GOVERNMENT OF KERALA

PERFORMANCE BUDGET 2024-25

WATER RESOURCES DEPARTMENT

FINANCE DEPARTMENT

PERFORMANCE BUDGET 2024-25

WATER RESOURCES DEPARTMENT

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FOREWORD

Performance budgeting seeks to integrate the physical and financial dimensions of government programmes by clearly linking resource allocation to measurable objectives and expected outputs and outcomes. Instead of relying on historical spending patterns, this approach emphasises physical targets and the actual results achieved, thereby improving transparency, accountability, and efficiency in public spending. By focusing on outcomes and measurable performance indicators, it ensures that government resources are utilised effectively to enhance public service delivery and to provide optimum value for taxpayers.

As detailed in the 140th Report of the Public Accounts Committee (PAC) for the period 2008–11, the Water Resources Department-had been selected as one of the departments for performance budgeting.

Along with other budget documents presented in the Legislature, the performance budget outline the actual performance of the selected departments and public sector undertakings for the previous financial year (2024–25). It provides essential information on the progress and achievements of various schemes and programmes implemented under different plan heads.

The Performance Budget 2024–25 of the Water Resources Department includes information received from the Irrigation Department, the Groundwater Department, and two autonomous bodies—the Kerala Water Authority and the Kerala Rural Water Supply and Sanitation Agency (Jalanidhi). The details of the autonomous bodies are included in the sixth chapter.

The Finance Department has prepared the Performance Budget Document (2024-25) based on the reports furnished by the department concerned and data collected through field visits. The findings and recommendations derived from the performance budget are intended to guide corrective actions, strengthen financial management, and ensure timely and effective implementation of schemes, ultimately contributing to improved institutional performance.

The structure of the performance budget report 2024-25 is given below:

Chapter 1

Introduction

In Chapter I, a brief introduction of the Water Resources Department has been included. The vision, mission and the organisational set up of the department has also been included in this chapter.

Chapter 2

Comments of Finance Department

Recommendations are made based on diagnostic studies and field visits pertaining to selected schemes of the Water Resources Department. During the year, some plan schemes have randomly been selected for evaluation. During the diagnostic stage, problems were analysed through verification of files and field visits, questionnaires and group discussions with stakeholders and study of documents such as Government Orders, Circulars, detailed project reports and other available documents. Recommendations include process changes, leveraging on technology and work related suggestions, etc.

Chapter 3

Financial Outlays and Quantifiable Deliverables

The chapter reflects the budgetary allocations provided for major schemes in the Water Resources Department. These allocations are juxtaposed with physical output and their projected outcomes. The main objective is to establish a one-to-one correspondence between the financial budget 2024-25 and the Performance / Outcome budget 2024-25 of various schemes and programmes implemented by the Water Resources Department. Details are furnished in Annexure I.

Chapter 4

Reform Measures and Performances

The details of reform measures, policy initiatives, and innovative technologies taken by the department and how these relate to the immediate outputs and financial outcome in various areas/ fields, such as public-private partnerships, alternate delivery mechanisms, social and women empowerment processes, greater decentralisation, transparency etc. are discussed in this chapter.

Chapter 5

Financial Review

Chapter 5 highlights overall trends in expenditure vis-a-vis Budget Estimates/Revised Estimates/Actual Expenditure in recent years, and the position of unspent balances with the department. The details are included in Annexure II.

Chapter 6

Review of Performances of Autonomous Bodies

The chapter includes the review of the performance of autonomous bodies under the administrative control of the Water Resources Department. Details of Kerala Water Authority and Kerala Rural Water Supply and Sanitation Agency (Jalanidhi) are included in this chapter.

Thiruvananthapuram

January 2026

CHAPTER 1

INTRODUCTION

1.1 Formation of Irrigation Department

In Kerala, the Irrigation department was initially a part of the Public Works Department. Based on the recommendation of the Retrenchment Committee, the staff of the Public Works Department underwent reduction and led to the formation of Irrigation Division, with three sub-divisions and nine sections on 19/3/1934 to carry out the irrigation works of the State. Later, as per the G.O (P) No 27/90/PW & T dated 29th March 1990 the Irrigation department was spun off from the Public Works Department with effect from 1st April 1990.

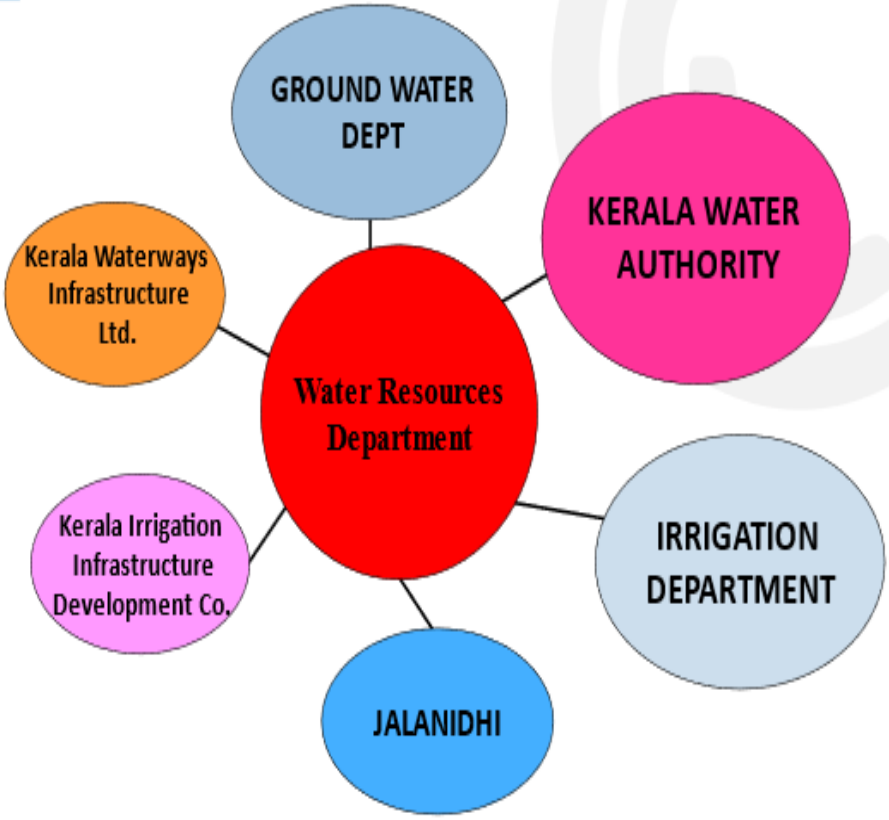
Kerala, being a state with a network of rivers, has several irrigation projects aimed at enhancing agricultural productivity and ensuring water availability. Though there are various methods for providing water for irrigation, the best and the most reliable method which can be used for Kerala is the construction of storage reservoirs for impounding water during the monsoon and utilising the water in the reservoir for critical periods of the crops when there is insufficiency. Hence, major and medium projects were taken up and a major portion of the cultivable land could be made ayacut under these projects. The oldest irrigation project in Kerala is the Peechi Irrigation Project, built across Manali River in Thrissur district. This straight concrete gravity dam was completed in 1959 which serves as an irrigation dam for nearly 17555 ha of land and also caters the drinking water needs of the population. Numerous irrigation projects like the Vazhani, Malampuzha, Mangalam, Gayathri, Pothundy, and Neyyar were taken up for enhancing the irrigation potential of Kerala. Out of these the Malampuzha Irrigation Project in Palakkad district is the first large-scale irrigation system attempted in the State.

Minor Irrigation (MI) Schemes play an important role in Kerala where average farm size is small and land labour ratio is low. With a view to enhance irrigation efficiency and to accelerate crop productivity, measures for implementing micro irrigation projects across the state have been initiated. Modernisation of canals and expansion of irrigation in water deficient areas is also an important priority.

In the present situation almost all projects are being converted into multipurpose projects in order to maximise the utilisation of existing resources. In order to improve the irrigation potential, innovative MI Schemes have also been implemented in almost all parts of the state.

Fig.1.1

Line/Subordinate Departments under Water resources Department



1.2 IRRIGATION (I &A)

Irrigation & Administration wing deals with the Major & Minor Irrigation works across the state, Inter-State Water sharing, Flood Control & Coastal Zone Management and Salt water extrusion apart from the general administration of the department. The Chief Engineer, Irrigation & Administration is the administrative head of the department. The hierarchy is given at Figure 1.3. The Chief Engineer is assisted by a Law Officer, Senior Finance Officer, and Senior Administrative Officer for dealing the areas related to legal, financial and administrative matters respectively.

Vision

- To sustainably conserve and manage Kerala's water resources in a scientific, equitable manner.
- To build and maintain irrigation infrastructure (like dams and

regulators) that supports agriculture productivity and improves farmers' livelihoods.

- ❖ To provide water for local bodies' drinking needs during dry seasons, ensuring social welfare.
- ❖ To support the Kerala Water Authority (KWA) as a water source when needed, blending irrigation with public water supply goals.
- ❖ To contribute to the overall social and economic well-being of the people by ensuring equitable, reliable access to water and boosting food security.

Mission

- ➢ To plan, develop, and manage water resources effectively for irrigation, drinking water, industry, and environmental needs.
- ➢ To construct, operate, and maintain dams, canals, reservoirs, and related infrastructure ensuring safety and sustainability.
- ➢ To support agricultural productivity by ensuring reliable and equitable water distribution to farmers.
- ➢ To promote efficient water use through modernization, conservation, and adoption of advanced irrigation technologies.
- ➢ To protect rivers and water bodies while implementing flood control, drainage management, and ecological restoration measures.

Fig.1.2 (a) : Organizational Structure

The Irrigation Department is further subdivided into 6 different wings.

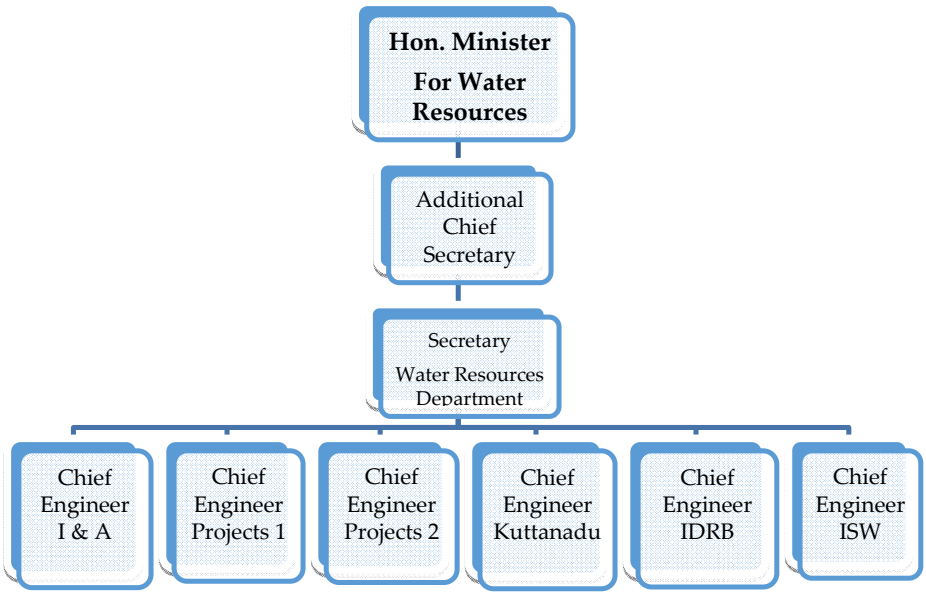
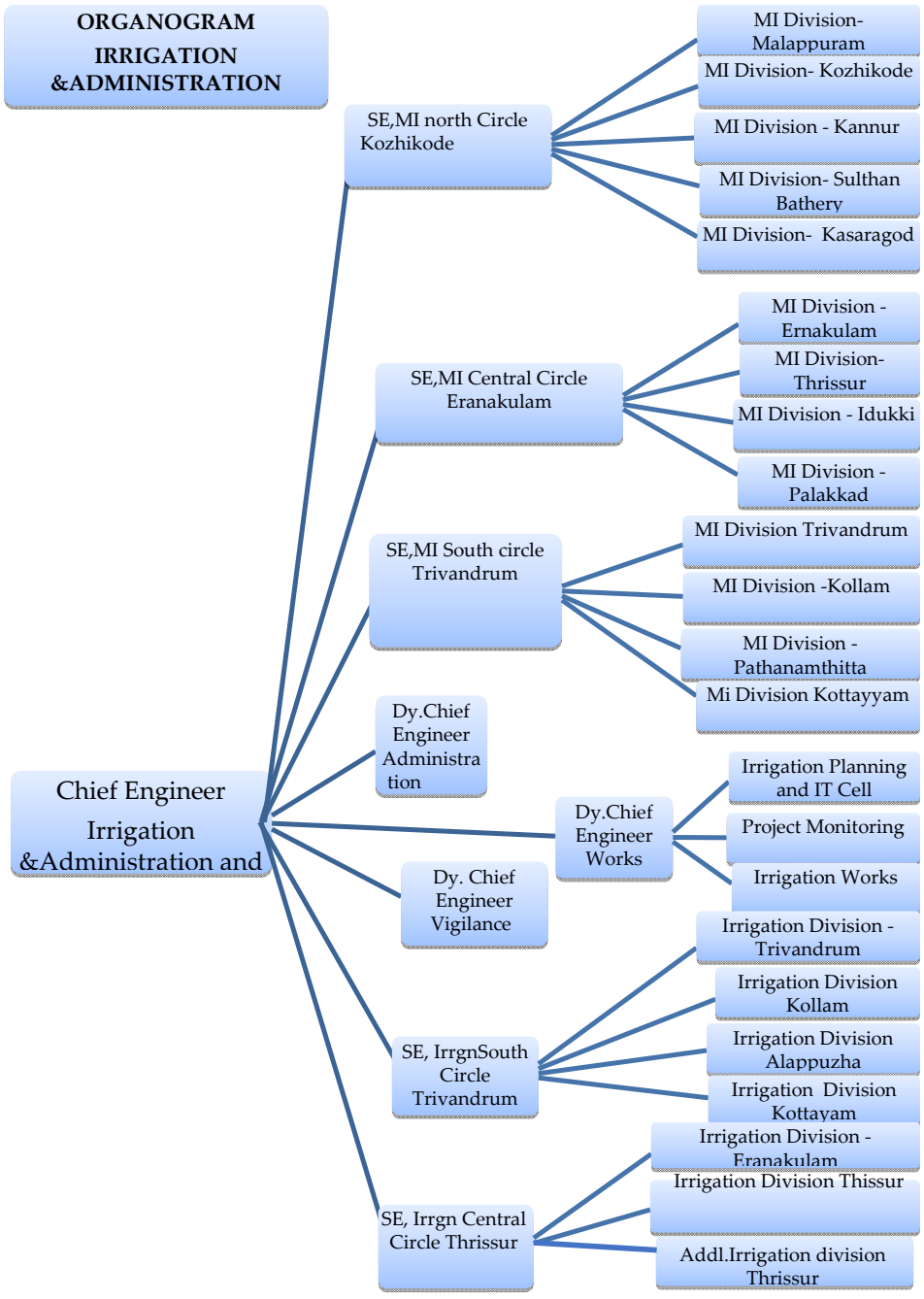


Fig.1.2 (b) : Organogram of Irrigation &Administration

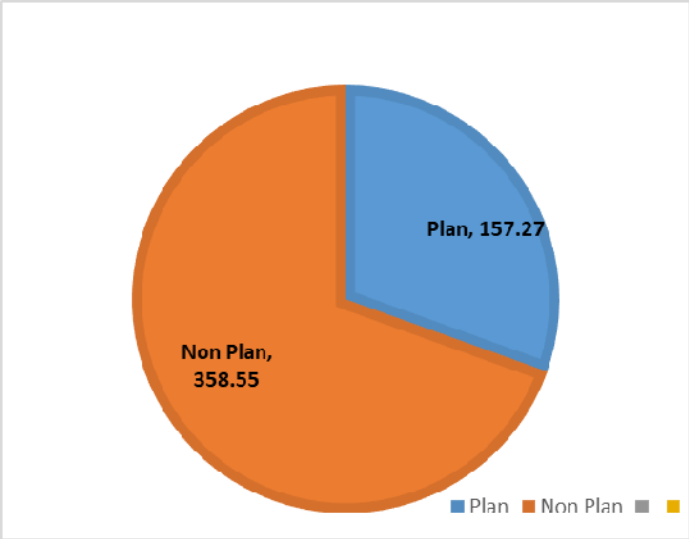


Hierarchy of Offices under the Department

- Office of the Chief Engineer (The Chief Engineer (A&D) shall be the Ex-Officio Additional Secretary to Government.)
- Office of the Superintending Engineer (Circle)
- Office of the Executive Engineer (Division)
- Office of the Assistant Executive Engineer (Sub Division)
- Office of the Assistant Engineer (Section)
- Canal Office

Fig.1.2 (c)

Budget Allocation 2024-25



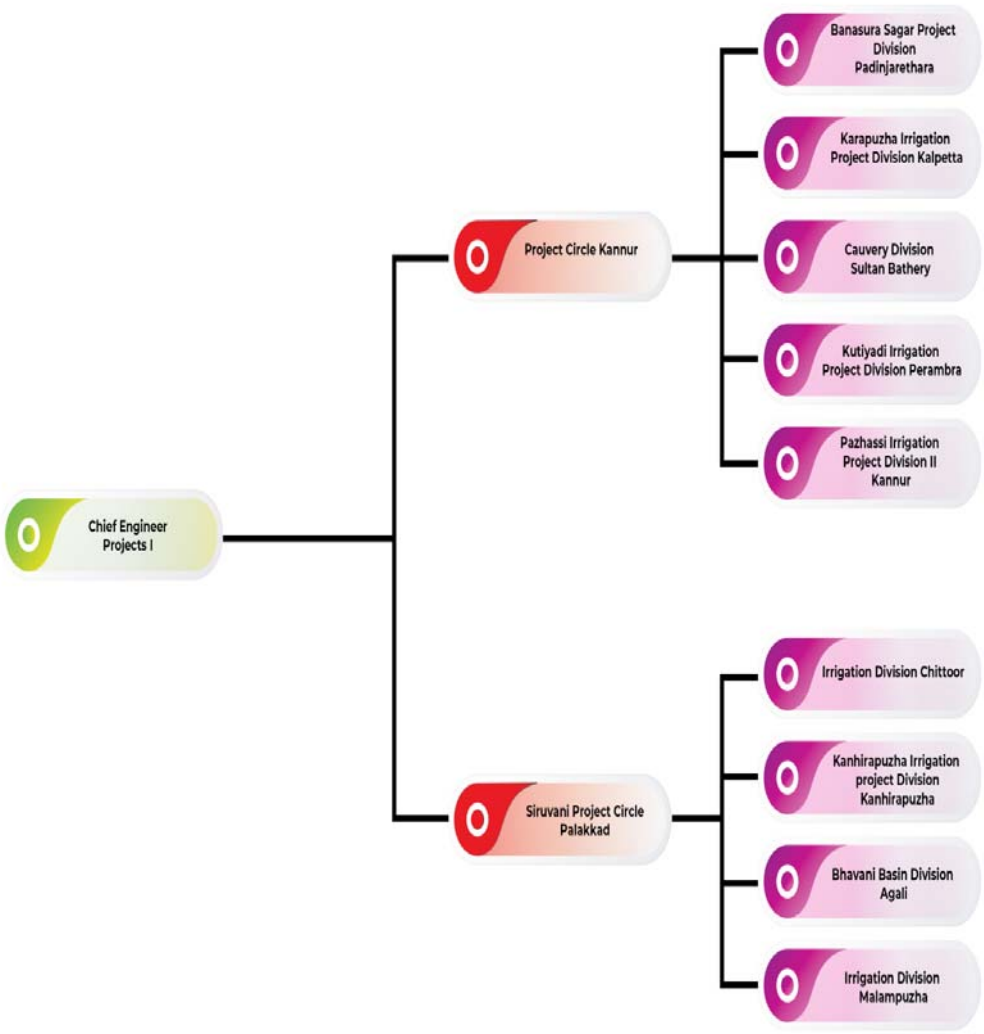
(Amount in crores)

1.3 PROJECT- 1 (CAUVERY CELL)

All the Major and Medium Irrigation Projects in the Northern Part of the state, i.e. from Palakkad to Kasargod comes under Irrigation Projects-1,Kozhikkode.Chief Engineer is the head of the department. At present there are 11 completed Projects in the region viz. Malampuzha, Mangalam, Pothundy, Meenkara, Chulliyar, Walayar,Chitturpuzha, Kuttiyadi, Pazhassi, Kanhirapuzha and Regulator cum Bridge at Thrithala. In addition to the increasing irrigation facilities, these projects have helped the overall development of the region to a great extent by way of improving infrastructure, irrigation facilities, employment opportunities and availability of drinking water. The ongoing projects under the control of this office are Karapuzha Project, BanasuraSagar Project and Chammravattom Project.

ORGANOGRAM - PROJECT 1

Fig.1.3 Organogram of Irrigation Administration



Various project details are elaborated as given below.

1.3.1 KARAPUZHA IRRIGATION PROJECT

Karapuzha Medium Irrigation Project (Kabini Scheme) is being implemented in the Kabini Sub-basin of the Inter State River Cauvery. This is the first Irrigation Project to be taken up in the Kabini basin. The Project is to construct an earthen dam at Vazhavatta across Karapuzha Stream with an objective to create a reservoir of 76.50Mm^3 storage capacities and to irrigate a net ayacut of 5221 hectares (Gross command Area – 5600 Ha.) of land in Vythiri, SulthanBathery and Mananthavady Taluks of Wayanad District through a network of canal system. Even though originally envisaged as an Irrigation Project, Karapuzha has now transformed into a

Multi-Purpose Project with drinking water supply schemes, Tourism, Power generation and Fisheries projects. Drinking water supply scheme to Kalpetta Municipality had been commissioned and that for Sultan Bathery and adjoining Panchayats are under implementation by KWA. In addition, scope for producing 0.75MW of electricity through the canal head works is under consideration by Kerala State Electricity Board. Wayanad District, with its natural beauty and climatic condition, is already a well-known tourist destination and the Phase 1 to Phase 3 proposals for developing the area near the Karapuzha Project head works and reservoir area as a Mega tourism destination had been completed and open to the tourists from 21st May 2017 Onwards. Since then, it has attracted a large flock of tourists. It is estimated that more than 30.58 lakhs of people have visited the spot till date.

The Irrigation Project was cleared by Planning Commission videNo.II-20(4)771&CAD dated, 19.04.1978 and Administratively Sanctioned vide G.O.(MS) No.67/78/W&T dated 28.07.1978 for an amount of 7.60 Crores. Revised DPR of this Project as per DSR 2014 (Cost index 39.05) amounting 560 Crores has been submitted and approved by the Government of Kerala as per GO(Rt)No.988/2017/WRD, Tvm, dated 11.12.2017. The total expenditure for the project as on 31.03.2025 is Rs.392.44Crores.

As Karapuzha Medium Irrigation project was one of the four major/ medium irrigation projects characterized by time and cost overruns the Kerala State Planning Board evaluated four large scale infrastructure projects like Karapuzha in 2017 by appointing a Technical Committee. The Technical committee after detailed review and site visits submitted their recommendations on August 2018. As per the recommendations the original scope of the project was reduced to achieve an ayacut of 2538 Ha instead of the originally proposed 5221 Ha (Gross Ayacut 5600 Ha). As first milestone from the current status the completion of the rectification works of the existing canals, completion of the distributaries for which land is available with the department, and completion of Kottoor Branch canal and its three distributaries for which land is to be acquired and completing the Land acquisition of the reservoir for raising the reservoir storage to its full capacity of 76.50 Mm^3.

1.3.2 BANASURA SAGAR PROJECT

Banasurasagar Project is envisaged to provide irrigation facilities in Wayanad district. It is located in Karamanthodu basin which is tributary of Panamaram River which in turn is tributary of Kabani River which ultimately joins with Cauvery River. Karamanthodu originates from two hills namely Kakkanmalai and Modgiri in Western Ghats

BanasuraSagar Dam was constructed by KSEB in 1973 mainly for the Kuttiyadi Augmentation scheme. In Wayanad District Paddy, pepper, coffee,

Banana vegetables etc. are the main cultivation. The project is proposed for an ayacut of 2800Ha. Kerala State Electricity Board had agreed to provide 1.7TMC of water for irrigation purposes out of an annual yield of 6.7 TMC of water in the reservoir. But as per the amendment in the Cauvery Water Tribunal decision, the allocation for BanasuraSagar Project is 0.84 TMC. The Administrative sanction obtained for the project in 1999 for Rs. 37.88 crore.

1.3.3 MALAMPUZHA PROJECT (CADA)

The Malampuzha irrigation Project is the first large-scale irrigation system attempted in the Malabar District of old Madras State. The aim of Malampuzha Project was not only to bring new lands to cultivation, but also to supplement the rainfall in the season between the South West and North East monsoon in December and January. The cultivation was depending entirely on rainfall which was heavy but ill distributed. All low lying lands that can retain some moisture could raise two crops, while the high level lands raise only one crop. The seeds for 1st crop which coincide with the south west Monsoon are laid in the month of May after two or three showers and as soon as this is harvested the land is prepared for the Second crop which is entirely transplanted and which coincide more or less with the North East Monsoon during the period from October to February. The problem of timely rains for the broadcasting of seeds in the month of May and for the last stage of the Second crop in December-January was a constant headache to the Malabar regions. But the second crop was more or less a gamble and rarely attempted.

The Malampuzha River has its source in the portion of the Western Ghats lying due north of Palakkad Taluk. The Malampuzha Irrigation Project was constructed in erstwhile Madras State and was commissioned in 1955 before the formation of Kerala State. It has a storage capacity of 226 million cubic meters of water. It has two systems of canals namely Left Bank Canal (LBC) and Right Bank Canal (RBC) along with branch canals, distributaries and field channels.

At the present designated ayacut under the Malampuzha Project which is 21165 Ha, due to various reasons it is not possible to irrigate the entire ayacut of 21165 ha to the required quantity of water in the required time. This is partly due to the dilapidated condition of field channels supplying water to the fields.

1.3.4 POTHUNDY PROJECT

The Pothundy project commissioned during 1967 consists of;

1. An earth dam across the tributaries of Ayilur river mainly,Meenchadypuzha and Paddy puzha originating from the Nelliyampathy Hills.

2. A masonry spillway at right flank of the dam for surplussing the flood discharge and other apparent works.
3. Two main canals, their branches and distributaries to irrigate 4986 Ha. lands in Chittur and Alathur Taluks of Palakkad district.

It comprises an Earthen Dam of length 1680.00 m with a storage capacity of 50.914Mm³, i.e., live storage of 43.90 Mm³ and dead storage of 7.014Mm³. The location of the dam is at, latitude of 10º37'N and longitude of 70º37 'E and 8 km from Nemmara town in Palakkad district.

The dam is 1680.00 m in length and the reservoir has a water spread area of 4.14 sq. Km and live storage capacity of 43.90Mm³ at FRL of 108.2m. There are two sluices for regulating water in the main canal that take off from the Dam, viz, RBC & LBC. The Right bank canal is having (1) a main canal of length 10.50 Km (2) 16 branches of length about 56.20Km (3)and number of spout of about 236nos (both direct sluice and field boothies) feeding an ayacut area of 2711.55Ha. and the Left bank is having (1) a main canal of length 8.3Km (2) 8 branches of length 37.65Km (3) and number of spouts of about 165nos (both direct sluice and field boothies) feeding an ayacut area of 2074.05Ha.

Water is being distributed through the Left and Right Bank canals mainly for paddy, which is being cultivated in 90% of the ayacut area. Crops like coconut, plantain, areca nut, vegetables, pulses, rubber, and tapioca are also grown.

Water is being distributed continuously in the main canals for the entire base period of the crop depending on the availability of water in the dam and the request of the farmers. Water is being released into the branch canals and field channels in a turn system. The entire canal system is divided into two turns to feed the ayacut in intervals.

1.3.5 MANGALAM PROJECT

The Mangalam project commissioned during 1956 consists of;
1. A Dam across the Cherukunnampuzha a tributary of Mangalam river, which is a tributary of Bharathapuzha.
2. Two main canals, their branches and distributaries to irrigate 3440Ha .lands in AlathurTaluk of Palakkad district.

It comprises a main dam of rubble masonry 162m long with a storage capacity of 25.494Mm³, i.e., live storage of 25.344Mm³ and dead storage of 0.15Mm³. The location of the dam is at, latitude of 10º31'N and longitude of 76º32'E and 48km south of Palakkad town and 48km northeast of Thrissur town.

There are two canals i.e. The Right bank canal and Left bank canal to irrigate 3440Ha of land in Alathur taluk of Palakkad District. Left bank canal takes off from the sluice in the dam and traverses a distance of 24km to irrigate 1720ha of land and LBC has 6 major branches and 41 distributaries. RBC starts from a head sluice at ch: 200m of left bank canal crosses the parent river by an aqueduct and traverses a distance of 21.5km to irrigate 1720Ha of land and RBC has 7 branches. The command area of the project lies in panchayaths of 1)Vadakencherry 2)Vandazhy 3) Kizhakkenchery 4)Kannambra 5) Pudukkode 6) Kavassery.

Mangalam Irrigation Project has more than 40 number of field channels. Field channels receive the water from the branches and distribute water directly to the field.

1.3.6 CHITTURPUZHA PROJECT (CADA)

Chitturpuzha Project has 336 field Channels. Most of the field was damaged in several portions due to the non-maintenance. Due to crossing of the field channel by cattle's, tractor, pedestrian formation of new work way and for diversion of water by farmers the field channels were damaged at many places. The project aims at the renovation & modernization of the selected 39 field channels at different locations of the canal network.

1.3.7 PAZHASSI PROJECT

Pazhassi Irrigation Project is the first Irrigation Project in Northern Kerala. The construction of the Project started in 1961 and was commissioned in 1998. The project has a barrage and reservoir in Valapattanam River at Kuyiloor, and a canal network for a length of around 400 Km as its assets. Water distribution was done through the project till 2008. Due to various reasons distribution was disrupted and completely stopped since then. The Ayacut area of the project is 11525 Ha.

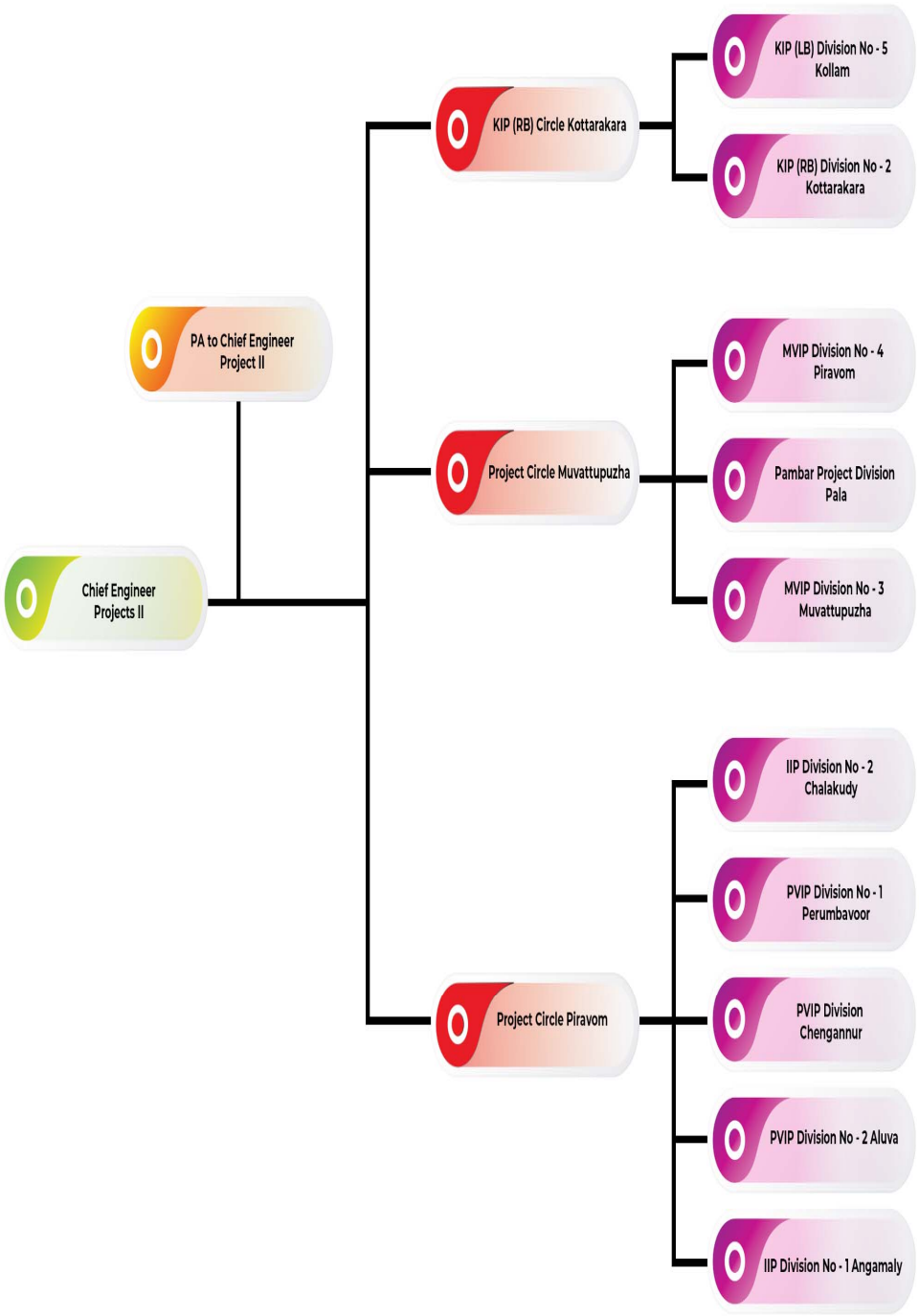
The renovation of the main canal was completed at 5.50 Km and the trial run for water distribution was conducted on 20-04-2022 by the Honorable Minister for Water Resources Sri. Roshy Augustine. The government has intended to re-commission this project by the end of December 2025.

1.4 PROJECT II

Irrigation Project II which is a part of the Irrigation Department entrusted with the responsibility of implementation of major and medium Irrigation projects in Central and South Kerala. Maintenance of already completed projects in this region is also the responsibility of this wing. The ongoing Projects under Plan head are

Muvattupuzha Valley Irrigation Project, Idamalayar Irrigation Project, Pambar Basin Project and Meenachil River Valley Project.

Fig.1.4 <u>Organizational structure:-</u>



Objectives and Functions:-

The main activity of the Project II Wing of the Irrigation Department includes planning, designing, execution and monitoring of the major and medium irrigation projects and maintenance of commissioned projects. The main projects under execution are as follows.

1.4.1 Muvattuppuzha Valley Irrigation Project

The Muvattupuzha Valley Irrigation Project, one of the major projects in Kerala envisages the utilization of the tailrace discharge from the Moolamattom Power House of the Idukki Hydro-Electric Project and the dependable runoff from the catchments of Thodupuzha River. It comprises of an earth cum masonry dam at Malankara in river Thodupuzha, a tributary of Muvattupuzha River and right bank and left bank canal systems to irrigate a cultivable command area of 19237 ha **(**Idukki, Ernakulum and Kottayam districts**).** Vide G.O (MS)NO.20/2008/WRD, dated: 10.04.2008 and Govt. letter No. 18511/mp1/2011/WRD dated 22.02.2016, some canals were not done revising this ayacut to 18237 Ha**.** In addition to this, the project envisages to supplement canal water for drinking water supply schemes, generation of hydel power at the toe of the dam with an installed capacity of 10.5 MW and other indirect benefits to Ernakulum, Idukki and Kottayam Districts. The power production commenced from 9/2005 onwards. The project was partially commissioned in 1994. As the completed canal network is charged during the summer season, the ground water level in the entire area will be much benefitted, solving drinking water problems without incurring any additional expenditure. The tail end of Kurumulloor minor distributary and Kuravilangadu minor distributary discharge into the Pennarthodu and Meenachil River respectively. Through this, the vast low level paddy fields in Kottayam district can also be made cultivable through its desalination and the drinking water problems in summer can be avoided.

Dam and connected works are completed. The left bank main canal and right bank main canal are completed to its full length. 37.100 km and 28.337 km respectively. Branch canal works completed for a length of 56.695 km. Distributaries completed for a length of 208.610 km. DPR for balance works of distributories & branch canal submitted for an amount of Rs.36.50 Crores to NABARD for approval. Expenditure up to 31-3-2025 is Rs.1165.75 Crore. Budget allocation for 2024-25 is 15 Cr.

The AIBP works to be completed are balance works of Karikode distributary and Piravom Branch Canal. A DPR on balance works of Karikode distributary amounting Rs. 36.50 crore has been submitted to NABARD through Govt. for sanction.

1.4.2 Pambar Basin Project

Pambar river, an east flowing river is a tributary of Cauvery river. The basin area of Pambar scheme in Kerala is 384 KM^2. It is located in Idukki district. Pambar river is flowing upstream of Amaravathy reservoir in Tamilnadu. This is an interstate river. According to the final verdict of Cauvery River Water Tribunal, Kerala is eligible for 30 TMC of water from Cauvery basin. Out of this, 3 TMC is Pambar basin's share. In order to utilize this share effectively, the following schemes are proposed in the Pambar basin.

1. Chengalar Scheme
2. Thalayar Scheme
3. Vattavada Scheme
4. Champakad Scheme

1.4.3 Meenachil River Valley Project

Meenachil River having a length of 78 km originates from Kurishumala and Melukavu mala and flows through Erattupetta, Kidangoor, Ettumanoor, Kottayam and finally joins Vembanad Lake. Meenachil basin is located on the south of Muvattupuzha basin and north of Manimala basin. At present there are no major projects in Meenachil Basin.

Meenachil basin experiences severe water shortage during summer season. Every year, a large amount of money is being spent for drinking water supply, control of salinity intrusion and for prevention of epidemics spreading with contaminated water apart from shortage of water for agricultural development. Proposal already submitted to Govt for conducting the catchment area study and hydraulic modelling for Meenachil river. AS obtained for an amount of Rs.2,13,58,000/- as per G.O(R.t) No. 458/2024/WRD Dated : 15/06/2024 for conducting feasibility study.

1.4.4. Muvattupuzha-Meenachil River Basin Integration Tunnel Project

To divert surplus water from Idukki's Moolamattom power house to Meenachil River via a 6500 m tunnel and 200 m open channel. Will resolve summer water scarcity in Meenachil basin. The agency WAPCOS LIMITED has been entrusted for conducting the feasibility study and submitting the report for the Project, As per Government Order (Rt) No. 458/2024/WRD dated 15.06.2024, the State Government has sanctioned an amount of ₹2,13,58,000/- (Rupees Two Crore Thirteen Lakh Fifty-Eight Thousand only) for this purpose. Following this, a Memorandum of Understanding (MoU) was signed between WAPCOS LIMITED

and the Government. In connection with the above-mentioned activities, a joint inspection of the project site was successfully conducted by officials of WAPCOS LIMITED in coordination with officers from the Irrigation Department.

1.4.5 Idamalayar Irrigation Project

The Idamalayar Irrigation Project is a Diversion Scheme for irrigating vast cultivable land lying in Periyar Basin on right side of Periyar River in Aluva and Paravur Taluks of Ernakulam District and Mukundapuram Taluk of Thrissur District. It also envisages extension of irrigation on the left and right bank of Chalakudy River. The total additional ayacut for irrigation aimed at by the implementation of the Project using the water of Periyar and Chalakudy Rivers is 8393 hectares. The main source of water is Idamalayar Dam of Kerala State Electricity Board which is already completed and the run off from the free catchment upstream of Bhoothathankettu. The Project started in 1981 with an approved cost of Rs. 17 crores.

The works to be completed for commissioning of IIP is the link canal of 7.5 km length, out of which 2.035 km has been completed. For the completion of the remaining length of the IIP Link canal, a proposal for the design of the pumping system has been invited from KWA.

1.4.6 Chalakudy River Diversion Scheme

The Chalakudy River Diversion Scheme was commissioned in 1966. The head works of the Project is at Thumboormuzhy which comprises a gravity type weir having length of 185 m in mass concrete with coursed rubble masonry casing across Chalakudy river. The weir was completed in 1957. The maximum height of the weir was 3.66m. This was increased by 0.3 m with concrete casing as a part of the developmental works when the Chalakudy Project was made an integral part of the Idamalayar Irrigation Project. The canal system of the project consists of two main canal viz the right bank Main canal and Left Bank Main Canal with their branches and distributories. The total length of the Right and Left bank main canal and its branches and distributories comes to 379km.The ayacut served by the project is 14142 Ha in Thrissur and Ernakulam districts.

Now water distribution through Chalakudy left bank and right bank canals under CRDS are being done through Thumburmuzhy weir across Chalakudy river. After completing Idamalayar Irrigation Project, water from Bhoothathankettu barrage will be benefitted to Main canal, Low Level Canal and Chalakudy left Bank canal (under CRDS) through connecting Link Canal and hence water from Thumburmuzhi weir will be benefitting exclusively for Chalakudy Right Bank Canal. The canals of this project are in dilapidated condition which adversely affects the efficiency of the canal system. A DPR on revamping of Chalakudy River

Diversion Scheme amounting Rs. 371.66 Cr has been submitted to Govt. for sanction.

1.4.7 Periyar valley irrigation Project

The Periyar Valley Irrigation Project envisages the utilization of the tail race discharge from the completed hydel schemes in the Muthirappuzha Tributary of river Periyar together with the controlled release from the Ennakkal Dam constructed by KSEB under hydel scheme across the Idamalayar tributary and the dependable run off from the uncontrolled catchment of Periyar River for irrigating an area of 32800 Ha of land lying on the left bank of Periyar river through a network of canal system and controlling devices. The project envisages to provide irrigation facilities to an area of 32800 ha. Lying in Kothamangalam, Muvattupuzha, Kunnathunad, Aluva, Kanayanoor and Paravurthaluk of Ernakulam district. The project enables supply of water to FACT, supply of minimum quantity of water through the river to check the ingress of salinity at lower reaches as well as to meet the requirements of many LI Schemes of the river Periyar. The Project was commissioned in 1992.

The canals of this project are in dilapidated condition which adversely affects the efficiency of the canal system. A DPR on revamping of Periyar Valley Irrigation Project amounting Rs. 575.1961 Cr has been submitted to Govt. for sanction.

1.4.8 Pamba irrigation Project

The Pamba Irrigation Project aims at the utilization of the firm discharges of the tail race water of Sabarigiri hydro Electric Project for the catchment of 287sq.km. in the reservoir formed by a dam across river Pampa at Anathodu and across Kakkiyar at Kakki. The tail-race water is let into the river Kakkad and is picked up at Maniyar by a Barrage. The water thus collected is diverted through a canal on the left bank of the river. The Project irrigates 21135 Ha land in Pathanamthitta and Alappuzha district through a network of canal system PIP was completed years back in 1993.

The canals of this project are in dilapidated condition which adversely affects the efficiency of the canal system. A DPR on revamping of Pamba Irrigation Project amounting Rs. 217.6469 Cr has been submitted to Govt. for sanction.

