supply Scheme.
- (10) Combined Water-supply Scheme for Tenkasi, Courtallam, Ilanji and Melagaram Panchayats.
- (11) Pattukottai Water-supply Scheme.
- (12) Pattikonda Water-supply Scheme—I Stage.
- (13) Guntakkal Water-supply Scheme—Parts A and B of II stage.
- (14) Narasaraopet Water-supply Scheme.
- (15) Mangalore Water-supply Scheme (Netravathi source) II stage—High and low lift pumping station—Settling tank, etc.
- (16) Tirupathi Water-supply Improvements Scheme (Confluence source).
- (17) Cuddapah Water-supply Improvements, remodelling of the Distribution system.
- (18) Masulipatnam Water-supply Improvements.
- (19) Arni Water-supply Scheme—Outline proposals.
- (20) Arcot Water-supply Scheme—Outline proposals.
- (21) Vriddachalam Water-supply Scheme—Outline proposals.

DRAINAGE.

- (1) Eluru Drainage Scheme.
- (2) Madurai Drainage Scheme—Block No. 7—Revised plans and estimates for sub-pumping station.
- (3) Madurai Drainage Scheme—Sewerage Scheme for Block No. 8.
- (4) Madurai Drainage Scheme—Sewerage Scheme for Block No. 1-A.
- (5) Vijayawada Drainage Improvement Scheme—Block I.
- (6) Rajahmundry Drainage Scheme—Outline proposals.
- (7) Tuticorin Drainage Scheme—Outline proposals.
- (8) Manaparai Drainage Scheme—Outline proposals.
- (9) Tenali Drainage Scheme—Outline proposals.
- (10) Masulipatnam Drainage Scheme—Outline proposals.
- (11) Kumbakonam Drainage Scheme—Block V (Revision as per Chief Engineer's remarks).

II. Detailed plans and estimates for the following schemes were submitted to the higher authorities during the half-year under review (1st April 1953 to 30th September 1953):—

WATER-SUPPLY.

- (1) Pattikonda Water-supply Scheme—First Stage.
- (2) Mannargudi Water-supply (Pilot) Scheme.
- (3) Chittoor Water-supply Scheme—Third Stage.
- (4) Nandyal Water-supply Scheme—Second Stage.
- (5) Cuddapah Water-supply Improvements—Remodelling of the Distribution System.

DRAINAGE.

- (1) Eluru Drainage Scheme.
- (2) Madurai Drainage Scheme—Block 7—Revised plans and estimates for sub pumping station.
- (3) Madurai Drainage Scheme—Sewerage Scheme for Block I A.
- (4) Vijayawada Drainage Improvements Scheme—Block I.

The total cost of the schemes mentioned above based on the estimates submitted for approval amounted to Rs. 182 lakhs nearly.

CHAPTER V.—SCHEMES UNDER INVESTIGATION DURING THE HALF-YEAR UNDER REVIEW (1st APRIL TO 30th SEPTEMBER 1953).

Investigations for the following schemes were in progress during the half year under review:—

WATER-SUPPLY.

- (1) Ootacamund Water-supply Improvements.
- (2) Palghat Water-supply Scheme.
- (3) Yecaud Water supply Scheme (Salem district).
- (4) Velur and Vengarai Panchayats (Salem district) Water-supply.
- (5) Tiruppur Water-supply Comprehensive Scheme.
- (6) Satyamangalam Panchayat (Coimbatore district) Water-supply.
- (7) Kotagiri Panchayat (Nilgiris district) Water-supply.
- (8) Dharapuram Water-supply Scheme.
- (9) Gobichettipalayam Water-supply Scheme.
- (10) Kaveripatnam Water supply Scheme.
- (11) Komarpalayam and Bhavani Water-supply Scheme.
- (12) Mangalore Water-supply Scheme (Netravathi source).
- (13) Coimbatore Water-supply Scheme—Re-designing of distribution system.
- (14) Manachanallur Panchayat (Tiruchirappalli district) Water-supply scheme.
- (15) Tiruchirappalli Water Works—Boring work in Cauvery River bed.
- (16) Siruguppa Water-supply Scheme.
- (17) Rajampet Water-supply Scheme.
- (18) Cuddapah Water-supply Improvements.
- (19) Kancheepuram Water-supply Scheme.
- (20) Gudur Water supply Scheme.
- (21) Arcot Water-supply Scheme.

DRAINAGE.

- (1) Kozhikode Drainage Scheme.
- (2) Masulipatnam Drainage Scheme.
- (3) Visakhapatnam Drainage Scheme.

CHAPTER VI.

I. *Technical sanction accorded for miscellaneous works.*—During the half year under review the following estimates for investment were technically sanctioned. In addition, a number of estimates relating to the improvements to the Municipal Water-supply and Drainage Works received from the local bodies were also sanctioned for execution. The total value of the estimates sanctioned was nearly Rs. 11 lakhs.

Details of estimates for which technical sanction was accorded by the Sanitary Engineer during the half-year (1st April to 30th September 1953).

Name of work.	Amount of estimate. RS.
1 Water-supply to the City of Madras estimate for prospecting the potentialities of Palar river bed.	1,900
2 Tenali Municipality—Second Stage of Investigation (Water-supply Scheme).	13,500
3 Water-supply—Ootacamund Municipality—Tapping of the water source at Government Cinnamon Plantation.	48,900
4 Water-supply—Proddatur Municipality—Electrification of the pumping plants.	33,600
5 Water-supply—Kodaikanal Water-supply Scheme—Fourth Revised Estimate.	41,730
6 Water-supply—Vijayavada Municipality—Extension to the distribution system in 8th Ward.	18,200
7 Water-supply—Vijayawada Municipality—Extension to the distribution system in 22nd Ward.	33,600
8 Water-supply—Nellore Municipality—Estimate for removing the choked up mains—Revised estimate.	12,230
9 Water-supply—Tanjore Municipality—Laying 5" main under main—Revised estimate.	12,900
10 Rural Water-supply—Siruguppa Panchayat—Bollary District Water-Supply—Investigation estimate.	3,000
11 Water-supply—Gudur Municipality—Extension of mains in the area west of Railway line.	64,000
12 Water-supply—Visakhapatnam Municipality—Improvements—Detailed plan and estimate.	1,84,000
13 Cuddalore Water-supply Improvements—Investigation revised estimate.	1,750
14 Water-supply—Vellore—Improvements—Construction of an infiltration gallery between Well Nos. 2 and 3 at Palar.	51,500
15 Water-supply—Kurnool Municipality—Filling sand in the filter beds—revised estimate.	15,000
16 Water-supply—Vellore Municipality—Improvements—Works—Provision of 2nd electrical unit.	65,800
17 Drainage—Lalgudi Panchayat—Investigation	1,500
18 Water-supply—Narasaraopet—Emergency Scheme	1,62,000
19 Repairs to furniture in the Office of the Sanitary Engineer	190
20 Water-supply—Guntur Municipality—Emergency measures—Construction of slow sand filter beds.	27,700
21 Water-supply—Salem Municipality—Erection of 12 additional public fountains.	12,480

Name of work.	Amount of estimate. RS.
22 Water-supply—Kurnool—Improvements Scheme Investigation	1,200
23 Tools and Plants—Purchase of furniture for Waltair P.H. Subdivision.	380
24 Tools and Plants—Purchase of furniture for Kakilada P.H. Subdivision.	400
25 Water-supply—Guntakal Municipality—First Stage of the Scheme	72,840
26 Water-supply—Tirupathi Municipality—Improvements—Confluence source—Detailed plans and estimates sanctioned.	89,600
27 Water-supply Scheme—Second Revised Estimate for the Kurnool Water-supply improvements—Construction of two additional filter beds.	1,21,503

II. *Preparation of general design, etc.*—The following designs were prepared during the half-year under review (1st April 1953 to 30th September 1953).

- (1) San. No. 75/1953—Design for a sheep slaughter-house.
- (2) San. No. 89/1953; 90/1953; 91/1953; 92/1953; 93/1953; 94/1953; 95/1953.—Rural sanitation—Design for latrines, etc.

III. *Technical sanction for improvement works accorded by the Executive Engineer in the Public Health Divisions.*—

	Number of estimates.	Total amount of estimates. RS.
1 Central Division	7	39,705
2 Vijayavada Division	2	10,150
3 Tiruchirappalli Division	13	76,225
4 Coimbatore Division	3	8,407

CHAPTER VII.—CORPORATION OF MADRAS—GRANT-IN-AID WORKS—WATER-SUPPLY AND DRAINAGE.

I. The Sanitary Engineer as an Inspecting Officer for all grant/works (Drainage and Water-supply) of the Corporation, in terms of G.O. No. 2164, P.H., dated 23rd May 1941 as modified in G.O. No. 3386, P.H., dated 5th December 1944, had in addition to his routine inspections of all Water-supply and Drainage Works, to offer his remarks on the following:—

- (i) Schemes relating to water-supply and drainage capital works for which Government grant of loan is claimed.
- (ii) The annual budget provisions in regard to grants and loans for water-supply and drainage works;
- (iii) Administration report of the Corporation;
- (iv) Tenders for grant in aid works estimated to cost Rs. 25,000 and above.
- (v) References relating to accounts and audit, schedule of rates, indents for pipes and specials, etc.
- (vi) Proposals to alienate the small nuisance in the city water way.
- (vii) Scrutiny of grant statements for water-supply and drainage—Grant-in-aid works, and
- (viii) Inspection and report on the working of the Kilpauk Filter Stations and other water works.

II. *Drainage works—Proposals.*—Sewering of Sembiam area—Rs. 1,04,200.

Saidapet Drainage Scheme—in Nos. 5619-M3/53-1, CW, dated 15th August 1953.

III. The following works in progress were inspected during the year under review :—

(a) WATER-SUPPLY.

- (i) City Distribution system—Improvements Rs. 15.29 lakhs schemes.
- (ii) City Distribution system—Further schemes Rs. 4.76 lakhs.
- (iii) Laying on a separate trunk main for south Madras—1st and 2nd Stages.
- (iv) Laying of the 48 inches diameter duplicate pumping main from Kilpauk Pumping station to shaft.
- (v) Gandhinagar Water-Supply Scheme.
- (vi) Water-supply to Dr. Alagappaagar and Aminjikarai areas.

(b) DRAINAGE WORKS.

- (i) Thyagarayanagar Drainage Scheme;
- (ii) Vyasaripadi and Perambur Drainage Scheme Works.

IV. The two grant statements for the periods ending 31st December 1953 and 28th February 1954 have been scrutinized and the following months have been recommended for payment :—

	First period upto 31st December 1953. RS.
Water-supply	4,15,442
Drainage	42,596

V. Staff.—The Sanitary Engineer was assisted by an Assistant Engineer (Public Health) and a Supervisor in discharging his duties as the Inspecting Officer of the Corporation Grant works (Water Supply and Drainage). The Kilpauk Experimental Filter Station continued to be under the control of the Sanitary Engineer the Assistant Engineer (Public Health) Corporation Works being in charge of the same and being assisted by a Technical Assistant.

CHAPTER VIII.—RESERVE STOCK OF C.I. PIPES AND SPECIALS.

During the period under report, C.I. pipes and specials were purchased only against the bulk indents of the year 1950-51, but no fresh orders were placed. From the reserve stocks materials to the value of Rs. 0.76 lakhs were issued to schemes under execution in the several divisions.

CHAPTER IX.—RURAL WATER-SUPPLY SCHEMES.