1.4.9 Kallada Irrigation Project

Kallada irrigation and Tree crop development scheme is the largest irrigation project in the State of Kerala. The dam was commissioned in 1986. Our mission is to ensure water in the canals for irrigation and power generation, flood

control and safety of the dam. This project comprises a straight gravity masonry dam across the Kallada river, at Parappar near Thenmala in Kollam District.

The total length of the dam is 335 m and height from the deepest foundation is + 85.35 m. The dam was made up of 12 blocks, serially numbered from left to right. The total length of the spillway is 42.06 m (which includes 3 Nos. gated ogee type spillway of size 12.19 m x 9.14 m). There are two non-overflow masonry sections on either side of the spillway. The non-overflow masonry dam on the left side is of length 130.87 m and on the right side is 162.07 m, including the power generation portion. A road way 7.62 m wide with parapets is provided. An Auxiliary Spillway of Labyrinth type is constructed on the right bank of the main dam. It is a free flowing spillway without any control gate. The designed discharge of Auxiliary Spillway is 698 m3/sec. As and when the flood water rises above MWL (+116.73 M), flow will commence. The length of the auxiliary spillway is 56 m. Crest level +116.73 m.

The length of earthen dam is 225.7 m. and has a maximum height of 12.51m from the lowest foundation level. The lowest foundation level is +106.39 m and dam top level is + 118.90m. The type of saddle dam is impervious fill.

The command area of this project is distributed over Kollam, Pathanamthitta and Alappuzha district and covers Punalur, Pathanapuram, Kottarakkara, Kollam, Kunnathur, Karunagappally, Adoor, Konni, Mavelikkara and Karthikappally Taluks. Also, the canals pass through Kollam, Pathanamthitta and Mavelikkara Parliament constituencies. The scheme benefits a net cultivable command area of 53100 Ha in 92 villages. The main canals (RBC and LBC) take off from the weir. The canal network comprises Left Bank Main canal of length 56.016 km, Right Bank Main canal of length 69.752 km, Left Branch Canal of length 61.692 km, Right Branch canal of length 47.573 km. distributaries and minors.

Revamping of KIP amounting Rs. 530 Cr has been submitted to Govt. for sanction.

1.4.10 Vazhani Irrigation Project

The Vazhani Project consists of an earth dam across the Wadakkanchery river a tributary of Kechery River, originating from Machad Hills in the Western Ghats. This project has a catchment area of 20.72 sq.km and a network of canal systems to irrigate a total ayacut of 4,313 Ha. of land in Thalappilly, Kunnamkulam and Thrissur taluks in Thrissur District.

The Dam with outlet sluice and surplus escape is located at Vazhani, 10 km east of Wadakkanchery railway station. The bed level of the river at the dam site is+39.62 m and the maximum water level is +62.48 m. This project was started in 1951 and partially commissioned in 1957 and fully commissioned in 1962.

An earth dam 792.48 m long is constructed across the Wadakkanchery river, connecting the hills on either side, with protective revetment in front and of turfing in the rear, which gives a pleasing appearance. Reinforced cement concrete conduit supply sluices regulated from the top of masonry wells in front, are provided on both flanks. A masonry spillway of 4 spans each 6.62 m long with steel shutters 2.65 m height, total length of spillway 31.09m and is built on natural rock on the left bank.

The canal network starts from the left bank of the dam. The canal takes on as left bank main canal at 100 m downstream, with one outlet to the Wadakkanchery River, which acts as Right Bank System to feed an ayacut of 2200 Ha. The main canal runs as a left bank main canal to feed an ayacut of 2113 Ha. The distribution system consists of a LBMC which is 39.20 km long with 3 branch canals and a network of distributaries.

A DPR for construction of new shutter arrangements to various chiras in Wadakkancherry river.

1.4.11 Neyyar irrigation project

The Neyyar Irrigation Project, one of the commissioned Major Irrigation Projects in Kerala, aims at the harvesting of the Neyyar river for the purpose of irrigation. This was the first major irrigation project taken up in the Travancore Cochin state under the Ist Five Year Plan. Originally, this project was conceived as a Hydro Electric Power Project, but later this was abandoned since it was uneconomical.

The dam was constructed across Neyyar River at Chempilamodu near Kattakkada in Thiruvananthapuram district, approximately 29 kilometres east of Thiruvananthapuram City. The construction of the project was started in 1951 and completed in 1973. The project has Gross Command Area (GCA) of 18095 Ha. The Project has now become an integral part of the lives of the people of Neyyatinkara Taluk and its surroundings, since it is the main source of water for agricultural and drinking purposes.

The main dam is a straight gravity masonry dam, 295m long. The height of the dam above the deepest foundation is 56.08m. The spillway length is 34.60m with 4 Nos of radial gates each having size 8.65mx5.18m. There are four earthen saddle dams; one on the right bank side and three nos on the left bank side. The total length of all saddles is 491.66m and the maximum height is 12.19 m.

This project consists of (1) Straight gravity rubble masonry dam of 56m height across Neyyar river, (2) a reservoir having water spread area of 9.1 sq km at Full Reservoir Level and (3) water distribution system consisting of two main canals and its branch canals and distribution planned to irrigate two crops of paddy in the area of 15380 ha. The canal network consists of Right bank canal of length 33.4 km, left bank canal of length 33.82 km and branch canals of length 277.78 km. DPR

of " Revamping of Neyyar Irrigation Project" for a total amount of Rs.436.712 Cr is submitted to Govt. for sanction.

1.4.12 Cheerakuzhy Irrigation Project

The construction of the project was started in 1957 and completed in 1968. But its commissioning was in 1973. Cheerakuzhy is located at the northern part of Thrissur District and Southern side at Palakkad District. The Cheerakuzhy weir is constructed across Gayathri river, a major tributary of Bharathapuzha River. It consists of a masonry weir at Cheerakuzhy with a system of Irrigation canal at the left bank which caters 1200 Ha. of ayacut in Talappilly taluk of Thrissur District. The site of the masonry weir is at the upstream of the road bridge of Pazhayannur-Thiruvilwamala road. The head works consisting of masonry weir is located at 10o40' N latitude and 76o 25' longitude. The weir is situated in Vadakkethara village of Talappillytaluk in Thrissur district, approximately 33km from Wadakkanchery town.

The canal system is regulated by a sluice at the left side of the reservoir. This scheme is the only source of irrigation of the areas in 11 villages, named Pazhayannur, Vadakkethara, Kondazhy, Mayannur, Thozhuppadam, Panjal, Pynkulam, Cheruthuruthy, Nedumpura,Desamangalam and Kodayaur villages. This scheme is mainly intended for Mundakan crops.

The left bank main canal system with its initial off take from the reservoir at a level of 36.12m above M.S.L. is having a total length of 50.70km.including main canal and four branches.

The left bank main canal has a total length of 40.90Km and 4 branch canals of length 9.8 km and it serves an ayacut of 1200 ha. The canal finally empties its residual water into the Bharathapuzha river at Kondayoor.

1.4.13 Chimoni Irrigation project

Chimoni Dam was constructed in Chimonipuzha, a tributary of Karuvannur River in Thrissur District. The project is proposed to irrigate a gross area under crop of 35700 hectares. Besides the Irrigation benefit the project also ensures protection of 5600 hectares of land in the Vallivattom- Chettuva area from saline intrusion. The project also benefits by moderating floods in Karuvannur Basin.

The Chimoni dam and the reservoir is situated 38.00 Km east of Thrissur. Nearest Railway Station Puthukkad is 29 Km away from Chimoni Dam. The project consists of a dam across Chimoni River, a tributary of Karuvannur River, at Echippara in Thrissur district to irrigate 13000 Hectare of Paddy fields and to make possible two crops and single crop in Kole lands. As there is no canal system in this project, the regulated flow from the reservoir is let down into the river and is diverted to fields by means of Regulators constructed at various points. The Storage capacity of the reservoir is 179.00 Mm^3 and the water spread area is 10.10 Km^2. This project was completed in the year 1996 and it is constructed as a Masonry and

earth dam. The length of the Masonry dam is 495m and the length of the Earth dam is 686.50m. By commissioning of this project, 11000 hectares of paddy fields in Kole lands get water for Puncha and 6200 hectares of Kole fields get additional Mundakan crop besides the 5400 hectares of paddy fields in Chettuvai, Vallivattom, and Brahmakulam area. Flood control is an added advantage.

1.4.14 Thrissur kole lands

Kole land is part of the unique Vembanad Kole wet land eco system in Kerala. The kole lands are located in the Central Kerala that spreads over Thrissur and Malappuram districts. In olden days the kole lands were reclaimed from kayal area by putting up temporary earthen bunds and cultivation of rice were done by enterprising farmers during summer period from December to May. A peculiar type of cultivation carried out from December to May is "Kole" and means "Bumper yield". It contributes to forty percent of rice production in the state. Rice cultivation in Kole land started in the 18th century. Temporary bunds were constructed around each plot (padavu) in this Kayal land and dewatered and used for cultivation during December to May. Dewatering waters from Padavu were stored in canals/drainage networks between these padavu and used in later stages for irrigation. But this is insufficient and only with the help of good summer showers farmers get good yield.

In Thrissur district, 13000 Ha of kole land extends between Kechery river and Karuvannur river. Kole land lies below the mean sea level ranging from 0.5m to 2.5m. Majority of the kole land in Thrissur Taluk and a small portion in Thalappilly Taluk are lying very near to sea. As these lands are low lying areas, a day long rain is enough to bring the land under flood. During the monsoon season, the entire area resembles a vast sheet of water inundation and would remain in this stage for nearly six months and during this period, the entire land lies submerged under water. Flood water enters through chemmeenchal, Peramangalamchal etc. from Kechery river. It enters through Herbert canal, Chirakkalthodu, Link canal etc from Karuvannur river to the north zone. Entry to the south zone is through Thamaravalayam canal, Thommana etc. Exit for this flood water is through Enamakkal, Idiyamchira and Koothumakkal regulators.

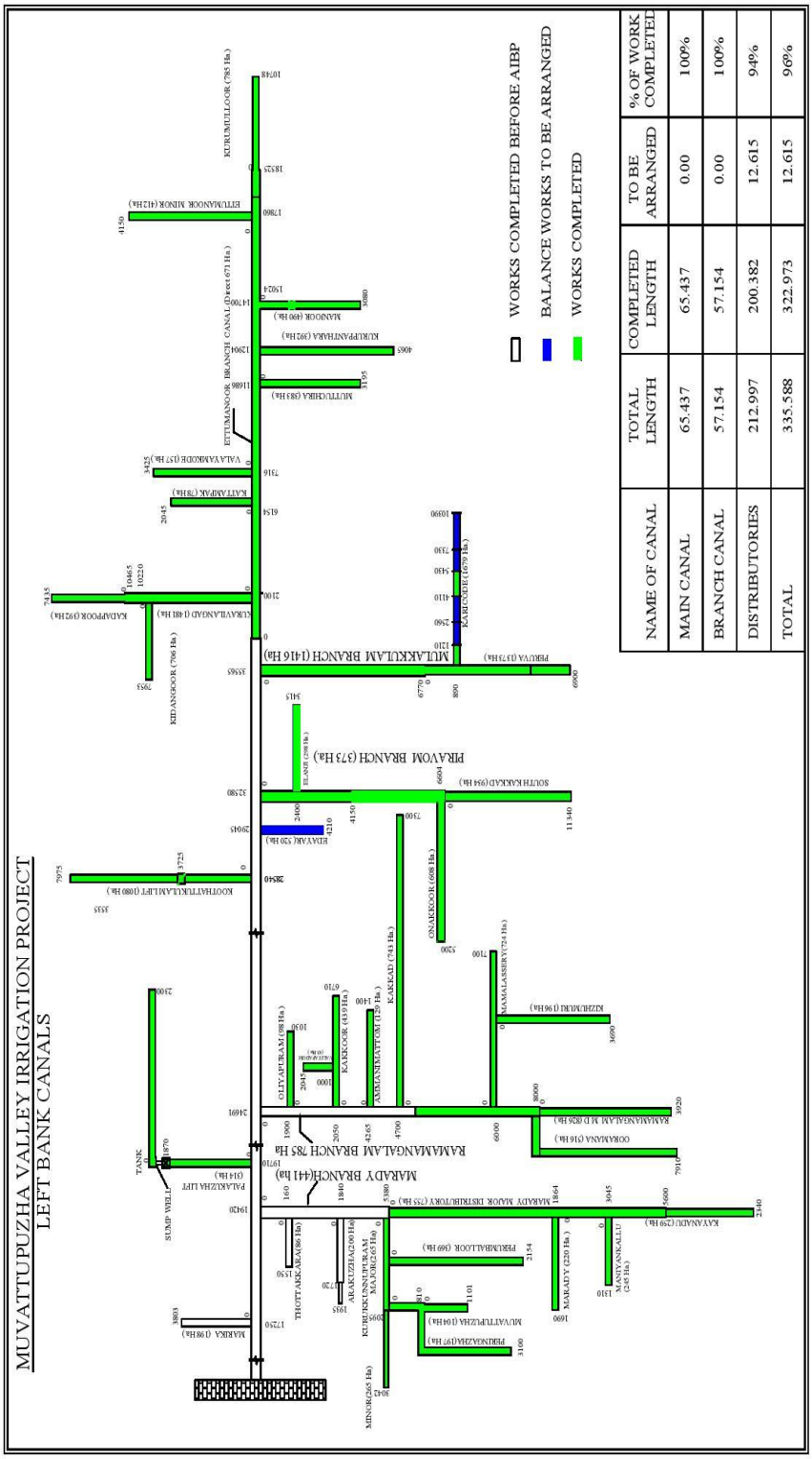
The soil in the kole lands is classified under the category of acid saline soil as it is acidic and contains elements of sodium chloride. The soil also contains elements of iron, aluminium, manganese and sulphur. By constructing temporary bunds at Munayam, Enamakkal and Idiyanchira, salt water intrusion to the agricultural land is prevented to a great extent. Now, instead of temporary bund at Munayam, the works of a permanent regulator cum bridge across Karuvannur river connecting Kattoor and Thannyam Panchayat is under progress (NABARD - RIDF

XXIII – Saline Ingress Prevention by construction of Regulator at Munayam across Karuvannur River). With the construction of this RCB, 3000 Ha of kole land with double crop, fish farming etc. can be achieved. About one lakh people in Nattika and Irinjalakuda Constituency can utilize this bridge and thereby increase the facility for communication. This RCB is proposed for retaining water to a height of 5.5 m with a length of 82m using 6 shutters of 12m length.

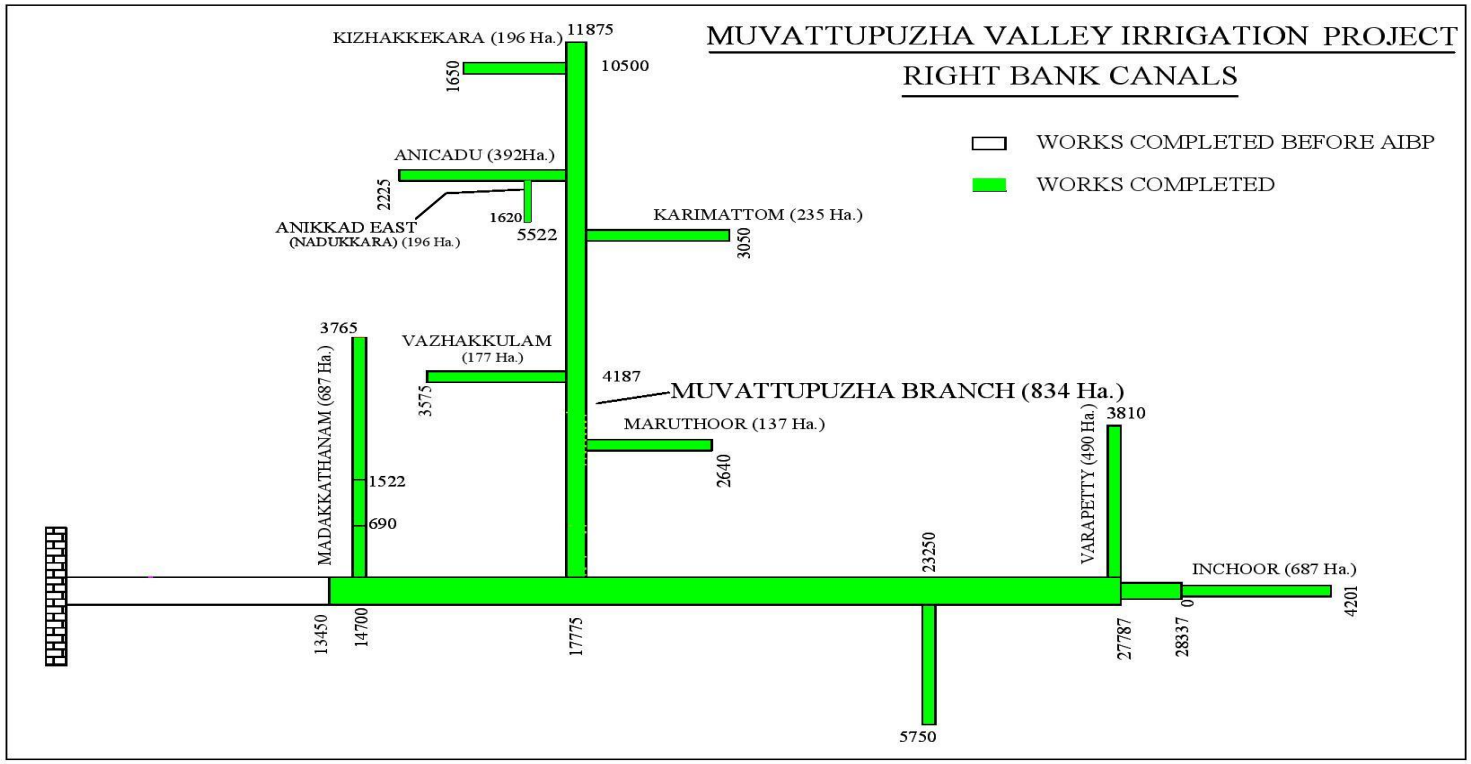
The sources of irrigation water for the kole land area are the Peechi irrigation project, Vazhani Irrigation Project and Chimoni Irrigation Project. Water released from Chimoni is stored and diverted to Kole lands with regulators constructed at Illikkal and Kottenkottuvalavu. The water headed up is directed to the north zone through link canal, Herbert canal, Chirakkalthodu, Perumpuzhachal, Chettupuzhachal etc. Irrigation supply to the south zone is through Neerolithodu, Nandi thodu etc. The total length of these canals is approximately 170 Kms. Canals in Kole land act as drainage channels during flood season channelizing flood water to outlets at Enamakkal, Idiyanchira, Koothumakkal.

Sluices and regulators along these canal networks can be used for controlling flow in fields, canals and rivers. Lifting devices like Petti & Para or Motor & Pump are used for pumping. Petti & Para is the indigenous pumping device used for dewatering fields. It is now replaced with axial flow pumps.

Fig. 1.4.1 Canal system of MVIP



NAME OF CANAL	TOTAL LENGTH	COMPLETED LENGTH	TO BE ARRANGED	% OF WORK COMPLETED
MAIN CANAL	65.437	65.437	0.00	100%
BRANCH CANAL	57.154	57.154	0.00	100%
DISTRIBUTORIES	212.997	200.382	12.615	94%
TOTAL	335.588	322.973	12.615	96%


MUVATTUPUZHA VALLEY IRRIGATION PROJECT
RIGHT BANK CANALS
WORKS COMPLETED BEFORE AIBP
WORKS COMPLETED
KIZHAKKEKARA (196 Ha.)
11875
1650
10500
ANICADU (392Ha.)
2225
1620
5522
ANIKKAD EAST
(NADUKKARA) (196 Ha.)
KARIMATTOM (235 Ha.)
3050
3765
VAZHAKKULAM
(177 Ha.)
3575
4187
MUVATTUPUZHA BRANCH (834 Ha.)
MADAKKATHANAM (687 Ha.)
1522
690
MARUTHOOR (137 Ha.)
2640
23250
VARAPETTY (490 Ha.)
3810
INCHOOR (687 Ha.)
4201
0
13450
14700
17775
5750
27787
28337

1.5 KUTTANADU PACKAGE

The Chief Engineer (Inland Navigation & Kuttanad Package) was functioning as the Chief Engineer (Kuttanad Package) from 2011 to 2018 June. During 2018-19 ,as per GO(MS)No:31/2018/WRD dated 29.06.2018,the post of Chief Engineer (Kuttanad Package) is redesigned as Chief Engineer (Inland Navigation &Kuttanad package) and the full jurisdiction of development of Inland Waterways is transferred from Chief Engineer (Irrigation &Administration) to Chief Engineer (Inland Navigation & Kuttanad Package).

The Kuttanad Wet Land System Comprising of 32 Panchayats of Alappuzha District, 27 panchayats of Kottayam district and 5 Panchayats of Pathanamthitta District is predominantly agriculture belt of Kerala, where people are dependent on farming and allied activities like fishing, animal husbandry etc for livelihood. Cultivation is taken up along continuous blocks or padasekharam or polders bounded by rivers and canals. Before sowing, the flooded water is pumped out using engine pumps after the bunds are repaired. But during the monsoon and other heavy rains the flow in the canals and rivers increases, which may lead to breach of weak bund causing floods in the paddy field and result in heavy crop loss. Also the standing crops are subject to extensive damage due to salinity intrusion through the estuaries during the dry seasons.

Kuttanad region and its community were facing severe agrarian distress for the last many decades owing to the above problems and due to a variety of other factors. Based on the request of the Government of Kerala to address the perennial problem faced in Kuttanad, the Union Government entrusted Dr. M. S. Swami Nathan Foundation, Chennai to conduct a scientific study of the region and suggest suitable measures to mitigate agrarian distress in Kuttanad.

To mitigate the agrarian distress the MSSRF recommended a variety of interventions to be implemented as a Package with a total cost of Rs. 1,840 Cr. (2007 Price Level) which was accepted by the Union Government for funding under ongoing central sector schemes out of which those related to Flood Control, Salinity Management and drainage with a total cost of 1517.90 Cr. are undertaken by the Irrigation Department under the Chief Engineer, Kuttanad Package, Alappuzha.

Functions and objectives of the Department.

The strategy of Management of Flood is by erection of strong bunds along the periphery of the padasekharms of Kuttanad wet Land with clay obtained from deepening the channels all around and protecting the clay bund thus formed by constructing retaining wall using rubble masonry or Pile & Slab along the channel

side where the existing bund is very weak. Also modernization of Thaneermukkom Barrage (TMB) which regulates saline water intrusion during dry season is also taken up for execution which includes construction of RCB at the IIIrd stage replacing existing earthen bund and replacing old shutters with stainless steel shutters in the 1st & 2nd stage etc. This will contribute immensely to managing Flood efficiently. A scheme for improving the efficiency of Thottappally Spillway (TSW) which diverts the excess flood water directly to the sea is also taken up for alleviating problem caused by flood in Kuttanad Region

The Central Government while accepting the report of M.S swami Nathan foundation has reiterated that proposals made in the report shall be proposed for funding under the appropriate schemes of the concerned ministries. Accordingly all the schemes under Kuttanad Package were proposed for funding under “Flood Management Programme”.

After extensive study and surveys detailed project reports were prepared & submitted to the Government of India for funding under FMP. So far 4 schemes namely (1) KEL - I- FMP- Mitigation of Floods in Group-1, 14 Padashekharams in Kuttanad Region of Kerala. (2). KEL - II- FMP- Regulation of flood water in Kayal area - 4 padashekharams and Mitigation of Flood in Group-9 – 5 padashekharams in Kuttanad region of Kerala, (3) KEL - III- FMP - Mitigation of flood in Kuttanad Region-Phase –I, (Group 2- 5, 7-8, 10-19), 231 padasekharams (4) KEL_IV- Mitigation of flood in Onattukara region comprising of 12 watersheds have been sanctioned in 2010 and 2011. Besides 3 Projects namely, "*Mitigation of flood in 397 padashekharams of Kuttanad Taluk and Mitigation of flood in 14 padashekharams of Veeyapuram panchayath of Kuttanad Constituency in Alappuzha District", "Modernization of Thannermukkam bund to manage salinity and minimize ecological decay” & “Renovation of Leading Channel For Efficient Flood Water Disposal From The Confluence Of Pumba And Achankovil Rivers To Sea At Thottappally" have been proposed for central assistance under FMP*. The DPR for Modernization of Thaneermukkom Bund was approved by the 124th meeting Advisory committee of MoWR on 16/10/14. The investment clearance was issued by the investment clearance committee of MoWR on 10/02/2017.

Fig.1.5 Organizational setup

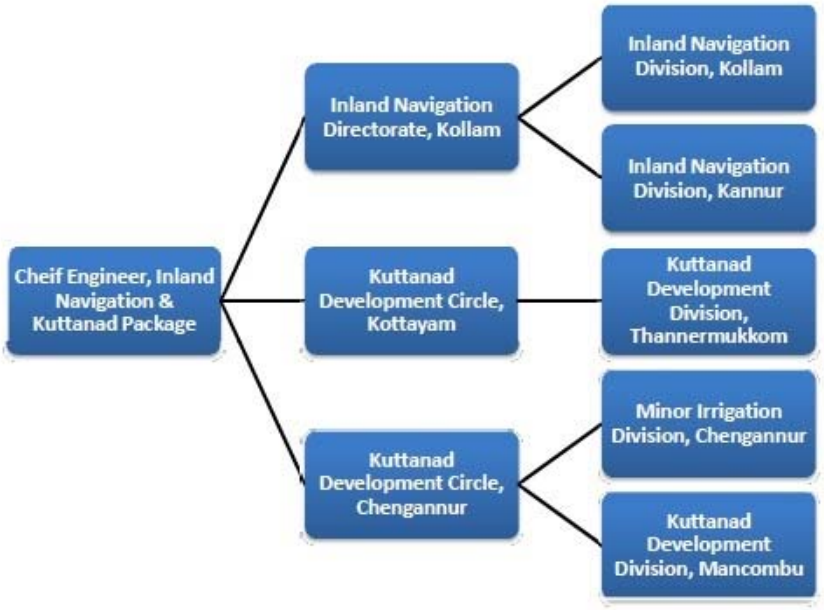


Table 1.5 Major Schemes of Kuttanad Package.

The following major schemes are undertaken by the department during the last 3 years.

SL. No		Head of Account	Description	Scheme
1	Kuttanad Package	4711-01-103-86	PMKSY	Flood management component in Kuttanad (50% CSS)
2		4711-01-103-84	Plan Voted	Flood Management program in Kuttanad
3		4711-01-103-83	NABARD RIDF	Assistance for Kuttanad

1.6 IRRIGATION DESIGN AND RESEARCH BOARD (IDRB)

The Irrigation Design and Research Board (IDRB) is the Central Design and Research Organization of Irrigation Department, Government of Kerala. The Design, Research, Quality Control, Coastal Erosion studies, Field Studies Circle and Investigation wing of the Department are under the control of the Chief Engineer (Investigation and Design) with headquarters at Thiruvananthapuram. IDRB was formed in August 1986 vide G.O.(MS) No.24/86/Irrgn dated 14-08-1986 and

subsequently started functioning under the Chief Engineer IDRB vide G.O. (MS) No. 7/1987/Irrgn dated 24/03/1987.

VISION

Towards a dynamic center, striving continuously in pursuit of excellence in the field of quality design and innovative research for water resources management of the State.

Objectives of IDRB

The Irrigation Design and Research Board (IDRB) is the Central Design and Research Organization of the Water Resources Department, Government of Kerala. IDRB, the only pioneering Institution of Water Resources Department, is entrusted with the activities of investigation and design of all irrigation Projects; all water retaining structures like Dams, Check Dams, Regulators and other various irrigation structures. The Chief Engineer (Investigation and Design) co-ordinates, monitors and reviews all the works relating to Investigation, Design, Research, Quality control, Coastal Erosion, Water Resources and Hydrology.

The primary objective is to bring IDRB as one of the best Institutions in the Country for design, research, Investigation, hydrology and other related works.

For achieving this various schemes were incorporated.

- Modernization of IDRB
- Formation of River Basin Organization
- Dam Rehabilitation and Improvement Project

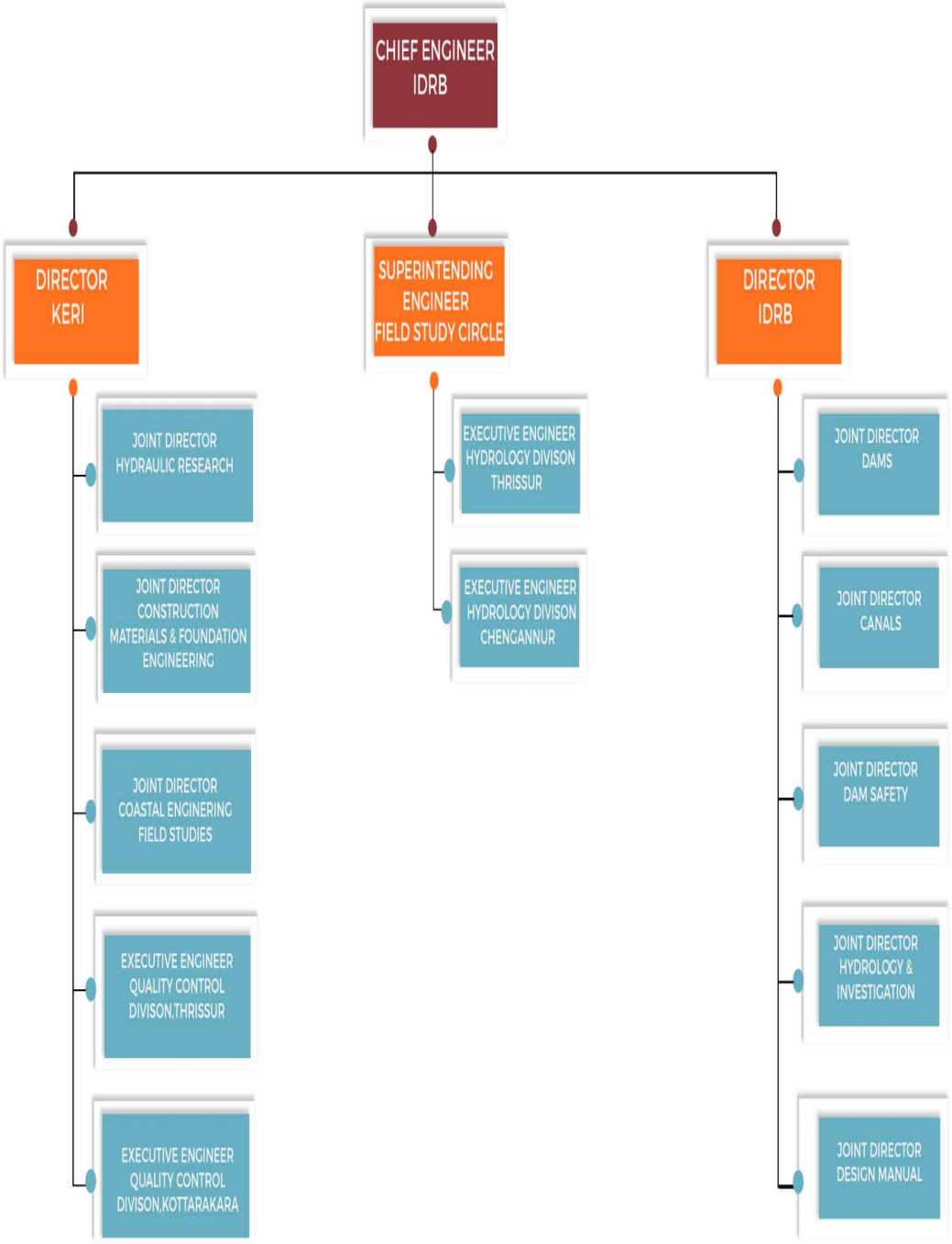
The major works include

- Examination and formulation of Project reports of medium irrigation projects for getting clearance from CWC.
- To conduct trainings for the capacity building of officers of Irrigation Department
- Receiving and submitting of design indent of various works and submission of drawings of design
- Online monitoring of Dams.
- To conduct investigation works for the design of Irrigation Structures.

Functions of IDRB

The office of the Director (Designs) at Thiruvananthapuram is in charge of designs, while the office of the Director (Research) stationed at Peechi is in charge of research. Works related to water resources and hydrology are being dealt with by the office of the Superintending Engineer – (Field Studies) stationed at Thrissur. The monitoring of Peechi Irrigation Project is done by Chief Engineer (I & D)

Fig.1.6 Organizational structure:-



1.7 GROUNDWATER DEPARTMENT

Water is as essential for human survival as air. As the population grows, the demand for water also increases, leading to intensified efforts to access it by any means. Unfortunately, this often results in a decline in water quality and causes harm to the environment.

Rainfall is the primary source of fresh water, and in Kerala, it is predominantly received through two monsoon seasons. The southwest monsoon, from June to September, contributes about 70% of the total annual rainfall, while the northeast monsoon, from October to November, accounts for around 16%. The remaining 14% comes from pre-monsoon (summer) showers. Kerala receives nearly two and a half times more rainfall than the national average.

Despite this abundance, Kerala faces acute water scarcity during summer. This is largely due to its unique geographical features, which cause most of the rainwater to quickly drain into the sea without recharging groundwater reserves adequately. To address the issue, it is crucial to adopt artificial groundwater recharge methods that facilitate the percolation of rainwater into the soil, thereby enhancing groundwater availability.

The department serves as the nodal agency for conducting groundwater investigation, constructing extraction structures, conserving and regulating groundwater across the state.

To ensure sustainable groundwater use, the department envisions a holistic management strategy that includes conservation, regulation, and watershed-based approaches. It strives to balance environmental sustainability with human needs by integrating scientific methods and encouraging community participation. Activities include groundwater investigations, construction of wells and recharge structures, and continuous monitoring of groundwater quality and availability.

The Ground Water Department also plays a vital role in enforcing the **Kerala Ground Water (Control and Regulation) Act, 2002**. It is responsible for issuing permits, resolving disputes, ensuring compliance with environmental laws, and implementing Supreme Court directives. Additionally, the department actively supports local self-governments and other agencies in executing groundwater-based drinking water schemes, particularly in underserved areas.

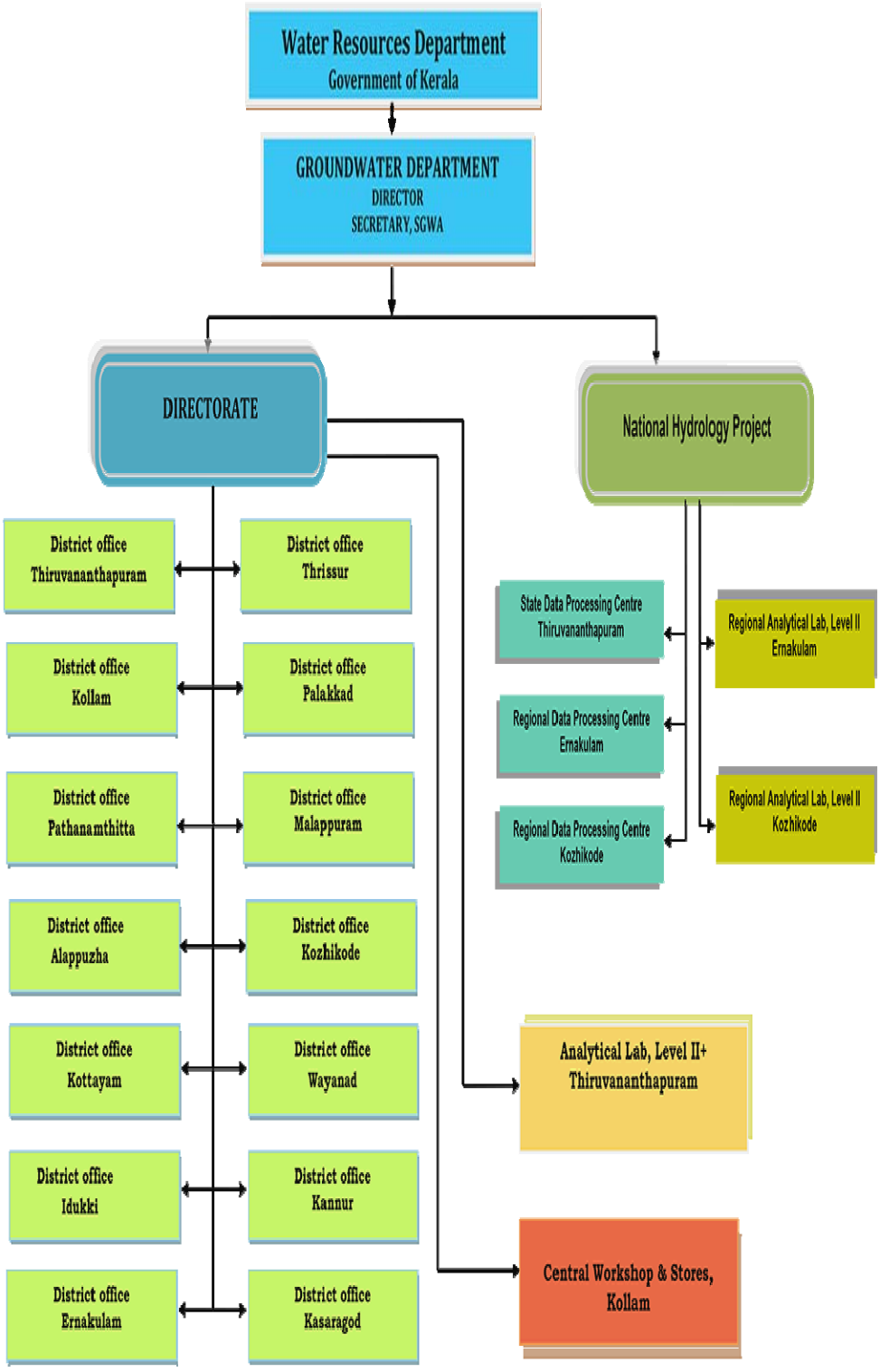
Beyond its technical and regulatory functions, the department is committed to provide education and to create awareness. It conducts training and capacity-building programs for scientific, technical, and administrative personnel. Through ongoing research, policy implementation, and collaboration with state initiatives like the **Haritha Keralam Mission** and the **State Disaster Management Authority**, the

Ground Water Department contributes significantly to ensure groundwater be a reliable and sustainable resource for future generations.

The main activities of the Department are:-

- Groundwater Resource estimation
- Groundwater investigation
- Construction of groundwater abstraction structures (Bore well, Tube well, Filter point well)
- Implementation of mini drinking water supply schemes and Hand pump schemes for Plan and Deposit Schemes.
- Providing FHTC connections under Jal Jeevan Mission.
- Implementation of groundwater conservation structures.
- Implementation of Kerala Groundwater (Control & Regulation) Act 2002
- Water quality Analysis.
- Pumping test for groundwater regulation and groundwater studies.
- Data collection for various scientific studies.
- Specific studies for disputes on ground water resource exploitation.
- Renovation of mini drinking water supply schemes and Hand pump repair.
- Rapid risk assessment studies for Kerala State Disaster management Authority as and when required.
- Activities under Navakeralam Mission.
- Water Conservation activities under Jal Shakti Abhiyan (Catch the Rain Programme) and acts as Nodal Department for the programme.
- Implementation of National Hydrology Project (100% Central Sector Scheme).
- Modernisation and National Accreditation Board for Testing and Calibration Laboratories (NABL) Accreditation for 3 Analytical Labs

Fig: 1.7 Organisational structure



CHAPTER 2

COMMENTS OF FINANCE DEPARTMENT

The Water Resources Department of Kerala plays a pivotal role in the sustainable management and development of the State's water resources. Guided by a clear vision and mission, the Irrigation department seeks to conserve and manage water resources in a scientific, equitable, and sustainable manner. Its objectives extend beyond irrigation to include enhancement of agricultural productivity, support to drinking water supply during dry seasons, assistance to the Kerala Water Authority when required, and promotion of food security and social welfare. Through systematic planning, construction, operation, and maintenance of dams, canals, and reservoirs, the department aims to ensure safe infrastructure, efficient water use, ecological protection, and balanced development.

The implementation of major and medium irrigation projects is organized through dedicated project wings. Project-I (Cauvery Cell) is responsible for irrigation projects in the northern region of the State, from Palakkad to Kasaragod, with several completed and ongoing projects that have significantly contributed to irrigation expansion, infrastructure development, employment generation, and drinking water availability. Project-II caters to central and southern Kerala, handling both the execution of new irrigation schemes and the maintenance of completed projects, thereby ensuring continuity and reliability of irrigation services across regions.

Special emphasis is placed on region-specific challenges through targeted initiatives such as the Kuttanad Package. The Kuttanad Wetland System, a unique and vulnerable agrarian region, faces recurring issues of flooding, salinity intrusion, and crop loss. Based on scientific studies conducted by the M. S. Swaminathan Research Foundation, a comprehensive package of interventions was formulated and funded by the Union Government. Flood control, salinity management, and drainage components of this package are being implemented by the Irrigation Department under the Chief Engineer (Inland Navigation & Kuttanad Package), addressing long-standing agrarian distress and enhancing livelihood security.

Complementing irrigation development are specialized institutions such as the Irrigation Design and Research Board (IDRB), the Ground Water Department, the Kerala Water Authority, and the Kerala Rural Water Supply and Sanitation Agency (Jalanidhi). While IDRB provides technical expertise in design, research, and quality control, the Ground Water Department ensures sustainable groundwater investigation, regulation, and conservation. The Kerala Water Authority and Jalanidhi focus on urban and rural drinking water supply and sanitation, emphasizing community participation and sustainability. Together, these institutions form an integrated

framework for effective water resources management, supporting Kerala's long-term social, economic, and environmental well-being.

Plan Allocation to Water Resources Department

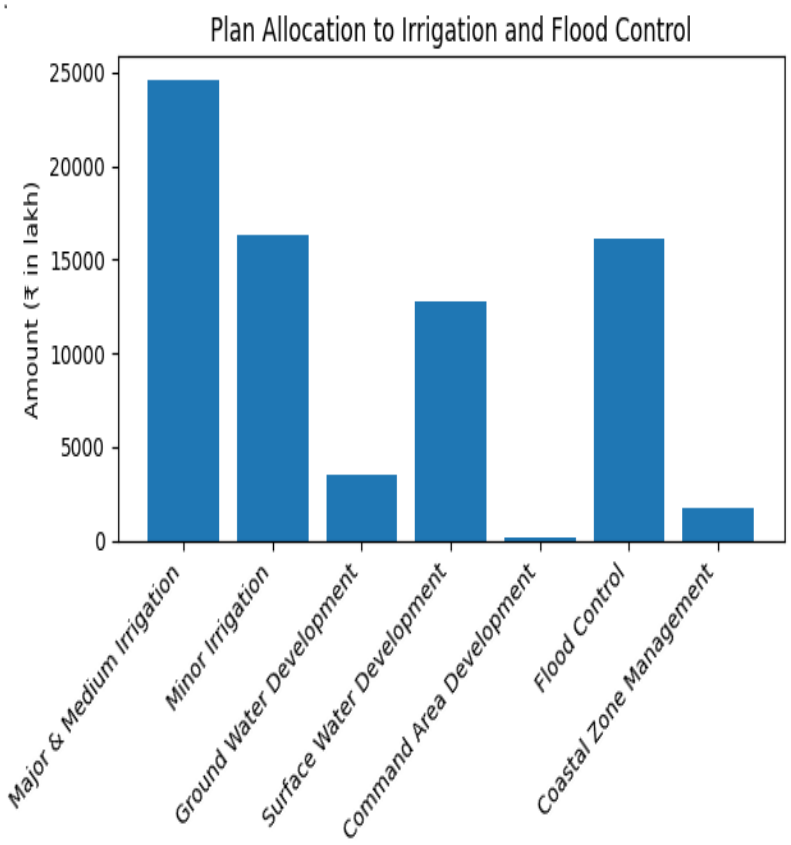
The main functions of the Water Resources department is irrigation and flood control sewage and water supply.