The activities of this department on rural water-supply schemes continued to be on the increase during the past year, as reflected by the number of estimates received by the Sanitary Engineer and the Executive Engineers (Public Health) from the Revenue Board and the District Collectors respectively for technical scrutiny. The Coimbatore Public Health Division in particular had to deal with a large number of estimates for rural water-supply works in the Nilgiris district.

In order to speed up the investigation and execution of rural water-supply schemes in the Nilgiris and Coimbatore districts which are beyond the competence of the minor irrigation staff, a suggestion was made to the Revenue Board for the formation of a special public health subdivision in the Coimbatore Public Health Division to deal with the detailed investigation design and execution of all the rural water-supply works. The proposal is under the consideration of the Revenue Board.

CHAPTER X.—MAINTENANCE OF SCHEMES.

The first half of the year 1953-54 was not as severe as in previous years in regard to drought conditions affecting the yield from many of the water-supply schemes in operation, as there had been timely rains during this period.

A pilot scheme of water-supply to Guntur Municipality was brought into operation, making use of the components of the scheme already completed, viz., storage tank, pumping main, service reservoir and the distribution system in the high level areas of the town. This was of immense benefit to the people of this town.

Similarly an emergency water-supply scheme for Calicut ahead of the completion of the treatment works was arranged for from April 1953 after necessary chemical treatment in the service reservoir within the town and effecting supplying through public taps.

CHAPTER XI.—MUNICIPAL ENGINEERING SERVICE.

The Municipal Engineering Service and the Municipal Engineering Subordinate Service continued to be under the control of the Sanitary Engineer and steps were taken to implement the decision of Government to post of Municipal Engineers according to the grades, of the Municipalities as and when opportunities arose for postings and transfers of the Municipal Engineers.

CHAPTER XII.—GENERAL.

The Sanitary Engineer continued to be a member of the Board of Public Health as well as of the Water and Sewage Purification Committee. He was also a member of the Technological Diploma Examination Board.

He continued to be the Inspecting Officer for the grant-in-aid works (other than Road and Electrical) of Corporation of Madras.

He also served as a member of the Hotel Sanitation Expert Committee constituted in G.O. No. 1000, Health, dated 19th March 1953.

The Sanitary Engineer continued to exercise control over the maintenance of the Experimental Filter Station at Kilauk assisted by the Assistant Engineer (Public Health) posted for this purpose as well as the Corporation Works. The post of Instructor in Elementary Sanitary Engineering, Madras Medical College, continued to be under the control of the Sanitary Engineer.

DIRECTION PERSONNEL.

Sri S. Rajagopalan, B.E., M.I.E., held the post of Sanitary Engineer during this half year.

Sri A. Venkataramanan, B.A., B.E., A.M.I.E. (Ind.), held the post of Executive Engineer (Public Health), Designs, during the periods 1st to 14th April and 15th May to 30th September 1953. Sri S. Rajagopalan, Sanitary Engineer, held additional charge of the post during 15th April to 14th May 1953, *a.n.*

Sri M. G. Parthasarathy, B.E., held the post of Personal Assistant to the Sanitary Engineer, from 1st April to 8th June 1953, *a.n.* Sri S. R. Srinivasan, Assistant Engineer (Public Health), Corporation Works, held additional charge of the post from 9th June 1953, *f.n.* to 21st July 1953, *a.n.* and Sri D. Konchady, B.E., S.M., M.P.H., held the post from 22nd July to 30th September 1953.

Sri T. Durairaj, B.E., M.E. (Public Health), A.M.I.E., continued to hold the post of Assistant Engineer (Public Health), Technical No. 1, during this half-year.

Sri S. R. Srinivasan, B.E., M.E. (Public Health), continued to hold the post of Assistant Engineer (Public Health), Corporation Works, during the half-year.

Sri T. Durairaj, Assistant Engineer (Public Health), Technical No. 1, held additional charge of the post of Assistant Engineer (Public Health), Technical No. 2, during the 1st to 2nd April 1953, *a.n.* Sri K. Balasubramaniam, B.E., held the post during 3rd April to 5th July 1953, *a.n.* and Sri T. K. George, B.E., held the post during 6th July to 30th September 1953.

Sri S. T. L. K. V. N. S. Ramanujachari, B.Sc., Engg., held the post of Mechanical Expert during the half-year. Sri M. V. Subramaniam, B.A., B.E., held the post of Additional Mechanical Expert during the half-year.

PUBLIC HEALTH DIVISIONS.

1. *Vijayavada (Public Health) Division*—Sri P. Thambumalla Reddi, B.A., from 1st April to 8th September 1953, *a.n.*

Sri O. R. Subramania Iyer, A.M.I.E. (Ind.), from 9th to 30th September 1953, *a.n.*

2. *Central (Public Health) Division*—Sri G. R. Subramanya Iyer, B.E.

3. *Tiruchirappalli Public Health Division*—Sri B. Satyamurthi, B.E.

4. *Coimbatore Public Health Division*—Sri M. M. Mani, B.E., A.M.I.E.

ADMINISTRATION REPORT OF THE SANITARY ENGINEERING BRANCH, P.W.D., FOR THE PERIOD FROM 1ST OCTOBER 1953 TO 31ST MARCH 1954 (RESIDUARY MADRAS STATE).

PART II.

CHAPTER I.

This report pertains to the activities of the department in the Residuary Madras State during the period from 1st October 1953 to 31st March 1954.