Finance (Performance Budget) Department mainly evaluates the works under Plan Schemes. The plan outlay provided for the Irrigation and Flood Control during the financial year 2024-25 was ₹58885 lakh. The total outlay consists of state plan schemes, state share for CSS, EAP (External Aided Project) and NABARD-RIDF. Details of outlay provided for the sector during the financial year 2024-25 are as follows:

Plan allocation to Irrigation and Flood Control

Sl No	Name of the sub sector	Amount (₹ in lakh)
1	**Major & Medium Irrigation**	**24600**
2	**Minor Irrigation**	**16328**
	a. Ground Water Development	3518
	b. Surface Water Development	12810
3	**Command Area Development**	**150**
4	**Flood Control & Coastal Zone Management**	**17807**
	a. Flood Control	16100
	b. Coastal Zone Management	1707
	Total	**58885.00**

Graphical Representation of Plan allocation to Irrigation and Flood Control

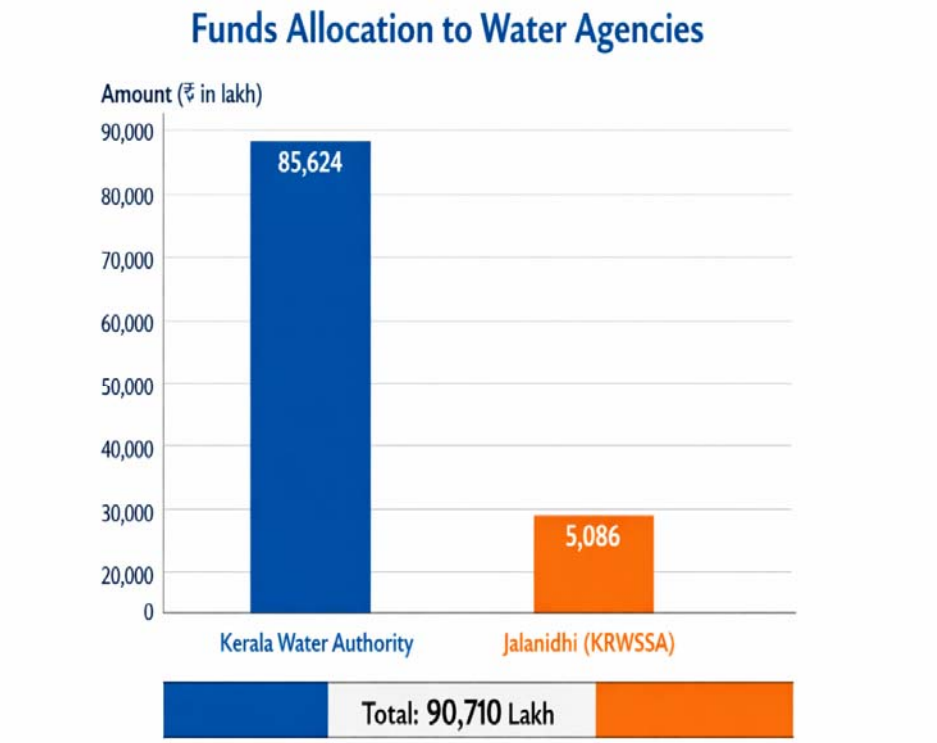


Kerala Water Authority and Jalanidhi (Kerala Rural Water Supply and Sanitation Agency) are the two main agencies involved in the supply of drinking water in Kerala. The plan outlay for the Water supply and Sewage during the financial year 2024-25 is ₹90710 lakh. Details of allocation are given below:

Plan allocation to Water supply and sewage

Sl No	Name of the agency	Amount (₹ in lakh)
1	Kerala Water Authority	85624
2	Jalanidhi (KRWSSA)	5086
	Total	**90710**

Graphical Representation of Plan allocation to Water supply and sewage



As part of the Performance Budgeting of the Water Resources Department 2024-25, Finance (Performance Budget) Department has evaluated the following schemes:

- Minor Irrigation Class I
- Minor Irrigation Class I schemes under Haritha keralam
- Lift Irrigation Works
- Rehabilitation of Lift Irrigation Scheme
- Dam Safety Organisation and Dam Safety Measures.
- Conservation of Groundwater and Artificial Recharge
- Ground Water Based Drinking Water Scheme & Renovation of Ground water based Drinking water supply scheme
- Sustainability support to community managed water supply scheme.

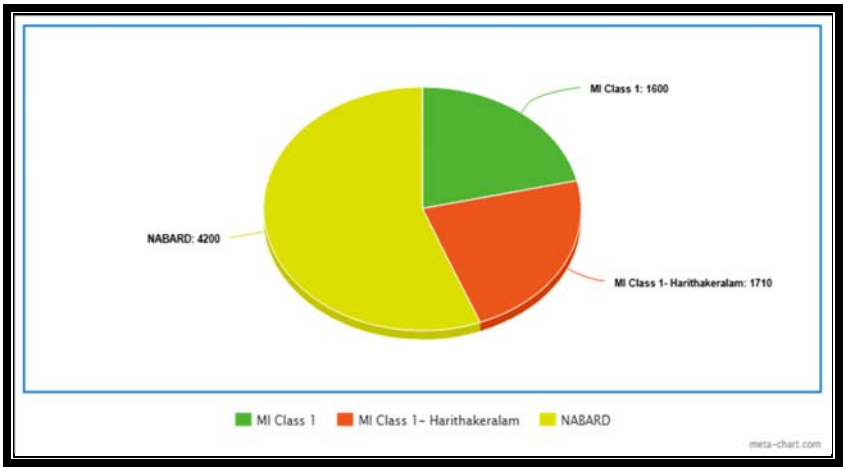
2.1 MINOR IRRIGATION

Minor irrigation refers to small-scale water management systems that provide water for agriculture, typically using groundwater or Surface water sources and covering a Culturable Command Area upto 2000 hectares. In Kerala, minor irrigation schemes are classified into Class I and Class II based on the extent of the Culturable Command Area (CCA).

2.1.1 Minor Irrigation Class I

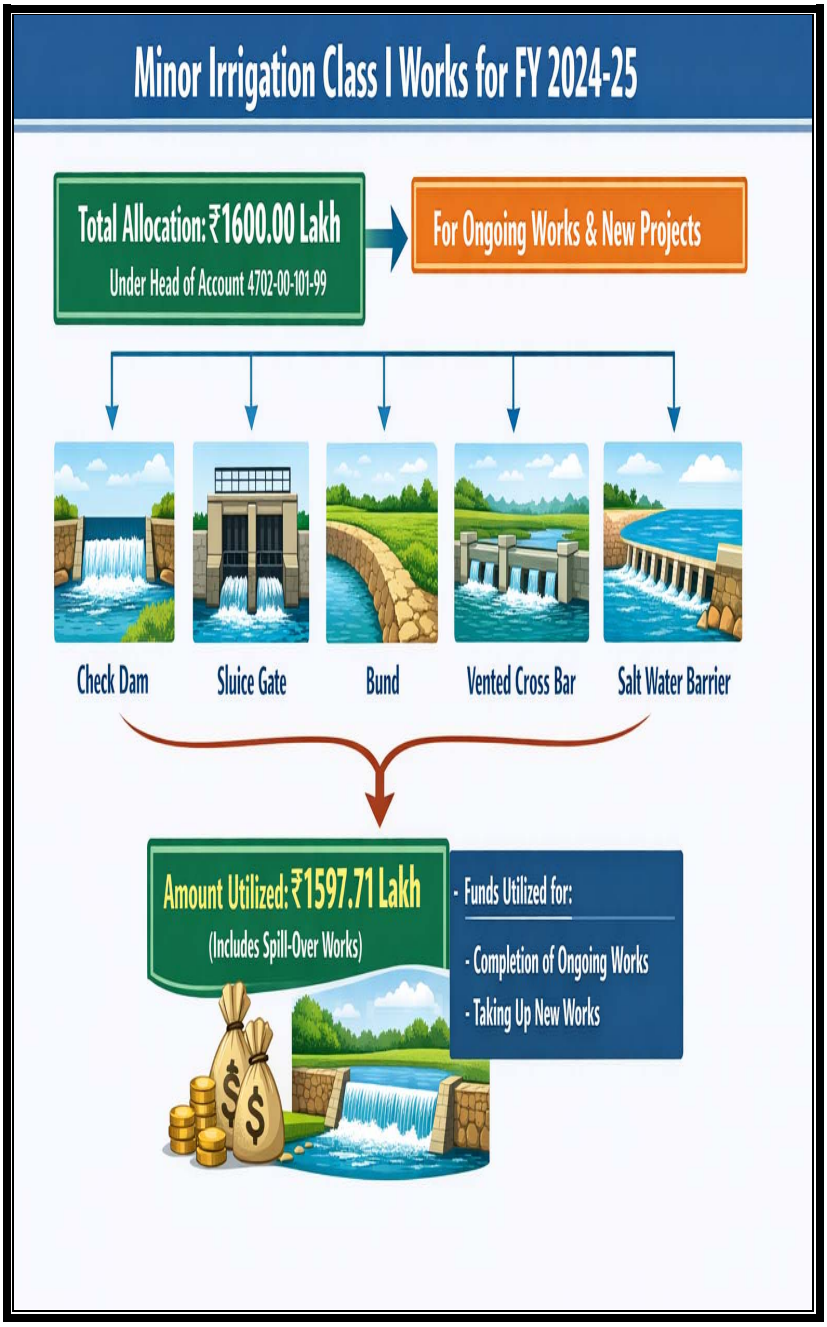
MI Class I deals with the CCA between 50 ha and 2000 hectares. They are crucial for localized water needs and often involve individual farms or small communities. Minor irrigation works such as improvements of tanks and rivulets, construction of check dams, sluices, regulators, bunds, vented cross bars, salt water barriers, layout of channels and drainage structures etc. Under MI Class I scheme, a total outlay of ₹ 7510.00 lakh was earmarked in the Budget 2024-25. A graphical representation of the same is given in the following figure:

Fig 2.1.1 (a): Component-wise allocation to MI Class 1 (4702-00-101-99)



Of the total allocation for the scheme, an amount of ₹1600.00 lakh was earmarked under the head of account 4702-00-101-99 for undertaking Minor Irrigation Class I works during the financial year 2024-25. The amount was allocated for incurring the expenditure towards the completion of ongoing works and for taking up new works such as construction of check dams, sluices, bunds, vented cross bars, salt water barriers etc. An amount of ₹1597.71 lakh has been utilised for the MI works which includes spill-over works also. Details of Budget allocations and expenditure under the above head of account during 2024-25 are represented in the figure below:

Fig.2.1.1 (b): MI Class I works 2024-25



The officials of the Finance (Performance Budget) Department visited MI division, Ernakulam and selected some of the works for assessment randomly. Details are given below:

2.1.1 a Construction of sluice at Padannakari padasekharam in Kumbalangi Panchayath in Ernakulam District

The work aimed at enhancing the agricultural output of two major Pokkali fields in Kumbalangi Panchayat viz. Padannakari and Manalkkoor padasekharams. Salt water intrusion from Kaithapuzha kayal hampered the agricultural productivity of these padasekharams. The aim was to bring back the rotational farming of paddy and fish in these Pokkali fields. In the absence of a reliable salt water barrier, farmers were reluctant to cultivate paddy and hence for the past couple of decades, only fish farming was carried out in these padasekharams. During paddy season, the fields were left uncultivated. The proposal includes construction of a culvert-cum-sluice at the point where Padannakari thodu joins Kaithapuzha Kayal to arrest salt water intrusion from Kayal. Further, the houses in the vicinity also used to get damaged due to continuous exposure to saline water. The proposal was conceived to mitigate these jeopardizing state of affairs.

Photo 2.1.1.a Sluice at Padannakari padasekharam in Kumbalangi

Administrative sanction was issued for an amount of ₹96 lakh on 26.08.2020 and the technical sanction for the same amount on 07.09.2020. The work was tendered on 06.07.2021. The agreement for the work was executed on 28.09.2021 with PAC of ₹9728809.65. The site was handed over to the contractor on 08/10/2021. The time limit for the completion of work as per the agreement was on 07.08.2022. But, the contractor could not complete the work on stipulated time and the time of completion was extended to the contractor up to 30.09.2023 without imposing fine. The work was completed on 30.09.2023. The expenditure incurred was ₹9560527. In response to the inquiry, the officials concerned replied that, during the course of execution of the work, lots of hurdles occurred, in which the main obstacle was the construction of ring bund. Due to flooding in the nearby houses caused by heavy rain and high tide effect the constructed ring bund had to be removed and again was reconstructed for proceeding with the work. Besides, at the time of bailing out, the side protection and the nearby bund on the entry side of the work site collapsed. Hence additional length of ring bund was constructed. The execution of mechanical work also got delayed. All these hurdles delayed the progress of work for almost 2 years.

The construction of the sluice has effectively hindered the ingress of salt water to padasekharams of Kappithankari and Manalkoor area. However the farmers have requested the provision of electrically operated shutters against the proposed manually operated ones and also the provision for pumpset and pump house. The fund for the same has not been allotted till date by the Agricultural Department. Farming activities will be resumed once these issues are sorted out.

i) Section 2112 of Kerala PWD Manual stipulates that the extension of time for completion of a work shall at a time not exceed 25% of the original time or six months whichever is less.

ii) Section 2112.1 Fines for Extension of Time of completion

Period	Rate of fine
First Extension	1%of the PAC subject to a minimum of Rs.1000/- and maximum of Rs.50000/-
Beyond First Extension	2%of the PAC subject to a minimum of Rs.2000/-and maximum of Rs.100000/-

Most of the irrigation works are related to water bodies unlike other civil works. Irrigation projects often face challenges due to unpredictable weather conditions like monsoons and also unexpected tidal effects especially in Kochi, which cause water levels to rise and disrupt the progress of work. These variations lead to delays.

During the onset of tides, the paddy field cannot be made cultivable by using only one part of the sluice. It can be made cultivable only if the other bunds round this paddy field are also be strengthened. The confrontation between the paddy cultivators and pisciculturists is one issue, where the pisciculturists who need water for fish farming, oppose the strengthening of bunds but paddy cultivators are in favour of strengthening bunds and constructing sluices.

It has come to the attention of the Finance (Performance Budget) Department that before the preparation of preliminary estimate report, the preliminary investigation works executed by the Irrigation Department are not enough. Before granting administrative sanction for a work, a preliminary estimate report needs to be prepared and should be submitted to the department. Failure to prepare an estimate after conducting proper study of the work and the site where the work is to be carried out often results in the work being unscientifically carried out or having to be terminated halfway.

Section 1401 of Kerala PWD Manual *stipulates that maximum attention shall be given to investigation and furnishing of full and correct field data required. Modern equipment shall be used as far as possible. The Assistant Engineer will be responsible to conduct the preliminary investigations through the department investigation wing or through empanelled agencies with the approval of Executive Engineer. On the basis of the preliminary investigation, the Assistant Engineer must send a report to the Executive Engineer/ authority competent to issue technical sanction for the work, through the Assistant Executive Engineer concerned.*

2.1.1.a (i) ***Irrigation works cannot be executed like PWD works. Irrigation works can only be completed by considering the weather conditions like rain and floods. Therefore, Time of Completion (TOC) may be fixed judiciously of an irrigation work at the initial stage by considering favourable weather factors. The Administrative Department may explore the possibility of bringing out a separate manual for irrigation works.***

2.1.2 MINOR IRRIGATION CLASS I SCHEMES UNDER HARITHA KERALAM

Minor Irrigation Class I schemes under Haritha Keralam focus on water resource development and management, particularly for agricultural lands. These schemes, which include the rejuvenation of water bodies, watershed development, and minor irrigation works, aim to improve irrigation facilities for areas larger than 50 hectares but not exceeding 2000 hectares.

2.1.2.a Improvement works to Nambiar Kulam in Udayamperoor Grama Panchayath in Ernakulam District

The work aimed at rejuvenating Nambiar Kulam, a major water-source of Udayamperoor panchayath.

Administrative sanction was issued for an amount of ₹50 lakh on 28.03.2023 and the technical sanction for the same amount on 18.05.2023. The work was tendered on 23.05.2023. Agreement for the above work was executed on 03-07-2023 with PAC of ₹47,79,073.16. The site was handed over to the contractor (Saji P Varghese) on 13-07-2023 with time of completion of 8 months up to 12-03-2024. But, the contractor could not complete the work on stipulated time and the time of completion was extended to the contractor up to 28.06.2025 without imposing fine. The work was completed on 27.06.2025. The expenditure incurred was ₹47,68,915.

In response to the inquiry, the officials concerned replied that, at the starting stage itself the work got delayed due to the delay in the demarcation of boundary by the Revenue department. Only after receiving the resurvey sketch from Revenue Department on 19.04.2024, the Panchayath instructed to proceed with the work. Hence, for the Ist time the TOC of the work was extended up to 12.05.2024 due to the delay in demarcation process. Also the restrained site conditions due to houses near the boundary of the pond necessitated a cautious approach to the work. This affected the progress and the work could not be completed within 1st TOC period. Hence, TOC was extended up to 12.07.2024 (2nd TOC).Then due to the monsoon rains the work again got delayed and TOC was again extended 6 times upto 09.03.2025. As during the rainy season, there is huge water surge in the pond and also there was possibility of endangering the houses in the near proximity of the pond. Also, tidal effects used to cause sudden water surges in the pond due to its proximity to the lake. The remaining work could be resumed after approval of Revised Estimate, the TOC was extended up to a period of 08.05.2025 (7th TOC) and subsequently upto 28.06.2025 (8th TOC) for approval of final levels.

The implementation of the work has decreased the water shortage in the surrounding area and also the quality of water in the pond has increased. Purpose fulfilled.

The Survey & Land Revenue Records Department may be entrusted with the task of accurately surveying the land under the irrigation Department and the same may be entered in the asset register of the department so that complete transparency of all asset data can be derived.

Section 2112 of Kerala PWD Manual stipulates that the extension of time for completion of a work shall at a time not exceed 25% of the original time or six months whichever is less.

Section 202.6 of Kerala PWD Manual stipulates that an Executive Engineer should ensure that no tendering of works is done before getting encumbrance free land for a project.

Section 202.12 of Kerala PWD Manual stipulates that the Overseer must be pre-visited to the work site and ensure that it is suitable for the work.

Section 1401 of Kerala PWD Manual stipulates that maximum attention shall be given to investigation and furnishing of full and correct field data required. Modern equipment shall be used as far as possible. The Assistant Engineer will be responsible to conduct the preliminary investigations through the department investigation wing or through empanelled agencies with the approval of Executive Engineer. On the basis of the preliminary investigation, the Assistant Engineer must send a report to the Executive Engineer/ authority competent to issue technical sanction for the work, through the Assistant Executive Engineer concerned.

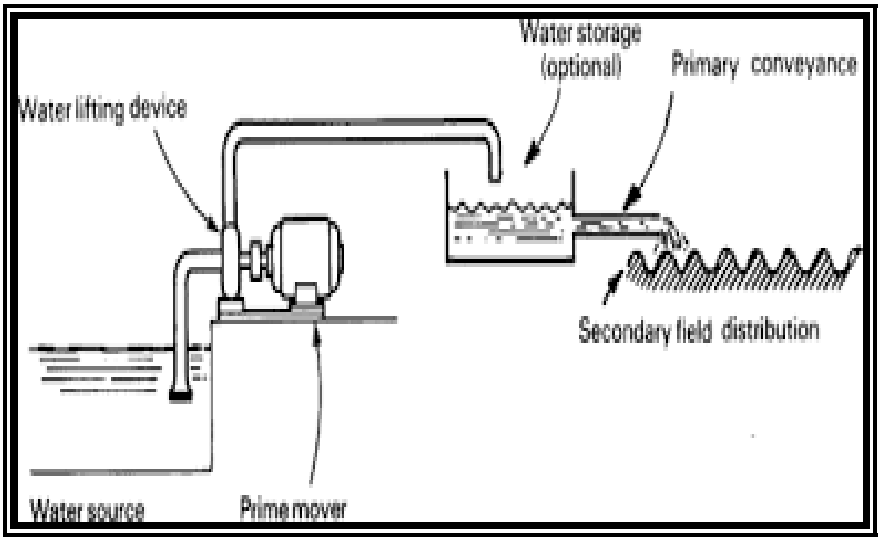
Photo 2.1.2 (a) : Current status of Nambiarkulam Chira

Photo 2.1.2.b : Progress in the construction of side protection for Nambiarkulam Chira

2.1.3 LIFT IRRIGATION WORKS (LI)

A lift irrigation project is a system that uses pumps to raise water from a lower elevation to a higher one for irrigation, particularly useful for areas where gravity-fed irrigation is not feasible. These projects are crucial for bringing water to higher-altitude lands and are vital during droughts or water scarcity.

Fig 2.1.3: Water lifting method



An outlay of ₹ 1700.00 lakh is provided in the Budget 2024-25 for Lift Irrigation schemes of the State. Out of the total outlay, ₹ 1500.00 lakh is provided for new Lift Irrigation schemes, of which ₹ 200.00 lakh is provided for the lift irrigation works in Idukki and Wayanad districts.

2.1.3.a Construction of Avolichal Lift Irrigation Scheme in Kavalangad Panchayat in Ernakulam District

Avolichal Lift Irrigation Scheme envisages the availability of water through Perakuthu creek thus ensures agriculture sector to benefit an ayacut of 487 hectares of land thereby the income of farmers who own agricultural land adjoining to Perakuthu rivulet gets multiplied. Moreover as the rivulet flows through the forest area, the wildlife gets benefited too. The project is mainly proposed as a drought relief measure of Kavalangad Grama Panchayath.

Administrative sanction was issued for an amount of ₹12,65,00,000/- on 10.03.2022 and the technical sanction for the same amount on 23.07.2023. The work was tendered on 09.01.2024. The agreement for the work was executed on 28.02.2024 and the site was handed over to the contractor (Daisy Jose) on 09.03.2024. The time limit for the completion of work as per the agreement was on 08.03.2025. Request for the first extension was submitted to the Superintending Engineer.

In response to the inquiry, the officials concerned replied that the pump house of Avolichal LI scheme is situated in the upstream of Bhoothathankettu barrage. Therefore the time when water starts collecting at the barrage the site of the pump

house gets inundated and the work cannot be executed. Also the drastic climatic change resulting in heavy summer showers also have affected the execution of the work. Also the final NOC from the Forest Department, for pipe laying through forest has not been accorded since the payment of about ₹43.00 lakh is pending towards the charges for tree cutting, replanting and land utilisation . Since no fund was allotted for this in the approved estimate, the revised Administrative Sanction has been sought.

The Avolichal LI Scheme project includes civil, electrical and mechanical components and 4 check dams along the rivulet were also put up in the estimate for rejuvenation. It was proposed to construct a pump house near Avolichal , adjoining to KWA water treatment plant. NOC has already been issued by Kerala Water Authority for the purpose. With regard to the electrical work, which follows the pump house construction, NOC for installation of the 11 KV transformer has to be obtained from the adjoining Panchayath/Periyar Valley Irrigation Project (PVIP) land. In addition to the construction of the pump house, it was proposed to pump water using three. 250 HP pumps and motors from Periyar to Perakuthu creek which ultimately joins Kothamangalam river. The pumped water from Periyar to Perakuthu creek was proposed to be taken through a 700mm dia pipe for about 1.55km along Neriamangalam – Palamattom & Avolichal – Oonnukal PWD road.

Initially in the estimate, it was proposed to lay the pipeline along the side of Neriamanglam – Paalamattom, Avolichal - Unnukal PWD Road for a stretch of 1.55 km. Among these 4 m wide Avolichal – Unnukal road passes through a forest area and hence it was estimated to be sought for the NOC of these two departments (Forest Dept. and PWD Dept.). As the proposed Hill Highway of State passes through the above cited stretch of Avolichal – Oonnukal road, the width of the road has to be increased from 4m to 12 m necessitating the acquisition of forest land of 4m on either side of the existing road which in turn has resulted in laying of the pipeline, of the scheme beyond 12 m width. Thus the pipeline associated with the work is to be solely laid through 0.199 ha of forest land necessitating the cutting of 56 trees in the Forest. For compensating the cutting of the trees, three times the number of the cut trees has to be planted and the department has to pay the amount for the same. To that account, an amount of ₹40.39 lakh has to be remitted to the Forest Department. Permission for the same was sought through Parivesh portal and stage 1 permit was obtained on 16/02/2024. Final permission is seen pending as the said amount has not yet been remitted to the Forest Department.

Present status of work

The rectification and allied works of Vellamkuthu check dam and Thandikulam check dam has almost been completed. Due to the summer showers and onset of monsoon showers the work of Panickankuthu Vented Cross Bar (VCB) could

not be started. 45% of the work has been completed. TOC has been extended from 08/03/2025 to 08/06/2025 and the application for the extension of TOC till 08/12/2025 has been submitted to the Superintending Engineer, Minor Irrigation Central Circle, Ernakulam.

Initially, IDRB has designed the pump house with single footing. Considering the space constraint, it is obligatory to change the design of pump house, the revised design has to be obtained from IDRB. Moreover, the construction of pump house can be executed only when the water level of Periyar is low and when the shutter of Bhoothathankettu Barrage is kept open as the pump house is situated in the catchment area of the barrage.

Irrigation works cannot be executed like PWD works. Irrigation works can only be completed by considering the weather conditions like rain and floods. Therefore, TOC may be fixed judiciously of an irrigation work at the initial stage by considering favourable weather factors. The Administrative Department may explore the possibility of bringing out a separate manual for irrigation works.

The Finance Performance Budget Team visited Vellamkuthu Check Dam and Thadikulam Check Dam. It is observed that the soil taken from Vellamkuthu Check Dam as part of the renovation works has been dumped in the surrounding area of the check dam. The Finance Team has directed the Irrigation Department to take steps to auction the same urgently. The officials concerned replied that the bidding process can be started only after the soil quality test is done.

2.1.3.b Construction of a pump house at Mambra Kadavu near chalakudy river and laying pipe line to Mambra Padasekharam in ward no:1&18 of Parakkadavu Grama panchayath in Ernakulam District

The project involves constructing a pump house at Mambra Kadavu, near the Chalakudy river, and delivering water to ward No.1 & 18 of Parakkadavu Grama Panchayath where acute shortage of water is experienced. It aimed at providing irrigation or other water-related needs to the designated area.

The first phase includes construction of pump house and suction pit adjacent to the river, construction of retaining wall on the banks of the river for the protection of pump house and suction pit and laying of 617 m DI pipe for pumping. The total estimated amount of the works comes to ₹105 Lakh. Agreed PAC for the work is ₹80,26,802. The second Phase, construction of Mambrakadav LIS includes construction of two cisterns, laying of delivery lines (1083m) and laying of distribution lines (1445m). For this an estimate of ₹156 lakh has been submitted to the higher authorities for approval.

The 617 m DI pipe which forms the part of the first phase of the works was proposed to be laid along the sides of Mambra PWD road and Laksham Veedu colony panchayath road in Annamanada Panchayath. But the authorities of Annamanada panchayat had not given permission to lay the pipe line through the recently tarred panchayat road considering its Defect Liability Period (DLP). Hence this work cannot be done in the 1st phase and will be considered in the 2nd phase.

The first phase of the project is ongoing. Administrative sanction was issued for an amount of ₹105 lakh on 11.05.2021 and the technical sanction for the same amount on 30.12.2022. The work was tendered on 31.12.2022. The agreement for the work was executed on 01.03.2023 and the site was handed over to the contractor on 07.03.2023. The time limit for the completion of work as per the agreement was on 06.09.2023. But, the contractor could not complete the work on stipulated time and the time of completion was extended to the contractor up to 06.06.2025 without imposing fine.

In response to the inquiry, the officials concerned replied that, at the time of the preparation of estimate for the 1st phase, the part of PWD road where the pipe was intended to be laid was an earthen shoulder and therefore ₹2 lakh were included for road restoration work. But at the lapse of 3 years the PWD road was raised to BMBC (Bituminous Macadam and Bituminous Concrete) standards and the road side was concreted to make Irish drain. Hence an application for road cutting permission for laying the pipe was submitted at the ROW portal (Right of Way). Following this the PWD officials conducted site inspection and issued a Demand note of ₹16,64,896/-. Hence, an amount of ₹14,64,896/- became necessary for the restoration works in addition to the provision of ₹2 lakh which was provided in the 1st phase. An inordinate delay in getting permission to cut the PWD road for pipe laying consequently led to the extension of TOC to 6 times and delayed the completion of work.

Section 2112 of Kerala PWD Manual stipulates that the extension of time for completion of a work shall at a time not exceed 25% of the original time or six months whichever is less.

Photo 2.1.3. b : Newly constructed pump house in Mambra Kadavu

Further, from the field visit and interaction with officials concerned, it was realized that there was a lapse on the part of AE in handing over the site to the contractor on time which led to the extension of the TOC date. The AE was transferred and the new AE assumed charge of the section. Later the contractor started the work. The former AE was responsible for the unnecessary extension of the TOC. The officials concerned should ensure that all the provisions of the contract are strictly adhered to and to take appropriate action if any of these are violated.

Section 202.10 of Kerala PWD Manual stipulates that an Assistant Engineer posted in control of a Section is responsible for the proper execution of all works in his Section or under his charge.

Also, during the course of inspection by the Finance Performance Budget Department team, dampness at some portions on the wall of the pump house was observed. The officials concerned have been instructed to rectify this immediately at the expense of the contractor, since the defect liability period has not been expired.

2.1.4 Scheme: REHABILITATION OF LIFT IRRIGATION SCHEMES

2.1.4.a. Reconstruction of pump house for Karumalloor no.1 LIS in Karumalloor Grama Panchayath in Ernakulam District

Karumalloor No 1 pump house is situated near Narayana Mangalam Ayyappa temple on the banks of the river Periyar. The project aimed to reconstruct 70 year old dilapidated pump house and reparation of some portions of canal to provide uninterrupted distribution of water to 111.82 hectares of agricultural land and for domestic purpose in the surrounding area.

The estimate includes demolition of existing pump house, construction of new pump house, rectification of main canal, construction of a temporary motor shed and the dismantlement of the existing pump set.

Administrative sanction was issued for an amount of ₹25 lakh on 11.05.2021 and the technical sanction for the same amount on 14.03.2022. The work was tendered on the same date. The agreement for the work was executed on 27.06.2022 with PAC of ₹26,69,080.98. The site was handed over to the contractor on 06.07.2022. The time limit for the completion of work as per the agreement was on 05.01.2023. But, the contractor could not complete the work on stipulated time and the time of completion was extended to the contractor up to 19.10.2023 without imposing fine.

Meanwhile at the time of commencement of work objection was raised by the Narayanamangalm Ayyappa temple committee alleging that the existing pump house is situated in the temple property and the pump house has to be demolished for the development works of the temple and had to be relocated to some other place. The Assistant Devasom Commissioner, Travancore Devasom Board informed the same matter to the Assistant Executive Engineer MI Sub Division Aluva. On behalf of this, the Assistant Engineer MI Section Paravoor sent a letter to the Land & Revenue Tahsildar, Paravoor Taluk to conduct a survey and demarcate the boundary of the Karumalloor LIS Pump house. The Assistant Executive Engineer (MI Sub Division), Aluva informed the Assistant Devasom Commissioner, Travancore Devasom Board that the pump house is in a dilapidated condition due to flood, hence the pump house requires urgent reconstruction. The Assistant Devasom Commissioner stated that no works shall be permitted in the land of Devasom board and also to relocate the existing pump house from their land so as to construct a Temple in the same land. Thereafter Sri Balachandran, Secretary Narayanamangalm Ayyappa temple committee, filed a complaint to the Ombudsman Travancore and Cochin Devaswam Board on 22.12.2022 to relocate the existing pump house from the Devasom land to a newer location. The said matter was reported to the Hon. High Court. The Hon. High court, directed to survey and fix the boundaries of the Devasom Board Property through a joint survey by the Special Tahasildar of Travancore Devasom Board and Revenue

Tahasildar within four months to finalize the owner ship of the land. Thus the case was disposed on 27.07.2023.

Karumalloor is an area where a lot of paddy cultivation is taken up every year. The agricultural officer had requested to start the pumping for cultivation purpose. When the pumping season started in year 2023, the pump operators refused to do daily pumping on account of the fear of falling off building parts due to heavy vibration of the pump and motor.

During the meeting conducted at the chamber of President, Karumalloor Panchayath on 18.08.2023 in which the officials of temple committee, a private land donor and the representatives of Irrigation department participated where in it was proposed to construct a temporary shed to facilitate the pumping process for the time being. Considering the urgency of starting pumping for agricultural purposes, essential repairs to the deteriorating pump house were deemed necessary to ensure the safety of the pump operators and to prevent any accident. Considering the decision taken in the meeting the suspension period of the work was revoked vide proceedings no D2-2019/9201/IA(A) dated 19.08.2023 of Executive Engineer, MI Division, Ernakulam. Instructions were given to commence the urgent reparation of the pump house by extending the time of completion of work.

Revised estimate was prepared by including temporary covering of pump house, maintenance of the ground floor of the building and demolition of the first floor which were urgent necessary works to be taken up to facilitate pumping in the season. Revised estimate was prepared for an amount of ₹24.5 lakh to continue pumping of irrigation water without any hindrance to an ayacut of 111.82Ha in Karumalloor panchayath.

To solve the dispute on the existing land and to decide upon the new location, another meeting was conducted on 11.09.2023 at the chamber of Panchayath President, Karumalloor in which the officials of temple committee and the representatives of Irrigation department participated, wherein temple committee informed their willingness to give another piece of land belonging to the temple authority to the irrigation department for the construction of new pump house.

Photo 2.1.4.a : Karumalloor pump house

They assured that proper land sketch and land documents will be prepared and handover the land as per rules to the Irrigation Department.

A survey was conducted on 23.01.2024 by the Land & Revenue Tahsildar, Paravur Taluk on the disputed land and it was found that the land in which the pump house was situated in Karumalloor Village under survey no. 216/12 belongs to Narayana Mangalathu Devaswom.

A new site has been identified for the construction of the pump house; however the land has not yet been transferred to the Irrigation Department. The process of the setting up of a new pumphouse shall be initiated only after the mutation of the proposed land is complete.

Prior to the commencement of any work by the Irrigation Department at a site, clear land ownership must be established. This includes the completion of the land mutation and inclusion of the site in the departmental asset register. Only upon fulfilment of these requirements shall the proposed for Administrative Sanction (AS) be submitted to Government for approval.

The Survey & Land Revenue Records Department may be entrusted with the task of accurately surveying the land under the irrigation Department and the same may be entered in the asset register of the department so that complete transparency of all asset data can be derived.

REHABILITATION OF LIFT IRRIGATION SCHEMES

2.1.4.b Re-Construction of pump house for Chowara No.3 Lift Irrigation Scheme-General Civil Work

Chowara No.3 Lift Irrigation Scheme is one of the major LI Schemes in Sreemoolanagaram Panchayath in Ernakulam District. The scheme started in 1950 benefitting an area of around 30 Ha in the Panchayat. The main source of water for the scheme is the Periyar river. The LI scheme serves the entire ayacut through slabs lined canal, earthen canal and CC canal with a length of 3374 m. The seasonal wise cultivation of paddy and other vegetables has started by the commissioning of the scheme and is continuing till date. Besides agriculture, the scheme serves as a subsidiary source for drinking water as water through the spouts of the canal maintains the water level in the adjacent wells.

The pump house of the L I scheme was constructed with its sides and the roof covered with G.I (Galvanized Iron) sheets. These sheets are damaged leading to water leakage in the pump house during the rainy season. This may cause damage to the motor, pump and other electrical systems in the pump house. Hence, urgent reconstruction of the pump house was very essential. The pump house was proposed as a RCC framed structure with two floors. The provisions in the estimate include rectification to building, sanitary items fixation, provision for toilet with septic tank are also included. The total estimated amount of the work is ₹22 Lakh.

Administrative sanction was issued for an amount of ₹22 lakh on 23.03.2023 and the technical sanction for the same amount on 29.05.2023. The work was tendered on 16.06.2023. The site was handed over to the contractor on 04.08.2023. The time limit for the completion of work as per the agreement was on 03.05.2024. But, the contractor could not complete the work on stipulated time and the time of completion was extended to the contractor up to 31.03.2025 without imposing fine.

Photo 2.1.4 b: Newly constructed pump house @Chowara

In response to the inquiry, the officials concerned replied that, due to the delay in dismantling and removing of motor pump set and other electrical equipment from the pump house due to continuous rain and also due to dispute with the nearby resident regarding the boundary of the pump house, the work was not completed in the agreed time of completion. Due to the above mentioned reasons the time of completion was extended 5 times.

Section 1401 of Kerala PWD Manual *stipulates that maximum attention shall be given to investigation and furnishing of full and correct field data required. Modern equipment shall be used as far as possible. The Assistant Engineer will be responsible to conduct the preliminary investigations through the department investigation wing or through empanelled agencies with the approval of Executive Engineer. On the basis of the preliminary investigation, the Assistant Engineer must send a report to the Executive Engineer/ authority competent to issue technical sanction for the work, through the Assistant Executive Engineer concerned.*

An objection was raised by the neighbours against the installation of septic tank and other related works due to an ongoing boundary dispute. In order to resolve the issue and demarcate the boundary of the disputed land the Assistant Engineer MI Section Aluva filed an application on the matter to the Tahsildar, Aluva. As a result, it was stated that no land near the pump house (i.e. in block no 31-298/8-5, 302/6-6-2,479/2) or in the nearby survey number was owned by Minor Irrigation. Also that it is possible to demarcate the boundary only if there occurs a separate canal subdivision sketch in resurvey sketch. Therefore no further proceedings can be taken on the above matter vide letter no TLKALV-3274/2024-D5 dated 20.12.2024. As the boundary of the pump house could not be demarcated, the installation of a septic tank is still pending.

2.1.4 b (i) The Survey & Land Revenue Records Department may be entrusted with the task of accurately surveying the land under the irrigation

Department and the same may be entered in the asset register of the department so that complete transparency of all asset data can be derived.

2.1.4.c Rehabilitation of No. I Lift Irrigation Scheme (LIS) Sub Canal in ward No 2 of Ramamangalam Grama Panchayath in Ernakulam District.

The Lift Irrigation Scheme (LIS), commissioned in 1953, is a major and vital agricultural infrastructure at Ramamangalam Grama Panchayath, in Ernakulam District. The project aimed to lift water from the Muvattupuzha River, an essential source of irrigation for a variety of crops including paddy, coconut, plantains, and also for other seasonal crops. In addition to agriculture, the canal system contributes to groundwater recharge (well recharge) significantly, thereby a subsidiary source of drinking water.

The public and the local stakeholders demanded for the urgent renovation and revitalization of the sub-canal, owing to the difficulties faced by the farmers. The renovation of the sub canal improves the irrigation potential. The restoration and renovation of the sub-canal is crucial for the functioning of the entire LIS system which helps to ensure sustainable irrigation for farmers in the command area, especially in the tail-end areas, which prevent agricultural losses, maintain local food security, and improve drinking water availability by accelerating groundwater recharge. The work includes the construction of side walls and canal bed to facilitate smooth and continuous flow of water.

Administrative sanction was issued for an amount of ₹37,27,700/- on 23-03-2023 and the technical sanction for the same amount on 23-05-2023. The work was tendered on 30.05.2023. The site was handed over to the contractor on 14.07.2023. The time limit for the completion of work as per the agreement was on 13.05.2024. The agreed PAC was ₹2883179.55. But, the contractor could not complete the work on stipulated time and the time of completion was extended to the contractor up to 23.05.2025 without imposing fine. The work was completed on 22.08.2025. The expenditure incurred was ₹28,37,073. In response to the inquiry, the officials concerned replied that, during the course of execution of the work, the sliding of the bund into the canal triggered by the heavy monsoon showers, made the work temporarily halted. The pumping operations of the LIS also hindered the timely completion of the work.

A large number of farmers and residents in the area will be benefitted. Further from the field visit it is observed that the work done has been completed appropriately.

Photo 2.1.4.c (i) : The completed part of the sub-canal construction

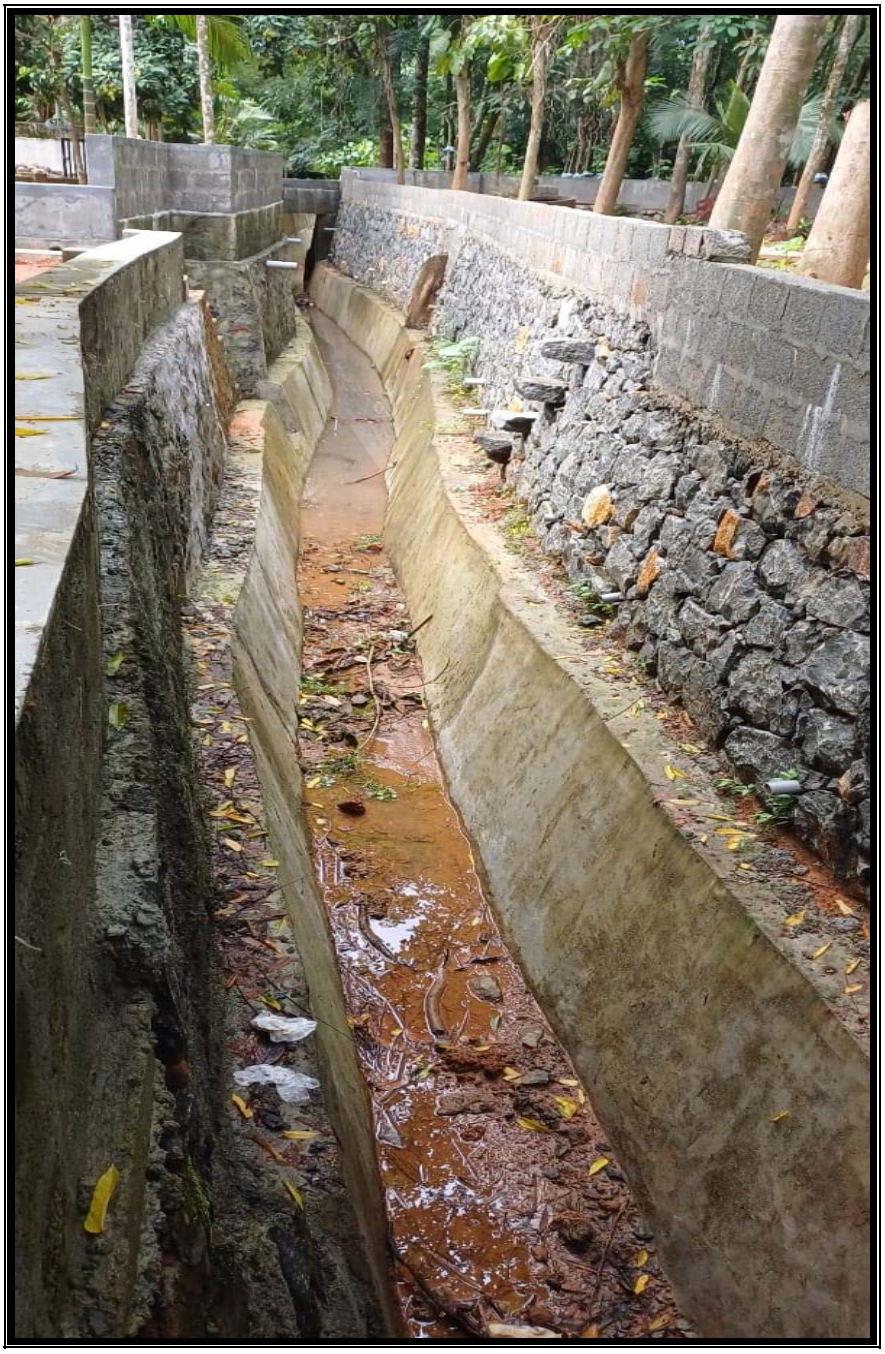


Photo 2.1.4.c (ii) : The part of the sub-canal to be completed

2.1.5 General Recommendations

(I) Irrigation works—especially those involving implementation of lift irrigation (LI) schemes- typically include civil, mechanical, and electrical components in the cost estimate. Only after the civil structures are completed can the electrical and mechanical components be executed. The completion of civil works largely depends on weather conditions. Ernakulum district, being surrounded by the Arabian Sea, kayals, and numerous water bodies, is particularly affected by such conditions. Moreover, if a proposed project includes electrical and mechanical components, a

lump-sum provision for these is included upfront in the civil estimate when Administrative Sanction (AS) is accorded. This is done because obtaining detailed estimates from the concerned department can be delayed. Thus, the on-time submission of the overall estimate is ensured through the initial inclusion of a lump-sum provision for electrical and mechanical components in the civil estimate at the time that AS is granted.