2. On the formation of the Andhra State, the entire Vijayavada Public Health Division and the Chittoor and Guntakal Public Health subdivisions formerly attached to the Central Public Health Division have been merged in the Andhra State. The Tiruchirappalli and Kumbakonam Public Health subdivisions attached to the Tiruchirappalli Division were transferred to the Central (Public Health) Division and the Sanitary Engineering Branch in the Residuary Madras State continued to function with the Central, Tiruchirappalli and Coimbatore (Public Health) Divisions. The Public Health Divisions were renamed as Northern, Southern and Western Public Health Divisions and the Southern (Public Health) Division at Tiruchirappalli was proposed to be shifted to Madurai. The special subdivision at Tuticorin sanctioned for investigation and design and improvements to Water-supply Scheme at Tuticorin was formed in October 1953.

3. The expenditure on the execution of water-supply and drainage schemes during the part-year is Rs. 10.03 lakhs. There was also good progress on the design of schemes during the part-year.

4. The number of schemes of water-supply under execution during the half-year was 19 and the number of drainage schemes 11. The preparation of plans and estimates was in progress for 15 water-supply and drainage schemes (municipal and panchayat). Investigation was in progress for 17 schemes (municipal and panchayat).

CHAPTER II.—STATISTICAL PARTICULARS.

The following statistical particulars would convey an idea of the situation in regard to the municipal and urban panchayat water-supply and drainage schemes :—

	Population.	Percentage.
(i) Madras City	1,416,056	4.4
Municipal towns	3,634,839	10.2
Other urban areas	2,775,437	7.8
Rural areas	27,908,157	78.0
Total	35,734,489	100

(ii) *Number of district municipalities.*—The number of district municipalities in the Residuary Madras State was 61 as against 98 in the composite Madras State.

(iii) *Water-supply schemes*—(a) *Municipal*.—Out of 61 municipal towns, 27 are yet to be provided with protected water-supply. Out of 34 towns where water-supply schemes are in operation, improvements and expansions to the schemes are necessary in most cases in order to make them serve the present requirements in the municipal towns concerned.

Out of 34 water-supply schemes in operation, 7 are gravitational, 23 involve pumping, while the remaining 4 are combined schemes (gravitational and pumping).

Again, 20 of the 34 schemes depend on ground water sources, on 3 up-land impounded water and 11 on surface waters of rivers and canals.

(b) *Panchayats*.—The following 5 panchayats have protected water-supply schemes in operation, most of them only partial and in need of expansion and improvements :—

- | | |
|-----------------|----------------|
| (1) Batlagundu. | (4) Arantangi. |
| (2) Manapparai. | (5) Arkonam. |
| (3) Rameswaram. | |

(iv) *Drainage schemes*—(a) *Municipal*.—Nine municipal towns continue to have drainage schemes of a sort, most of them being of the open drain type and serving part of the towns only.

(b) *Panchayat*.—There is no panchayat having a drainage scheme in operation.

CHAPTER III—PROGRESS IN THE YEAR ON EXECUTION OF SCHEMES.

1. As many as 17 municipal water-supply schemes (including improvements to existing schemes) and 2 panchayat water-supply schemes (including one composite rural water-supply scheme) were under execution during the year. The estimated cost of all the works was Rs. 327.0 lakhs and the outlay of expenditure during this half-year was about Rs. 8.63 lakhs.

2. As for drainage, 11 municipal and panchayat drainage schemes were under execution during the year. Their total estimated cost was Rs. 51.0 lakhs and the expenditure during this half-year was Rs. 1.40 lakhs.

3. All the schemes were being executed by the department itself.

4. The total expenditure on schemes (including improvements schemes) during the half year under report was Rs. 10.03 lakhs.

NOTES ON SCHEMES UNDER EXECUTION DURING THE PART-YEAR 1953-54.

The following notes will indicate the progress made on the execution of the different schemes during this half part-year as well as their stages at the end of the half-year :—

WATER-SUPPLY SCHEMES.

(1) *Coimbatore Water-supply Scheme*—*Partial duplication of gravitation main*—*Estimate Rs. 42,69,000.*—So far, 891 r.ft. of 24" main, 1,352 r.ft. of 18" main and 860 r.ft. of 14" main have been laid and jointed. The overflow and scour connections have to be completed for the low level reservoir; works relating to the duplicate gravity main have been completed except for inter-connections between the new and the old main.

(2) *Coimbatore Water-supply Scheme*—*Duplication of gravitation main for the remaining length of the main*—*Estimate Rs. 13,42,000.*—So far, a length of about 11,000 feet of 18 inches main has been completed. About 8,000 feet of 18 inches main remain to be taken up.

(3) *Mangalore Water-supply Scheme*—*Nethravathi source*—*Estimate Rs. 82,85,000.*—About 11,000 r.ft. of pumping main has been laid and jointed and 5,000 feet tested. The work is in progress.

(4) *Kozhikode Water-supply Scheme*—*Estimate Rs. 17,50,300.*—Work as per the original estimate completed except for forming pathway along the pumping main, which work is in progress.

(5) *Kozhikode Water-supply Scheme*—*Treatment works*—*Estimate Rs. 4.59 lakhs.*—Construction of chemical house, laying concrete for serrations and for R.C.C. lining to sedimentation tanks, construction of flocculation chambers, suction well, sludge manholes and well completed. The supply and erection of pumpsets, and also flocculation and chemical feed equipment, etc., remain to be done.

(6) *Salem—Mettur Water-supply Scheme*—*Estimate Rs. 36,67,000.*—All works completed except for some minor works relating to construction of watchman's quarters.

(7) *Salem Water-supply Scheme*—*Temporary connexion of Panamarathupatti main with Nangavalli main*—*Estimate Rs. 4,00,000.*—All works completed.

(8) *Siraganga Water-supply Scheme*—*Estimate Rs. 1,38,370.*—Further work on the scheme will be taken up after a decision is taken on the nature of treatment works necessary for improving the quality of the water.

(9) *Palayamkottai Water-supply Scheme*—*Estimate Rs. 28,18,000.*—The gallery work at Manapadai, and the construction of one R.C.C. reservoir has been completed. Laying and jointing of 16" pumping main is also in good progress. Laying and jointing work for the pipe in the distribution system is also in progress. The construction of the pumping station as also supply and erection of pumping plant will be taken up shortly, now that the combined water-supply scheme for Palayamkottai and Melapalayam municipalities has been approved by Government.

(10) *Srivilliputtur Water-supply Scheme*—*Estimate Rs. 15,70,000.*—The laying of pipes in the distribution system of North zone has been completed. The work on the distribution system in the other zone is in progress. The work of laying and jointing pipes for gravity main has been completed for a total length of about 15,000 feet.

(11) *Composite Water-supply Scheme for Kayalpatnam, etc., villages*—*Estimate Rs. 37.50 lakhs*—*I Stage.*—Summer storage tank, offtake arrangement, inlet outlet and bye-pass to filters, clear water reservoir are nearing completion, laying filter media is in progress.

II Stage—Pumping main.—The 12", 10", 7" and 4" mains have been laid up to respective service reservoir.

III Stage—Reservoirs.—The materials are being received. The work will be taken up for actual execution after orders of Government are received regarding the per capita rate of supply for Kayalpatnam Panchayat.

IV Stage—Distribution system.—The materials are being received.

(12) *Karaikudi Water-supply Scheme—Estimate Rs. 89,660.*—Certain minor works remaining to be completed will be taken up after obtaining sanction of Government for the II Revised Estimate.

(13) *Tiruchirappalli Water-works—II Instalment of II year Programme—Estimate Rs. 11,34,500.*—The work of laying and jointing of C.I. pipes and specials for improvements to the distribution system in zones I to IV of Rock Fort area, is in progress.

(14) *Mayuram Water-supply Scheme—I stage—Estimate Rs. 17,000.*—Further works will be taken up after a decision on the results obtained regarding the yield tests is taken.

(15) *Cuddalore Water-supply Scheme—Estimate Rs. 7,78,000.*—The construction of infiltration cum suction well and the manhole well has been taken up and the works are in progress. The C.I. pipes and specials for the pumping main are being received.

(16) *Karur Water-supply Scheme—Extension of mains—Estimate Rs. 26,000.*—The A.C. pressure pipes and C.I. specials have been received. The works will be started shortly.

(17) *Tindivanam Water-supply Scheme—I stage—Estimate Rs. 25,000.*—Check borings have been put down to decide on the site for the location of the experimental well. As a preliminary for putting down further borings, probings in the adjoining area are being put down.

(18) *Tiruvettipuram Water-supply Scheme—Estimate Rs. 4,85,000.*—Tenders for the construction of the infiltration well and suction well are decided and agreement executed. The preliminaries for starting the work are being attended to. Final orders of the Chief Engineer in regard to certain technical issues are awaited before proceeding with the other component works.

(19) *Kumbakonam Water supply scheme—II Stage—Estimate Rs. 16,81,000.*—All the works as per the scheme have been completed. The following are the balance works to be done (viz.) construction of electrical Superintendent's Quarters, fencing the head-works, gallery site and removal and relaying of old pipes.

DRAINAGE SCHEMES.

1. *Coimbatore Drainage Scheme—Estimate Rs. 25,00,000.*—The pre-treatment works have been put into operation in March 1954.

2. *Coimbatore Drainage Scheme—Laying new sewer line in Okkiliar Lane 'D' Block—Estimate Rs. 13,100.*—All the works have been completed and handed over to the municipality.

3. *Madurai Drainage Scheme—Providing sewerage to Block 7.—Estimate Rs. 2,78,000.*—The materials required for the work are mostly received and laying and jointing of sewers are in progress.

4. *Madurai Municipality—Electrification of the main pumping station—Estimate Rs. 6,48,000.*—The C.I. specials and M.S. rods, angles, etc., have been received. Tenders for the pumpsets have been received. The works will be started shortly.

5. *Paramakudi Drainage Scheme—Estimate Rs. 29,100.*—All the works as per the sanctioned estimate have been completed. The additional works relating to the regrading of drains in the new street are being held up, pending a decision on the request of the Panchayat Board for providing disposals on a sewage farm.

6. *Srirangam Drainage Scheme—Second stage—Estimate Rs. 4,77,000.*—All the works completed; the supply and delivery of the pumpsets is expected.

7. *Tiruchi Partial Drainage Scheme—Diversion of sullage—Estimate Rs. 2,94,000.*—Works relating to the pump house and pumpsets remain to be carried out.

8. *Virudhunagar Restricted Drainage Scheme, Estimate Rs. 75,000.*—The provision of pumpset will have to be taken up after the works relating to the extended portion of the pumping main are taken up separately and completed.

9. *Ambur Drainage Scheme—Estimate Rs. 14,240.*—Masonry drains of sizes 9", 18" and 21" and culverts have been completed in all respects. Works relating to the outfall and the channel are under progress.

10. *Tirupathur Improvements to Vellaivoikal Drainage—Estimate Rs. 72,000.*—Orders of Government are awaited.

11. *Nagapattinam Drainage Scheme—Estimate Rs. 7,04,100.*—The remaining work relating to the pumping main will be taken up after the design for the Kaduvayar river crossing is completed.

CHAPTER IV.

1. PROGRESS IN THE PAST YEAR AND ON THE DESIGN OF SCHEMES.

1. *Detailed plans and estimates for the following schemes were under preparation during the half year under review (1st October 1953 to 31st March 1954):—*

WATER-SUPPLY.