2) A team comprising revenue authorities and irrigation officers should be constituted to demarcate the boundary of the Government land, and necessary action should be initiated to incorporate the required changes in the revenue records, including those related to the free surrender land belonging to the department.

2.1.6 Retention of Unclaimed Securities

The Finance Performance Budget team verified the Security Register maintained in MI Division Ernakulam and noticed that many security deposits and Earnest Money Deposits (EMD) were retained in the office. The details of the security details kept in the office are given below:

Details of the retention of unclaimed EMD:

Sl.No	Name of work	Name of contractor	Mode of payment	Amount
	1996-1997			
1	Putting up tidal bund across Chithrapuzha for 1996-97	M.B.Jeevan	FDR 795 dt 04/10/1996 of people Urban bank Ltd 51 Thripunithura	5,900.00
	1997-1998			
2	Special Component plan Electrification supply and erection of suction and delivery pipes 20 HP pump set Parappathara Edakkattuvayal	K.V.Poulouse	51 VP/50 B 356638 dt. 22/07/94 P.O. Thrissur	1,000.00
	1999-2000			
3	SP works Ennakkamoolam padam by the side of Neela the padam in Muvattupuzha Municipality	Biju K. Abraham	DD No.483300 dt 28/04/99 of Urban Bank Ernakulam	10,000.00
	2002-2003			
4	FD Urgent side protection works Chalakkal Padamthodu in Ward No. 9 & 10 of Vazhakkulam Panchayath	Saji Joseph	N.K/171/02-03 dt. 18/09/2002 of Kottayam District Co-operative Kuppamthala branch	20,00.00

Sl.No	Name of work	Name of contractor	Mode of payment	Amount
	2009-2010			
5	Supply of 50 HP motor and stator replacing 40 HP Squiral pump case including motor in LIS Karamoottil	M/S Omni Electricals Kochi	961738dt. 22/06/09 of Punjab National Bank, Ernakulam	4,400.00
	2010-2011			
6	Supply & Providing 25 HP open wall submersible pump set in Pandipura LIS in Avoili Panchayath	M/S Power India Electricals	203655 dt. 15/07/2010 of Bank of Baroda EKM	4,500.00
	2011-2012			
7	Improvements to Nechoor LIS Canal in Maneed Panchayath	Jose Paul	FD Receipt 0783547 dt, 07/02/12 District Co-operative Bank Ltd. Muvattupuzha	25,000.00
8	Extension of Pump house and reconstruction of syphon at CD Branch Canal of Karukappilly LIS of Puthenkavu	Abraham Scaria M.S.	Receipt No. 296555/10110 5000 98665 dt. 27/07/2011 Federal Bank Kolenchery	37,500.00
	2012-2013			
9	Deepening and side protection works thodu near Elavoor Market in Parakkadavu Panchayath	Jose P.P	Receipt No. 265947 dt.04/03/2011 of Co.Operative Bank Angamaly	15,933.00
			Receipt No. 265952 dt. 04/03/2011of Co-operative bank Angamaly	11,657.00
			Receipt No.218079 dt. 14/01/2011 Fedl Bank Athani,	5,000.00
10	Side protection works to Chemeen kuthu Erapingal thodu in Ward of 4 of Pindimana Panchayth	Shaji.K.Mathew	No.248552 dt. 21/08/2012 Fed Bank Kothamangalam	24,700.00
	2014-2015			
11	Providing trash rack and deepening the leading channel Chengamanad LIS under MI Section Aluva	Jeesmon .N.P.	Receipt No.10064 dt.21/07/2014 Kalady Kanjoor Rural Co-operative Bank	12,500.00

Sl.No	Name of work	Name of contractor	Mode of payment	Amount
12	Cleaning of Thottara Punchira & of Petty Para for the yr. 2014-15	P.N.Ramachandran Nair	Receipt No. 89CD176403 dt. 24/05/2010 Kisan vikas pathra Post Office Piravom	10,000.00
			Receipt No. 89CD176404 dt. 24/05/2010 Kisan vikas pathra, Post Office Piravom	10,000.00
			Receipt No. 89CD176405 dt. 24/05/2010 Kisan vikas pathra Post Office Piravom	10,000.00
13	Annual Maintenance of Chettikkad Permanent branch for the yr. 2014-15	V.Muraleedharan	Acct. No 67296408548 dt. 01/10/2024 SBT., Mannam	8,000.00
14	Side protection works to Paniyelithodu near Aruveli Bridge in Elanji Panchayath	V.A George	Receipt No.1017598 dt. 15/01/2015 of District Co-operative Bank Ernakulam	24,370.00
			Receipt No.056117 dt. 26/02/2015 of District Co-operative Bank Ernakulam	350.00
15	Renovation of Ramp and side protection works near Chelamattom Anganvady in Ward No.4 of Pangottoor Panchayath	Benny Joseph	Receipt No. 71265 dt. 05/03/15 of Mekkadambu Service Co operative Bank	19,000.00
	2015-2016			
16	Renovation works to Palamattom cross bar at Koothattukulam Panchayath	V.A.George	Receipt No. 056757 dt 27/04/2025 Dist.Co-operative bank Ernakulam	19,218.00
			Receipt No. 0835737 dt 09/02/2015 Dist.Co-operative bank Ernakulam	3,346.00
17	Total station survey works for the preparation of	T.K.Prabhakaran	Receipt No. 276658 dt. 28/04/2015 of Bank of Baroda Kakkanad	10,000.00

Sl.No	Name of work	Name of contractor	Mode of payment	Amount
	Waterbody in Muvattupuzha basin			
18	Side protection works to Muvattupuzha thodu in Ward No. 12 of Muvattupuzha Municipality	Ajimon M .M.A	Account No. 67326394570 dt. 23/05/2015 SBT VelloorKunnam	39,381.00
19	Improvement to Ozhavoorthodu and Protecting sides of Muttumugham Koothattukulam Panchayath	V.A George	Receipt No. 056784 dt. 28/04/2025 of Co-operative Bank EKM	16,106.00
			Receipt No. 056785 dt. 28/04/2015 of Co-operative Bank EKM	10,014.00
20	Maintenance and Construction of side wall for Canal in various chainages of Karukapilly LIS	Prasanth Markose Issac	Receipt No. 649896 dt. 08/03/2016 of Federal Bank Kolenchery	37,500.00
21	Maintenance of Construction of side wall for Canal in various chainages of Aikkaranadu LIS	Prasanth Markose Issac	Receipt No. 649897 dt. 08/03/2016 of Federal Bank Kolenchery	30,000.00
22	Side protection works of Ozhavoor thodu right side of Ramanchira Cross bar near Edayar St.Mary's Jacobite Syrian Church in Koothattukulam Panchayath	V.A George	6 yr NSC No. 95EE 637932 dt. 24/03/2011 of Post Office Piravom	10,000.00
			6 yr NSC No. 95EE 637933 dt. 24/03/2011 of Post Office Piravom	10,000.00
			6 yr NSC No. 95EE 637934 dt. 24/03/2011 of Post Office Piravom	10,000.00
			6 yr NSC No. 01 EF 795486 dt. 03/08 /2012 of Post Office, Piravom	10,000.00
23	Improvements to Thottuva Branch Canal of Cheranalloor LIS	Daisy Jose	Receipt No. 192/kb dt. 05/03/2016 of Kalady Kanjoor Co-operative Bank	27,000.00
24	Improvements to Thottuva Branch Canal of Cheranalloor LIS	John Cheriyan	Receipt No. 0281206 /Acct.No. 40552201600046 dt. 04/03/2016 of Kerala Gr.Bank. Perumbavoor	27,000.00

Sl.No	Name of work	Name of contractor	Mode of payment	Amount
	2016-2017			
25	Investigation works of improvements of Renovation of Andhakara thodu	T.K.Prabhakaran	Receipt No. 276998 of Bank of Baroda	8,000.00

Details of the retention of unclaimed Security Deposits:

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
1995-1996				
1	Improvements to Nattuthazham Manjathupattam in ward no. 4 of Pampakuda Panchayath.	K.M David	1 yr TD Account No. 21293 dated, 03/01/1996 of Ramamangalam P.O.	15,500.00
2	Side protection work to Pindimana thodu Kothamangalam Panchayath.	P. T vargheese	1 yr TD Account No. 1050224 Dated, 06/05/1996, P.O.Kakkanad	31,450.00
3	Urgent repairs to CB near Pazhathottukara temple ward no 8, 9 Kothamangalam	Varkey Varkey	1 yr TD Acc.No.1050282 dated 30/07/1996, P.O.Kakkanad	9,500.00
4	Improvements to Side protection work to Padikkalchira kulam PMLM Panchayath.	P. T vargheese	1 yr TD Acc.No.1050289 dated, 21/08/1996 , P.O.Kakkanad	13,550.00
1996-1997				
5	Construction of CB at U/s of bridge across Kothamangalam Panchayat.	P.K Mathai	1 yr Acc.No.1050347 dated, 05/03/1997 of P.O.Kakkanad	28,600.00
6	Side protection work to Kalloorpad thodu in Kovapady Pt	P.A Muhammed Sardaar	1 yr Acc.No.19875 dated, 28/02/1996 of P.O.Perumbavoor	14,400.00
7	Improvements to Neeleeswaram Kalady	Joemon joseph	6 yr NSCNo. 08EE 402714-10000 6 yr NSCNo 13 CC 283352-1000 6 yr NSCNo13 CC. 283551- 1000	14,300.00

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
			6 yr NSCNo 13 CC. 283350- 1000	
			6 yr NSCNo 13 CC. 283349- 1000	
			6 yr NSCNo. 00AA 275709- 100	
			6 yr NSCNo. 00 AA. 275710-100	
			6 yr NSCNo 00 AA. 275708-100	
8	AM of Kanjoor LIS for the year 96/97	T.J Baby	1 yr TD Acc.No.710484 dated, 16/05/1997 , P.O.Kalady	3,200.00
9	Urgent Protection work to Vazhakulath chira LIS in Ramamangalam	M.V Joy	1 yr TD Acc.No.1050201 dated, 12/04/1996, P.O. Kakkanad	11,850.00
1997-1998				
10	Rectification newly contracted pump house of LIS Choornikara	Jacob sabu	NSC No. 6NS/21CC2226814Rs .1000 dt. 21/01/1999	3,100.00
			6NS/21 CC2 22682 for Rs.1000 dt. 21/01/1999	
			6NS/21 CC 2 22683 for Rs.1000 dt. 21/01/1999	
			6/NS/14 AA 667211 for Rs.100 dt. 21/01/1999	
2002-2003				
11	Electrification of LIS in Palupuzha in Parakkadavu Panchayath.	Jacob sabu	6 NS/09 DD 371550- Rs. 5000 dt. 23/03/1999	6,700.00

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
			6 NS /22 C 995602Rs. 1000 dt. 21/07/1999	
			6 NS/09 BB 420485- Rs. 500 dt. 09/09/1998	
			6 NS/ 30 AA 6301410- Rs. 100 dt. 22/06/2000	
			6 NS /30 AA 630 409 Rs.100 dt. 22/06/2000	
2003-2004				
12	Putting up Kozhithump tidal bund across kadambrayar 2003-2004	Jeeven K. Vijayan	6Yr.NSC 24EE-740634Rs.10000 Dated, 13/06/01	50,000.00
			6Yr.NSC 24EE-740596Rs.10000 dated, 23/04/01	
			6Yr.NSC 24EE-115506Rs.10000 Dated, 12/02/01	
			6Yr.NSC 24EE-106386 Rs.10000 Dated, 20/12/2000	
			6Yr.NSC 24EE-106237 Rs.10000 Dated, 10/10/2000	
2004-2005				
13	Supply and erection pipes and etc LIS in Vadau code	Dharmarajan	6 yr NSC 22CC 969922- Rs.1000 Dated, 07/09/99	8,000.00
			22CC 9529961- Rs.1000 Dated, 24/11/99	

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
			22CC 970275- Rs.1000 Dated. 26/11/1999	
			22CC 970276- Rs.1000 Dated, 03/12/99	
			22CC 969899 Rs.1000 Dated, 14/07/99	
			22CC 969901- Rs.1000 14/07/99	
			22CC 969902 Rs.1000 Dated, 14/07/99	
			39 CC 446963 Rs.1000 Dated, 05/02/2001	
	Palupuzha LIS supply and motor pump set	Madhusoodhanan	1 yr TD 1016282 dated22/11/2004 of EKM.P.O.682018	2,600.00
2006-2007				
14	Replacement of defective switch board and accessories in LIS Puliyampally	Jacob sabu	6 NS/160917Rs.5000 dated, 18/02/06	5,000.00
15	Supply of 50 HP pump set in Chalaykkal LIS	MI Gopi	SB No.1050934 dated, 09/02/2007 Kakkanad.P.O.	14,400.00
16	MLA - SDF 2003-04 Supply and 100 Hp pump set Avanamcode LIS	Raidco Kerala Ltd	TD No.1050935 dated, 09/02/2007 Kakkanad .P.O.	42,200.00
17	Putting up trial bund across Kadambrayar at Kozhithump	M.B.Jeevan	Acc.No. 1050943 dated, 30/03/2007 Rs. 40000	40,000.00
18	Putting up trial bund across Chithrapuzha for 2006- 2007	M.B.Jeevan	Acc.No. 1050943 dated, 30/03/2007 Rs. 2000	2,000.00
2008-2009				

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
19	Electric list of reconstruction CC canal of Chakkttumala LIS	Mathai. M.O	Receipt No.0457967 dt. 08.05.2008 of Union Bank of India, EKM	39,000.00
20	Nabard Pantheerzhipara LIS in Vengoor Pt. supply of 30 Hp motor pump set	Sakthi enterprise	2 yrs. TD 201275of Alappuzha.P.O.	9,000.00
21	Improvements to Kayanad LIS	M. A jose	1yr.TD No.1109187 of Dtd. 06/08/08 Muvattupuzha.P.O.	24,000.00
22	NABARD Assistance RADF XI Panikkessei Para LIS Supply 1 and 20 HP motor	Barnet Associates	Receipt No. 039367 dt. 03/10/08 of SBT EKM	5,870.00
23	Side protection work for Chellanam near Little flower church in Chellanam Pt.	TV Paulose	1yr.TD No.27998 Dt. 12/12/08	28,200.00
	2009-2010			
24	Contractors Registration - C class	Anu Peter	6 Yr.NSC 63EE 904930 Rs. 10000 Dt. 06/11/09 of Pampakuda P.O 6 Yr.NSC 63EE 904931 Rs. 10000 Dt. 06/11/09 of Pampakuda.P.O. 6 Yr.NSC 35 DD 931343 Rs. 5000	25,000.00
25	Convenience of Dept material to District Store Aluva for 2009-10	C. S Radhakrishnan	Receipt No. 359158 dt. 03/03/10 of EKM DCB N.Parur	8,000.00
26	Improvements to main and formation of farm road near pump house in Kannamkulam LIS	P.P Jose	2 yr.TD.No. 5075227 dt. 15/03/2010	43,000.00
	2010-2011			
27	Protecting the Side of Vijayamkulam in ward 13 Chottanikkara Pt.	Jose Paul	2 yr.TD.No. 3538 Dt. 01/06/2010	30,400.00

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
28	Contractors Registration - C class	Shihab M.A	NSC 60DD049703 Rs. 5000 Dt. 15/09/2010 96EE705441 Rs.10000 Dt. 15/09/2010 96EE709442 Rs. 10000 Dt. 15/09/2010	25,000.00
29	Supply of Lift Pump set of LIS in Vazhakulam	Raidco Kerala Ltd	Treasury Savings Bank No. AA-104075 dt.31/01/11	12,300.00
30	Renovation of Ambalachira AyyappaSwamy Temple in Parur Municipality	Joshy Varghese	2 Yr.TD.No.22159 Rs.75000 Dt. 03/03/2011	75,000.00
2011-2012				
31	MIRPA Rewamping of Ramamangalam LIS	Alias . K. Kuriakose	Acc.No. 3844 dt. 06/03/2011 Muvattupuzha .P.O.	16,600.00
32	Extension Perumani Pump house of replacement of damages pipes Valves	M.P George	Acc.No. 22196 dt. 30/06/2011 Perumbavoor.P.O.	17,000.00
33	Side protection work to Oorgangal thodu near Ashamanur junction in Ashamanur Pt.	M.P George	Acc.No.22195 dt. 30/06/2011 Perumbavoor.P.O.	15,800.00
34	MIRPA Rewamping of Pampakuda Re-lift LIS	Saji Cheriyan	Acc.No.21612 dt. 07/06/2011	24,000.00
2013-2014				
35	Contractors Registration - C class	Antony. C.C	6NS/72 DD 053174 dt.16/07/2013 P.O. Karukutty Rs. 5000 6NS/72 DD 053175 dt.16/07/2023 Rs. 5000 P.O. Karukutty 6NS/72 DD 053176 dt.16/07/2023 Rs. 5000 P.O. Karukutty	25,000.00

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
			6NS/72 DD 053177 dt.16/07/2023 Rs. 5000 P.O. Karukutty	
			6NS/72 DD 053178 dt.16/07/2023 Rs. 5000 P.O. Karukutty	
36	Providing Cover slab over Vallam Canal in Ward no. 24 in Perumbavoor Municipality	P.V Babichan	Acc.No.195538 dt. 18/07/13 Mookkanoor.P.O.	40,400.00
37	Annual maintenance of Chakarachal bund for the year 2013-14	George. K.V	FD/Ac.No.8128 dt. 07/11/13 Kalady, Kanjoor.Co-operative Bank	28,000.00
			1Yr. TD Acc.No.1017559dt.07 /11/13 Rs. 9600 of Thrikkakara.P.O.	9,600.00
38	Security Deposit of permission of laying pipe line of GAIL	GAIL INDIA LTD.	DD No. 19190 dt. 21/03/2013	5,000.00
2014-2015				
39	Cleaning the suction pit and deepening the leading channel in various L.I.S. Under M.I.Section North Paravoor	P.G.Varghese,	JJ 635133/ 13104 dt.27/09/2014 Sub Treasury Angamaly	46,900.00
40	Contractors Registration - C class	Innamma Paulose	JJ No. 572661 dated 29.09.2014 of Sub Treasury Piravom	50,000.00
41	Contractors Registration - C class	Shihab M.A	AA No.148520 dated 30/09/2014 District Treasury Ekm	25,000.00
42	Contractors Registration - C class	Antony C.c	JJ No. 635188 dated 29.10.2014 Sub Try. Angamaly	25,000.00
43	Annual Maintenance of Kocherikal Kadavu bund for the year 2014-15	Johnson Thomas	1. No:AA-148836/11512 dt.07/11/2014	4,600.00
			2. Certificate No: 145081 dt.24/11/2014	15,000.00

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
			of Federal Bank, Karumalloor	
44	Putting up tidal bund across Athikai thodu for 2014-15, Agmt. No. 43 / EE / MIDVN / EKM/2014-15 dated, 31/01/2015	Shihab.M.A.,	No:AA-76904/11732 dt.31/01/2015 of District Try.EKM	9,000.00
45	Contractors Registration - C class	Johnson Thomas	AA No.-148463 dt. 25/09/2014 Dist.Try.EKM	25,000.00
			AA No.-148492 dt. 29/09/2014 Dist.Try.EKM	25,000.00
2015-2016				
46	Total station survey work for the preparation of DPR of Water bodies in Muvattupuzha basin,Agmt.No.10/EE/MIEKM/2015-16 dt.25/05/2015	Liju.D.John	(1)No.AA419759/12141, dt.25/05/2015 District Treasury EKM	7,500.00
			(2) FD Receipt No:6612038 dt. 21.05.2015 of IDBI Bank Ltd Pathanamthitta,	7,500.00
47	Contractors Registration - C class	Nasar K.M	AA 076905 dated 31/01/2015 District Treasury: EKM	50,000.00
48	Contractors Registration - C class	P.J Baiju	AA 486716 dated 07/09/2015 Dt. Try. EKM	50,000.00
49	Improvements to Main & branch Canal of Vallom L.I.Scheme. Agreement . 53 / EE / MIDVN/EKM/15-16	Daisy Jose	No.JJ-192750 dt. 03/03/2016 Dist. Try.EKM	23,500.00
50	Improvements to Manassery L.I.S-Reconstruction of Mai Canal near Nedungattu temple in Ramamangalam Panchayath, Agmt.59/EE/MIDVNEKM/15-16 dated, 03/2016	Sreejith Chandran	No.JJ-843910/TFD 6496 dated, 17/03/2016	40,000.00

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
2016-2017				
51	Construction of side Protection wall to marikkathodu near Thekkanal thazham cross bar in palupuzha panchayath	Babu.Paul	No.JJ-385927/13769 dt.04/04/2016 of District Treasury Ekm	25,000.00
			receipt No;44262 dt.5/03/2016 of Arakuzha service Co-operative bank Ltd. 495	25,000.00
				25,000.00
52	Side protection Poothampra Parayoduthodu in Ward No:5 of Arakuzha Panchayath. 2/EE/MIDVN/EKM/2016-17 dated, 04/04/2016	Babu.Paul	No.JJ-385926/13768 dt.04/04/2016 Dist. Try EKM	25,000.00
			receipt No;44261 dt.5/03/2016 of Arakuzha service Co-operative bank Ltd.	25,000.00
53	Emergency Rectification works-Kayanad LIS-Mulakulam in ward No:2 of Maray GramaPachayath Agmt. No : 13 / EE / MIDVN/EKM/16-17 dated, 30/04/2016	M.A.Jose	No.JJ-916009/TFD-11317 dated, 30/04/2016, Sub Try Muvattupuzha	45,000.00
54	Cleaning of thottarapunchathodu and maintanance	Jacob Darish	No:AA 434378/7990 10500012938 dated, 17/10/2016 Dist. Try EKM	11,000.00
55	Maintenance of L.I.S 2015-16, fully comprehensive annual maintenance for motor pumpset starter & electrical accessories at Paniyeli L.I.S.	Kamala Electricals,	No.-AA 261138/7990 10500025249 dated, 22/11/2016	12,100.00
2017-2018				
56	MLA-LAL-ADS- Aluva constituency construction of No:2 Irrigation Motor shed in Ward No.3 of Chengamanad.	Wilson Thomas	(1)TS TD(FD) No.J.J. 286597/ 799014500098123 dated, 07.03.17 of Sub Try. Angamaly	20,250.00
			(2) Receipt No.TBM/TDR/2007 D 624569 dt.	14,790.00

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
			05.10.2015 of Bank of Baroda Angamaly	
			(3) Receipt No.624836 dt.20.12.2016 of Bank of Baroda, Angmaly	5,000.00
57	Side protection and deepening works to Varambithara, Nadakkavu thodu in Udayamperur Panchayath	Eliyas.P.V.	No.JJ 364428/ 799010500126457 dated, 17.04.2017 Sub Try Mulanthuruthy	53,700.00
58	Annual Maintenance of Karukappilly Aikkaranadu LIS under MI Section Pattimattom for 17-18 including clearing of suction pit	C.V. Vargheese	1. No. AA.337427dated 21.11.2017. Sub Try Kolenchery	18,800.00
			2. FD No.011311 dated 24.11.2019 of District Cooperative Bank, Ernakulam	43,400.00
	Annual Mace of Kayanadu LIS for 17-18	Cijo John	No. JK. 044536/ 799010500271479 dated 29/11/2017 Dist.Try EKM	19,400.00
59	Annual Mace of Marady LIS for 17-18	Cijo John	No. JK. 044535/ 799010500271467 dated 29/11/2017 of District Treasury, Ernakulam	17,100.00
60	Annual Mace of Chirayar bund for the year 2017-18	High Tech cremalium (Pt) ltd.	No. JK. 034703/ 799010500359063 dated 14/03/2018 of District Treasury, Ernakulam	18,900.00
2018-2019				
61	Improvements works to the main canal Ch:750 m to 855 m of Kuttipuzha No.1 L.I.S	Wilson Thomas	1 No.JK 064983/79901050 0409390 dt. 07.06.18 Sub Try Angamaly	52,000.00
			2) TBM/TDR/2007/D 624821 dt. 19.12.16 of Bank of Baroda, Angamaly	5,000.00

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
			3) TDR/2014/11 115062 dt.11.08.17 of Bank of Baroda, Angamaly	2,500.00
			4)TDR/2014/11 115075 of dated, 11.08.2017 of Bank of Baroda, Angamaly	2,500.00
62	Reconstruction of damaged canal from ch.25m to ch.75m of Mangatturkara branch canal. Agt No. 142/ EE / MIDVN /EKM /2018-19	K.T.Itteera	No. JK 385578/79901 0500 550164 dt. 05.11.2018 of Sub Treasury Angamaly	41,100.00
63	Urgent Protection works to the S/P and leading channel of Neeleswaram LIS in Malayatoor Neeleswaram Panchayath. Agt. No. 145/EE/MIDN/EKM/ 18-19	Wilson Thomas	1)No.JK 444153/79901050055 9777 dt. 15.11.18 Dist. Try Kakkanad	18,000.00
			2) FD No.624211 dated 03.09.2014 of Bank of Baroda Angamaly	15,000.00
64	Improvements to Mangattukara LIS including raising to the side well of the main canal and replacing damaged pumpsets and allied works in Agamaly Municipality. Agt No.154/EE/MIEKM/2018-19 dated 04/12/2018	Itteera KI	1) No.JK 346738/ 799010500572628 dt. 29.11.18 of Sub Treasury Aluva	31,400.00
65	Annual Mace of Palathali, Gandhigram, Kramoottil, kanathaukunnu, Airapuram LIS under MI Section Pattimattom	Kurian poulose	1) No.JK 224447 dt.31.12.18 of Sub Treasury Kolenchery	17,800.00
66	FD - Rectification of damaged main canal near ch.500m and FC to Kuttadam padam of Parakkadavu No.1 LIS. 176/EE/MID/ 2018-19 dated 11/01/2019.	Wilson Thomas	1) No.JK 427012/ 799010500601634 dated 07/01/2019 of Sub Treasury Angamaly	26,000.00
			NSC ACC. No. 4252638462 dated	26,000.00

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
			10/01/2019 of Post office Angamali	
67	FD - 2018 - Mace of Keezhmad, Chalakkal Kuttamassery, Kalamassery, Choornikara, Muttam, Eloor, Kadungalloor, Uliyannoor & Mupathadam I, II, new LIS under MI Sn Aluva for 2018-19 Agt. No. 174/EE/MIDN/EKM/2018-19 dated 14/01/2019	Wilson Thomas	1) No.JK 427011/ 799010500601630 dated 07/01/2019 of Sub Treasury Angamaly	21,000.00
			2) NSC ACC. No. 4252650532 dated 10/01/2019 of Post office Angamali	21,000.00
68	Rectification works to Br. Canal between ch.50m to 200 m at purayar asari parambu area of Avanamcodu No.I (A) LIS 175/EE/MIDN/EKM/2018-19 dated 14/01/2019	Wilson Thomas	1) No.JK 427013/ 799010500601644 dated 07/01/2019 Sub Try Angamaly	13,000.00
			2)NSC ACC. No. 4252628227 dated 10/01/2019 of Post office Angamali	13,000.00
			3) FD No. 624805 dated 16/12/2016 of bank of baroda Angamaly	12,500.00
69	Urgent rectification of damaged and fuel delivery cistern of Palupuzha new LIS. Agt No. 180/EE/MIDN / 2018-19 dated 17/01/2019	K.I. Itteera	1) No.JK 427489/ 799010500604845 dated 14/01/2019 of Sub Treasury Aluva	11,000.00
			2)NSC ACC. No. 4257639068 dated 15/01/2019 of post office Angamaly	11,000.00
70	FD 2018 - Mace of Chanagamanadu Neduvannoor, thuruthikkavu, Desom west, Chowara .. 185/EE/MIDN/ 2018-19 dated 15/01/2019	Siby K.P	No.JK 427137/ 799010500606512 dated 16/01/2019	17,500.00
			2)NSC ACC. No. 4258605024 dated 18/01/2019 of Angamaly P.O.	18,000.00
	Annual Mace of Karumalloor No.1 & II Veliyathyunadu 1 &	Daisy Jose	1) No.JK 417453/ 799010500617966	12,000.00

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
71	II and Veliyathunadu East LIS in Karumalloor Panchayath for 2018-19 193/EE/MIDN/EKM/ 2018-19 dated 01/02/2019		dated 30/01/2019 of District Treasury, Ernakulam	
			2)NSC ACC. No. 4281002036 dated 30.01.2019 of Post office Aluva	12,000.00
72	Rectification works to Damaged portion of main canal between ch.1000m to 1500m and branch canal between ch.300m to 500m 198/EE/MIEKM/2018-19 dated 21.02.2019	Wilson Thomas	1) No.JK 407651/ 799010500632059 dated 21/2/2019 of Sub District Treasury, Angamaly	25,200.00
			2)NSC ACC. No. 4312165686 dated 21.02.2019 of Post office Angamaly	20,000.00
2019-2020				
NIL				
2020-21				
73	Urgent- rectification works to the super panage across Kottamamthodu at tail and portion of Neeleswaram No.2 LIS Agmt. No. 17/EE/MIDN/EKM/19-20 dated 11.09.2020	Wilson thomas	(1) No.JL.0164039 dated 11.09.2020 of Sub Treasury Angamaly	95,500.00
			(2) F.D Receipt No. 2908019 dated 11.09.2020 of Bank of Baroda Angamally	95,000.00
74	Renovation of Kandarachira pond in ward no 4 of thuravur panchayath. Agreement No. 22/EE/MIDN/EKM/20-21 dated 21.10.2020	V. Joy	No.JL.0483600 dated 21.10.2020 of Sub Treasury Angamaly	158,000.00
75	Improvements to Irrigation facilities in Pokkali Padasekharam in ward No. I am in Udayamperoor Panchayath. Agrmt.No. 24/EE/MIDVN/EKM/20-21 dt. 27.10.2020	M.P Salim	No.JL-0167431 dt. 27.10.2020 of District Treasury Ernakulam	178,000.00

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
76	Renovation of Erayachanchira in Ward No.16 of Nedumbassery Panchayath.Agmt. No.29/EE/MIDN /EKM/20-21 dt. 03.11.2020	M/S B2 Builder & Developers, Muvattupuzha	(1) No JS-0354438 dated 03.11.2020 of Sub Treasury Kolenchery	85,250.00
			(2) F.D Account No. 0810101000001236 dt. 02.11.2020 of south Indian Bank, Pamapakuda	85,150.00
77	Registration of C class License	Nikhil Das,	No.JL 0419720 dated 05/01/2021 Sub Try Aluva	50,000.00
78	Registration of C class License	Ummer Gadhafi P B	No.JL 0673969 dated 23/01/2021	50,000.00
79	Registration of C class License	Saji Sebastian	No.JL 0672524/799010100234614 dated 09/02/2021 Sub Try Aluva	50,000.00
80	Registration of C class License	Wesley Engineering & Constructions Pvt. Ltd	No.JL-0737753 dt. 12.02.21 Sub Try Kolenchery	50,000.00
81	Registration of C class License	MBM Engineering	No.JL-0634892 dt. 22.02.21 District Try EKM	50,000.00
82	Supply and installation of new HT out door switching panel, Inchoor LT Panel and renewal of electrical installation at Sreeboothapuram L.I.S in Kaladay Section	M/S Kittu Electricals	No. JL-0634858 dt. 19.02.2021 of District Treasury Ernakulam	62,500.00
2021-22				
83	Renovation to the end portion of Pandapadam thodu (Ganapathy temple pond to Manthodu) in Ward No.19 of Koovapady Grama panchayath agt, No.01/EE/MIDVN/EKM/2021 - 22 dated 31/05/2021	M/s. Sure safe Tech. PVT LTd	No. JL 0637833/ dated 25/05/2021 of Dt. Treasury Ernakulam	73,500.00
84	MLA - ADS - Renovation of Kattathara thodu in Division	MI. Muhammed Kunju,	. JL - 1097520 dated 08/07/2021 of Dt.	47,500.00

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
	18 in Kochi Corporation Phase I. Agmt No.2/EE/MIDN/EKM/202-22 dated 16/07/2021		Treasury Ernakulam Rs.47500/- as	
			2) bank guarantee bond becoming No. IBG 117104 dated 12/07/2021 Federal Bank, Thrikakkara	47,500.00
85	Construction of Sluice at padannakari in Kumblangi. Agt No. 03/EE/MIDVN/EKM/2021-22 dated 28/09/2021	Sri.M.P.Salim	No. JL - 1262219 dated 23/09/2021 of District Treasury Ernakulam	119,250.00
			.No. JL 1262217 dated 23/09/2021 of District Treasury Ernakulam	119,250.00
	C class registration	Jenil Jude,	No. JL-1866315 dated 12/10/2021 of Sub Treasury Kalamassery	50,000.00
86	MLA - ADF - 2020-21 Construction of field channel and side protection of field channel and side protection of thodu in Vaikom and Kuriyapadam padasekharam in Valakam. Agt No. 14/EE/MIDN/EKM/2021-22 dated 01/11/2021	Money Abraham	No.JL 0498704 dated 27/10/2021 of Sub Treasury Kolenchery	166,700.00
87	MLA - ADS - Renovation of Siva Subramaniya temple pond at Vyttila, Sree Narayaneswaram temple pond at ponnuruthy and Chennamkulam temple pond near Ponekkara road in Kochi corporation . Agt No. 05/EE/MIDN/EKM/2021-22/ dated 04/12/2021	Sri. Baby P.,	No. JL 1420991 dated 25/11/2021 at Dt. Treasury Ernakulam	178,310.00
88	Rectification of Kandampuzha lift - Kandampuzha Relift Puthupady and inchur LIS in Varapatty Panchayath Agt No. 07/EE/MIDN/Ekm/2021-22 dated 15/12/2021	Sri. Shaji Antony T	No. JL 1202107 dated 13/12/2021 of Sub Treasury Kothamangalam	63,400.00

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
89	Improvements to Edayattuthodu in Kalikalam Padashekaram in DN No. of Piravom Municipality. Agt No.10/EE/MIDVN/EKM/21-22 dated 25/01/2022	Sri.V.A. George	No.JL1203755 dt. 21/01/2022 of Sub Try Piravom	94,850.00
90	Construction of leading channel and rejuvenation of Ernathanam Pond Phase II in Edakkattuvayal Panchayath in Ernakulam. Agt. No. 11/EE/MIDN/EKM/2021-22 dated 07/02/2022	Ali P.P	No. JL 1205493 dated 04/02/2022 of Sub Treasury Muvatupuzha	232,360.00
91	Side Protection works to Arangil thodu (Semitherithodu) connection with Arangil padaseksharam (ward No.7) at Kuzhippilly Panchayath	C.P.Aboobacker	No. JL-1557608 dated 14/02/2022 of District Treasury Ernakulam	78,750.00
92	Urgent Side Protection works to the damaged right side bund of Kadathythodu in ward No.7 of Valakam Panchayath. Agt No. 12/EE/MIDN/2021-22 dated 17/02/2022	Unnikrishnan nair. K.S,	No. JL 1204335/- from Sub Treasury Koothatukulam . Dated 16/02/2022	104,000.00
93	Rectification of Puthenkudal VCB and connected loading channel in Koothatukulam Municipality under Paravur Constituency. Agt No. 14/EE/MIDN/2021-22 dated 25/02/2022	Unnikrishnan Nair K.S,	No. JL 1204358 dated 22/02/2022 of Sub Try Koothattukulam	51,500.00
2022-23				
94	Improving Irrigation facilitation to Ayyamvole Padasekharam(formation De-silting and Geo textile side protection of thodu)Phase - 1 in Amballoor Panchayath. Agmt No.1/EE/MIDN/EKM/2022-23 dated 02/04/2022	Ginesh .K Sarkar,	No. JL - 1226609 dated 02/04/2022 of Dt. Treasury Ernakulam.	68,700.00
95	Immediate measures for strengthening the outer bund of Maruvakkadu Padasekharam in Chellanam Panchayath. Agt No.	Jithin Km,	No. JL 1226878 dated 22/04/2022 of District Treasury Ernakulam	115,000.00

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
	2/EE/MIDN/EKM/2022-23 dated 22/04/2022			
96	C' Class registration	Baby. S.	No. JL 0801790 dated 21/05/2022 of Sub Treasury Vaikom	50,000.00
97	Laying of new pipeline cum maintenance of pumphouse and premises of Karamoottil Lift Irrigation Scheme under MI Section Pattimattom Agreement No. 03/EE/MIDVN/EKM/2022 - 23 dated 06/06/2022	Prince Aliyas	No. JL 1490202 dated 07/05/2022 of Sub Treasury Kolenchery	40,300.00
98			No. JL 1490201 dated 07/05/2022 of Sub Treasury Kolenchery	9,050.00
99	Construction of leading channel for Ambedkar Lift Irrigation Scheme Agmt No. 05/EE/MIDVN/EKM/2022-23 dated 07/06/2022	Sabu M.S Maliyekal West Vengola	No. JL No. 1490796 dated 16/05/2022 at Sub Treasury Kunnathunad	66,000.00
100	Urgent Side Protection works to Kizhakke Kuthukuzhy thodu in Kothamangalam Municipality & Kasargod Panchayath. Agnt No.07/EE/MIDVN/EKM/2022-23 date 08/06/2022	P.O. George	No. 1380097 dated 07/06/2022 at Sub Treasury Kothamangalam A	60000
101	Side Protection works to Kuttiyamchal thodu in ward No.15 of Kuttampuzha panchayath Agmt No.08/EE/MIDVN/EKM/2022-23 dated 17/06/2022	Vishwanathan T.V	No. 1227641 dated 17/06/2022 at Sub Treasury Kalamassery	84,000.00
102	providing infrastructure facilities to various paddy fields under kizhakombu padasekharam in koothattukulam municipality under piravom constituency. Agmt No.11/EE/MIDVN/EKM/2022-23 dated 12/07/2022	Alias P Baby	JL- No. 0968352 dated 12/07/2022 at Sub Treasury Ernakulam Account No. 799010502080053	232400
103	Rectification works to the main canal of Chengamanad No. 2 LIS Ist reach Agmt	Jomin Benny	No. JL 0969935 dated 07/06/2022	35450

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
	No.06/EE/MIDVN/EKM/2022-23 dated 07/06/2022		District Treasury Ernakulam	
104	Rectification of pump house for Kanjoor No. 1 LIS in Karumalloor Panchayath Agmt No.09/EE/MIDVN/EKM/2022-23 dated 27/06/2022	Smt. Daisy jose	Details of PG Rs. 74000/-TSB No. JL 096666490 dated 27/06/2022 District Treasury Ernakulam	74,000.00
105	Construction of VCB occurs at Poomalathodu near cherampara bridge in ward no. 17 of vengola panchayath. Agmt No.04/EE/MIDVN/EKM/2022-23 dated 06/06/2022	Hasan Kochupilla,	No. JL 1229804 dated 12/05/2022 District Treasury Ernakulam	60,500.00
106	Reconstruction of box culvert pandarachira road near chilavanoor district Agmt No.17/EE/MIDVN/EKM/2022-23 dated 31/08/2022	K.V Joseph,	No. JL 0969493 dated 26/07/2022 District Treasury Ernakulam	141,000.00
			Bank guarantee No. 0506622 BG 0000293 dtd 05/08/2022 SBI Ernakulam	140,650.00
107	Constrction of VCB at Aasharithazham thodu in Karukutty pt. Agmt No.15/EE/MIDVN/EKM/2022-23 dated 11/08/2022	wilson Thomas	No. JL 0968494 dated 06/08/2022 SubTreasury Angamaly.	59000/
			No. 2929642 dated 10/08/2022 of Bank of Baroda Angamaly.	59000/
108	Construction of VCB across Pallithodu and leading channel in Kandanadu Padasekharam in Ward No. 4 in Udayamperoor pt. Agmt No.10/EE/MIDVN/EKM /2022-23 dated 12/07/2022	Ali. P.P	No. JL 1380974 dtd 12/07/2022 SubTreasury Muvattupuzha.	115,100.00
			No. JL 1380975 dtd 12/07/2022 SubTreasury Muvattupuzha.	183,400.00

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
109	Supply, conveyance, erection and commissioning of 100 HP spore motor pump set at Palapuzha new LIS Agmt No.16/EE/MIDVN/EKM/2022-23 dated 22/08/2022	George K.O	No. JL 1544079 dated 22/08/2022 SubTreasury Aluva.	44400/
			No. 1544080 dated 22/08/2022 SubTreasury Aluva.	5,100.00
110	Cleaning desilting of thodu and construction of drain Mambra 4 cent colony Agmt No.13/EE/MIDVN /EKM/ 2022-23 dated 13/07/2022	Smt. Daisy jose	No. JL 1227248 dated 11/07/2022	30,000.00
			JL 1227263 dated 12/07/2022 Rs. 10000	10,000.00
			NSE A/C NO, 4259447982 Rs. 20000 dt. 16/01/2019	20,000.00
			NSC A/C NO, 4280918444 dt. 31/01/2019	12,000.00
111	Urgent rectification works of Paruvakkad Branch canal of Veliyathunadu No. 1 LIS Agmt No.14/EE/MIDVN/EKM/2022-23 dated20/07/2022	wilson Thomas	No. JL 1776394 dated 19/07/2022 of Sub Treasury Angamaly.	28,000.00
			No.2929623 dated 19/07/2022 of Bank of Baroda Angamaly. Rs. 28000/-	28,000.00
112	Reconstruction of damaged culvert in pipe line road of Kerala Water Authority in Division No. 10, 11 Kalamassery Municipality Agmt No.20/EE/MIDVN/EKM/2022-23 dated 12/01/2023	Daisy jose,	No. JL 1257667 dated 12/01/2023 of DistrictTreasury Ekm.	88,000.00
113	Renovation of pond - Renovation of Kannamkulam in ward no. 4 in Cheranalloor pachayath. Agmt No.21/EE/MIDVN/EKM/2022-23 dated	Jackson. J	No. JL 0726535 dated 24/02/2023 of DistrictTreasury Ekm.	185,100.00