(1) *Madurai Water-supply improvements—Augmentation of supply with infiltration works at Melakkal.*

(2) *Dindigul Water-supply Improvements Schemes—I Stage (18" conveying main).*

(3) *Melapalaya'am Water-supply Scheme.*

(4) *Combined Water-supply Scheme for Tenkasi, Courtallam, Ilangi, and Melagaram Panchayats.*

(5) *Pattukkottai Water-supply Scheme.*

(6) *Mangalore Water-supply Scheme (Nethravathi Source)—II Stage (Head Works).*

(7) *Mangalore Water-supply Scheme (Nethravathi Source)—III Stage (Distribution system).*

(8) *Mangalore Water-supply Scheme (Nethravathi Source)—IV Stage (Treatment Works).*

- (9) Arni Water-Supply scheme—Outline proposals.
- (10) Arcot Water-supply Scheme—Outline proposals.
- (11) Vriddachalam Water-supply Scheme—Outline proposals.
- (12) Gobichettipalayam Water-supply Scheme—I Stage (Pumping main).
- (13) Pudukkottai Water-supply Improvements to Ammayapatti Head Works.
- (14) Chingleput Water-supply Improvements Scheme.

DRAINAGE.

- (1) Madurai Drainage Scheme—Block 8 Sewerage Scheme.
- (2) Tuticorin Drainage Scheme—Outline proposals.
- (3) Kumbakonam Drainage Scheme.

II. Detailed Plans and Estimates for the following schemes were submitted to the higher authorities during the half-year review (1st October 1953 to 31st March 1954):—

- (1) Dindigul Water-supply Improvements Scheme—I Stage (18" conveying).
- (2) Arni Water-supply Scheme (Outline proposals).
- (3) Arcot Water-supply Scheme (Outline proposals).
- (4) Vriddachalam Water-supply Scheme.
- (5) Gobichettipalayam Water-supply Scheme—I Stage.
- (6) Mangalore Water-supply Scheme (Nethravathi Source)—II Stage.

The total cost of the schemes mentioned above based on the estimates submitted for approval amounted to Rs. 63.9 lakhs nearly.

CHAPTER V.—SCHEMES UNDER INVESTIGATION DURING THE HALF-YEAR UNDER REVIEW (1st OCTOBER 1953 TO 31st MARCH 1954).

I. Investigation for the following schemes were in progress during the half-year under review:—

WATER-SUPPLY.

- (1) Ootacamund Water-supply Improvements.
- (2) Palghat Water-supply.
- (3) Yercaud Water-supply (Salem district).
- (4) Velur and Vengorai Panchayats (Salem District) Water-supply.
- (5) Tiruppur Water-supply Comprehensive Scheme.
- (6) Satyamangalam Water-supply Scheme.
- (7) Kotagiri Panchayat (Nilgiris District) Water-Supply scheme).
- (8) Dharapuram Water-supply.

- (9) Gobichettipalayam Water-supply Scheme.
- (10) Kaveripatnam Water-supply Scheme.
- (11) Komarapalayam and Bhavani Water-supply Scheme.
- (12) Mangalore Water-supply Scheme (Nethravathi source).
- (13) Coimbatore Water-supply Scheme—Re-designing of the Distribution System.
- (14) Tiruchi Water-works—Boring Work in Cauvery river bed.
- (15) Tuticorin Water-supply Improvements.

DRAINAGE.

- (1) Kozhikode Drainage Scheme.
- (2) Lalgudi Panchayat (Tiruchirappalli district) Drainage Scheme.

CHAPTER VI.

1. *Technical sanction accorded for miscellaneous works.*—During the half year under review the following estimates for investigation were technically sanctioned. In addition, a number of estimates relating to the improvements to the municipal water-supply and drainage works, received from the local bodies were also sanctioned for execution. The total value of the estimates sanctioned was nearly Rs. 4.9 lakhs.

List of estimates for which technical sanction was accorded by the Sanitary Engineer during the half year (1st October 1953 to 31st March 1954).

Serial number.	Name of work.	Amount of estimate. RS.
1	Water-supply—Satyamangalam Panchayat—Investigation	2,700
2	Water-supply—Coimbatore Municipality—Laying 4 inches main in A.T.T. Colony	16,380
3	Purchase of wooden screws for the office of the Sanitary Engineer ..	60
4	Water-supply—Kozhikode Municipality—Emergency Water-supply arrangements	29,400
5	Wandiwash Panchayat—Water-supply Scheme—Investigation	2,700
6	Ranipet Panchayat—Water-supply Scheme—Investigation	3,000
7	Drainage—Salem Municipality—Establishment of sewage farm—Investigation	2,500
8	Tools and plants—Office furniture for Cuddalore Public Health Subdivision	380
9	Tools and plants—Furniture for the Executive (Public Health) Central Division	430
10	Devakottai Municipality—Water-supply Scheme—Supplemental Investigation	1,000
11	Drainage—Mannargudi Municipality—Construction of open drains—Investigation	1,200
12	Water-supply—Tuticorin Municipality—Improvements to Water-Supply—Investigation	35,000
13	Drainage—Virudhunagar Municipality—Extension of C.I. pumping main under restricted drainage scheme up to sewage farm	1,36,000
14	Water-supply—Mettupalayam Municipality—Extension of mains and erection of additional public fountains	1,03,500

Serial number.	Name of work.	Amount of estimate. RS.
15	Water-supply—Coimbatore Municipality—Improvements to the Distribution System—district 2	58,000
16	Water-supply—Coimbatore Municipality—Improvements to the Distribution System—District 3	17,200
17	Water-supply—Coimbatore Municipality—Improvements to the Distribution System—District 7	50,800
18	Tools and plants—Purchase of furniture for Tiruchirappalli (Public Health) Subdivision	450
19	Water-supply—Mettur Township Committee Extension of distribution system to Head Electricity Department Quarters	22,450
20	Water-supply—Nilakkottai Panchayat—Investigation	2,800
		4,85,950

II. *Preparation of general designs, etc.*—The following designs were prepared during the half year under review (1st October 1953 to 31st March 1954):—

- (1) San. No. 120/53 Design for a latrine in dry areas.
- (2) Do. 111/53 single and double seats.
- (3) Do. 122/53 Design for sand washing arrangements
- (4) Do. 123/53 Design for connecting open drains, from residences to public sewers.
- (5) Do. 128/53 Design for C.I. protecting tubes in place of masonry pits for sluice valves.
- (6) Do. 13/54 Design for infiltration well for W.S.S.