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
114	General - Nadukani kozhipillythodu side protection works in ward no. 16 of kothamangalam municipality Agmt No.22/EE/MIDVN/EKM/2022-23 dated 03/03/2023	Unnikrishnan Nair K.S.Kizhakkekkara (H) Koothattukulam	No. JL 1258101 dated 02/03/2023 of SubTreasury Koothattukulam	33,704.00
115	MLA - Ads Revamping of Pallikkadavu LIS in Kanjoor G.P Aluva Constituency Agmt No.23/EE/ MIDVN/EKM/2022-23 dated 04/03/2023	Viju P.T.	No. JL 0726603 dated 04/03/2023 of DistrictTreasury Ekm.	71,400.00
116	Licence renewal of ' C ' Class no. 4/MIEkm	P.A Pareed Kunju	BG No. 38540IGL0000423 dated 21/03/2023 of Union Bank of India Thrikkakara	50,000.00
2023-24				
117	Licence renewal of ' C ' Class no. 37/91-92	Smt. Innamma Paulose	BG No.006/6948/RO/Ekm - II/ADV/2023-24 dt. 05.04.2023	50,000.00
118	Side protection works for Kulagattukuzhi thodu in ward no. 10 of Poothrika Pt,	Geroge P.C	No. JL 1261011 dated 03/04/2023 of SubTreasury Kolanchery	38,100.00
119	Licence renewal of ' C ' Class no. 3/2020-21	Jubesh A.M	BG No.1241IBG134330 dt. 18.04.2023	50,000.00
120	PMOC-side protection work to Aikkaranadu LIS near Pump House	George.P.C.	No.JL 1261130/79901010000530 dated, 02/05/2023 of Sub Treasury Kolenchery	84,000
121	Renovation of Leading channel at the tail end portion of Ramamangalam No.3 and No.4 LIS in Ramamangalam Panchayath	ALIAS P. Varghese	No. JL 1571132 dated 04/05/2023 of Sub Treasury, Muvattupuzha	82,000
			No. JL 1571158 dated 08/05/2023 of Sub Treasury, Muvattupuzha	271,000

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
122	Renewal of "c" class contractor Licence 06/2020-21	Wesly Engineering and constructions Pvt.Ltd.	Bank Guarantee Ref.No. 1223 IBG135688 dated, 19/05/2023 of Federal Bank Puthencruz	50,000
113	Renewal of "C" class civil contractor's Licence	Shihab.M.A.,	Bank Guarantee - No. 1464 IBG 135221 dated 10.05.2023 of Federal Bank, Kakkanad	50,000
114	Renovation of Valiyakulam Chira in Koovapady Grama Panchayath	Georgekutty K. M.	No. JL 1261209 dated 16/05/2023 of Sub Treasury, Kolenchery	197,120
			No. JL 1261210 dated 16/05/2023 of Sub Treasury, Kolenchery	81,750
			Bank Guarantee No. 0132BG000692023 dated, 16.05.2023 of South Indian Bank Muvattupuzha, Branch	31,000
115	Renewal of "C" class Civil Contractors Licence	Sainudeen P.A.	Bank Guarantee No. 40634BG00007 dated, 29/05/2023 of Kerala Gramin Bank, Ernakulam	50,000
116	Urgent Rectification works to Chilambilly Branch Canal of Kanjoor LIS in Sreemoolanagaram Panchayath	Daisy Jose	No. JL 1118081 dated, 20/05/2023 of District Treasury, EKM	62,500
117	Renewal ' C' Class Contractors Licence	Nasar K.M	BG No. 377880IGL0000823 dated 01.06.2023 of union bank of india, Arakkapady	50,000
118	Renovation work Keezhmad LIS reconstruction work to be	Daisy Jose	No. JL -1118185 dated 05.06.2023	164,150

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
	the main canal of Keezhmad LIS new ch. 30m Agt No. 7/EE/MIDVN/EKM 23-24 dtd 05.06.23		District Treasury, EKM	
119	Urgent rectification works to main canal of Neeleeswaram LI Scheme Agt No. 6/EE/MIDVN/EKM 23-24 dtd 03.06.23	Bentry George,	No. JL -0728146 dated 31.05.2023 sub treasury Angamaly	61,000
120	Renewal ' C' Class Contractors Registration Licence	Antony Jude	BG No. 34530lGL0000523 dated 18.07.2022 of Union bank of india, Kannamali	50,000
121	Renewal ' C' Class Contractors Registration Licence	E.C. Sasi	BG No. 33780IGL0000523 dated 30.06.2023 of union bank of india, North Paravoor	50,000
122	Renovation work Keezhmad LIS reconstruction of side wall and providing fencing to Keezhmad LIS canal in Keezhmad GP Ch175m to 288m Agt No. 10/EE/MIDVN/EKM 23-24 dtd 26.06.23	Daisy Jose	No. JL -1119810 dated 26.06.2023 District treasury Ekm	71,500
123	Reconstruction work to be ch 1300 and 1550m of Okkal LI Scheme Agt No. 09/EE/MIDVN/EKM 23-24 dtd 08.06.23	Sijo.P.L.	No. JL -0728172 dated 06.06.2023 sub treasury Angamaly	78,500
124	Reconstruction work to be Kaprikadu LIS from ch 1375 to 1750m for preventing side step and leakage Agt No. 08/EE/MIDVN/EKM 23-24 dtd 07.06.23	A.P. Sebastean	No. JL - 1260153 dtd 06.06.2023 sub treasury Kothamangalam	90,750
125	Desilting and side protection works to Karpillykavu Ambalakulam - Thottuchira thodu in ward no. 7 of Manjapra GP Agt No.	V. Joy	No. JL -0728272 dated 30.06.2023 sub treasury Angamaly	131,300

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
	11/EE/MIDVN/EKM 23-24 dtd 01.07.23			
126	Ponds Renovation & Improvement to nambiarkulam in Udayamperoor Panchayath Agt No. 12/EE/MIDVN/EKM 23-24 dtd 03.07.23	Saji. P Vargheese	No. JL -1572125 dated 01.07.2023 sub treasury Kolenchery	202,600
			No. JL -1572126 dated 01.07.2023 sub treasury Kolenchery	31,700
127	Rehabilitation of No.1 LIS sub canal in ward no. 11 of Ramamangalam Pt. Agt No. 13/EE/MIDVN/EKM 23-24 dtd 04.07.23	Saju C.S	No. JL -1570326 dated 03.07.2023 sub treasury Piravom	72,000
			Term deposit dt. 03.07.2023 - bank of India Anjalpetty	60,000
			No. JL -1570325 dated 03.07.2023 sub treasury Piravom	128,000
			No..JL -1570310 dated 26.06.2023 sub treasury Piravom	62,200
			No. JL -1119865 dated 04.07.2023 District treasury Ernakulam	10,000
			Deposit dated 03/07/2023 of Bank of India, Anjalpetty	140,000
			Deposit dated 26/06/2023 of Bank of India, Anjalpetty	60,000
128	Chowara No. 3 LIS Pump house - Reconstruction of pump house for chowara no. 3 LIS Agt No. 14/EE/MIDVN/EKM 23-24 dtd 26.07.23	Ashraf P.K,	No. JL - 0727461 dtd 24.07.2023 sub treasury Aluva.	88,500

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
129	General - Parippachira thodu Desilting and side protection work including RR masonry of Parippuchira thodu near Rehabilitation plot of Vallarpadam ICTT project at Thuthiyoor in Thrikkakara municipality Agt No. 15/EE/MIDVN/EKM 23-24 dtd 17.08.23	Saju. P Makkar	No. JL - 1882999 dated 17.08.2023 sub treasury Kuthiathodu	202,582
130	Construction of VCB and side protection works in chemmanadu vailyathodu in ward no. 6 Thiruvaniyoor. Agt No. 16/EE/MIDVN/EKM 23-24 dtd 15.09.23	Wilson Varkey,	No. JL - 1573850 dated 13.09.2023 sub treasury Kolenchery	304,480
131	General AK bund repair and maintenance of sluice no. 2 including side protection of works of AK bund in Amballoor Panchayath Agt No. 16/EE/MIDVN/EKM 23-24 dtd 15.09.23	Xavier C. M.	No. JL 1875139 dated 25.09.2023 of Sub Treasury Vaikom	28,500
			Deposit Receipt No. 705447 dtd 26.09.2023- Canara Bank Vaikom	28,500
			No. JL -1875138 dtd 25.09.2023 sub treasury Vaikom	47,000
			Deposit Receipt No. 705446 dtd 26.09.2023 Canara Bank Vaikom	47,000
132	Completion of VCB across Karipathazham thodu in ward 6 of Aikkaranad GP Agt No. 18/EE/MIDVN/EKM 23-24 dtd 29.09.23	Shaji Francis,	no. JL 1571854 dtd 27.09.2023 sub treasury kothamangalam	36,000.00
			No. 7707017351 - 5 dtd 27.09.2023 of SBI Chelad branch ekm	36,000.00
			No. JL 1571853 dtd 27.09.2023 of sub	104,000.00

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
			treasury kothamangalam	
			No. 7707017351 - 5 dtd 27.09.2023 of SBI Chelad branch ekm	104,000.00
133	Annual Maintenance of Cheriyathekkanam bund for the year 2023 -24 Agt No. 19/EE/MIDVN/EKM 23-24 dtd 10.11.23	Dilu K. Johnson	No. JL 1446271 dtd 7.11.2023 of sub treasury Angamaly	36,200.00
134	General - Renovation of ponds Kannankulam in ward no. 4 in Cheranalloor Pt. Phase 2 General Civil work Agt No. 21/EE/MIDVN/EKM 23-24 dtd 04.12.23	Aneesh C.P,	No. JL 1443697 dtd 28.11.2023 of District treasury Ekm	114,100.00
			No. JL 1448696 dtd 28.11.2023 of District treasury Ekm	21,750.00
135	Rectification works of 1400 to 1470 of Thottuva Branch of Cheranalloor LIS Agt No. 22/EE/MIDVN/EKM 23-24 dtd 23.12.23	Mahesh R,	No. JL 0814563 dtd 22.12.2023 of Sub treasury Kunnathunad	40,000.00
136	Renewal ' C' Class Contractors Registration Licence	Sunil Kumar M.C	No. JL 1448802 dtd 17.02.2024 of Sub treasury Nayarambalam	150,000.00
137	General Construction of Road and side protection works in continuation of proposed Padannkari culvert in ward no. 12 in Kumbalangi Pt. Agt No. 23/EE/MIDVN/EKM 23-24 dtd 19.02.24	Director M/s Accurate infrastructure	No. JL 0925419 dtd 17.02.2024 of District treasury Ekm	60850
138	General Side protection thodu near Sanjay Gandhi road in ward no. 7 in Kumbalangi pt Agt No. 29/EE/MIDVN/EKM 23-24 dtd 15.03.24	Noushad P.M	No. JL 0840646 dtd 15.03.2024 of District treasury Ekm	97,274

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
139	Renovation of Irattuchira in ward 16 of Perumbavoor Municipality including thodu side protection Agt No. 24/EE/MIDVN/EKM 23-24 dtd 23.02.24	Sijo.P.L.	No. JL 0925476 dtd 21.02.2024 of District treasury Ekm, APG nil	78,300
140	Construction of VCB across valiyathodu at mankuttypadam Vengola Pt. Agt No. 25/EE/MIDVN/EKM 23-24 dt 04.03.2024	A.P Sebastian	No. JL 0817076 dtd 22.02.2024 of Sub treasury Kunnathunad	95,100
141	Urgent rectification works for canals in Parakkadavu No.1 LIS in Parakkadavu Pt. Agt No. 26/EE/MIDVN/EKM 23-24 dt 11.03.2024	Wilson Thomas	No. JL 0924660 dtd 7.03.2024 of sub treasury Angamaly	64,000
			No. JL 0924663 dtd 7.03.2024 of sub treasury Angamaly	80,000
			No. JL 4873735 dtd 7.03.2024 Bank of baroda Angamaly branch	75,500
142	Urgent rectification works for canals in Kuttipuzha No. LIS in Kuttipuzha Pt. Agt No. 27/EE/MIDVN/EKM 23-24 dt 11.03.2024	Wilson Thomas	No. JL 0924662 dtd 7.03.2024 of sub treasury Angamaly	85,300
			No. JL 0924659 dtd 7.03.2024 of sub treasury Angamaly	107,500
			No. JL 4873736 dtd 7.03.2024 Bank of baroda Angamaly branch	100,000
143	MLA SDF 2023-24 Installation of pump and motor, electrification and connected civil works for Kulavankunnu LI Scheme in Ward No. 2. Chengamanad Panchayath Agt No. 28/EE/MI Division Ernakulam 2023-24	Wilson Thomas	No. JL 0924661 dtd 7.03.2024 of sub treasury Angamaly	19,000
	2024-2025			

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
144	General Renovation of VCB in foot path in Thattupadam Pathuprapadam in ward no 12 of Pampakuda Gp Agt No. 01/EE/MIDVN/EKM 24-25 dt 15.06.2024	Ginesh .K Sankar	No. JL 1815177 dtd 7.06.2024 of sub treasury Piravom	40,110
			Bank Gurantee no. KFC/PBR/3/2024 dt 28.05.2024 KFC Perumbavoor	189,900
145	Renovation of Narikuzhichira pond in ward no. 12 of Manjapra Pt Agt No. 02/EE/MIDVN/EKM 24-25 dt 12.07.2024	Ramesan P	D. JL 0839324 dtd 05.07.2024 of sub treasury Angamaly	188,100
			no. JL 0839325 datd 05.07.2024 of sub treasury Angamaly	86,600
146	Renewal ' C' Class Contractors Licence IRR/Civil/152-2024-25	M/S Power boat Aluva	No. JL 0838316 dtd.5.08.2024 of sub treasury Aluva	150000
147	General Annual maintenance putting up tidal bund across kadambrayar at Kozhithumbu for the year 2024-25 - General Civil work Agt No. 05/EE/MIDVN/EKM 24-25 dt 22.11.2024	Kelvin K.G	No. JL 0820501 dtd. 21.11.2024 of sub treasury Poochakkal	78,600
			No. JL 1605489 dtd .19.11.2024 of sub treasury Poochakkal	35,200
148	Rectification of canal of LIS of Parakkadavu no.1, no. II Poovathussery and Palupuzha LIS in Angamaly Constituency Agt No. 03/EE/MIDVN/EKM 24-25 dt 12.07.2024	V. Joy	No. JL 0839346 dtd. 10.07.2024 of sub treasury Angamaly	150,200
			No. JL 0839347 dtd.10.07.2024 of sub treasury Angamaly	1,99,300
149	Annual Maintenance of Poovathussery LIS, Erayamkudy LIS, Kurumassery LIS, Palupuzha LIS, Parakkadavu No.1, No.2, LIS in Parakkadavu Pt for the year 2024-25 Agt No. 06/EE/MIDVN/EKM 24-25	Thomas S.P	No. JL 1759327 dtd .21.11.2024 of sub treasury Angamaly	77,000.00
			No. JL 1759326 dtd. 21.11.2024 of sub treasury Angamaly	1,54,000

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
150	Annual Maintenance of Cheriyathekkanam temporary bund for the year 2024 -25 Agt No. 07/EE/MIDVN/EKM 24-25 dt 29.11.2024	Dilu K. Johnson	No. JL 1759336 dtd .22.11.2024 of sub treasury Angamaly	30,000.00
			No. 17380400014798 dtd 25.11.2024 from federal bank Angamaly	28,000.00
			No. JL 1759335 dtd 22.11.2024 of sub treasury Angamaly	131,000.00
			No. 17380400014780 dtd 25.11.2024 of federal bank Angamaly	130,000.00
151	Revamping and rejuvenation of LIS - Left branch canal of Chelamattom LIS Agt No. 08/EE/MIDVN/EKM 24-25 dt 03.01.2025	Wilson Thomas	No. JL 1759521 dtd 23.12.2024 of sub treasury Angamaly	29,000.00
			FD No. 4874043 dtd 23.12.2024 of Bank of Baroda Angamaly (branch)	30,000.00
			No. JL 1759520 dtd 23.12.2024 of sub treasury Angamaly	78,000.00
			Rt No. 4874044 dtd 23.12.2024 of Bank of Baroda Angamaly (branch)	78,000.00
152	Registration of C class License Reg No. 2/2016-17/BVKP 0166N/ 1994503	Asha Bibin	No. JL 1982961 td 25.01.2025 of sub treasury Kolenchery	150,000.00
153	Renewal ' C' Class Contractors Licence	Jithin Km	No. JL 0806938 td 27.03.2025 of sub treasury Nayarambalam	150,000.00

Sl. No	Name of work	Name of contractor	Mode of payment	Amount
154	Renovation of Elavankudithazham pond in ward no. 12 of Vazhakulam Gp	Anil kumar K.S	No. JL 1983798 td 17.01.2025 of sub treasury Kunnathunad	98,400.00
155	Side Protection work kannankallell paravummel thodu in Elanji Panchayth under Piravom Constituency	Jomy Mathew	No. JL 1541669 td 03.02.2025 of sub treasury Erattupetta	162,400.00
156	Reconstruction of Thattekad VCB in Thirumarady Panchayath under Piravom Constituency	Dilip kumar N.M	No. JL 1984647 dated 15.03.2025 of sub treasury Koothatukulam	152,000.00
			No.JL 1984646 dated 15.03.2025 of sub treasury Koothatukulam	304,000.00
157	Construction of side protection wall and leading channel near Keezhichira VCB in Thirumarady Pt under Piravom Constituency	Jose MA	No. JL 1978988 dated 20.03.2025 of sub treasury Muvattupuzha	101,100.00
158	Muriyamel padashekharam Construction of VCB cum Tractor passage of Muriyavelil padashekharam in Mulanthuruthy Panchayath	Prince Aliyas	No.JL 1920523 dated 28.10.2024 of sub treasury Kolenchery	201,000.00
159	LAC-ADS-Protection works at Valyattuchira in Ward No.4 of Kalady G.P.	Daisy Jose	Try Deposit No. 0860650 dt. 21/05/2025 of Dist.Try EKM	61,000.00
			Try Deposit No. 0860649 dt. 21/05/2025 of Dist.Try EKM	86000

As per the rules, the security deposits are to be released after the expiry of Defect Liability Period. But even though the validity period of the securities has been expired, no action is seen initiated by the Division either to release the security deposit or to deposit the same to the Government.

As per article 282 of Kerala Financial code Vol I "Lapse of deposits to the Government"- All deposits unclaimed for more than three complete financial years should be credited to the Government at the close of March in each year.

2.1.6.a Action may be taken to credit the above Security Deposit amount to the Government under the appropriate revenue head of account and periodical physical verification of the security deposits should be conducted at regular intervals.

2.2 MAJOR AND MEDIUM IRRIGATION

The Major Irrigation Department of Kerala plays a vital role in ensuring sustainable water resource management across the state, focusing on the development, operation, and maintenance of large-scale irrigation infrastructure. With Kerala's unique topography and monsoon-dependent climate, the department undertakes the critical task of managing dams, canals, and reservoirs to support agriculture, mitigate floods and to provide drinking water supply. By implementing modern irrigation techniques and integrated water management strategies, the department not only enhances agricultural productivity but also contributes significantly to rural development and climate resilience in the state even though undue delays in the implementation of major and medium irrigation projects have been observed. In order to address the inordinate time lags due to changes in land use patterns, difficulties in land acquisition, and other related challenges, effective steps have to be taken to complete these projects in a phased and time-bound manner. The project cost is met from the Plan fund.

As part of the Performance Budgeting of the Water Resources Department 2024-25, the Finance (Performance Budget) Department has evaluated the following scheme:

2.2.1 Dam Safety Organisation and Dam Safety Measures.

Inspection of dams, technical visit, conducting training programmes, maintenance works of dams/ barrages, rectification of emergency works and other dam safety works under Irrigation Department are envisaged under this project. These efforts are in line with the provisions of the Dam Safety Act, 2021, which aims to ensure the structural integrity and operational efficiency of the dams. An amount of ₹500.00 lakh has been earmarked in the Budget 2024–25 to support these activities. The fund will be utilized for:

- Civil, mechanical, and electrical maintenance of dams and barrages.
- Emergency safety works.
- Rectification of damages caused by floods.
- Routine pre- and post-monsoon inspections.
- Execution of works recommended by the Dam Safety Organisation.

The project specifically addresses the maintenance and safety needs of major dams and barrages viz Chimoni Dam, Kuttiyadi Dam, Pazhassi Dam, Peechi Dam, Periyar Valley Barrage, Kanjirapuzha Dam, Kallada Dam, Malampuzha Dam, Neyyar Dam, Pothundy Dam, Vazhani Dam, Pamba Barrage, Meenkara Dam, Chulliyar Dam, Walayar Dam, Mangalam Dam, Karapuzha Dam, Malankara Dam and Moolathara Barrage.

The core mission of the Irrigation Division is the maintenance and monitoring of performance of major and medium irrigation projects under Project 2, especially the upkeep of dams. It also ensures that proper infrastructure is in place for the timely and effective maintenance of all completed projects. The Irrigation Division in Thrissur has jurisdiction over the Kole lands, which stretch from Irinjalakuda to the northern boundary of Thrissur district near Ponnani. The division manages three major dams — Vazhani, Chimoni, and Peechi — along with a weir located at Cheerakuzhy.

The Additional Irrigation Division plays a vital role in water conservation and storage, pollution control, irrigation support, flood management, and the protection of coastal areas. It also actively involves in the construction, operation, and maintenance of irrigation infrastructure.

The Officials of the Finance (Performance Budget) Department visited the Irrigation Division and the Additional Irrigation Division of Thrissur and selected some of the plan works for assessment randomly. These Divisions come under the Irrigation Central Circle, Thrissur.

2.2.2 Chimoni Dam

The Chimoni Dam, located at Echippara about 38 km east of Thrissur in Kerala, is a composite masonry-cum earth dam. Its total length is 1181.5 metre, consisting of a 495 metre masonry section and a 686.5 metre earthen section. The dam was built across the Chimony river, a tributary of Karuvannur river and was completed in 1996. Despite the absence of a canal system, water is regulated through a sluice at a sill level of +40.000 metre and released into the river, then diverted to fields via strategically placed regulators. The dam also prevents saline intrusion over 5,600 hectares in the Vallivattom-Chettuva region and significantly contributes to flood mitigation in the Karuvannur River Basin. The Full Reservoir Level (FRL) is +76.400 metres, with a storage capacity of 151.55 million cubic metres, 148.70 Mm^3 live storage and 2.85 Mm^3 dead storage. It serves a catchment area of 10.10 km^2, and the water spread area at FRL is approximately 72.13 km^2. Flood regulation is managed via an Ogee spillway equipped with four radial shutters, each measuring 10.00 x 7.50 metres.

The project is proposed to irrigate a gross area under crop of 35700 ha. By commissioning the project, 11000 ha of paddy fields in kole lands get water for puncha and 6200 ha of kole fields get additional mundakan crop besides the 5400 ha of paddy fields in Chettuvai, Valiavattom and Brahmakulam area. Flood control is an added advantage by preventing saline intrusion over 5600 ha in the Valiavattom-Chettuvai region.

Photo 2.2.2 :Chimoni Dam

The Finance (Performance Budget) team visited Chimoni Dam to review and assess the works, the details of which are provided below.

2.2.2 i) GENERAL-Chimoni Dam –DSO Works 2024-25-Rectification works to the toe drain of Earthen Dam-Balance works- General civil work.

A toe drain is a drainage system typically located at the base (toe) of an embankment dam or levee. Its primary purpose is to collect and remove seepage water that passes through the dam or embankment, thereby preventing saturation of the downstream slope, which could lead to instability or failure.

The proposed work was included in the 2024–2025 plan based on the recommendations of the State Dam Safety Organisation. The estimated cost of the project was ₹6,80,000/-. This estimate was prepared to rectify certain portions of the DR packing of the toe drain that had become disturbed and displaced. These damages posed a significant risk of sliding and potential collapse of the side pitching in the

future. Therefore, it was essential to restore the damaged sections of the toe drain. In addition, the scope of work included the provision to cast a plinth beam over the DR wall to protect the structure from future damage. Administrative sanction for the work was issued on 31-08-2024, followed by technical sanction on 25-10-2024.

The agreement for the work was executed on 03-01-2025, and the site was handed over to the contractor on 01-04-2025. The work was completed satisfactorily on 05-03-2025, well within the agreement period.

Photo 2.2.2 (i) : Rectification works to the toe drain of Earthen Dam

2.2.2 (ii) GENERAL-Chimoni Dam- DSO Works- 2024-2025- Maintenance and Repainting of parapet wall of Dam and allied structures-General Civil Work

The parapet wall of the earthen dam had suffered slight damage, and the painted surface had faded over time, which affected the aesthetic appearance of the structure. The estimate included provisions for scrapping and washing the surface, replastering the damaged areas, and painting the parapet wall, grills, gates, and light posts.

The estimated cost of the project was ₹6,63,000/-, with administrative sanction issued on 31-08-2024, followed by technical sanction on 25-10-2024. The agreement for the work was executed on 04-12-2024, and the site was handed over to the contractor on 08-12-2024. The agreed PAC (Probable Amount of Contract) was ₹4,00,816/-, and the contractor assigned for the work was Mr. Sujith Bhaskaran. The work was completed satisfactorily on 28-01-2025, well within the agreement period.

Photo 2.2.2 (ii) : Maintenance and Repainting of parapet wall of Dam

2.2.2 (iii) **GENERAL-CDP-Dam safety works-Reaming works in pressure holes at drainage gallery, removing calcinations in the drains, floors and walls for the year 2024-2025-General Civil Work**

The estimated cost of the project was ₹30,80,000/-, with administrative sanction issued on 27-12-2024, followed by technical sanction on 07-02-2025. The agreement for the work was executed on 25-03-2025, and the site was handed over to the contractor, T.N. Raghavan Nair, on 04-04-2025. The agreed PAC for the work was ₹19,22,188.50. The project involves the removal of calcination from drains, floors, and walls as part of the annual maintenance work for the year 2024-2025. The work was specifically intended for cleaning the inside of the drainage gallery of the dam.

The main objective of the work was to facilitate accurate measurements of seepage and uplift pressure by removing calcination in the pressure holes, drains, and side walls of the dam gallery. As of now, almost 85% of the work has been completed.

The time of completion (ToC) for the project was extended without penalty to 03-07-2025.

As part of the structural health monitoring under the DRIP (Dam Rehabilitation and Improvement Project), the supply, installation, testing, and commissioning of instrumentation, including software monitoring and necessary accessories, were to be undertaken. It was decided to install uplift pressure gauges in the drain holes to monitor any fluctuations in uplift and seepage pressures. However, during inspection by Encardio (**Encardio** is an Indian engineering instrumentation company that designs and supplies geotechnical, structural, and hydrological monitoring systems widely used in groundwater studies, dam safety, irrigation, hydropower, and large infrastructure projects), it was observed that most of the pressure holes, drains, walls, and floors were either partially or fully clogged with calcination, which obstructs the installation of these instruments.

Therefore, reaming of the pressure holes and removal of calcination from the drains, walls, and floors became essential prior to the installation of the pressure gauges. Accordingly, the work titled "Reaming works in pressure holes at drainage gallery, removing calcinations in the drains, walls, and floors for the year 2024-2025" was implemented. The intermittent power failure affected the timely completion of the work since Chimony dam is located in the forest. As a result, extension of TOC had to be granted three times to accommodate the delays caused by these unforeseen circumstances.

Photo 2.2.2 (iii) : Reaming works in pressure holes at drainage gallery, removing calcinations in the drains, floors and walls

2.2.3 Peechi Dam

Peechi Dam, located near Peechi about 20–22 km from Thrissur in Kerala, is a straight gravity/rubble masonry dam constructed across the Manali River. The construction was began in 1947 and was completed in 1958. The dam has a crest length of approximately 213.36 meter and a maximum height of about 40.85 metres from the deepest foundation. It serves dual purposes—providing irrigation and drinking water. The dam supplies water to the Thrissur Corporation, several Panchayats, and paddy fields around Thrissur, including the Kole lands during the Puncha season. The reservoir has a catchment area of approximately 18,615.50 hectares (≈ 186.16 km²) and a gross storage capacity of around 110.436 million cubic meters, with a dead storage of about 2.266 million cubic meters. The Full Reservoir Level (FRL) is +79.25 meters above mean sea level, while the minimum draw-down level is +53.34 meters. The dam's spillway is an ogee overflow type with four straight gates, each measuring 10.05 × 3.05 meters, set at a crest level of +76.20 meters. The spillway has a discharge capacity to handle a probable maximum flood of approximately 368.119 cubic meters per second (cumecs).

Photo 2.2.3: Peechi Dam

The Finance (Performance Budget) team visited Peechi Dam to review and assess the works, the details of which are provided below.

2.2.3 (i) Dam-Safety-Rectification of parapet walls of Peechi dam and earthen dam, d/s side protection wall and construction of new MWL for the year 2022-23

The estimated cost of the project was ₹11,50,000/-, with administrative sanction issued on 31-03-2023, followed by technical sanction on 02-08-2023 for the same amount. The tender was invited on 03-08-2023, and the agreement was executed on 01-09-2023. The site was handed over to the contractor, Raju T.U. (Civil Work), on 08-09-2023, and the work was completed on 16-05-2024.

This estimate was prepared with the objective of ensuring proper maintenance and rectification of the Peechi Dam and its surroundings. A major component of the work involved the rectification of the dam parapet, including the rebuilding of damaged portions of the earthen dam parapet wall, along with the required finishing works. Additionally, a section of the downstream side protection wall of the river was found to be damaged. Accordingly, provisions for rubble masonry and pointing work at this location were included in the scope of work.

As per the instructions of the Kerala Dam Safety Authority, the parapet portions of the earthen dam were duly rectified. Furthermore, the damaged downstream protection wall of the Peechi dam bridge was reconstructed to restore structural integrity.

The MWL (Maximum Water Level) indicator in the catchment area had been damaged. Provision was made to strengthen and refix the MWL platform using structural steel and secure it through bolting, ensuring its continued reliability.

The emergency shutters of the Right Bank Main Canal (RBMC) and Left Bank Main Canal (LBMC), which were severely rusted due to prolonged weather exposure, were also addressed. The rusting affected both the channels and plates. To protect these vital components, GI sheet roofing was installed with adequate supporting truss work and finishing. These protective measures were essential for preserving the motors and fittings associated with the emergency shutters, thereby ensuring their longevity and operational reliability.

In addition, the RBMC and LBMC valve houses were found to be non-electrified, and the main distribution board in the inspection gallery was damaged. As part of the project, electrification works were carried out, including the provision for a 3-phase connection, cabling, control panels, and necessary security attachments. These upgrades were essential for enabling the electrical operation of the intake valve at the Peechi RBMC, which had previously been replaced as a deposit work. Electrification is vital for the safe and efficient operation of the valves, especially during emergency scenarios.

All the items included in the estimate were integral for the maintenance, operational efficiency, and the overall safety of the Peechi Dam infrastructure. The timely execution of these works has significantly contributed to the structural stability of the dam and supports the secure and effective management of the region’s water resources.

Photo 2.2.3 (i): Rectification of side protection wall

2.2.4 Delay in clearing trees from the dam's catchment area.

During the evaluation conducted by the Finance (Performance Budget) Department at the Chimoni and Peechi Dams, it was found that several large trees have grown in and around the dam structures, posing a serious threat to dam safety. The roots of these trees have penetrated the dam body, potentially compromising its structural integrity. The Dam Safety Authority, during its periodic inspections, has repeatedly recommended the removal of such trees to ensure the structural safety of the dam and to mitigate the risk of potential damage. The dam site falls within the

protected forest area, making it mandatory to obtain prior permission from the Forest Department for any tree cutting activities.

Despite multiple requests, the required approval from the Forest Department has not yet been received. As a result, Technical Sanction (TS) has not been granted for these works. Only after receiving the necessary clearance from the Forest Department tree removal operations can be carried out. The Irrigation Department informed the forest department about the risk posed by many such trees to the sidewalls of the dam; permission has so far been granted for the removal of only one or two trees following their valuation process. This limited action is insufficient to ensure the overall safety of the dam.

Considering the urgency of the matter, the officials of the Finance Department visited the office of the Forest and Wildlife Peechi-Vazhani to discuss the critical nature of the issue. During the meeting, they assured steps will be taken immediately to remove the remaining hazardous trees, so that the safety of the dam can be assured.

The Finance (Performance Budget) team visited the Additional Irrigation Division Office and evaluated some of the ongoing works being carried out under the project. The details are provided below:

2.2.5 (i) Construction of Pandarachira Check Dam across Manalipuzha at Mulayam in Nadathara Grama Panchayat – General Civil Work

The construction of the Pandarachira Check Dam across the Manalipuzha at Mulayam in Nadathara Grama Panchayat in Thrissur District was completed to enhance agriculture and water security. This vital infrastructure project aims to ensure comprehensive agricultural, social, and economic development of the surrounding regions by addressing long-standing issues of water scarcity in Mulayam, Kootala, Ayyappankavu, and adjacent areas.

Strategically located about 16 kilometers downstream of the Peechi Dam, the check dam is designed to mitigate the acute shortage of water during summer months, which adversely affected both domestic and irrigation needs. The new dam is expected to enhance water retention, replenish groundwater levels, and support the drinking water distribution network of the surrounding regions, including the Thrissur Corporation.

The project was meticulously planned, beginning with a detailed investigation to identify the most suitable site and assess the soil and rock strata. Based on these findings, a technical design was prepared by the Chief Engineer Irrigation Design & Research Board (IDRB), Thiruvananthapuram, and was approved on 02.06.2023. Following this, a detailed project report was submitted to the government, and administrative sanction was accorded for ₹400 lakh vide G.O.(Rt) No.

913/2023/WRD dated 04.11.2023. The Technical Sanction was subsequently issued by the Chief Engineer, Irrigation Administration, Thiruvananthapuram, vide order no. IRR/IA/EST-TS/8325/2022_5_1_1 dated 18.07.2024. Tender proceedings were initiated by the Superintending Engineer, Irrigation Central Circle, Thrissur, on 23.07.2024, and the work was awarded to Shri K. Manoj, Madhavi Mandiram, Palakkad. The agreement was signed on 09.09.2024.

The dimension of the check dam is 36 meter length by 2.5 meter height and includes four vent ways, each 1.2 meters wide, to regulate the water flow. The dam is supported by concrete abutments, retaining walls, and dry rubble protection walls on both upstream and downstream sides. Additionally, cutoff and toe walls have been built on either end of the structure to ensure long-term stability and resistance to erosion. To further strengthen the structure, the dam features a solid apron (36m x 4.2m) and a loose apron (36m x 7.25m) on the upstream side, and a solid apron (36m x 9m), loose apron (36m x 9.05m), and a 36-meter-long end sill on the downstream side. These protective elements are designed to dissipate energy from water flow and minimize scouring.

With the completion of all construction activities, the Pandarachira Check Dam stands as a significant achievement in improving water availability in the region. This project is expected to play a pivotal role in boosting agricultural productivity, ensuring sustainable irrigation, and enhancing the economic resilience of the local population.

Photo 2.2.5 (i): Pandarachira Check Dam

2.2.5 (ii) Road work- Renovation works to the Karuvannur south bund road connecting between Karuvannur valiyapalam & Karalam Panchayath-General Civil Work

The Karuvannur Bund Road runs parallel to the Karuvannur River, connecting Valiyapalam in Irinjalakuda Municipality to Karalam Panchayath. Constructed approximately 53 years ago by the Irrigation Department, the road was originally developed as a flood protection measure for the surrounding areas during the monsoon season. During periods of heavy rainfall, all other roads within Karalam Panchayath become inundated, making this bund road the only viable access route for residents to reach the State Highway at Karuvannur. In addition to serving local commuters, the road also functions as an alternative route during traffic blocks on the State Highway.

In 2017, the road underwent widening and straightening to improve its utility. However, the severe floods of 2018 and 2019 caused extensive damage, including the formation of multiple potholes and surface irregularities, rendering smooth traffic movement extremely difficult. Since these floods, no maintenance work had been carried out, prompting widespread concern among local residents. A mass petition was submitted through the Irinjalakuda Municipal Councillor, which led to the preparation of an estimate for reparation of the road.

The proposed work begins at chainage 0.00, from the Karuvannur South Bund Road junction with the Kodungallur–Shornur State Highway near Valiyapalam. The scope includes clearance of light jungle, earthwork excavation, filling of potholes with 36 mm and 12 mm graded stone aggregates, and levelling uneven surfaces using similar materials. The plan also includes laying an Open Graded Premix Carpet (OGPC) of 20 mm thickness over a length of 3030 meters, and the provision of interlocking tiles over 345 meters, which includes a 6 mm aggregate layer laid over a Wet Mix Macadam (WMM) base.

The total estimated cost of the project was ₹100 lakh, prepared as per DSOR 2018 with a cost index of 35.59%, and included in the 2024–25 budget with a token provision of ₹20 lakh. Administrative Sanction was issued on 31-07-2024, followed by Technical Sanction on 22-08-2024. The agreement for execution was signed on 21-10-2024, and the site was officially handed over to the contractor on 30-10-2024. The agreed PAC is ₹80,44,606/-, and the original completion date was scheduled for 29-04-2025.

Due to unavoidable circumstances, extension was granted twice. The first extension, without penalty, extended completion date to 13-06-2025 (Order No: D8-1033/2024 dated 22-05-2025). The second extension, also without penalty, extended the deadline to 28-07-2025 .However, considering the current pace of progress and

ongoing monsoon conditions, the expected date of completion has now been revised to December 2025.

A revised estimate was prepared due to a correction in the coefficient used for calculating the quantity of 12 mm stone required for the Open Graded Premix Carpet. In the original estimate, a coefficient of 0.020 was considered mistakenly instead of the correct value of 0.027, resulting in a lower quantity being accounted for. During execution, the entire stacked quantity of 12 mm stone was utilized, necessitating additional supply to complete the work satisfactorily. To stay within the approved financial limits, the length of road was slightly reduced, leading to a corresponding reduction in the OGPC area. The adjustment has been reflected in the revised estimate.

Further, the revised estimate incorporates the quantities related to concrete works, based on the actuals. Specifically, in front of residential houses, additional side concreting was undertaken to facilitate tile laying and to correct the slope, ensuring that vehicles could enter and exit the properties smoothly and safely. All concrete work has been executed with attention to functionality and user convenience.

In response to the inquiry, the officials concerned replied that many hurdles arose during the execution of the work, primarily due to persistent heavy rainfall. As a result, the latest approved completion date of July 28, 2025, could not be met. The project is now expected to be completed by December 2025.

2.2.5 (iii) GENERAL-IWT-Side protection works to the west bank of Vijayan thodu for a length of 70m behind Urban Primary Health center Anappuzha in Kodungallur Municipality-General Civil Work

The Kanoli Canal, also known as the PC Canal, was constructed during the pre-independence period by the Governor of Malabar, Mr. Kanoli. It is a unique waterway comprising a combination of a free-flowing natural river and an artificially constructed canal. The canal has several feeder canals, including Kavil Canal, Kollikkathara Canal, Thiruvanchikkulam Canal, and Vijayan Thodu, among others.

The Urban Primary Health Centre (UPHC), Anappuzha, is located on the west bank of Vijayan Thodu. During monsoon season, floodwaters of adjacent areas rapidly discharge through the thodu. Over the time, the sides of the thodu have undergone severe erosion, resulting in the loss of valuable land. This posed a significant threat to the stability and safety of the Urban Primary Health Centre.

Consequently members of the Municipality requested urgent intervention to protect the health centre. Accordingly, an estimate was prepared, and side protection work was initiated. The provisions in the estimate included:

- Earthwork excavation for the construction of a protection wall
- Dry Rubble (DR) masonry for a foundation depth of 0.75 meters

- A superstructure wall with a height of 2 meter
- An RCC top wearing coat (mix 1:1.5:3 using 20 mm metal) with a thickness of 150 mm

Administrative sanction for the project was issued on 21.06.2023 for an amount of ₹8,90,000/-, and technical sanction was granted on the same date. The work was tendered on 22.07.2023, and the agreement was executed on 04.09.2023. The site was handed over to the contractor on 08.09.2023, with a stipulated completion period of six months, ending on 07.03.2024.

During the course of inspection conducted by the Finance (Performance Budget) team, it was observed that some spalls were missing and voids were present near the return wall of the side protection structure adjacent to the Urban Primary Health Centre. The officials concerned have been instructed to address these issues immediately to ensure the durability of the structure and effectiveness of the protection works.

Photo 2.2.5 (iii) : Side protection works to the west bank of Vijayan thodu

2.2.6 Recommendations

1) The possibility of establishing an exclusive, recurring fund to guarantee uninterrupted financing for essential activities such as water hyacinth removal, silt clearance, canal maintenance, monsoon preparedness, and emergency response, thereby addressing chronic

underfunding and ensuring year-round upkeep of the Kole ecosystem, may be explored.

2) Facilitate the accelerated rehabilitation and modernization of strategic water- regulating infrastructure.
3) Transition from temporary to permanent bunds- The shift from temporary bunds to permanent, well constructed bunds results in a triple benefit system

   i) cost efficiency: minimizes recurrent labour, material and machinery expenses.

   ii) irrigation reliability: ensures controlled water availability, reduces breaching and water loss and enhances soil moisture

   iii) saltwater intrusion prevention: maintains hydraulic barriers and prevents salinity related degradation of fields.

   This holistic improvement supports sustainable agricultural practices by combining economic,agronomic and environmental resilience.

4) Prioritizing automatic shutters over manual ones can significantly reduce operational delays, enhance safety, and ensure optimal performance in regulating water during monsoons.
5) Integrate modern technologies with sustainable practices to enhance environmental stewardship.
6) Implement a comprehensive hyacinth management programme that integrates mechanical harvesting, biological control methods and community participation.
7) Mandate the use of geotextile bags as the standard for sustainable temporary works replacing conventional plastic materials
8) Adopt a Geographic Information System(GIS) -based monitoring framework for rivers and channel management to enhance the tracking of siltation ,identification of encroachment and hydraulic planning
9) Institutionalize robust disaster preparedness and establish clear accountability mechanisms
10) Develop and enforce a specific pre-monsoon action plan (PMA Plan) for the kole wetlands ensuring all necessary works are completed prior to the onset of the monsoon season
11) Mandate quarterly performance audits for regulatory bodies and digitize all maintenance, complaints, and operational records to ensure transparency and facilitate timely intervention.