III. *Technical sanction for improvement works accorded by the Executive Engineer in the three Public Health Divisions:*—

	RS.
(1) Northern (Public Health) Division. 6 Estimates	27,400
(2) Southern (Public Health) Division. 9 "	51,310
(3) Western (Public Health) Division. 3 "	46,250

CHAPTER VII.—CORPORATION OF MADRAS—GRANT-IN-AID WORKS—WATER-SUPPLY AND DRAINAGE.

I. The Sanitary Engineer as Inspecting Officer for all grant works (Drainage and Water-supply) of the Corporation in terms of G.O. No. 2164, Public Health, dated 23rd March 1944 as modified in G.O. No. 3386, Public Health, 5th December 1944 had in addition to his routine inspections of all Water-Supply and Drainage Works, to offer his remarks on the following:—

- (i) Schemes relating to water supply and drainage capital works for which Government grant or loan is claimed.
- (ii) The annual budget provisions in regard to grant and loans for water-supply and drainage works.
- (iii) Administration report of the Corporation.

(iv) Tenders for grant-in-aid works estimated to cost Rs. 25,000 and above.

(v) References relating to accounts and audit, schedule of rates, indents for pipes and specials, etc.

(vi) Proposals to alleviate the smell nuisance in the city waterway.

(vii) Scrutiny of grant statements for water-supply and drainage grant-in-aid works.

(viii) Inspection and report on the working of the Kilpauk filter stations and other water-works.

II. During the period under review the plans and estimates for the following schemes were scrutinized and remarks offered thereon:—

(i) WATER-SUPPLY.

(a) Scheme for installation of rapid mechanical filters at a cost of Rs. 23.5 lakhs.

(b) Scheme for sedimentation and coagulation in tanks—Rs. 24.03 lakhs.

(c) Construction of additional clear water reservoirs at Kilpauk filter station—Rs. 10.67 lakhs.

(d) Scheme for installation of diesel generators and 3 numbers electrical pumpsets at Kilpauk.

(e) Revised estimate for Gandhi Nagar water-supply scheme—Rs. 7.62 lakhs.

(f) Laying water mains in Nungambakkam Western Town-Planning area—Rs. 28,000.

(ii) DRAINAGE WORKS—PROPOSALS.

(a) Disposal works for Thyagarayanagar Drainage.

(b) Sewer laying proposals of Chetput-Thangal area.

(c) Laying rider sewers at Vyasarpadi and Perambur.

III. The following works in progress were inspected during the year under review:—

(a) Water-supply.

(i) City distribution system—Improvements—Rs. 15.29 lakhs.

(ii) City distribution system—Further schemes—Rs. 4.76 lakhs.

(iii) Laying a separate trunk main for South Madras—1st and 2nd stages.

(iv) Laying of the 48" diameter duplicate pumping main from Kilpauk pumping station to shaft.

(v) Gandhi Nagar water-supply scheme.

(vi) Water-supply to Dr. Alagappa Nagar and Aminjikarai areas.

(b) Drainage Works.

(i) Thyagarayanagar drainage scheme.

(ii) Vyasarpady and Perambur drainage scheme works.

IV. The two grant statements for the periods ending 31st December 1953 and 28th February 1954 have been scrutinized and the following amounts have been recommended for payment:—

	Second period up to 31st December 1953
	(1)
	RS.
Water-supply	34,788
Drainage	38,738

V. Staff.—The Sanitary Engineer was assisted by an Assistant Engineer (Public Health) and a Supervisor in discharging his duties as the Inspecting Officer of the Corporation Grant Works (Water-supply drainage). The Kilpauk Experimental Filter Station continued to be under the control of the Sanitary Engineer, the Assistant Engineer (Public Health) Corporation Works being in charge of the same and being assisted by a Technical Assistant.

CHAPTER VIII.

RESERVE STOCK OF G.I. PIPES AND SPECIALS

During the period under report G.I. pipes and specials were purchased only against the indents of the previous years: but no fresh orders were placed. From the reserve stocks, materials to the value of Rs. 0.46 lakh were issued to schemes under execution in the several divisions.

CHAPTER IX.

RURAL WATER-SUPPLY SCHEMES.

The Coimbatore Public Health division continued to deal with a large number of estimates for rural water-supply works in the Nilgiris district.

In order to speed up the investigation and execution of the rural water-supply schemes in the Nilgiris and Coimbatore district which are beyond the competence of the M.I. staff as against a special Public Health subdivision originally applied for (in the Composite state) a suggestion for the employment of two additional Supervisors has been made to attend to rural water-supply works and the matter is under consideration.

CHAPTER X.

MAINTENANCE OF SCHEMES.

The period under review proved to be satisfactory, due to timely rains and there were no complaints in regard to drought conditions affecting the yield from any of the water-supply schemes in operation.

CHAPTER XI.

MUNICIPAL ENGINEERING SERVICE.

Consequent on the formation of the Andhra State, there was reduction of four posts of I Grade Municipal Engineers, seven posts in the II Grade and fifteen posts in the III Grade. There was, therefore, reversion of some of the Municipal Engineers from the I to II Grade and from the II to III Grade, as there were Non-Andhra Officers in excess of the sanctioned strength for this State.

CHAPTER XII.

GENERAL.

The Sanitary Engineer continued to be a member of the Board of Public Health as well as of the water and sewage purification committee. He was also a member of the Technological Diploma Examination Board constituted by the State Government.

He continued to function as the Inspecting Officer for the grant-in-aid works (other than Road and Electrical) of Corporation of Madras.