2.2.7 Report on the Temporary Bunds in Kole Wetlands in Thrissur

The Kole wetlands of Thrissur district comprise an extensive system of low-lying areas, most of which lie below mean sea level, and represent a unique and ecologically sensitive wetland ecosystem. The region primarily supports paddy cultivation and pisciculture, managed through Padasekhara Samithis, with water levels regulated by an interconnected network of canals, bunds, rivers, and regulators. Irrigation water is mainly sourced from the Chimmony Dam and conveyed through the Karuvannur River system, while tidal influences further affect the hydrology of the Kole lands. Key regulators and bunds associated with the system include those at Enamakkal and Idiyanchira in the north, Koothumakkal in the south, Illikkal across the Karuvannur River, and Munayam near the Canoli Canal, all of which are primarily intended to prevent saline water intrusion, regulate freshwater storage, and facilitate floodwater drainage during the monsoon.

However, several of these regulators suffer from serious functional and structural deficiencies. The shutters at Enamakkal, Idiyanchira, and Illikkal are either non-operational or in poor condition, resulting in substantial leakage and freshwater loss, while the approved regulator at Munayam has not yet been constructed. Consequently, temporary earthen ring bunds made of soil and bamboo are constructed annually at Enamakkal, Idiyanchira, and Munayam to prevent saline water ingress. These temporary bunds require significant financial outlay each year and large quantities of earth, and they must be dismantled during the monsoon to allow floodwaters from the Thrissur urban areas to drain into the sea, only to be reconstructed once the rains subside. The prolonged time required for bund construction further necessitates additional releases from the Chimmony Dam to control salinity, leading to avoidable losses of valuable freshwater.

In summary, the continued reliance on temporary bunds for over three decades reflects systemic inadequacies in the existing water regulation infrastructure. Making the regulators at Illikkal, Enamakkal, Idiyanchira, and Munayam fully functional would significantly enhance water management efficiency in the Thrissur Kole lands, conserve substantial quantities of freshwater, reduce recurring expenditure on temporary bund construction, and provide long-term protection to agriculture and the fragile wetland ecosystem.

2.2.7. (a) ENAMAKKAL REGULATOR

The Enamakkal temporary bund is an earthen embankment constructed annually by the Kerala Irrigation Department as an interim measure to prevent saline water intrusion and to retain freshwater for irrigation in the Thrissur Kole wetlands. This temporary arrangement supplements the Enamakkal Regulator-cum-Bridge (RCB), a major hydraulic structure commissioned in 1963 at the tail end of the Kottachaal Canal. The regulator was designed to regulate water levels in the Kole wetlands, prevent saline ingress from the Canoli Canal, and facilitate the discharge of

excess floodwater during the monsoon season. The structure consists of fifteen shutters along with a navigation lock. Over the years, however, the regulator has developed severe leakage, resulting in saline water intrusion, recurring crop damage, and continued dependence on temporary bunds for safeguarding agriculture in the region.

The regulator sustained substantial structural damage during the floods of August 2018, following which a comprehensive restoration proposal was prepared and sanctioned under the Rebuild Kerala Initiative. Administrative approval was accorded for civil works amounting to ₹406.20 lakh and mechanical works amounting to ₹453.00 lakh. The tender process was completed, and restoration works commenced in November 2024. However, the execution of the project was subsequently disrupted due to legal challenges raised by the second-lowest bidder(L2), leading to prolonged litigation and a stay order issued by the Hon'ble Supreme Court in March 2025. As a result, all works have remained in abeyance, adversely affecting the coordinated execution of civil and mechanical components essential for effective rehabilitation. Completion of the restoration works is expected to permanently resolve the issue of saltwater intrusion, eliminate recurring expenditure on temporary bund construction, and ensure sustainable water management and long-term protection of agriculture in the Thrissur Kole wetlands.

Examination of the file relating to the said work indicates that the Department was not fully able to place all relevant facts before the Court in a timely and comprehensive manner. It has since been brought to the notice of the Department that the opposite party in the case, namely L2, has passed away. Accordingly, officers of the Finance Performance Department instructed the Officials of the Irrigation Mechanical Engineering Wing to ascertain whether the legal heir of the deceased was willing to pursue further legal proceedings. In response, it has been reported that the concerned legal heir has expressed no interest in continuing with the case.

In view of the above developments, it is recommended that the relevant facts be formally documented, the affidavit of the concerned legal heir be urgently submitted before the Hon'ble Court, and necessary procedural steps be initiated on a priority basis to facilitate the resumption and early completion of the long-pending restoration works of the Enamakkal Regulator-cum-Bridge without further delay.

Photo.2.2.7 (a) Enamakkal Regulator

The details of amount spent for Maintenance and Repair for Setting up of Temporary Bund of Enamakkal (Non Plan) for 10 Years

Sl No	Year	Head of Account	AS amount	Agreed PAC	Contractor name	Expenditure Amount
1	2024-25	2701-80-800-97-34-03-NV	36,40,000	32,64,522	Biju.K.C.	25,81,985
2	2023-24	2701-80-800-97-34-03-NV	45,12,000	36,88,773	KrishnaPranav	41,23,795
3	2022-23	2701-80-800-97-34-03-NV	44,34,000	38,73,445	Abdul Riyas.B.A M/s.Bravia PMS	44,36,192
4	2021-22	2701-80-800-97-34-03-NV	36,00,000	30,31,918	M/ S Bravia PMS	33,54,406
5	2020-21	2701-80-800-97-34-03-NV	38,01,000	35,36,405	Krishnankutty.T.M	37,75,955
6	2019-20	2701-80-800-97-34-03-NV	33,00,000	28,54,391	Krishnapranav.T.K	27,95,284
7	2018-19	2701-80-800-97-34-03-NV	26,25,000	21,18,371	Krishnapranav.T.K	19,88,630
8	2017-18	2701-80-800-97-34-03-NV	6,16,000	6,38,904	K.K.Gouthaman	6,36,307
9	2016-17	2701-80-800-97-34-03-NV	20,00,000	21,84,058	Krishnankutty.T.M	20,92,837
10	2015-16	2701-80-800-97-34-03-NV	30,00,000	29,40,286	Freddy Iyyuni	21,49,247
Total						**2,79,34,598**

2.2.7 (b) IDIYANCHIRA REGULATOR

The Idiyanchira Regulator, constructed in 1998, is currently in a deteriorated condition due to aging. As water flows from the Chimmony Dam through the

Karuvannur River, it is regulated by the Manjamkuzhi, Illikkal, and Kottankottuvalavu regulators. The Idiyanchira Regulator plays a crucial role in preventing the mixing of saltwater with freshwater in the Kole fields via the KLDC canal and the Mullassery canal. Due to leakage in the Idiyanchira Regulator, saltwater is entering agricultural lands and causing widespread crop loss. This has created a major crisis in Kerala, as agriculture, our primary sector, is being severely impacted. As a temporary solution, bunds are built every year to prevent saltwater intrusion. However, constructing these earthen bunds is both expensive and challenging. Though proposals suggesting repairs to the shutters, pillars, and apron were submitted to the government to permanently address the leakage, due to insufficient budget allocations, only routine maintenance has been carried out through the action plans. Later, in the 2018-19 financial year, a proposal for restoration was submitted under the RKI scheme. Administrative sanction was accorded an amount of ₹242 lakhs for civil works and ₹262 lakhs for mechanical works, vide G.O. (Rt) No. 358/2023/P&EA dated 13.09.2023. About 75% of the civil work and 90% mechanical works has been completed, and remaining works are progressing.This work is scheduled to be completed by March 2026. Once the project is completed, the need to build temporary earthen bunds every year can be eliminated.

Photo 2.2.7 (b) Idiyamchira Regulator

The details of amount spent for Maintenance and Repair Putting Up Temporary Bund of Idiyamchira (Non Plan) for 10 Years

Sl No	Year	Head of Account	AS amount	Estimate Amount	Agreed PAC	Contractor name	Expenditure Amount
1	2024-25	2701-80-800-97-34-03-NV	16,00,000	13,52,943	14,41,745	Biju.K.C	11,49,374

Sl No	Year	Head of Account	AS amount	Estimate Amount	Agreed PAC	Contractor name	Expenditure Amount
2	2023-24	2701-80-800-97-34-03-NV	18,00,000	15,22,710	14,74,991	KrishnaPranav.T.K	16,45,792
3	2022-23	2701-80-800-97-34-03-NV	18,00,000	15,22,599	16,10,721	KrishnaPranav.T.K	16,39,986
4	2021-22	2701-80-800-97-34-03-NV	15,50,000	11,92,467	11,28,190	M/s Bravia PMS	12,17,968
5	2020-21	2701-80-800-97-34-03-NV	16,40,000	14,58,341.58	15,16,453	KrishnaPranav.T.K	14,41,002
6	2019-20	2701-80-800-97-34-03-NV	16,00,000	12,93,113	13,48,122	Lijo Johny.K.	10,77,910
7	2018-19	2701-80-800-97-34-03-NV	11,50,000	11,50,000	10,79,789	Lijo Johny.K.	10,15,199
8	2017-18	2701-80-800-97-34-03-NV	10,86,200	10,86,200	11,48,875	K.K.Gouthman	11,27,309
9	2016-17	2701-80-800-97-34-03-NV	6,13,000	6,13,000	6,67,471	KrishnaPranav.T.K	6,55,048
10	2015-16	2701-80-800-97-34-03-NV	9,30,000	9,30,000	9,10,831	Freddy Iyyuni	7,17,795
Total				**1,16,87,383**			

2.2.7 (c) MUNAYAM REGULATOR

The Munayam regulator is critical to the water management system that sustains agriculture and drinking water supply in the Thrissur Kole wetlands. Water released from the Chimmony reservoir flows through the Kurumali River, joins the Manali River from Peechi Dam, and forms the Karuvannur River, from where it is distributed to nearly 12,000 hectares of paddy fields through an extensive canal network. The Karuvannur River also connects with the Ponnani–Cochin (Canoli) Canal, making the area vulnerable to saltwater intrusion during the dry season. To protect the Kole wetlands and ensure potable water supply, a temporary earthen bund is constructed every year at Munayam. This river stretch is also a vital drinking water source for the Kerala Water Authority, supplying water through the Elikkal pump house to the panchayats of Kattoor, Thanniyam, Anthikkad, and Chazhoor. However, preventing saltwater intrusion between December and June remains a persistent challenge under the current temporary arrangement.

The annual construction and removal of the temporary bund is costly, technically challenging, and increasingly risky due to unpredictable rainfall, floods, and soil scarcity. Repeated damages to the bund cause financial losses, while delays in its removal during monsoon seasons often lead to flooding and property damage. Recognizing these issues, the government approved a permanent regulator project in 2018 under NABARD funding, but progress was hindered by the 2018–19 floods, COVID-19 disruptions, land acquisition delays, and subsequent design changes. Although revised DPRs were submitted in 2024 and 2025 with updated cost estimates,

financial sanction has yet to be granted. The construction of a permanent regulator at Munayam is therefore essential to permanently prevent saltwater intrusion, enable safe flood discharge, ensure reliable drinking water from the Karuvannur River, and revive agricultural productivity by bringing nearly 4,000 hectares of land back under cultivation, while also eliminating recurring annual expenditure on temporary bunds.

Photo 2.2.7 (c) Munayam Regulator

The details of amount spent for Maintenance and Repair Putting Up Temporary Bund of Munayam (Non Plan) for 10 Years

Sl No	Year	Head of Account	AS Amount	Agreed PAC	Contractor name	Expenditure Amount
1	2024-25	2701-80-800-97-34-03-N-V	43,00,000	35,43,343	Lijon.P.L.	26,41,461
2	2023-24	2701-80-800-97-34-03-N-V	41,22,000	37,23,265	M.K.John	42,37,847
3	2022-23	2701-80-800-97-34-03-N-V	41,22,000	37,79,048	Accurate Infrastructure	41,42,470
4	2021-22	2701-80-800-97-34-03-N-V	38,90,000	36,79,127	KrishnaPranav.T.K	36,88,836
5	2020-21	2701-80-800-97-34-03-N-V	34,00,000	31,75,822	Mathew Korah	33,16,963
6	2019-20	2701-80-800-97-34-03-N-V	33,00,000	30,84,584	KrishnaPranav T.K	26,14,022
7	2018-19	2701-80-800-97-34-03-N-V	40,00,000	35,33,235	KrishnaPranav.T.K	30,26,022
8	2017-18	2701-80-800-97-34-03-N-V	36,92,000	34,61,346	Ciju John	27,96,202
9	2016-17	2701-80-800-97-34-03-N-V	26,23,490	26,64,230	Dileep Kumar.T	26,64,230
10	2015-16	2701-80-800-97-34-03-N-V	29,50,000	29,42,773	P.T.Mathew	36,35,310
Total						**3,27,63,363**

2.2.8 Key Observations and Recommendations

1) *A review of the operations of the Munayam, Ediyanchira, and Enamakkal bunds reveals that approximately ₹7.24 crore has been spent during the last decade alone on the repeated construction and dismantling of temporary bunds, a practice that has continued unabated for over four decades. The cumulative expenditure incurred on these temporary arrangements is substantial and could have been sufficient to construct several permanent regulator-cum-bridges. The continued dependence on temporary bunds, coupled with the lack of timely and adequate maintenance of existing regulators, reflects an unsustainable approach to infrastructure management and has contributed to social issues, delays in the effective delivery of government development schemes, and avoidable wastage of public funds, thereby imposing significant financial and administrative burdens on both the Government and the public.* ***In this context, it is imperative for the State to examine the feasibility of initiating a vigilance enquiry to assess persistent lapses in planning, construction, maintenance, and utilisation of plan funds.***
2) *The analysis further establishes that the* ***Enamakkal, Idiyanchira, and Munayam regulators should be treated as critical climate-resilience infrastructure*** *rather than routine irrigation works, and that their permanent construction must be fast-tracked through strengthened institutional oversight, dedicated legal facilitation, and systemic reforms in tendering and contract management to prevent prolonged litigation. Completion of scientifically designed permanent regulators, based on robust hydrological, tidal, and climate-risk assessments within a basin-level management framework for the Karuvannur system, would enable the phased elimination of temporary bunds, reduce recurring expenditure, minimise flood risk and ecological disturbance, and safeguard agriculture, drinking water security, and wetland conservation, thereby transforming the Thrissur Kole wetlands into a model of sustainable and climate-resilient wetland management in Kerala .*

2.3 GROUNDWATER DEPARTMENT

Groundwater is a vital resource in Kerala, supporting drinking water supply, irrigation, and industrial needs, especially in areas with limited or seasonal surface water availability. Increasing demand, urbanization, and climate variability have intensified pressure on this resource, underscoring the need for scientific management. The Ground Water Department (GWD), Kerala, under the Government of Kerala, is responsible for the assessment, monitoring, regulation, and conservation of groundwater through activities such as exploration, water level and quality

monitoring, implementation of recharge and conservation schemes, and technical support to water supply and irrigation projects, while promoting sustainable groundwater management in critical and over-exploited areas. The Ground Water Department was allocated a total budget of ₹35.18crore for the financial year 2024-25 of which ₹19.85crore was released. The department demonstrated a high level of financial discipline, with actual expenditure amounting to ₹19.46crore, indicating efficient utilization of the funds made available. In the district of Kollam an amount of ₹1,52,19,759 was allocated in the budget and an expenditure of ₹1,52,09,987 was incurred. The near-total utilization of the allocated funds in the district reflects effective planning, timely execution of activities, and close monitoring of expenditure.

As part of the Performance Budgeting of the Ground Water Department 2024-25, the Finance (Performance Budget) Department has evaluated the following schemes:

I. Conservation of Groundwater and Artificial Recharge (2702-02-005-80 & 4702-00-102-97)
II. Ground Water Based Drinking Water Scheme & Renovation of Ground water based Drinking water supply scheme(2702-02-103-99 & 4702-00-102-94)

2.3.1. Conservation of Groundwater and Artificial Recharge

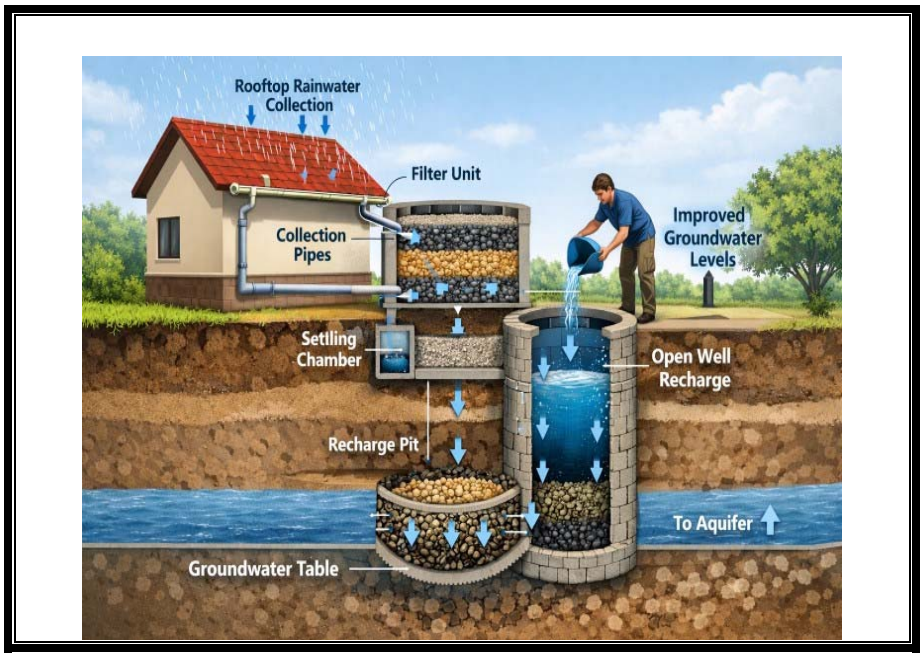
The scheme focuses on the conservation and recharge of groundwater through artificial recharge interventions to restore aquifers depleted by drought and excessive extraction, and to enhance areas with inadequate natural recharge. By promoting the storage of excess surface water, the scheme aims to improve both groundwater levels and water quality. Key interventions include the construction of subsurface dykes, vented cross bars (VCBs), small check dams in first- and second-order streams, bore well and dug well recharge systems, recharge pits, ponds, and the rejuvenation of small traditional open ponds (less than 25 cents), either individually or in combination. Priority is accorded to over-exploited, critical, and semi-critical blocks of the State, with special emphasis on recharging open wells in public buildings. During 2024–25, the programme targeted the implementation of these structures on a micro-watershed basis, along with rooftop rainwater harvesting and catchment treatment for drinking water schemes in both public and private buildings

2.3.1.a Artificial recharge mechanism

Despite receiving an average annual rainfall of 3000 mm, the district of Kollam faces severe drinking water scarcity once the monsoon season ends.A significant portion of the rainwater is lost as surface runoff due to the region's undulating topography and the presence of laterite in the midlands, which limits natural groundwater recharge. To address the issue, large-scale implementation of groundwater recharge structures is essential. Open well recharge schemes, which involve collecting rainwater from rooftops during the monsoon and summer showers,

can effectively enhance groundwater levels. This water is directed through filter media into recharge pits or dug wells, helping to replenish groundwater and mitigate the drinking water shortage in the district.

Photo 2.3.1 (a) Artificial Recharge Mechanism



2.3.1 (b) Implementation method

Areas facing drinking water shortages in various parts of the district are initially identified based on the recommendations of the respective Gram Panchayat or MLA concerned. Subsequently, a preliminary assessment is conducted by the officials of department, which is then followed by a detailed groundwater study. Based on the findings, a suitable and sustainable structure is designed to extract groundwater effectively. In the initial phase, only the essential infrastructure is constructed. After the construction, if there are existing water supply lines of the Water Authority in the area, the borewell is handed over to the Water Authority, and steps are taken to distribute the water through their network. In areas without Water Authority pipelines, groundwater-based drinking water projects are implemented directly through the Groundwater Department. After completion, the system is usually handed over to a beneficiary committee for ongoing operation and maintenance.

2.3.2. Ground Water Based Drinking Water Scheme & Renovation of Ground water based Drinking water supply scheme

The objective of the scheme is to provide drinking water supply to non-covered/partially covered habitats in the State. Each Water Supply Scheme (WSS) is

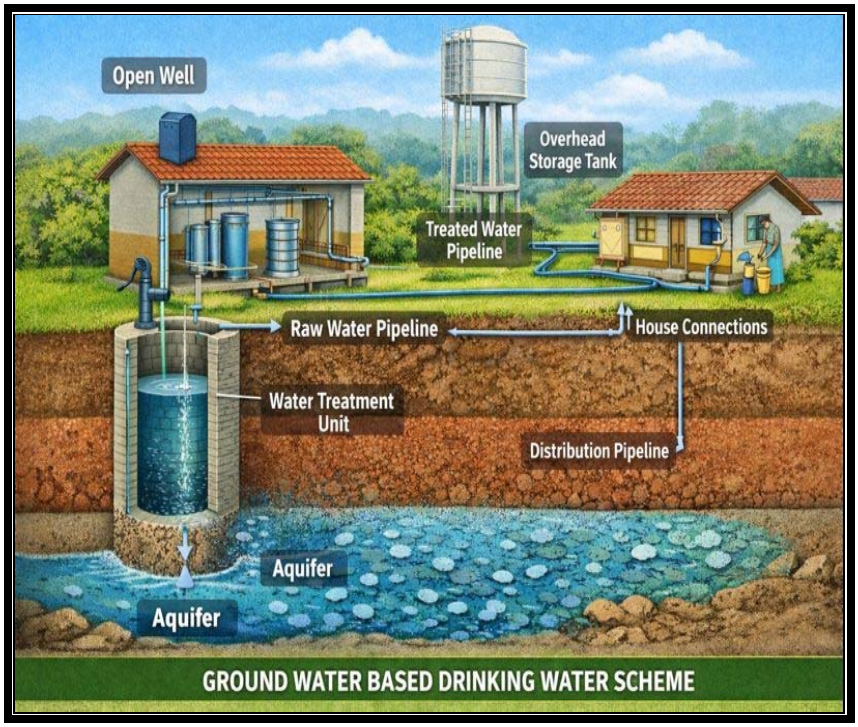
benefitted by 25 to 100 families. Mini water supply schemes will be implemented where the bore wells drilled are of high yield and hand pump schemes will be implemented where the bore wells drilled are of low yield. During 2024-25, it was envisaged to implement mini water supply schemes and bore well/tube well construction. Functional auditing, renovation of mini water supply schemes, reparation of hand pumps repair, repair and maintenance of existing groundwater conservation structures are also envisaged.

Bore wells and tube wells constitute a vital component of modern groundwater-based water supply systems, particularly in regions where surface water sources are inadequate or contaminated. By tapping deep, confined aquifers, they provide a reliable, drought-resilient, and consistent water source with minimal seasonal fluctuation, making them well suited for long-term public water supply planning. Their engineered design enables sustained high yields, supporting the needs of large communities and entire villages.

From a public health and environmental standpoint, these wells offer superior safety compared to traditional dug wells. Proper casing and sanitary sealing effectively prevent contamination from surface pollutants, while natural filtration through soil and rock layers significantly improves water quality, often limiting treatment requirements to basic disinfection.

Additionally, bore wells and tube wells are space-efficient, adaptable to both urban and rural settings, and compatible with mechanized pumping and gravity-fed distribution systems. When integrated with rainwater harvesting and artificial recharge measures, they support groundwater sustainability by replenishing aquifers. Owing to modern drilling techniques and durable construction, they represent an efficient, hygienic, and sustainable backbone for community water supply schemes

Photo: 2.3.2 Ground water based drinking water scheme.



Officials from the Finance Department conducted a visit to the District Office of the Groundwater Department, Kollam, and randomly selected a sample of works for assessment. Details are given below:

2.3.(i) Renovation of Mini Water Supply Scheme at Velamanoor Ambedhkar Colony, Kalluvathukkal Grama Panchayat

The borewell in Vellamanoor Ambedkar Nagar in Kalluvathukkal panchayath, on which 25 families solely depend for drinking water has become nonfunctional.The renovation work was undertaken due to a petition submitted by the residents during the Nava kerala sadhas.

Administrative sanction was issued for an amount of ₹1.16 lakh on 12.02.2024 and the technical sanction for the same amount on the same date. The work was tendered on 14.02.2024. Agreement for the above work was executed on 04.03.2024. The agreed PAC for the work is ₹1.16 lakh, with the tender executed at par, showing neither excess nor below rates (0%). The work commenced on 06.03.2024 and was completed on 25.03.2024. The total expenditure incurred for the work amounts to ₹ 1,13,257. No irregularity has been found during the field visit. People in the nearby area have good judgement over the work.

The site inspection conducted by the team of finance department confirmed that the borewell is functioning well after the necessary repair and maintenance works.

Since the operation of the borewell motor is entrusted to local residents, inadequate awareness frequently results in unscientific operation, leading to repeated breakdowns.

Therefore, in order to ensure proper and sustained operation of the motor of the borewell, the operation may be entrusted to a local committee after sufficient training regarding its operation has been given. This ensures more efficient and sustainable functioning of the system.

Photo: 2.3(i) a. Water tank situated in Velamanour settlement.

Photo 2.3 (i) b. Borewell motor shed

Photo 2.3 (i) c. Borewell in Velamanoor Ambedhkar settlement

2.3.(ii) Renovation of Mini Water Supply Scheme at Valavu Thengu Colony, Kadakkal GP in Kollam District

The Valavuthengu Settlement, located in the eastern hilly region of Kollam District, depends on a single borewell as its sole source of drinking water. Following the breakdown of this borewell, the residents submitted a petition during the *Navakerala Sadas*, based on which the Ground Water Department undertook related works in the area.

Administrative sanction was issued for an amount of ₹2.48lakh on 03.02.2024 and the technical sanction for the same amount on 06.02.2024. The work was tendered on 08.02.2024 . Agreement for the above work was executed on 25.02.2024. The agreed PAC for the work is ₹2.35 lakh. The work commenced on 15.03.2024 and was completed on 30.05.2024. The total expenditure incurred for the work was ₹ 2.26 lakh.

During the field visit conducted by the Finance Performance Budget Team, several critical issues affecting drinking water availability were observed. Relying on a single borewell is grossly insufficient to meet the drinking water needs of the settlement. In many instances, families are unable to obtain even the minimum required quantity of potable water from the borewell. As a result, the residents are

often compelled to walk long distances to bring water for their needs from a distant small pond located downhill. The sight of people climbing steep terrain with heavy water loads presents a distressing and unacceptable situation, underscoring the severity of the water scarcity faced by the community.

An additional challenge arises from the fact that the borewell was constructed in a private land. Due to personal disputes between the landowner and certain residents, frequently leads to conflicts and arguments, for getting access to the borewell.This social friction further restricts equitable and unhindered access to drinking water, thereby worsening the hardship experienced by the settlement residents.

Photo 2.3.(ii) a. Borewell motorshed situated in Valavutengu settlement

Photo 2.3 (ii)b. Watertank situated in Valavuthengu settlement

Photo 2.3 (ii) c. Borewell situated in Valavuthengu settlement

2.3.(ii) a. Moreover, the eastern regions of Kollam District are characterized by rocky, mountainous terrain, making borewell and tube-well construction largely unsuccessful and unreliable. In such geophysical conditions, alternative and sustainable solutions must be explored. Identifying suitable natural water sources such as ponds, springs, streams, or rivulets through scientific spot detection, and developing them into protected and reliable drinking water sources, presents a more viable and long-term approach. Implementing such source-based drinking water schemes would significantly improve water security and enhance the quality of life for the residents of this hilly settlement.

2.3.(ii) d. A model for ensuring drinking water availability in hilly areas

2.3. (iii) Renovation of Mini Water Supply Scheme at Thundil Surabhi Irumpanangadu, Ezhukone Grama Panchayath

The renovation of the Mini Water Supply Scheme at Thundil Surabhi, Irumpanangadu, in Ezhukone Grama Panchayat, Kollam district, was undertaken based on a detailed study conducted by the Investigation Team of Groundwater department. The team recommended the site for renovation to ensure a reliable and sustainable water supply for the local community. Subsequently a detailed estimate was prepared for the implementation of the scheme to improve the efficiency and functionality of the existing water supply system.

Administrative sanction was issued for an amount of ₹1.64 lakh on 06.01.2024 and the technical sanction for the same amount on 16.01.2024 .The work was tendered on 01.02.2024. Agreement for the above work was executed on 22.02.2024. The work commenced on 28.02.2024 and was completed on 25.03.2024. The total expenditure incurred for the work amounts to ₹ 1,48,386. No irregularities were observed during the field visit. The local residents expressed a positive assessment of the work carried out.

This project stands out for efficient planning and execution contributing to the overall enhancement of rural water infrastructure in the region.

Photo 2.3.(iii) a. Motor shed situated in Thundil Surabhi

Photo 2.3.(iii) b. Watertank situated in Thundil Surabhi

2.3 (iv) Construction of Tubewell at Workshop and Stores, Groundwater Department Kureepuzha

The construction of a tubewell at the Workshop and Stores of the Ground Water Department, Kureepuzha, Kollam, was undertaken after the detailed site investigation and recommendation of the Investigation team of Groundwater department.

Administrative sanction was issued for an amount of ₹14.12 lakh on 24.06.2023 and the technical sanction for the same amount on 30.06.2023. The work was tendered on 25.11.2023. Agreement for the above work was executed on 13.02.2024. The agreed PAC for the work is ₹14.08 lakh. The tender was accepted at 0.25% below the estimated amount. The work commenced on 13.02.2024 and was completed on 19.04.2024. The total expenditure incurred for the work was amounts to ₹ 10,95,246. No irregularity has been found during the field visit.

The Central Workshop and Stores of the Ground Water Department in Kerala is located at Kureepuzha in Kollam. Its function is to distribute materials and accessories for well construction to the district offices across the state. This central hub is responsible for maintaining a supply of necessary items for well digging activities such as machinery, tools and other equipment.

The physical condition of store items and equipment is assessed and verified at this facility prior to their dispatch to the respective district offices for field operation. Following distribution, the performance and functionality of these items are duly reported by the district officers concerned thereby ensuring accountability and the efficient and appropriate utilization of resources throughout the state.

During inspection, it was observed that the stock register was not properly maintained at this office.

2.3. (iv).a. ***In view of the provisions of the Kerala Financial Code, all Heads of Office and Officers-in-charge of stores are strongly advised to maintain Stock Accounts/Register with utmost accuracy, regularity, and accountability. Stock registers should be updated promptly at the time of every receipt and issue, using the prescribed forms applicable to the nature of stores, so as to reflect the true position of stock at all times. Particular care should be taken to ensure proper authorization of issues, timely reconciliation between main stores and sub-stores, and correct valuation of stock in accordance with prevailing market rates. Periodic physical verification of stores, at least once a year, must be conducted diligently and discrepancies, if any, should be investigated and rectified without delay. Strict adherence to these procedures will not only ensure effective control over government property but also enhance financial discipline, prevent losses or misappropriation, and facilitate smooth audit and inspection processes.***

Photo.2.3.(iv) Tubewell situated in workshop & stores, Kureepuzha

2.3. (v) Construction of Tubewell and Pumping Scheme at GHSS Sasthamkotta In Kollam

The project was conceived after a detailed study and site inspection conducted by the Investigation Team of Groundwater Department, which confirmed the suitability of the site for the proposed tube well. Subsequently, a detailed estimate was prepared to confirm that the design adhered to the specific technical and hydrological requirement of the site.

Administrative sanction was issued for an amount of ₹6.10 lakh on 13. 06.2023 and the technical sanction for the same amount on the same date. The work was tendered on 20.06.2023. Agreement for the above work was executed on 11.09.2023. The agreed PAC for the work is ₹6.09 lakh. The tender was accepted at 0.50% below the estimated cost. The work was commenced on 15.09.2023 and was completed on 30.09.2023. The total expenditure incurred for the work amounts to ₹ 6,06,934/-. No irregularity has been found during the field visit.

The Pumping Scheme was taken up as a complementary project to the tube well, ensuring effective distribution and accessibility of water across the school premises.

The completion of both the tube well and pumping scheme has significantly

improved the availability of clean and safe water for the students and staff of GHSS Sasthamkotta. It has reduced dependency on external water sources and ensured a steady supply for drinking and sanitation purposes, contributing to a healthier and more conducive learning environment. The project also aligns with the broader objectives of the Ground Water Department in promoting sustainable water resource management and efficient groundwater utilization.

In light of the location's proximity to the Sasthamkotta Freshwater lake- a significant regional natural waterbody - a preliminary feasibility study into an open well system is recommended as a more appropriate course of action prior to the installation of a tubewell. An open well could potentially have provided an eco-friendly and cost-effective alternative, minimizing groundwater extraction and maintaining better harmony with the local hydrology. Future projects in similar ecological settings could benefit from such considerations, ensuring that infrastructural development goes hand in hand with environmental conservation and sustainable resource management.

Photo 2.3.(v) Tubewell situated in GHSS Sasthamkotta.

2.3.(vi) Artificial recharge scheme at DB College, Sasthamkotta (2 Pond structures)

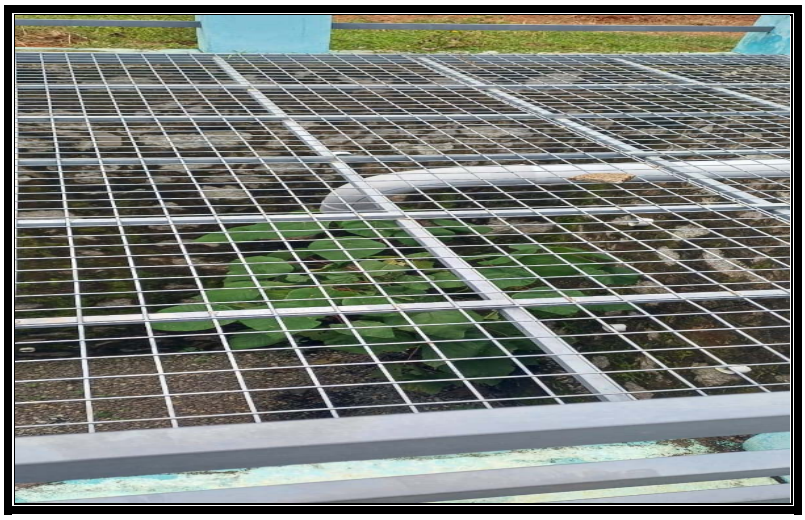
At DB College, located in Sasthamcotta Grama Panchayat, Kollam, Artificial Recharge Scheme (ARS) has been implemented, which includes the construction of two recharge ponds to collect rainwater from the college buildings' rooftop. Each pond measure 4 metre x 5 metre x 4 metre. The officials of the Groundwater Department conducted a detailed site inspection. Subsequently a detailed estimate was prepared for the implementation of ARS.

Administrative sanction was issued for an amount of ₹14.99 lakh on 24.03.2023 and the technical sanction for the same amount on 27.03.2023. The work was tendered on 26.10.2023. Agreement for the above work was executed on 28.11.2023. The agreed PAC for the work is ₹14.84 lakh. The tender has been submitted at 1% below the estimated cost. The work was commenced on 28.11.2023 and was completed on 24.02.2024. The total expenditure incurred for the work amounts to ₹ 14.99 lakh. No irregularities were observed in the construction during the field visit.

In the course of the site visit by the officials of Finance Department, it was observed that the pond was covered with iron grill. As iron is prone to rusting when exposed to rainwater, the grill is likely to deteriorate quickly. Furthermore, undesirable vegetative growth was identified on the interior surface of the pond. Root penetration by the plants may induce cracking within the structure, leading to a compromise of the pond walls' structural integrity.

It was observed that several conveyance pipes intended to channel rooftop rainwater to the pond are damaged, obstructing proper water flow and reducing the efficiency of the recharge system. In addition, lack of routine maintenance, including delayed pipeline repairs, unchecked vegetation growth, and the continued use of rust-prone iron grills, has contributed to the deterioration of project components. Although the "Artificial Recharge" project at D.B. College was completed under the plan funds, inadequate post-completion maintenance within a year has adversely affected its functionality, raising concerns regarding effective utilization of public resources. Accordingly, it is recommended that the Department assess the extent of damage arising from maintenance lapses and examine the feasibility of recovering the associated costs from the beneficiaries where prescribed maintenance responsibilities have not been fulfilled

Photo 2.3.(vi) Recharge ponds situated in D.B College Sasthamkotta



Administrative Sanction was accorded for an amount of ₹7,86,000 for the implementation of Artificial Recharge Scheme at the 3 sites in Kollam district.

Sl No.	Name of work	AS Amount (₹)	Agreed PAC (₹)
1	Artificial Recharge schemes at NSSHSS Chathannur	2,75,000	
2	Artificial Recharge schemes at Panchayath UPS Mylakkadu	4,17,000	

Sl No.	Name of work	AS Amount (₹)	Agreed PAC (₹)
			7.86 lakh
3	Artificial Recharge schemes at Meenakshi Vilasam GLPS Punthalathazham, Kottamkara GP	94,000	
	Total	**7,86,000**	

Of the above, Finance (Performance Budget) team visited two sites for evaluation.

2.3(vii) Artificial Recharge schemes at Meenakshi Vilasam GLPS Punthalathazham, Kottamkara GP

At Meenakshi Vilasam GLPS, Punthalathazham, Kollam Artificial Recharge System (ARS) has been implemented which includes the construction of a recharge round pit of 1.5 metre in diameter and 3 metre in depth to collect rainwater from the roof of the building. The site was selected and recommended for the implementation of ARS after a detailed study conducted by the investigation team of the Groundwater Department, and subsequently a detailed estimate was prepared.

Administrative sanction was issued for an amount of ₹94,000 on 07.09.2024 and the technical sanction for the same amount on 24.09.2024. The work was tendered on 27.09.2024. Agreement for the above work was executed on 24.10.2024. The agreed PAC for the work is ₹7.86 lakh, with the tender executed at par, showing neither excess nor below rates (0%). The work was completed on 12.08.2025. The total expenditure incurred for the work amounts to ₹68665.56 . No irregularity has been found during the field visit.

With the completion of the recharge structure, the institution is now equipped to harvest and recharge rainwater efficiently thereby contributing to sustainable groundwater management and improved water availability in the area.

Photo 2.3.(vii) a. Rainwater collection from school building

Photo 2.3.(vii) b. Recharge round pit in M.V.G.LPS

2.3.(viii) Artificial Recharge schemes at Panchayath UPS Mylakkadu

At Panchayat UPS, Mylakkadu, ARS has been implemented which includes the construction of a rectangular recharge pit measuring 4 metre in length, 4 metre in width, and 3 metre in depth. This structure was designed to effectively capture and percolate rainwater into the subsurface, thereby enhancing the sustainability of local groundwater resources. The site was selected after a detailed study and field inspection conducted by the Investigation team of Groundwater department.

Administrative sanction for an amount of ₹4,17,000 was accorded on 07.09.2024, followed by technical sanction for the same amount on 24.09.2024. The work was tendered on 27.09.2024, and the agreement was executed on 24.10.2024. The agreed Probable Amount of Contract (PAC) was ₹7.86 lakh, with the tender finalized at par, indicating neither excess nor below rates (0%). The work was completed on 12.08.2025, and the total expenditure incurred amounted to ₹4,16,912. No irregularities were observed during the field visit

All stages of the work were supervised by competent technical officers of the Groundwater Department to ensure adherence to quality and safety standards. Both the materials used and the methodology adopted were in accordance with departmental guidelines and standards for artificial recharge structures.

The project significantly contributes to groundwater recharge in the area,

benefiting the local community and ensuring sustainable water availability. The successful completion of the project highlights the department's commitment to effective water resource management and environmental conservation.

Photo 2.3 (viii) a. Rainwater collection from School building

Photo 2.3 (viii) b. Rectangular recharge pit in UPS Mylakkd

2.3. (viii). a. ***To ensure the long-term sustainability and efficient functioning of groundwater-based drinking water supply schemes, it is recommended that officials of the Groundwater Department conduct regular and systematic inspections of these projects after they are handed over to Beneficiary Committees formed with the approval of the Local Self Government Department. Such inspections should focus on verifying that the Beneficiary Committees are carrying out timely operation, maintenance, and necessary repairs of the system in accordance with prescribed technical and operational standards. Periodic monitoring and reporting mechanisms may also be instituted to identify issues at an early stage and to provide technical guidance and corrective support wherever required.***

2.3.3 Recommendations

i. *The procurement of additional, modern drilling rigs equipped with advanced technology suitable for unstable coastal soil conditions is recommended. Modern rigs with improved casing, mud circulation, and stabilization systems will significantly reduce construction failures, enhance efficiency, and ensure timely completion of tube wells. Simultaneously, upgrading existing rigs and providing technical training to operational staff will further improve performance and sustainability. This strategic investment will reduce dependence on external contractors, improve service delivery, and ensure reliable groundwater development in coastal regions.*

ii. *It is recommended that priority be accorded to the expansion of localized, community-managed groundwater-based drinking water schemes with household connections to sustainably address drinking water scarcity and its socio-economic impacts. These schemes should be implemented with active community participation, particularly of women, to ensure ownership, equitable access, and long-term functionality. Capacity-building measures for system operation, maintenance, and water conservation, along with regular monitoring of groundwater levels and water quality, are essential to safeguard resource sustainability. Integrating water supply initiatives with women-centric livelihood and skill-development programmes is also recommended to enhance economic benefits, health outcomes, and overall quality of life in water-scarce regions.*

iii. *The Finance Department observed that project files for the groundwater supply scheme lacked adequate documentation and periodic monitoring of drinking water quality. Although water samples were reportedly collected after well completion with no apparent issues, the absence of systematic testing records raises concerns regarding potential chemical and heavy metal*

contamination and the associated health risks, particularly for vulnerable groups such as infants, children, pregnant women, the elderly, and immunocompromised individuals. Accordingly, it is recommended that the Department establish a comprehensive water quality monitoring and documentation mechanism for all groundwater-based drinking water schemes, including mandatory chemical and bacteriological testing at the time of commissioning and at regular intervals thereafter, supported by proper record maintenance. The issuance of standard operating procedures for timely analysis, reporting, and corrective action may also be considered to safeguard public health

iv. *In water-scarce areas, the Department provides bore wells along with associated pump houses, with the responsibility for operating the pumping systems generally entrusted to locally constituted committees. However, due to inadequate technical awareness regarding pump operation, pumping is often carried out without assessing the water level in the bore wells. This has resulted in frequent damage to pump components in several locations.*

In view of the above, it is recommended that, while implementing such schemes, the Department examine the feasibility of incorporating safety mechanisms such as an ***Automatic Dry Run Cut-off system****, which enables pump operation based on the availability of water in the well. The inclusion of this safeguard would help ensure uninterrupted operation and enhance the long-term durability and sustainability of the schemes*.

v. *Although no construction-related irregularities were observed, deficiencies in post-completion maintenance—such as damaged conveyance pipes, unchecked vegetation growth, and the use of rust-prone iron grills—have adversely affected the functionality of the Artificial Recharge Scheme at D.B. College. It is recommended that the Department ensure timely maintenance by the beneficiaries and assess the extent of deterioration caused by maintenance lapses. The Department may also examine the feasibility of recovering the associated costs from the beneficiaries, in accordance with the prescribed maintenance responsibilities, to ensure the sustainable utilization of public funds.*

2.4 JALANIDHI

Jalanidhi, implemented by the Kerala Rural Water Supply and Sanitation Agency (KRWSSA), is a World Bank–assisted rural water supply and sanitation initiative executed in two phases. Jalanidhi-I was implemented in 112 Grama Panchayats across Kerala and successfully completed 3,694 small and 16 large water supply schemes, benefiting over 10.56 lakh people, along with initiatives such as

groundwater recharge, sanitation improvements, toilet construction, and rainwater harvesting. Recognized as a role model in the 'Water & Sanitation' (WATSAN) sector, it earned KRWSA the World Bank's First Runner-up People's Award in 2008. Building on this success, Jalanidhi-II was launched in 2012 with a decentralized, demand-driven approach to further expand access to sustainable water supply and sanitation services across 200 Grama Panchayats in eight districts. With an initially approved project cost of ₹1,022 crore-later revised to ₹1,358 crore-and financial contributions from the Government of Kerala, Grama Panchayats, beneficiaries, and the World Bank, the project concluded its implementation on 28 June 2019, followed by completion of financial settlements and reimbursements by December 2019.