He also served as a Member of the Hotel Sanitation Expert Committee constituted in G.O. Ms. No. 1000, Health, dated 19th March 1953.

The Sanitary Engineer continued to exercise control over the maintenance of the Experimental Filter Station at Kilpauk assisted by the Assistant Engineer (Public Health) posted for this purpose as well as the Corporation works.

The post of Instructor in Elementary Sanitary Engineering at Madras Medical College continued to be under the control of the Sanitary Engineer.

The Sanitary Engineer was deputed by Government to attend the Seminar for Water Works Operators at New Delhi held in December 1953, under the auspices of the World Health Organization.

DIRECTION PERSONNEL.

Sri S. Rajagopalan, B.E., M.I.E., held the post of Sanitary Engineer during the period from 1st October to 2nd December 1953 and 23rd December 1953 to 31st March 1954. Sri A. Venkataramanan, Executive Engineer (Public Health), (Designs), was holding full additional charge of the post of the Sanitary Engineer during 3rd to 23rd December 1953 when the Sanitary Engineer was on deputation to attend the World Health Organization Seminar for Water Works Operators at New Delhi.

Sri A. Venkataramanan, B.A., B.E., M.I.E. (Ind.), held the post of Executive Engineer (Public Health) (Designs), from 1st October to 29th December 1953 and retired from service on 30th December 1953. Sri S. Rajagopalan, Sanitary Engineer, was holding full additional charge of the post of the Executive Engineer (Public Health), (Designs), from 30th December 1953 to 5th February 1954.

Sri T. A. Narasimha Iyengar, B.E., M.E. (P.H.) A.M. I.E., held the post of the Executive Engineer (Public Health) (Designs), from 5th February to 31st March 1954.

Sri M. V. Subramaniam, B.A., B.E., held the post of Mechanical Expert from 1st October 1953 to 6th March 1954, and from 22nd to 31st March 1954. Sri T. A. Narasimha Iyengar, B.E., M.E. (P.H.), Executive Engineer (Public Health) (Designs) was holding full additional charge of the post of Mechanical Expert from 16th to 22nd March 1954 and the post was vacant from 7th to 15th March 1954.

Sri D. Konchady, B.E., S.M., (P.H.), held the post of Personal Assistant to the Sanitary Engineer from 1st October 1953 to 31st January 1954. Sri S. R. Srinivasan, B.E., M.E. (P.H.), Assistant Engineer (Public Health) Corporation Works held additional charge of the post from 1st February to 5th March 1954 and Sri J. N. Dawson, B.E., held the post from 6th to 31st March 1954.

Sri T. Durairaj, B.E., M.E. (P.H.), A.M.I.E., continued to hold the post of Assistant Engineer (Public Health) (Technical Section) during the year.

Sri S. R. Srinivasan, B.E., M.E. (P.H.), continued to hold the post of Assistant Engineer (Public Health) Corporation Works and Kilpauk Experimental Filter Station during the year.

PUBLIC HEALTH DIVISIONS.

1. *Northern Public Health Division*—Sri G. R. Subramania Iyer, B.E.

2. *Southern Public Health Division*—Sri B. Satyamurthy, B.E., from 1st October to 11th December 1953 and from 26th December 1953 to 31st March 1954.

Sri G. R. Subramania Iyer, B.E.—Additional charge from 12th December to 26th December 1953, *a.n.*

3. *Western Public Health Division*—Sri M. M. Muni, B.E., A.M.I.E.



DEPARTMENT OF HEALTH, EDUCATION AND LOCAL ADMINISTRATION

(Health)

G.O. No. 3282, 4th December 1954

Administration Report—Sanitary Engineering Branch—1953-54—
Reviewed.

READ—the following paper :—

Letter from the Chief Engineer, P.W.D. (General), dated
7th September 1954, No. 2664-P.H./54-4.

Order—No. 3282, Health, dated 4th December 1954.

Recorded.

2. *Period from 1st April 1953 to 30th September 1953 relating to the composite State.*—(i) The number of municipal and panchayat water-supply schemes in operation during the above period was 65. The number of municipal drainage schemes in operation was 13. No drainage scheme was functioning in any of the panchayats.

(ii) Water-supply schemes were under execution during the period in 27 municipalities and in 8 panchayats. The number of municipal and Panchayat drainage schemes under execution during the period was 11.

(iii) Detailed plans and estimates were prepared for 5 water-supply schemes and for 4 drainage schemes during the period. The plans and estimates for 21 water-supply schemes and 11 drainage schemes were under preparation.

3. *Period from 1st October 1953 to 31st March 1954 relating to the Madras State.*—(i) Out of 61 municipal towns water-supply schemes were in operation in 34 places. The number of water-supply schemes in operation in panchayat was 5. The number of municipal drainage schemes in operation was 9. No drainage scheme was functioning in any of the panchayats.

(ii) The number of water-supply schemes under execution during the period was 17 in municipalities and 2 in panchayats. The number of municipal and panchayat drainage schemes under execution was 11.

(iii) Detailed plans and estimates were prepared for six water-supply schemes. Plans and estimates for 14 water-supply schemes and 3 drainage schemes were under preparation.

4. The year under review was the fifth year of the First Five-Year Programme for the execution of municipal water-supply and drainage scheme on the basis of priority fixed by the Government.

(By order of the Governor)

S. A. SUBHAN,
Joint Secretary to Government

To the Chief Engineer, P.W.D. (General).

- „ Sanitary Engineer.
- „ Director of Medical Services.
- „ Director, King Institute, Guindy.
- „ Director, All-India Institute of Hygiene and Public Health, Calcutta.
- „ Public Health Commissioner with the Government of India (with C.L.).
- „ Librarian, Secretariat Library.
- „ Public Department.

Press and others as per the distribution list in G.O. No. 4831, P.H.L., dated 11th November 1941.