As part of the Performance Budgeting of the Jalanidhi 2024-25, the Finance (Performance Budget) team visited the Regional Project Management Unit (RPMU) Office,Kannur

Plan fund utilized during the Financial year 2024-25 under the Regional Project Management Unit (RPMU) Office.

Year	Scheme	Head of account	Budget Allocation (in lakh)	Administrative Sanction	Fund received	Total expenditure
2024-25	Sustainability Support to Community Managed Water Supply Schemes	2215-01-102-80-Plan-V	3090 lakh	1131.4 lakh	473.91 lakh	473.91lakh
2024-25	Scaling up of Rain Water Harvesting and Ground Water Recharge Programme	2215-01-800-64-P(V)	1000 lakh	702.96 lakh	115.54 lakh	115.54lakh
2024-25	Conversion of Domestic Wells into Protected and Sustainable Drinking Water Sources	4215-01-800-85-P(V)	400 lakh	100.64 lakh	41.36 lakh	41.36lakh
2024-25	Water Quality Monitoring and Surveillance of Community Managed Water Supply Schemes & Grey Water Management in colonies of Vulnerable Groups	4215-02-102-99-01-P(V) & 4215-02-102-99-02-P(V)	350 lakh	130 lakh	70.78 lakh	70.78lakh
2024-25	(Information Education and Communication (IEC), Capacity Building & Training and Jalasree Club	2215-01-003-99-P(V)	15.00 lakh	10.00 lakh	1.66 lakh	1.66lakh

Plan scheme works executed under the RPMU Office from the FY 2022-23 to 2024-25

Plan Head	Financial Year	Taken up	Completed
Sustainability Support to community managed water supply scheme	2022-23	78	78
	2023-24	100	56
	2024-25	38	Progressing
Rain Water Harvesting (RWH)	2022-23	281	281
	2023-24	25	25
	2024-25	48	Progressing
Well conversion and Recharge	2022-23	154	154
	2023-24	127	58
	2024-25	39	Progressing
Water Quality Mitigation measures	2022-23	25	25
	2023-24	11	0
	2024-25	6	0
Grey Water Management Projects	2022-23	2	2
	2023-24	0	0
	2024-25	1	Progressing

2.4.1 Economic and Social Significance of the Schemes implemented by Jalanidhi

- **Enhanced Community Ownership:** Active participation of beneficiary committees in planning, decision-making, estimation, and implementation strengthens transparency and accountability.
- **Improved Financial Sustainability:** The requirement for beneficiaries to contribute 10% of the project cost promotes responsibility and ensures regular repair and maintenance of water supply systems.
- **Support for Vulnerable Groups:** SC/ST community involvement is ensured through cross-subsidisation and reduced beneficiary contribution (5%), enhancing social inclusion and equity.
- **Revival of Water Supply Infrastructure:** Renovation of defunct and partially functioning schemes has significantly improved service delivery and ensured reliable access to safe water.
- **Revolving Fund Mobilization:** Mobilizing revolving fund at the Gram Panchayat level provides a sustainable financial resource for future operation and maintenance needs.

- **Strengthened Institutional Framework:** Reconstitution of beneficiary committees has improved the long-term O&M efficiency of community-managed water supply schemes.
- **Effective Technical Backstopping:** Continuous support from KRWSA enhances the technical quality, sustainability, and performance of community-managed water supply projects.
- **Overall System Sustainability:** The Sustainability Support Projects have enabled previously non-functional schemes to become operational, benefiting communities both socially and economically.

2.4.2 Implementation method

The implementation of the scheme follows a structured, community-centered approach beginning with project proposals from Gram Panchayaths (GPs). Plan workshops are conducted for GP board members and Beneficiary Committees, followed by grassroots-level meetings to identify the needs of the beneficiary community. Beneficiary Groups submit proposals for repair and rectification works, after which KRWSA engineers conduct site visits and prepare estimates. These preliminary proposals and rough cost estimates are presented in community planning and budget meetings at the GP level for approval by the Beneficiary Groups. Once approved, the beneficiary share is collected and deposited in the GP-level project bank account. The GP forwards the recommendation for Administrative Sanction (AS), and after receiving AS from the government, Technical Sanction (TS) is issued by KRWSA. A Tripartite Agreement is then signed between KRWSA, the GP, and the Grama Panchayat Level Action Committee (GPLAC). Procurement of goods and services is carried out through e-tendering or community contracting, with KRWSA inviting and approving the tenders on behalf of the Beneficiary Committee. After the agreement is executed by the Regional Project Director and the contractor, the site is handed over and the execution of work begins. KRWSA's technical team monitors the work and prepares bills, while GPLAC recommends contractor payments. The process concludes with the preparation of the final bill, settlement of accounts, and Operation & Maintenance (O&M) training for Beneficiary Committees to ensure sustainability.

As part of the Performance Budgeting of the Jalanidhi 2024-25, the Finance (Performance Budget) Department has evaluated the following scheme:

2.4.3 Sustainability support to community managed water supply scheme

KRWSA has implemented Jalanidhi Phase I & II Projects during the period 2000-2020. Jalanidhi is implemented by following a demand driven, participatory and community managed approach. Once the scheme is commissioned the assets created are handed over to Beneficiary Groups (BGs) for operation and maintenance by themselves. 5884 Water Supply Schemes, covering 22.26 lakh people (4.52 lakh

HHs), have been commissioned so far under Jalanidhi Projects and handed over to the communities for operation and maintenance.

It is found that some of the schemes have become partially or fully non-functional since being handed over to the User Groups (BGs) with technical, social and financial issues cropping up during continued operation. Hence Government of Kerala has initiated a sustainability project to rehabilitate all community managed water supply schemes through KRWSA from 2018-19 onwards under State Plan.

During 2024-25 it is proposed to restore fully/partially defunct schemes identified through Functionality Assessment Survey of community managed water supply schemes conducted by KRWSA in a phased manner, to conduct capacity building & IEC to enable the stakeholders for effective and efficient management of the assets rehabilitated and to act as a back stopping support agency for all community managed water supply systems. It is proposed to rejuvenate 500 partially/fully defunct schemes in 2024-25.

An amount of ₹ 3090.00 lakh has been earmarked for the programme during 2024-25.

The officials of the Finance Department selected some of the works for assessment randomly. Details are given below:

2.4.3 (i) Nenmeni Large Water Supply Scheme – Sustainability Project

The Nenmeni Rural Water Supply Scheme was initially implemented by the Kerala Water Authority (KWA) in 1991 in the Nenmeni Grama Panchayat. At the time of its inception, the project served only 300 households. Later, as part of the Jalanidhi Scheme (KRWSA) initiated in the panchayat, the project was taken over from KWA in 2005 and underwent reconstruction with financial and social cooperation from the community. It was restructured into what is now known as the Nenmeni Large Water Supply Scheme. Since then, the entire operation and maintenance has been managed by a committee of local representatives. Currently, the scheme provides drinking water through 5,065 household connections.

Under the Jalanidhi Sustainability Project, significant improvements were made to enhance the reliability and efficiency of the water distribution system. The existing distribution network, originally constructed with asbestos cement (AC) pipes, experienced frequent leakages due to aging infrastructure. To address this, a total of 5,250 meters of old AC pipes from the existing tank were replaced with durable PVC pipes, ensuring uninterrupted and efficient water supply. Additionally, recognizing that the system required continuous pumping for over 20 hours daily, the project upgraded the pumping capacity by installing an additional 90 HP pump set, effectively meeting the increased demand and improving overall system performance.

For this administrative sanction was issued for an amount of ₹3,30,00,000 on 15.11.2019 and the technical sanction for ₹2,00,00,000 on 01.08.2022. The work was tendered on 04.08.2022. The agreement for the work was executed on 05.10.2022 and the site was handed over to the contractor on the same date with an agreed PAC of ₹1,36,24,744. The tender was accepted at 15.29% below the estimated PAC. The work commenced on 13.11.2022 and was completed on 23.12.2023, with a total expenditure of ₹1,69,36,240 (Govt.of Kerala - 1,28,28,949+ Grama Panchayat - 25,40,436+ Beneficiary Group - 15,66,855) The entire scope of work has been successfully executed, achieving 100% completion.

Photo.2.4.3. Replaced GI pipeline

The daily operations and maintenance are overseen by the beneficiary committee, which ensures the system functions smoothly. To manage these responsibilities, the committee has appointed over 23 staff members who handle routine repair and maintenance works, guaranteeing uninterrupted water supply. All expenses related to operations and maintenance are covered through the revenue generated from water charges collected from the beneficiaries, ensuring the scheme remains sustainable and efficiently managed.

The project has successfully ensured an uninterrupted daily supply of clean drinking water to all connected households. It has also created employment opportunities for over 23 individuals, contributing to the local livelihood. Regular social auditing is conducted to maintain transparency and ensure corruption-free operations. Being a community-driven and self-sustained initiative, the project does not require government funding for its ongoing operations or maintenance, making it both efficient and sustainable.

The Nenmeni Rural Water Supply Scheme, under the Jalanidhi Project, stands out as a successful model of community-managed rural infrastructure. The scheme

not only ensures safe and continuous drinking water supply but also promotes local employment and responsible governance.

2.4.3 (ii) Alathur Water Supply Scheme,Noolpuzha GP – Sustainability Project

The Alathur Water Supply Scheme in Noolpuzha Grama Panchayat was originally implemented under the Rajiv Gandhi Drinking Water Mission. However, the scheme could not be effectively operated and maintained by the original group of beneficiaries, leading to its deterioration. Recognizing the critical need for safe drinking water, especially since all the beneficiary families belonged to Scheduled Castes (SC) and Scheduled Tribes (ST), the Panchayat Governing Committee decided to integrate the scheme into the Jalanidhi Programme with financial and social cooperation, the scheme was reconstructed and rebranded as the Alathur Water Supply Scheme under jalanidhi project, which is now fully managed and maintained by a local beneficiary committee. At present, the scheme serves 91 beneficiaries, primarily from Kuruma, Nayikkar, and Paniya tribal communities.

The daily operations and maintenance of the scheme are managed under the direct supervision of the committee, ensuring smooth and efficient functioning. To support routine upkeep, the committee has appointed two dedicated staff members responsible for day-to-day maintenance and minor repairs. All operational activities, including maintenance and repair work, are fully funded through the revenue generated from water charges.

For this administrative sanction was issued for an amount of ₹6,50,000 on 04.08.2023 and the technical sanction for ₹3,50,000 on 05.10.2023. The work was tendered on 10.01.2024. The agreement for the work was executed on 08.02.2024 and the site was handed over to the contractor on the same date. The work commenced on 29.02.2024 and was completed on 20.07.2024, with a total expenditure of ₹2,73,910 (Govt.of Kerala - 2,73,910+ Grama Panchayat - 0+ Beneficiary Group - 0) . The entire scope of work has been successfully executed, achieving 100% completion.

Works carried out under the scheme

- **Water Metering System Replacement**:

  The previously installed water meters had become outdated and non-functional, making it impossible to record water consumption or collect tariffs accurately. As part of the reconstruction efforts, a modern water metering system was installed. This upgrade ensures precise billing, promotes efficient water usage, and enables better management of water resources for the community.

❖ **Upgradation of Pumpset:**

The existing pump station was underperforming and could not meet the growing water demand. To address this, a new 5 HP pump set was installed, significantly enhancing the pumping capacity. With the upgraded pump, the water scheme can operate efficiently for over two hours daily, ensuring reliable water supply for all beneficiaries.

❖ **Tank, Well, and Pump House Renovation:**

Years of neglect had left the water tank, well, and pump house unhygienic and in poor condition. These structures were thoroughly cleaned, repaired, and repainted, restoring them to a functional and sanitary state. This renovation not only improves the longevity of the infrastructure but also ensures that water remains safe for consumption.

❖ **Solar Power Installation:**

Many beneficiaries of the scheme belong to SC/ST communities and previously faced difficulty in paying monthly electricity bills. To reduce operational costs and to provide sustainable energy, an on-grid solar power system was installed. This initiative has successfully cut electricity expenses by 80–90%, making the water supply system more cost-effective and environmentally friendly.

Photo. 2.4.3 a. Pump house

Photo. 2.4.3 b. Solar power plant

Photo. 2.4.3 c. Electrical panel board

The Alathur Water Supply Scheme under the Jalanidhi Project stands out as a successful example of how decentralized, ST community-driven water management can empower marginalized communities. By integrating social responsibility, local participation, and sustainable infrastructure (such as solar energy), the scheme ensures clean water access while reducing dependency on government resources. This model demonstrates that with the right support,

even remote and disadvantaged populations can manage essential utilities efficiently and transparently

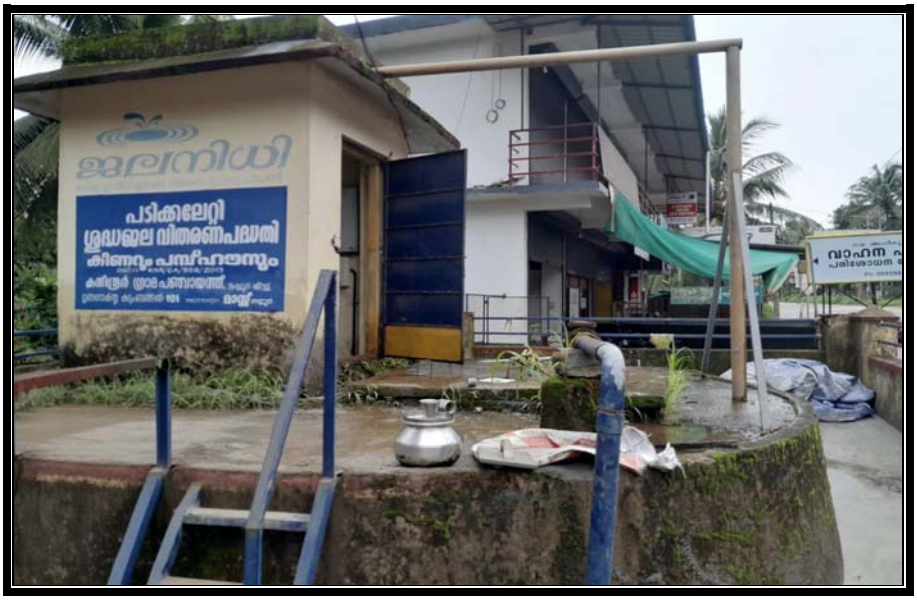
2.4.3 (iii) PADIKKALETTI WATER SUPPLY SCHEME JALANIDHI SUSTAINABILITY PROJECT- KADIRUR GP

The Padikkaletti Water Supply Scheme was implemented by the Kerala Rural Water Supply and Sanitation Agency (KRWSA) under Jalanidhi Phase II in Kadirur Grama Panchayath and was completed in the year 2016 to address the drinking water scarcity in the Moonnammayil area. The scheme currently supplies potable water to approximately 110 households. Over time, the system began experiencing frequent interruptions in water supply due to leakages in the reservoir and distribution pipelines. As uninterrupted water supply is essential for the area, Kadirur Grama Panchayath requested KRWSA to take up renovation works; however, the Panchayath faced constraints due to shortage of funds. In response, KRWSA included the Padikkaletti Water Supply Scheme under its Sustainability Project for the financial year 2023–24, with the objective of restoring reliable water supply and improving the long-term functionality of the scheme.

The existing distribution line was laid many years ago and had frequent leakage issues.To address this and ensure smooth water distribution under the 2023-24 Jalanidhi Sustainability Projects, a total of 200 meter pipe line was replaced with new HDPE pipes. Also, plastered the reservoir and water proofing work was performed on the tank to avoid the leakage in the reservoir. By providing solid blocks along the 4 sides of the column a store room was created.

For this administrative sanction was issued for an amount of ₹4,85,000 on 04.08.2023 and the technical sanction for ₹4,70,000 on 10.10.2023. The work was tendered on 10.01.2024. The agreement for the work was executed on 08.02.2024 and the site was handed over to the contractor on the same date with an agreed PAC of ₹3,76,403. The tender was accepted at 3.52% below the estimated cost. The work commenced on 03.03.2024 and was completed on 30.10.2024, with a total expenditure of ₹2,43,487 (Govt.of Kerala - 2,43,487+ Grama Panchayat - 0+ Beneficiary Group - 0) . The entire scope of work has been successfully executed, achieving 100% completion.

Photo 2.4.3 (iii) Well and Pump house in Padikkaletti



2.4.4 Recommendations

i. Lower number of contractors participation is often driven by concerns over delayed payments, which increase financial risk and discourage competitive bidding. To address this, implementing time-bound payment schedules linked to clearly defined project milestones can ensure predictability and discipline in fund disbursement. The introduction of online bill tracking and payment monitoring system would further enhance transparency, allowing contractors to track payment status in real time and plan their cash flows more effectively.

ii. Mobilising the Beneficiary Group (BG) share for reviving long-defunct schemes remains challenging due to financial constraints and loss of confidence among beneficiaries. This can be addressed by providing enhanced financial support or allowing phased BG contributions aligned with rehabilitation milestones, thereby reducing the immediate burden on beneficiaries. Introducing flexible payment options, such as installment-based contributions and extended timelines, can further improve affordability and participation. Confidence-building measures, including awareness campaigns and the showcasing of successfully revived schemes, can help restore trust in the rehabilitation process. Additionally, offering one-time incentive grants or partial waivers for schemes that have remained defunct for extended periods can act as a strong motivator for revival. Active involvement of Local Self Governments (LSGs) through co-sharing of beneficiary contributions, especially for critical schemes, can further ensure financial viability and accelerate scheme restoration.

iii. The implementation of the Jal Jeevan Mission (JJM) had a significant impact on existing Jalanidhi schemes, often leading to overlap, asset damage, and erosion of beneficiary confidence. To address this, a clear and well-defined policy on the coexistence of JJM and Jalanidhi schemes is essential to prevent duplication and ensure optimal use of infrastructure. Mapping of households already covered under Jalanidhi prior to JJM execution can help avoid dual connections and unnecessary expenditure. JJM executing agencies should be made accountable for restoring or compensating for any damage caused to Jalanidhi assets during implementation. Furthermore, Jalanidhi schemes can be effectively integrated as bulk water suppliers or last-mile distribution partners under JJM, leveraging their community-based strengths. Revising user charge structures and service standards in line with the new service environment will help retain beneficiary trust and ensure the long-term sustainability of Jalanidhi schemes.

iv. Internal conflicts within Beneficiary Groups often undermine the effective operation and sustainability of community-managed schemes. These challenges can be mitigated by strengthening community facilitation and capacity-building through trained social mobilizers who can guide groups in collective decision-making and conflict management. Introducing standardized bylaws that clearly define member contributions, tariff structures, and operation and maintenance responsibilities can reduce ambiguity and prevent disputes. The involvement of neutral third-party mediators, such as representatives from KRWSA or Local Self Governments (LSGs), can provide structured and impartial dispute resolution when conflicts arise. Promoting transparent financial disclosures, regular BG meetings, and shared access to records can further build trust and accountability among members. Additionally, encouraging women-led and inclusive leadership structures can enhance participation, improve consensus-building, and foster more resilient and cohesive beneficiary institutions.

v. Delays in obtaining statutory clearances and utility connections significantly affect project timelines and cost efficiency in drinking water schemes. Establishing a single-window clearance mechanism for electricity, PWD, and other statutory approvals can streamline processes and reduce inter-departmental delays. Integrating a detailed clearance timeline matrix into project planning will help align approvals with construction milestones and improve accountability. Entering into Memorandums of Understanding (MoUs) with agencies such as KSEB and PWD can enable fast-track approvals specifically for drinking water projects. Encouraging advance submission of applications and parallel processing of statutory clearances during the DPR

stage can further minimize idle time during execution. Additionally, empowering district-level committees with decision-making authority to promptly address and resolve clearance bottlenecks will ensure smoother coordination and timely project completion.

vi. Coordination gaps among multiple implementing agencies often lead to duplication of efforts, asset conflicts, and delays in project execution. To address this, establishing a district-level coordination committee comprising KRWSA, KWA, Local Self Governments (LSGs), and JJM implementing agencies can provide a structured forum for joint decision-making and issue resolution. The development of a shared, GIS-based asset and work mapping platform would help visualize ongoing and proposed interventions, thereby preventing overlaps and optimizing resource use. Regular joint planning and review meetings prior to tendering and during execution can further ensure alignment of objectives and timelines. Clearly defined roles and responsibilities, formalized through detailed guidelines, are essential to reduce ambiguity and inter-agency friction. Integrating Jalanidhi scheme planning into broader district and state-level water security plans will also promote coherence, sustainability, and long-term impact across programs.

vii. Overall, Jalanidhi should be strategically positioned as a community-managed, sustainability-focused complement to the Jal Jeevan Mission rather than as a parallel or competing model. Strengthening KRWSA's role as a key technical, social, and coordination facilitator will be critical in bridging institutional gaps and supporting beneficiary groups throughout the project lifecycle. Robust monitoring systems, systematic documentation, and continuous learning from field-level challenges should be institutionalized to improve design, implementation, and long-term performance of schemes. At the policy level, stronger alignment between JJM and community-based water supply models is essential to ensure coherence, avoid duplication, and leverage the strengths of participatory approaches, thereby enhancing resilience, ownership, and sustainability of rural drinking water services.

2.5 BANASURA SAGAR IRRIGATION PROJECT

The Banasura Sagar Irrigation Project, conceived as a major irrigation initiative in Wayanad district, has been facing prolonged delay despite substantial financial investment and administrative effort over more than two decades. Although the project received administrative sanction in 1999 with an initial estimated cost of ₹37.88 crore, its physical and functional completion remains elusive even after repeated revisions, policy interventions, and expenditure escalations.

As per the revised estimates, a total outlay of ₹263 crore, including Design and Administrative charges, is required for completion, of which ₹102.75 crore has already been incurred up to October 2025. This includes ₹68.75 crore towards works expenditure and ₹33.99 crore towards establishment expenditure. Even then, the project has failed to deliver its core objective, as irrigation water has not been conveyed through the canal system even once. This glaring mismatch between expenditure and outcomes underscores the severity of the implementation impasse.

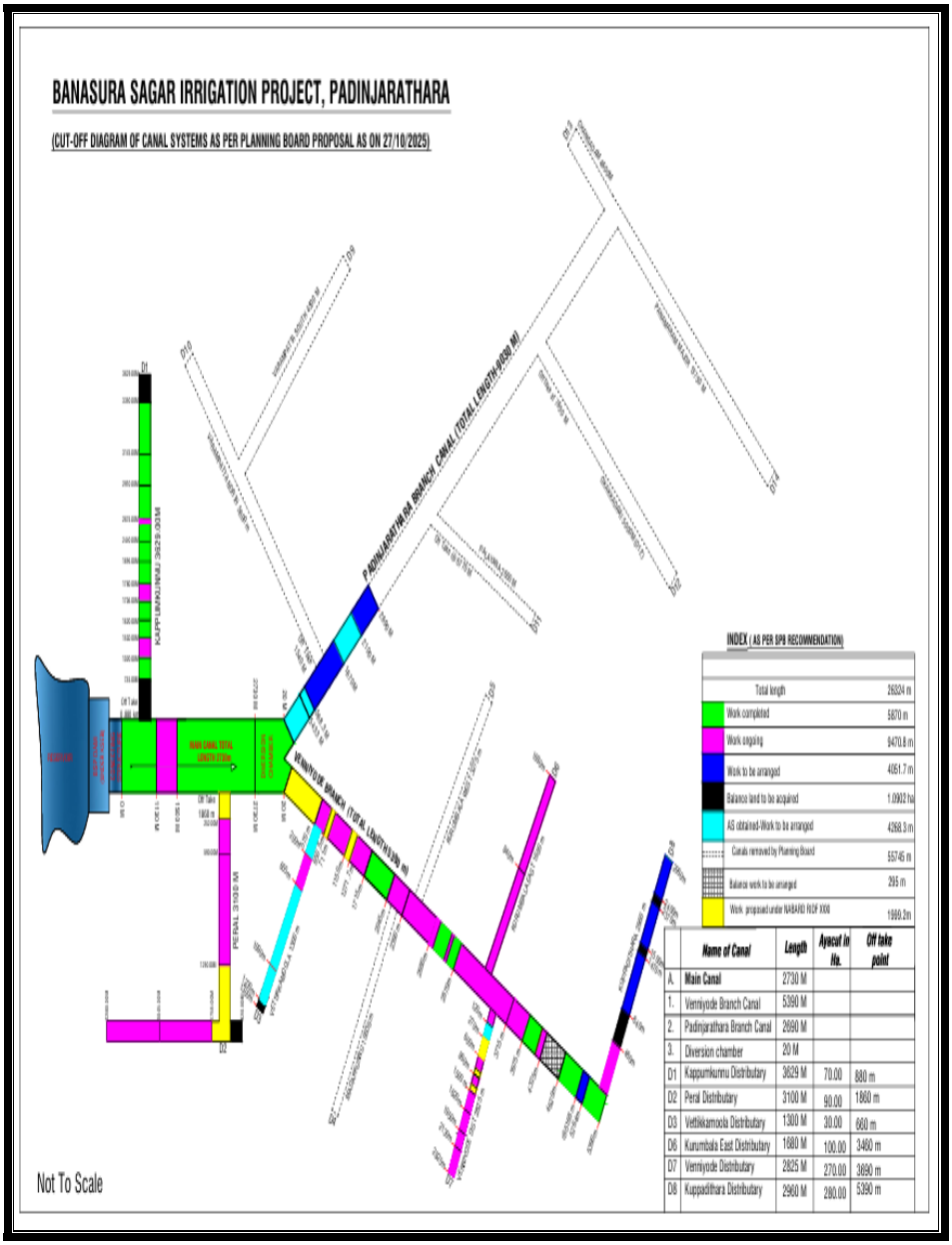
One of the principal bottlenecks is the inordinate delay in the completion of the main canal, particularly the critical stretch between chainage 1130 m and 1500 m. Although the work commenced on 21.10.2004 with a stipulated completion period of 18 months, the contractor failed to complete the work even after multiple extensions, with progress stagnating as early as March 2008. Persistent technical issues, site-specific design challenges, contractual disputes, and administrative inefficiencies have collectively contributed to prolonged stagnation in this vital segment, thereby preventing downstream canal networks from becoming operational.

Land acquisition has emerged as another major structural impediment. While a total of 29.3226 hectares of land is required for the construction of the main canal, branch canals, and distributaries, only 28.2324 hectares have been acquired so far. Critically, land acquisition issues continue to persist at the very starting reaches of certain distributaries, such as the Kappumkunnu Distributary, even as downstream sections have already been completed or are under progress. Initiating works without ensuring clear possession of land has not only led to execution delays but has also increased the risk of avoidable bargaining and financial liabilities to the Government.

Persistent deficiencies in project planning and execution have significantly contributed to the inordinate delay of this irrigation project. Although construction commenced long ago, the project has failed to achieve its intended objectives, prompting intervention by the Technical Committee of the Kerala State Planning Board. In an effort to reduce capital investment and accelerate partial commissioning, certain non-essential components were subsequently excluded. However, ₹3.45 crore had already been spent on these abandoned works, resulting in a direct and avoidable financial loss to the State. This reflects serious shortcomings in the initial project appraisal, improper prioritization of components, and the lack of a structured, phased implementation strategy. Furthermore, even after the command area was scaled down from six Panchayats to two—Padinjarathara and Kottathara—covering a reduced ayacut of 840 hectares and total length of the canal to 26320 m, out of which only 5870 mtr completed so far, the revised scope has not translated into tangible on-ground

outcomes. Compounding these issues is the continued maintenance of a disproportionately large establishment of 66 personnel across various administrative levels, fully financed through plan funds, leading to sustained recurring expenditure without commensurate physical progress. Collectively, these factors underscore weak project governance, inefficient resource utilization, and poor alignment between financial outlays and actual deliverables.

Fig: 2.5 Cut-off diagram of Banasura Sagar Irrigation Project



In essence, the Banasura Sagar Irrigation Project continues to face serious obstacles due to prolonged delays in execution, weak planning, unresolved land

acquisition issues, failures in contract management, and unscientific financial practices. Unless critical corrective measures—such as ensuring land acquisition prior to implementation, resolving legacy contractual disputes, prioritizing the completion of vital canal stretches, and enforcing strict outcome-based monitoring—are urgently undertaken, the project cost is likely to escalate further. More importantly, the continued non-delivery of irrigation benefits to the farming community of Wayanad is causing significant setbacks to the agricultural sector. Under these circumstances, it would be prudent to examine the feasibility of temporarily freezing further Plan fund allocations to the project until the department concerned submits a clear, realistic, and time-bound roadmap to the Government for the completion and commissioning of the Banasura Irrigation Project. This is particularly relevant given that a project initially estimated at ₹37.88 crore in 1999 has already incurred an expenditure of ₹102.75 crore, yet has failed to supply irrigation water through the canal system even once, clearly indicating a systemic failure. In this context, the possibility of redeploying project personnel—other than those required for essential maintenance—to their parent departments may also be considered.

CHAPTER 3

FINANCIAL OUTLAYS AND QUANTIFIABLE DELIVERABLES

The chapter contains a tabular format which is visualized as vertical compression and horizontal expansion of Statement of budget estimates. The objective is to establish a one to one correspondence between financial budget 2023-24 and outcome of budget 2024-25.

The Irrigation department has implemented a good number of schemes under major and medium irrigation. The present strategy adopted is to focus operation and maintenance of already existing major and medium irrigation systems along with focus in developing various minor irrigation systems.

Prevention of salinity ingress has always been a major issue being addressed by the department. During 2023-24, various schemes to prevent salinity ingress have been implemented. Some of the major works include repairs of shutters of Thaneermukkom barrage, construction of Kattampally regulator. Thottapally Spilway

Various flood control works including maintenance and protection of river banks have been carried out. Protection of Coastal areas from erosion and tidal attacks is another challenge faced by the department. Works including construction of new sea-wall, reformation of existing sea-wall have been completed.

Under Minor Irrigation, various check dams aimed at improving water availability in rivers during lean season and to recharge ground water have been constructed. Construction of Minor Irrigation structures were also initiated under MIRPA(Malabar Irrigation and Rehabilitation

The main highlight of the department is the introduction of the SMS Alert system. Initially, a pilot project has been carried out in PVIP (Periyar Valley Irrigation Project). This system will enable the water users to receive the pattern of water distribution in canals.

In addition to the above, works under Minor and Major Irrigation have been completed under the grants of Thirteenth Finance Commission and assistance from NABARD.

The scheme wise financial outlay and quantifiable deliverables are explained in Annexure-I.

CHAPTER 4

REFORM MEASURES AND PERFORMANCES

4.1 Coastal protection from sea erosion – using innovative technologies

Kerala boasts a dynamic coastline stretching 576 kilometres from Kollamkode to Thalappady, encompassing nine districts. Of this, 370 kilometers of the coastline are currently protected.

Due to the impacts of climate change and recurrent cyclones in the Arabian Sea, ten hotspots have been identified as highly vulnerable. Implementing coastal protection measures without proper study can worsen the condition of a specific coastal area. Therefore, thorough scientific study and site-specific designs are crucial to overcome these challenges.

To address these issues, it has been decided to task the National Centre for Coastal Research (NCCR) with strengthening existing coastal protection structures and providing site-specific coastal protection solutions for the entire Kerala coast.

The Kerala government has entrusted NCCR, an expert institute for coastal studies in Chennai, to conduct studies and prepare the Shoreline Management Plan (SLMP) for the entire coastal stretch to comply with NGT judgement. The SLMP is in the final stages of preparation. The status of coastal studies in the hotspots are as under:

Sl No	Hotspot	Status
1.	Shanghumugham-Thiruvananthapuram	DPR prepared for Rs.71.50Cr and submitted it to the Government.
2.	Kollamkode- Thiruvananthapuram	Thiruvananthapuram District-Kollemkode (Pozhiyur)- Coastal protection measures- Source of fund-In principle sanction obtained for KIIFB funding-KIIDC-Proposal amount Rs.51.00Cr- Technical Appraisal Report of KIIFB addressed.
3.	Alappad-Kollam	Kollam-Alappad- reformation of damaged sea walls using tetrapods- (Source of fund - DPR under scrutiny for KIIFB assistance) In principle sanction obtained. Proposal amount 172.50Cr- TAR of KIIFB addressed.

4.	Ottamasseri- Alappuzha	Administrative Sanction for the project at Ottamassery in Alappuzha district has been received at a cost of Rs. 79 crore. The work is progressing under the supervision of KIIDC.
5.	Chellanam- Ernakulam	The construction of a 7.35 km long sea wall using Tetrapods has been implemented through KIDC with KIIFB funds to protect the beach in Chellanam panchayat of Ernakulam district from sea erosion. As a result, 7.30 meters of the coast has been secured. In the second phase of coastal protection work using tetrapods, a 358 crore rupee estimate for the construction of a seawall from Puthenthodu to Manassery has been submitted to the government for approval through KIDC under the KIIFB fund.
6.	Kodungallur-Thrissur	As per the design available from NCCR, General - HOTSPOT - ASE work - reformation of damaged sunken seawall using tetrapods in between CP Stones 1195 to 1224 for 6 km stretches along Kodungallur sea coast in Kaipamangalam Constituency - General Civil Work, DPR of Rs 328.65 crore under preparation.
7.	Ponnani-Malappuram	The IDRB prepared the design for the project and the design vetted by NCCR. The estimate and DPR is under preparation.
8.	Kappad-Kozhikode	DPR prepared based on the design and model study report received from NCCR. DPR of Rs. 76.26 crore has been submitted to the government for approval. Proposal for obtaining CRZ Clearance has been given to KCZMA on 23.11.2024.
9.	Thalassery-Kannur	Design received from NCCR. DPR under preparation.
10.	Valiyaparamba-Kasargod	Design received from NCCR. DPR under preparation.

Other Vulnerable Hotspot		
1	Vypin –Eranakulam	Design received from NCCR. DPR under preparation.
2	Andhakaranazhi- Alappuzha	Design received from NCCR. DPR under preparation.

Proposals have been submitted to the government through the Mission Directorate for cabinet approval to carry out the work in the above-mentioned 10 hotspots using ADB (Asian Development Bank) funds.

4.2 E Governance Initiatives

The E-tendering system simplified the tendering process and PRICE software simplified the processes behind AS/TS sanctioning. The HQ of CE I &A will be soon integrated with KSWAN and e Office will be implemented. The department owns the official website in CMF (Content Management Framework).

In order to have a centralized management of departmental assets proposal for e Asset Management System is prepared and under processing of Government. Other projects like e-RTS , Project Monitoring system, Transfer & Postings -Online are under pre implementation stage.

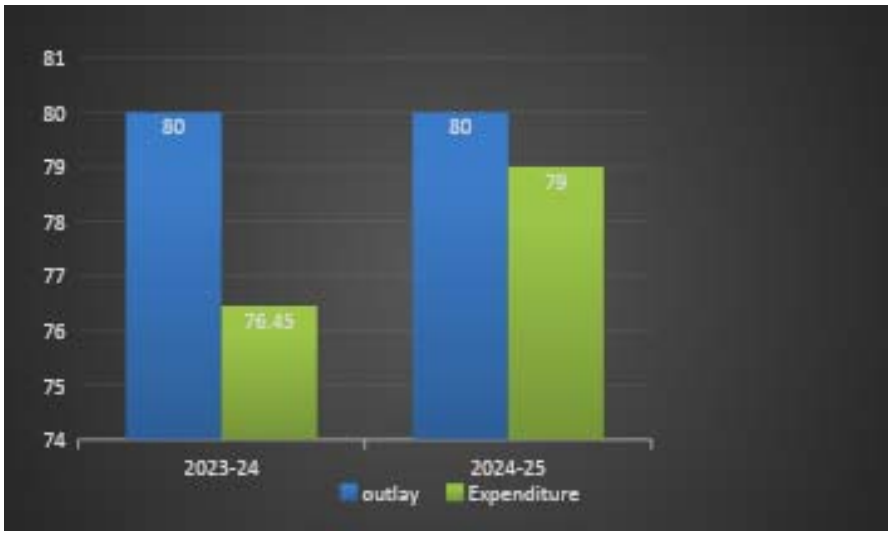
4.3 Modernisation of Department and E- governance

The Department has made significant strides in modernization and e-governance by implementing systems that have improved efficiency, transparency, and accessibility. The introduction of e-Governance tools has created a smoother working environment with faster interoffice and public communication, enabling paperless documentation across the Irrigation Department. All offices have been on boarded to the Aadhaar-enabled Biometric Attendance System (AeBAS), and Face Authentication has also been successfully deployed. The official website has been upgraded to the more secure Drupal 10 platform, with a fully translated Malayalam version underway to enhance public accessibility. The Department actively operates several key applications, including PRICE 3.0, SCORE, e-Tender, SPARK, BIMS, BAMS, GEM, CPRCS, PRISM, VEELS, and MEDISEP, supported by the procurement of essential IT hardware and the establishment of K-FON high-speed internet connectivity across all locations. The e-tendering system has streamlined tender processes, while PRICE 3.0 has simplified workflows from DPR preparation to e-Bill submission. To enhance centralized asset oversight, an e-Asset Management System is under proposal, and projects such as e-RTS, Project Monitoring System, and Online Transfer & Posting are in pre-implementation stages. With an outlay of ₹80 lakh each for 2023-24 and 2024-25, and expenditures of ₹76.45 lakh and ₹79 lakh respectively, the Department has successfully

implemented the e-Office system up to the Division level, with training underway for Sub-Division and Section offices, further expanding its digital capabilities.

A graphical representation of the same is detailed below:

Comparison of Outlay and expenditure for 2023-2024 & 2024-25



4.4 Quality analysis via mobile laboratory

The State Groundwater Department has proposed a project for conducting the assessment of Groundwater Quality of the State. As per order no 593/2023/WRD dated 27/06/2023, Government has approved the proposal and the quality analysis of 14 selected blocks in each District by the mobile laboratory procured under National Hydrology Project has been completed. A comprehensive data analysis report preparation is in progress. Apart from that, Well census second phase activity has been initiated in the State aims to develop a water budgeting system for the preparation of State action plan for the drought management, control and regulate the groundwater development and usage in the State under NHP project using the web enabled application Neerarivu. In Kannur and Wayanad District the well census activity has been completed.

4.5 Micro Irrigation

As per NCAP study, the potential area of micro irrigation in Kerala is 2.7 lakh hectare. By adopting Micro Irrigation, about 60 % of water loss due to conveyance, evaporation, percolation and seepage occurring using conventional methods of irrigation can be avoided. The micro irrigation method consists of an irrigation solution of a closed pipe network right from source to root zone of crops, resulting in huge savings of water and substantial increase in crop yields.

As a step forward in drafting the State's Micro Irrigation Policy, the Government had formed a drafting committee for State Micro Irrigation Policy with Chief Agri (Planning Board) as Chairman and Chief Engineer (I&A) as convener and members from various stakeholder departments. The Policy has been drafted and is under Government consideration.

4.6 Implementation of Community Micro Irrigation

Micro irrigation projects require multidisciplinary engineering expertise, with instrumentation engineering being a critical component. Each region necessitates a tailored design based on its topography and the crops to be cultivated. Additionally, the quantity of water required for the crops varies according to the local climate, which necessitates differences in the design of control units and automation units, including SCADA systems.

Currently, the irrigation department lacks the technical knowledge for installing these automatic control systems and their various components, including filter units.

An amount of ₹100 crore has been allocated for community micro irrigation projects in the 2025-26 budget under the title "Minor Irrigation Class I schemes under Haritha Keralam" for implementing micro irrigation projects under the Irrigation Department, with Rs.10 crores allocated for Idukki and Wayanad districts.

In order to implement K.M Mani Micro irrigation projects through the irrigation Department, the Government vide GO(Rt) No.210/2024 WRD dated 07-03-2024 has constituted the Departmental Technical/Design Committees to handle the technical and design aspects of micro irrigation projects. This order also grants permission to consider firms empanelled for projects implemented by the Kerala Irrigation Infrastructure Development Corporation (KIIDC) for works under the Water Resources Department.

In the light of above Government order, efforts are being taken to implement recently sanctioned micro irrigation projects through Irrigation department.

4.7 Room for River Projects

Major rivers which drain into Kuttanad i.e. Manimala, Pamba and Achankovil are silted up after 2018 floods. A holistic approach to reduce the flooding in Kuttanad area is to be implemented for which proposals were submitted with respect to 'Room for River' concept. The main proposals included improvements to 11 km leading channel from Veeyapuram to Thottappally spillway by desilting the channel and protecting the sides.

Veeyapuram the confluence point of Pamba and Achenkovil River, a major portion of water in these rivers flow through a leading channel passing Pandi Bridge and bifurcating into two branches. One branch to Thottappaly spillway

and other to Kuttanad through a network of canals. So flooding in Kuttanad can be prevented to a great extent by clearing the obstructions and encroachments in the leading channel and also by protecting the two sides of the leading channel thereby preventing overtopping of water to the nearby padasekharams and dry lands.

4.8 Restoration of Ecosystem

Water from Pamba, Manimala and Achenkovil rivers gets drained to the sea after flowing through a number of tributaries connecting these rivers in Upper Kuttanad/Kuttanad region. Thanneermukkam Barrage, Thottappally Spillway and Thrikkunnappuzha Lock are the three outlets in Alappuzha district for draining water from rivers to the Arabian Sea. After 2018 and subsequent floods, the rivers and its major and minor tributaries got silted up, thereby affecting the agricultural activities by breaching and overtopping of side bunds of channels. These interconnecting channels need to be cleared by desilting, breached bunds to be rectified and bunds to be raised at certain locations for the smooth flow of water. Some of the above channels have already been desilted and protected after the floods through different projects.

Rejuvenation of Ecosystems in and around Kuttanad region is essential to mitigate flood and rise in water level during high tides due to climate change. The river network in Kuttanadu and upper Kuttanadu regions have been delineated and major channels with more than 10m width with severe silting were identified. After a detailed analysis, most vulnerable areas are identified as per the observations in the previous flood and included in Phase I as 14 sub projects in Kuttanad, Chengannur, Harippad, Amalapuzha and Aroor LACS.

Detailed DPRs of all the 14 sub – projects, for a total amount of Rs. 56.25 crores (including GST) were included in phase I have been prepared to safeguard activities in Kuttanad area. The proposed depth of desilting varies from 0.30m to 1.00m. Desilting of the bed of the channel within 2m from either banks is excluded for ensuring the stability of existing protection works. The usage of coir geotextile is proposed at vulnerable stretches for raising and strengthening of side bunds. Retaining walls with rubble is proposed for raising existing retaining walls, rectifying breaches of bund and to protect bund roads and other structures.

4.9 Rejuvenation of Rivers

For the rejuvenation of rivers, vide order no. PL1(B)/Mon/23349/2021 of CE, I&A, TVM issued ownership and responsibility of the 44 Rivers in the State were entrusted to the Executive Engineers of Irrigation Department. Main Duties assigned to each officer included ensuring Room for River, up keep, maintenance and fortnightly inspection and data collection. The main aim of the River

Rejuvenation is to remove the sediments deposited due to the devastating flood that happened in the year 2018, 2019, and 2021. With the active participation of field staff the desiltation work was fully completed in 30 rivers and partially completed in remaining 13 rivers. The total sediments removed so far is 98,35,939 m3 (32%) against an estimated quantity of 3,01,65,570m3. District Collector who is the Chairman of District Disaster Management Authority is entrusted to dispose of the desilted sediments through auction.

4.10 Rebuild Kerala Initiative

Integrated Water Resources Management is the pillar of the Rebuild Kerala Project. Under the Rebuild Kerala Initiative, the department has taken up and completed the works which are necessary to ensure the rectification of damages caused by floods and also to take up works which are necessary to ensure safety to human life and properties from future floods. The department has taken up works like post flood repair and maintenance, River Basin Conservation and Management Authority initial operation/consulting expenses, Micro Irrigation, DPR preparation of 'Room for River' and Kerala Water Resources Information system (K-WRIS) etc. amounting to 307.895 crores.

4.11 Pollution abatement programme

As per the Order of the National Green Tribunal (NGT), action plans for the mitigation of Pollution in 21 river stretches have been prepared and submitted to Central Pollution Control Board (CPCB) to appraise the Hon'ble NGT. The upper limit for execution of the action plan is fixed as two years from 01/04/2019. For the execution of the works included in the action plan an amount of Rs. 110.81 Crores were required. However, the State couldn't achieve and comply with the order of the NGT due to various reasons which include climatic and financial constraints. Later, the CPCB through the State Pollution Control Board directed the department to revise and submit action plans to comply with the Order. Owing to various activities executed based on the action plan prepared, as per CPCB report on water quality 2022, 11 polluted river stretches were deleted and 8 new stretches were added and hence the number of polluted river stretches is currently 18. This shows that the activities aiming to reduce the pollution level in rivers pays well. As such during this five year plan period the department aims to execute specific works to abate pollution in all the rivers with special attention to 18 river stretches.

As far as Kerala is concerned, nearly 35 percent of the total population depend on tap water for their day to day use. Rivers are the main source of water for the rural and urban water supply schemes. The improvement in quality of water in water courses invariably increases the quality of water distributed through the water supply schemes managed and operated by KWA and LSGIs. Moreover, the increase

in surface water quality keeps the subsurface/ground water quality in good state. The quality of flow of water in rivers improves ecological health which helps to increase the fish wealth in rivers. The animal husbandry sector also benefits from the improved quality of water, which is the only primary sector in Kerala.

4.12 Capacity Building

The focus of all aspects of this programme is on developing a highly competent workforce so that the organization and its employees can accomplish their work goals effectively in service to the public. It also aims to provide training to new employees, giving them awareness about the department. Further, it is intended to improve the quality of both technical and non-technical employees of the department. Proper quality improvement programmes should be arranged for all officers to enable them to carry out their duties efficiently.

For this purpose, training based on specific needs are arranged for engineers and other officers, in consultation with management institutions, IITs, etc. Short-term courses are conducted in management institutions and IITs as per the requirements of engineers working in the department. Various training programmes for the administrative staff are also conducted in association with management institutions in the State.

CHAPTER 5

FINANCIAL REVIEW

This Chapter contains a financial review covering overall trends in expenditure viz-a-Viz budget estimate/revised estimate in recent years, which is detailed in Annexure-II

CHAPTER 6

REVIEW OF PERFORMANCE OF AUTONOMOUS BODIES

6.1 Kerala Water Authority

Kerala Water Authority was established on 1st April 1984 as an autonomous body of Government of Kerala under the Kerala Water Supply and Waste Water Ordinance 1984 as a successor to the erstwhile Public Health Engineering Department of the Government of Kerala for the development and regulation of water supply and waste water collection and disposal in the State of Kerala. The Ordinance was replaced by the Kerala Water Supply and Sewerage Act, 1986.

Responsibilities

- Design, construction, execution, promotion, operation, maintenance and financing of schemes for the supply of water and for the collection and disposal of waste water.
- Rendering all necessary services to the Government relating to water supply and collection and disposal of the waste water in the State of Kerala.
- Establishment of standards for water supply and waste water services.
- Fixation and revision of rates for water supply and sewerage maintenance with the approval of Government.
- Taking other measures necessary to ensure water supply in times of emergency.

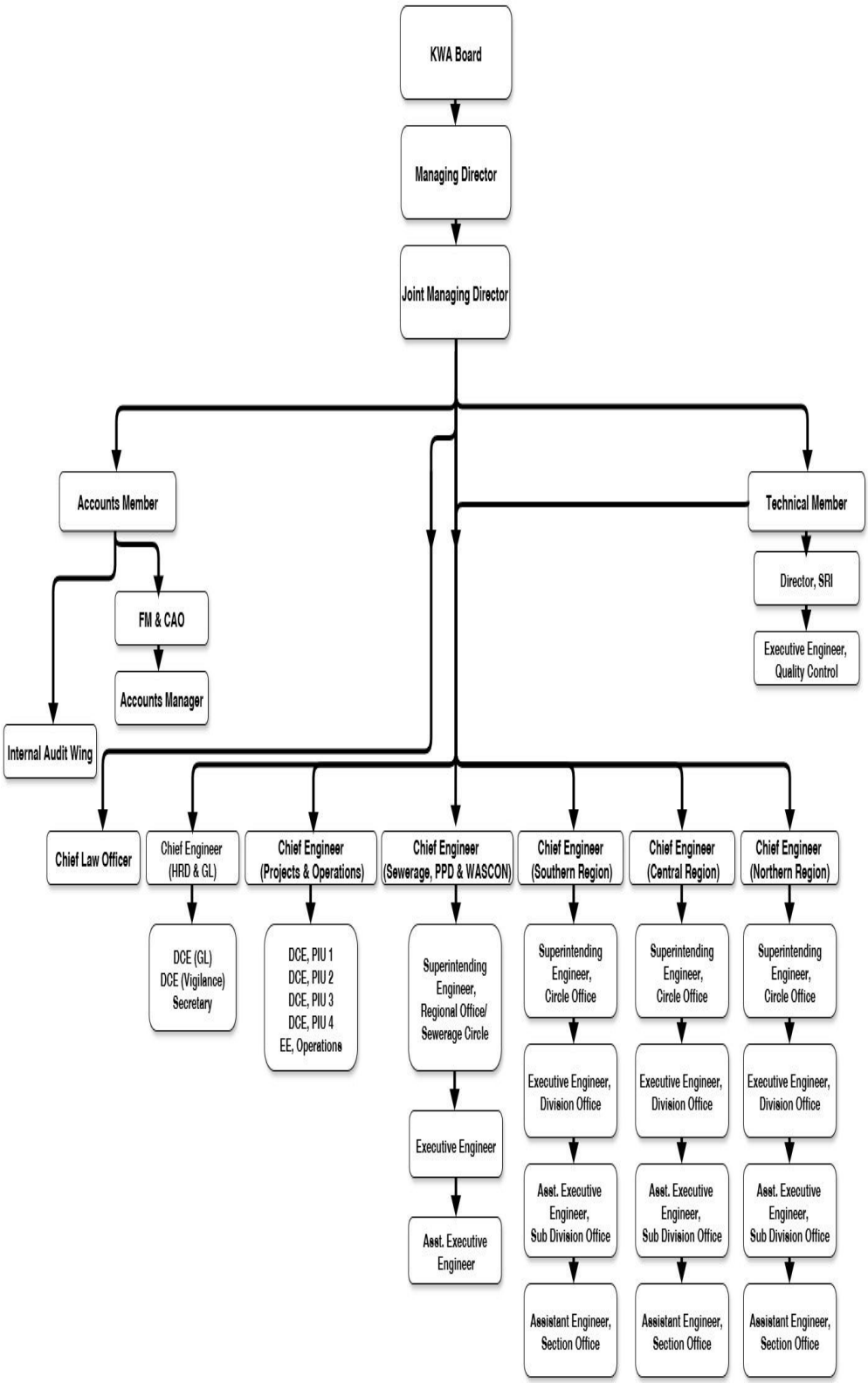
Vision

To provide quality water supply and waste water services in an environmentally friendly and sustainable manner.

Mission

To transform ourselves into a customer friendly organization providing services at the doorstep. To achieve 100% Functional Household Tap Connections and to achieve 100% networked sewerage all over Kerala.

Organizational structure



The Headquarters of the Kerala Water Authority is located at Thiruvananthapuram. The three Regional Offices at Thiruvananthapuram, Kochi, and Kozhikode are headed by Chief Engineers. In addition, there are three other Chief Engineers with designated functional responsibilities: the Chief Engineer (HRD & GL), entrusted with Human Resources Development and general administrative matters; the Chief Engineer (P&O), entrusted with the management of Projects and Operations; and the Chief Engineer (Sewerage, PPD & WASCON), entrusted with matters relating to sewerage facilities, investigation, planning and design, and consultancy services. The Finance Manager and Chief Accounts Officer is responsible for the overall management of funds, accounting, and related financial matters.

Under each region, Circle Offices are headed by Superintending Engineers, Division Offices by Executive Engineers, Sub Division Offices by Assistant Executive Engineers, and Section Offices by Assistant Engineers. The State Referral Institute, Kochi, together with the Quality Control Divisions, is responsible for overseeing and ensuring the quality of water supplied by the Kerala Water Authority.

The activities of the Authority are handled in the following offices

Sl. No.	Offices	Head of the Office	Function
1	Head Office	Managing Director	Chief Executive of the Authority
2	Regional Offices	Chief Engineer	Region Head
3	Circle Offices	Superintending Engineer	Supervision
4	Division Offices	Executive Engineer	Execution (Operation & Maintenance/ Projects/ Quality Control/ Sewerage)
5	Sub Division Offices	Assistant Executive Engineer	-Do-
6	Section Offices	Assistant Engineer	-Do-

6.1.1 FINANCIAL OUTLAY AND QUANTIFIABLE DELIVERABLES

Under the State Plan an amount of ₹85,624.00 lakh was provided as budget outlay during 2024-25 under 22 heads including Jal Jeevan Mission.

Annexure I contains head wise details of the financial budget 2024-25 and Physical outputs.

6.1.2 **REFORM MEASURES AND PERFORMANCE**

The Kerala Water Authority serves as the primary implementing agency for water supply and sanitation projects across the state. These projects are undertaken under various funding heads, including:

1. STATE PLAN
2. KIIFB
3. AMRUT
4. JJM
5. RKI (Rebuild Kerala Initiative)
6. RIDF – NABARD
7. NWQSM
8. JNNURM
9. SMART CITY
10. External Aided (JICA/ ADB/ WB)
11. Deposit Works (LSGD/SC&ST/ DD)
12. MPLADS
13. MLA ADF
14. MLA SDF
15. NITI AYOG FUNDS

6.1.3 FINANCIAL REVIEW

Government of Kerala releases fund to Kerala Water Authority for implementation of water supply schemes throughout the State and can be mainly classified in three categories:

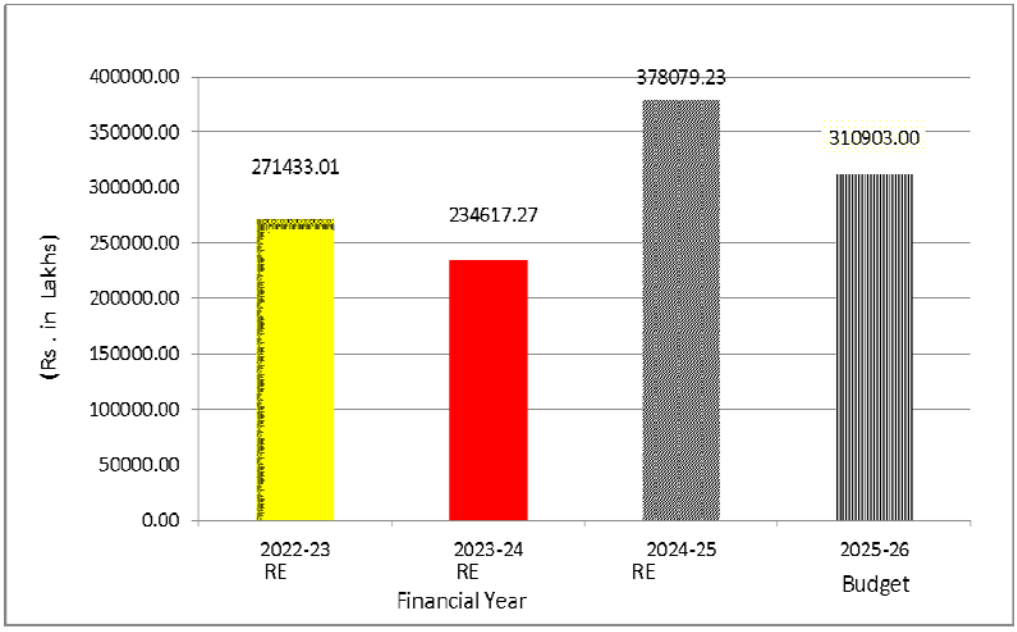
1. State Plan Schemes
2. NABARD assisted Water Supply Schemes
3. Jal Jeevan Mission / NRDWP schemes including matching central share

(A) Revised Estimate / Budget Estimate

The details of Revised Estimate for the last three years and Budget Estimate for 2025-26 are shown below.

Category	Revised Estimate(₹ in Lakhs)			Budget(₹ in Lakhs)
	2022-23	**2023-24**	**2024-25**	**2025-26**
STATE PLAN	9906.24	11901.26	7521.78	23903.00
NABARD	3897.66	2000.60	5363.93	7000.00
JJM/NRDWP	257629.11	220715.41	365193.52	280000.00
TOTAL	**271433.01**	**234617.27**	**378079.23**	**310903.00**

Graphical representation of revised estimate/ budget estimate (₹in lakh)



(B). Details of Fund Release Against Each Scheme

The details of fund released against budget provision by Government of Kerala to Kerala Water Authority for the last three years are shown below:

Category	Release (₹ in Lakhs)		
	2022-23	**2023-24**	**2024-25**
STATE PLAN	9805.22	11901.18	7521.61
NABARD	3897.66	2022.69	5564.39
JJM/NRDWP	382283.19	187833.41	242660.25
TOTAL	**395986.07**	**201757.28**	**255746.25**

(C) Details of Expenditure

The category wise details of expenditure met by Kerala Water Authority for the last three years are shown below:

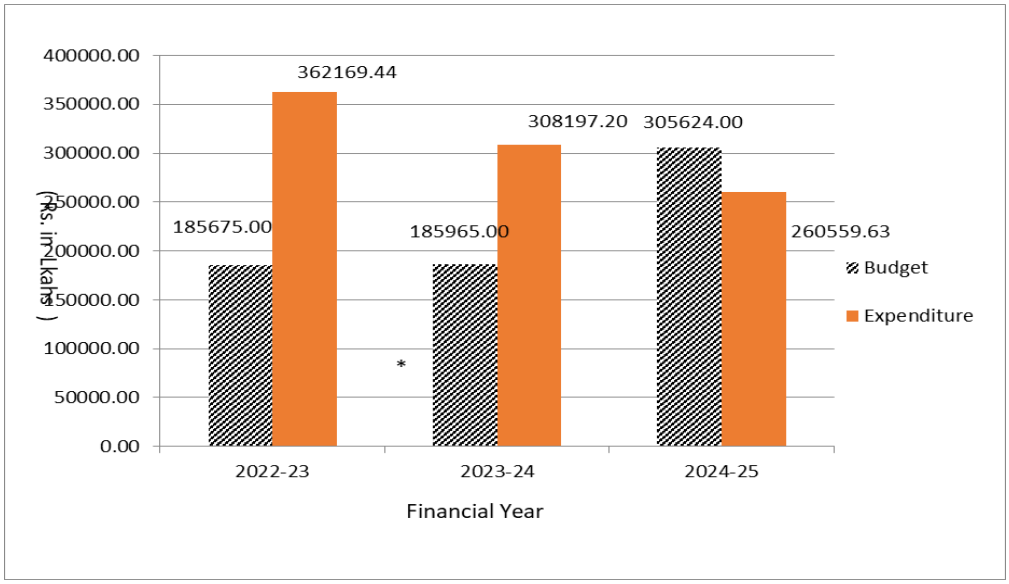
Category	Expenditure(₹ in Lakhs)		
	2022-23	**2023-24**	**2024-25**
STATE PLAN	9809.57	11898.58	7521.61
NABARD	3999.35	4904.62	4922.96
JJM/NRDWP	348360.52	291394.00	248115.06
TOTAL	**362169.44**	**308197.20**	**260559.63**

(D) Comparison between Budget and Expenditure

The comparison between the budget and actual expenditure met by KWA for the last three years is given below:

Category	Expenditure(₹ in Lakhs)					
	2022-23		**2023-24**		**2024-25**	
	Budget	**Expenditure**	**Budget**	**Expenditure**	**Budget**	**Expenditure**
STATE PLAN	27655.00	9809.57	27965.00	11898.58	23624.00	7521.61
NABARD	8020.00	3999.35	8000.00	4904.62	7000.00	4922.96
JJM/NRDWP	150000.00	348360.52	150000.00	291394.00	275000.00	248115.06
TOTAL	**185675.00**	**362169.44**	**185965.00**	**308197.20**	**305624.00**	**260559.63**

Graphical representation of comparison between budget and expenditure (₹ in lakh)

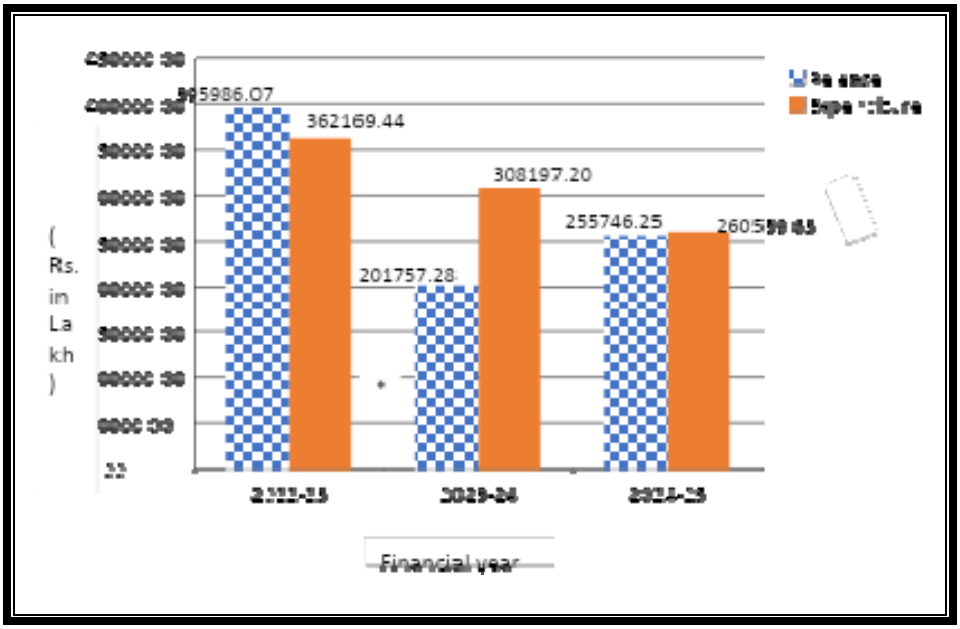


(E) Comparison among Budget Release and Expenditure

The details of budget release and actual expenditure met by KWA is shown below.

Category	Expenditure(₹ in Lakhs)					
	2022-23		2023-24		2024-25	
	Release	Expenditure	Release	Expenditure	Release	Expenditure
State Plan	9805.22	9809.57	11901.18	11898.58	7521.61	7521.61
Nabard	3897.66	3999.35	2022.69	4904.62	5564.39	4922.96
Jjm/Nrdwp	382283.19	348360.52	187833.41	291394.00	242660.25	248115.06
Total	**395986.07**	**362169.44**	**201757.28**	**308197.20**	**255746.25**	**260559.63**

Graphical representation of comparison among budget release and expenditure



(F) Comparison among Budget Estimate, Release and Expenditure

The statement of budget estimate, release and actual expenditure met by KWA is shown below.

Category	Expenditure(₹ in Lakhs)								
	2022-23			2023-24			2024-25		
	Budget	Release	Expenditure	Budget	Release	Expenditure	Budget	Release	Expenditure
State plan	27655.00	9805.22	9809.57	27965.00	11901.18	11898.58	23624.00	7521.61	7521.61
Nabard	8020.00	3897.66	3999.35	8000.00	2022.69	4904.62	7000.00	5564.39	4922.96
Jjm/ nrdwp	150000.00	382283.19	348360.52	150000.00	187833.41	291394.00	275000.00	242660.25	248115.06
Total	185675.00	395986.07	362169.44	185965.00	201757.28	308197.20	305624.00	255746.25	260559.63

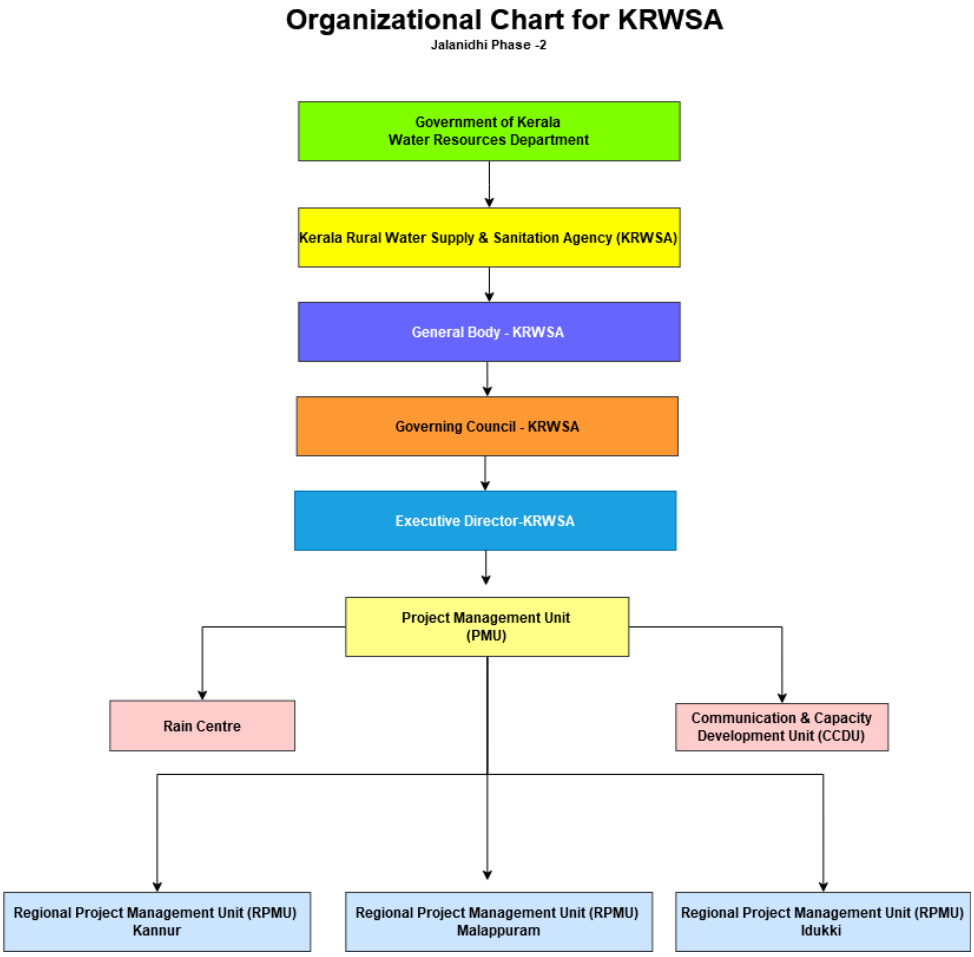
6.2 JALANIDHI (Kerala Rural Water Supply and Sanitation Agency)

Government of Kerala was a signatory State on the "Cochin Declaration on Drinking Water Sector" that brought in reforms in rural water supply sector in the Country in 1999, which advocates three key principles, i.e. changing the role of Government from provider to facilitator, increasing the role and participation of rural communities in the planning and management of their own water supply facilities, increasing cost recovery form user and management of operation and maintenance by users. Subsequent to this, Government of Kerala has created an autonomous institution "Kerala Rural Water Supply and Sanitation Agency (KRWSA)"- as a special purpose vehicle to implement the World Bank aided community managed demand driven water supply and sanitation project named as Jalanidhi project.

KRWSA was registered on 17-11-1999 under Travancore Cochin Literary, Scientific and Charitable Societies Registration Act 1955 (Act XII of 1955). KRWSA has successfully implemented two phases of Jalanidhi project, i.e. Jalanidhi Phase-1 during 2000-2008 & Phase-2 during 2012-2019. Grama panchayats have a pivotal role in implementing community based water supply projects under Jalanidhi. KRWSA has also established a wide network of NGOs in mobilizing communities towards implementing the participatory, community driven water supply & sanitation facilities owned and managed by them. This model of scheme implementation under JALANIDHI has demonstrated successfully an equitable, inclusive and decentralized delivery system mainly benefiting the SC, ST and BPL category of rural households in Kerala.

KRWSA is the nodal Agency of the State Government for the implementation of Rain Water Harvesting Programme. Further, KRWSA is designated as Water and Sanitation Support Organisation (WSSO) of Govt of India to coordinate drinking water related support activities in the State.

Organizational chart of KRWSA is given below:



Currently KRWSA is engaged in the implementation of the undermentioned project/programmes by utilising funds as provided in the state budget under state plan schemes.

6.2.1 Popularization of Rain Water Harvesting and GWR measures through KRWSA

KRWSA is, also, the nodal Agency of the State Government for the implementation of Rain Water Harvesting Programme in State. A separate cell – Rain Centre was functioning under KRWSA for undertaking the activities under

RWH Scheme and from 18-12-2021 onwards all activities of the cell have been merged with KRWSA and implementation activities arranged through its RPMUs.

The scheme is being implemented from the year 2012-13 onwards, mainly for providing House Hold and Government Institutional RWH units in rural areas where scarcity of water is at large. Open Well Recharge is also being carried out as part of the implementation of the scheme. It is being implemented by utilising the state plan funds allocated in the State Budget annually. The Physical Achievements made under the scheme, as on 31-03-2025, are as follows.

Setting Up of House Hold RWH Units	11,346 Nos
Setting of RWH & Open well recharge Units in selected Govt Institutions	840 Nos
Installation of Open Well Recharge System	2936 Nos.

6.2.2 Sustainability support to Community Managed Water Supply Schemes

Kerala Rural Water Supply and Sanitation Agency (KRWSA) has implemented 3710 schemes in phase-1 projects covering 112 GPs. Structurally once the schemes are commissioned, the assets created are to be handed over to the Beneficiary Groups (BGs) for Operation and Maintenance (O&M). However, later during the Performance Audit of Jalanidhi Phase-I schemes by the Accountant General; in the year 2016-17, it was observed that nearly 35% of the schemes have become partially or fully defunct. Therefore, post implementation support to the community merged schemes for the sustainability of the project is a critical one.

As such, the Government has launched a new scheme under State Plan namely - Sustainability support to Community Managed Water Supply Schemes in order to extend technical and financial support to the beneficiaries for rejuvenating the schemes and making them functional. Accordingly it is being implemented by providing necessary funds in the State Budget – under State Plan from the year 2018-19 onwards. As on 31-03-2025 a total number of 1385 partially /fully defunct water supply schemes were rehabilitated & restored and made functional.

6.2.3 Conversion of Domestic Wells into Protected and Sustainable Drinking Water Sources.

The objective of the scheme is to protect and recharge domestic wells in order to convert them as reliable sources of drinking water and to replenish dwindling ground water tables. The scheme is implemented the year from 2022-23. As on 31-03-2025, a total number of 467 domestic wells have been converted into protected and sustainable sources of drinking water.

6.2.4 Water Quality Monitoring and Surveillance and Grey Water Management.

The aim of the scheme is to set up regular monitoring and timely mitigation in the case of Water Quality issues of the community managed small water supply schemes. It has also been proposed to take up grey water management in colonies of vulnerable groups. This scheme is also to be implemented from the year 2022-23. As on 31-03-2025, a total number of 128 schemes have been completed under Water Quality Monitoring and 4 numbers of schemes under Grey Water Management.

6.2.5 Research and Development in Rural Water Technologies.

As certain habitations of the under privileged and vulnerable sections of the people are still having no access to large organized water supply schemes, it is necessary to provide them drinking water supply by using appropriate and innovative technologies and O&M models. KRWSA have tried and tested several technology options and management models in the Jalanidhi schemes. It is observed that failure of the scheme is due to the water quality issues developed in the schemes during the continued operations. It is absolutely essential to identify both the success and failure models both in technology and management for developing innovative ideas in the sector. The programme has been launched since 2022-23, for research and development in rural water technologies. As on 31-03-2025, 12 LORA units (sensor based automatic pumping system) have been installed in the community managed water supply schemes.

6.2.6 IEC, Capacity Building & Training and Jalasree Club.

The programme is envisaged Information Education and Communication (IEC) activities in water sector by building capacities of different stakeholders especially local communities, responsible and responsive leadership to own, manage, operate and maintain in village water supply systems .It is also proposed to create awareness among population, especially younger generation by

establishing Jalasree clubs in schools to inoculate the value of water at young age. This programme has also been launched during the year 2022-23. As on 31-03-2025, 21 numbers of IEC & Capacity Building activities have been carried out in connection with the implementation of various rural water supply and sanitation schemes. A total of 848 numbers of Jalasree Clubs have also been formed in Government/ aided Schools for creating awareness on the value of water among the younger generation.

6.2.7 Rejuvenation of Water Bodies for ensuring Source Sustainability of Water Supply Scheme.

Water bodies are an inherent part of the ecosystem. They have traditionally served the function of meeting water requirements of the populace for drinking, household uses like washing, agriculture, fishing, and also for religious and cultural purposes. Apart from these functions, which involve direct use of the water bodies for supporting Water Supply Schemes, they are also known to recharge groundwater, and channel water flow to prevent water logging and flooding. These water bodies and wetlands are also host to a wide variety of flora and fauna, especially birds. The need to initiate efforts to restore, conserve, manage, and maintain these valuable assets of the people's lifeline is a valuable part of the whole ecosystem that can no longer be ignored. It is never too late to realize that if the water sources/water bodies wetlands/lakes are not conserved without loss of time, the restoration costs later will not only reach phenomenal heights but will, more importantly, cause permanent ecological damage. This may lead to scarcity of potable water, cause heat islands, and affect biodiversity as a whole.

With this background, a proposal is put forth to develop and conserve the water bodies/ wetlands/ Lakes of the State in a phased manner. The proposal intends to explore the possibility of working in close partnership with all the State Line departments in the protection, conservation, and sustainable management of these water bodies. This proposal to assess the feasibility of conserving the water bodies at identified locations (identification based on per-defined parameters) in the State and taking up the conservation and rejuvenation of neglected water bodies. The Government of Kerala may consider providing funds through the viability gap funding for the implementation of the project. During the year 2024-25, KRWSA proposes to take up the rejuvenation and conservation of Sasthamcotta Lake in Kollam District.

The programme has been launched since 2024-25. As on 31-03-2025, the works of the said programme is going on.

6.2.8 Implementing Agency of JJM

KRWSA has been selected as one of the implementing agencies for the implementation of JJM program in the State by Government of Kerala. Total number of 29681 FHTCs and 8427 HTCs have been installed as on 31-03-2025 under the aegis of this agency

6.2.9 FINANCIAL OUTLAYS AND QUANTIFIABLE DELIVERABLES

6.2.9 a. Completion of Jalanihi-II Schemes under State Plan

The World Bank Aided Jalanidhi- Phase II Project has completed 2173 Water Supply Schemes and provided drinking water to 2.54 lakh households in selected 115 Grama Panchayaths. Even though the credit period of the EAP was over on 31-12-2019, the works related to some Large and Small Water Supply Schemes were spilled over to subsequent periods and the same have been carrying out by utilising the funds provided in the state budget from the financial year 2020-21 onwards and all those works have been completed by 2021-22. But bills in respect of construction were pending for settlement. An amount of Rs 125.00 lakh was provided for the year 2024-25 for the settlement of pending bills in respect of completed works. The entire amount of Rs 125.00 lakh was released during the year 2024-25 but Rs 2.99 lakh was resumed by the Government from the balance with the PSTSB as on 31-03-2025. As such a total amount of Rs 122.01 lakh was incurred as expenditure for the scheme for the year 2024-25. But the bills for a total amount of Rs 678.66 lakh were pending for payment as on 31-03-2025.

6.2.9 b. Popularization of Rain Water Harvesting and GWR measures through KRWSA

The Government of Kerala had provided an amount of Rs.1000 lakh for the year 2024-25 for this scheme. Out of this an amount of Rs 702.96 lakh was released but Rs 104.78 lakh was resumed from the PSTSB account on 31-03-2025. As such a total amount of Rs.587.68 lakh has been expended during the year from the amount released from the budget provision. Out of the 1289 RWH units structures taken up for construction, 740 RWH units were completed as on 31-03-2025 and works in respect of 549 Nos have been spilled over to 2024-25, excluding the schemes dropped for various reasons.

6.2.9 c. Sustainability support to Community Managed Water Supply Schemes

For the year Rs.3090 lakh was allocated for the scheme in the state budget and Rs.1421.39 lakh has been released during the year 2024-25. But a total amount of Rs 12.02 lakh was resumed from the PSTSB account on 31-03-2025. As such a total amount of Rs 1389.33 lakh has been expended, during the year 2024-25 from the amount released from the budget provision. Out of the 518 partially/ fully defunct schemes taken up for restoration, 121 schemes have been restored as on 31.03.2025 and works in respect of 397 schemes have been spilled over to the next financial year

6.2.9 d. Conversion of domestic wells into protected drinking water sources.

An amount of Rs 400 lakh was provided for the scheme and Rs 100.64 lakh was released during the year 2024-25. But a total amount of Rs 17.25 lakh was resumed from the PSTSB account on 31-03-2025. As such a total amount of Rs 73.68 lakh has been expended, during the year 2024-25 from the amount released from the budget provision. Out of the 489 Nos of wells taken up conversion, works in respect of 102 nos were completed as on 31.03.25 and works related to 387 nos have been spilled over to the next financial year.

6.2.9 e. Water Quality Monitoring and Surveillance and Grey Water Management

An amount of Rs 350 lakh was provided for the scheme (Rs.100 lakhs for WQMS and Rs.350 Lakh for Grey Water Management) and Rs.50 lakh for WQMS & Rs.80 lakh for Grey Water Management was released during the year 2024-25. But a total amount of Rs 27.06 lakh was resumed from the PSTSB account on 31-03-2025 under the head Grey Water Management. As such a total amount of Rs 50 lakh under WQMS and Rs.52.94 Lakh under Grey Water Management has been expended, during the year 2024-25 from the amount released from the budget provision. Out of the 42 Nos of WQMS taken up, works in respect of 4 nos were completed as on 31.03.25 and works related to 38 nos have been spilled over to the next financial year. Also out of the 13 Nos of Grey Water Management taken up, works in respect of 2 nos were completed as on 31.03.25 and works related to 11 nos have been spilled over to the next financial year.

An amount of Rs 6.00 lakh was provided for the scheme and Rs 3.00 lakh was released during the year 2024-25. Revised budget allocation of Rs.3 lakh was received on 20-03-2025. Hence no expenditure was incurred during the year and an amount of Rs 3 lakh was resumed on 31-03-2025, from the PSTSB Account. In accordance with the recommendation of the Subject Committee, a feasibility study

regarding the intervention of water security in the midland area is going on at Sasthamcotta and adjoining Grama Panchayats.

6.2.9 f. IEC, Capacity Building & Training and Jalasree Club

An amount of Rs 15.00 lakh was provided for the scheme and Rs 7.50 lakh was released during the year 2024-25. Out of this an amount of Rs 4.54 lakh was utilized and Rs 2.96 lakh was resumed from the PSTSB account on 31-03-2025. The target in the formation of 150 Nos of Jalasree clubs in schools has fully been achieved during the year 2024-25.

6.2.9 g. Rejuvenation of Water Bodies for ensuring Source Sustainability of Water Supply Scheme.

An amount of Rs 100.00 lakh was provided for the scheme and Rs 50.00 lakh was released during the year 2024-25. Revised budget allocation of Rs.50 lakh was received at the end of the FY 2024-25. Hence no expenditure was incurred during the year and an amount of Rs 50 lakh was resumed on 31-03-2025, from the PSTSB Account.

During the year 2024-25, KRWSA proposes to take up the rejuvenation and conservation of Sasthamcotta Lake Kollam District and preliminary steps of the programme are going on.

6.2.10 REFORM MEASURES AND PERFORMANCES

In Jalanidhi–I and II, there is greater integration in rural water supply at village levels. The up-front setting up of an operating institutional mechanism at the GP level will provide sustainable O&M backup support to all rural water supply schemes (not only Jalanidhi schemes) in the GP.

The schemes “Sustainability Support to Community Managed water Supply Schemes” is highly helpful to the community for synergising the strength of Community and Local Governments in order to build sustainable water supply through appropriate technology and resources. Capacity Building measures are also being carried out for the empowerment of the communities for sustainable Operation and Maintenance of drinking water supply and sanitation assets. From the year 2022-23 onward, a revolving fund is in place at Grama Panchayath level, by depositing the ‘Grama Panchayaths’ and Beneficiaries’ contributions for O&M expenses of the water supply schemes.

The programme- “Popularisation of Rain Water Harvesting and GWR Measures” is well accepted also during the year 2023-24, by the people in the State, especially those who are living in hilly, coastal and remote areas with limited access to potable water. Many of the Grama Panchayats, especially those in the hilly and coastal regions are actively implementing Rain Water Harvesting as a technology option to solve the drinking water issues of their GPs. The need and importance of the Rain Water Harvesting programme in view of the severe flood that hit the State has once again accelerated. The rate of beneficiary contribution has been changed during the year by extending exemption for the same to the BPL families.

The scheme, Conversion of Domestic Wells into protected drinking water sources, which has been started during the year 2023-24, is having prime importance as the objective of the scheme is to recharge domestic wells in order to convert as reliable sources of drinking water and to replenish dwindling ground water table. If properly protected and recharged, the dug wells can serve as a dependable source of drinking water.

One of the major issues facing the community managed water supply schemes is the absence of a mechanism for regularly testing and monitoring of the water quality concerns. Being a public water supply agency, the beneficiary groups which manage small water supply schemes need regular monitoring and timely mitigation of water quality issues. KRWSA wants to fill up the gap and started to function as a Water Quality Monitoring and Surveillance agency for all rural community managed water supply schemes, KRWSA will train operators and beneficiaries for field testing and also establish a network of water quality labs by tying up with educational institution and also set upon IT based monitoring system.

In some measures of “Grey Water Management", the agency has started the implementation of a Grey Water Treatment Unit in the tribal hostel of the Rajiv Gandhi Memorial Residential High school at Noolpuzha in Wayanad district during the year 2022-23. Subsequently one number of such schemes has also been set up, in Idukki district, for vulnerable group number of schemes in connection with the grey water management. Only one tank was being used for collecting water and no waste water treatment system was in place. The new treatment plan will help treat the waste water collected from bath rooms, kitchen sinks and other washing areas.

The scheme Research and Development in Rural Water Technologies is mainly focussed on to study the failure of the scheme is due to the water quality issues developed in the schemes during the continued operations. It is absolutely essential to identify both the success and failure models both in technology and

management for developing innovative ideas in the sector.

As part of creating awareness among the population, especially the younger generation, the agency launched a programme for formation of “Jalasree Clubs” in schools to inoculate the value of water at young age.

Water bodies are an inherent part of the ecosystem. They have traditionally served the function of meeting water requirements of the populace for drinking, household uses like washing, for agriculture, fishing and also for religious and cultural purposes. Apart from these functions, which involve direct use of the water bodies for supporting Water Supply Schemes, they are also known to recharge ground water, channelize water flow to prevent water logging and flooding. These water bodies and wet lands are also host to a wide variety of flora and fauna, especially birds. The need to initiate efforts to restore, conserve, manage and maintain these valuable assets of the people’s life line is a valuable part of the whole ecosystem that could no longer be ignored. It is never too late to realize that if the water sources / water bodies/wet lands/lakes are not conserved without loss of time, the restoration costs later will not only reach phenomenal heights, but will more importantly cause permanent ecological damage. This may lead to scarcity in potable water, cause heat islands in and affect biodiversity as a whole. With this background a proposal is put forth to develop and conserve the water bodies/wetlands/Lakes of the State in a phased manner. The proposal intends to explore the possibility to work in close partnership with all the State Line departments in protection, conservation and sustainable management of these water bodies.

Being an implementing agency of the JJM project, the agency could provide altogether 5241 Functional Household Tap Connections (FHTCs) in the rural sector all over Kerala during the year 2024-25.

6.2.11 . FINANCIAL REVIEW

The Budget Estimates/ Revised Estimates for the year 2024-25 was almost the same as that in 2023-24. Even though a total amount of Rs 5086.00 lakh was provided for the agency altogether, a total amount of Rs 2540.24 lakh was only released for implementation during the year 2024-25. The actual plan expenditure of the agency for the year 2024-25 was Rs 2280.18 lakh and the balance amount has been resumed on 31-03-2024.

The details are shown as Annexure II.

Annexure I

FORMAT OF TABLES IN CHAPTER III OF PERFORMANCE BUDGET 2024-25

IRRIGATION AND ADMINISTRATION

Rupees in Lakhs

Sl No	Name of the Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/Physical outputs	Target fixed		Target Achieved			Projected outcomes	Period of implementation	Remarks/Risk factors
			Non Plan Budget	Plan Budget(GO (Rt)No.871/2024/WRD dtd 17.11.2024- Prioritization of Plan schemes 2024-25- Restricting the plan expenditure to 50%)	Complementary Extra Budgetary Resources	Central Assistance if Any		Physical	Financial	Physical	Financial	Additional Authrization Amount by Sanctioning Finance Department			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7			8	9	10
1	Coastal zone management-XXXVIII-4711-02-103-99	The scheme envisages the construction of new sea walls in the balance portion of unprotected areas, improvements to the damaged sea walls,proctection of estaury and improvements to existing structures at estuary, construction of Groynes wherever necessary as per the site specific design by IIT/CWPRS, Implementing modern technologies like geo-textiles,polyethylene fabrics/sheets, and nourishment of foreshore with biomaterials for coastal protection	0	154 (126.85)	0	0	AS issued for 4 works for an amount of Rs. 126Lakhs from this office	100%	154 (126.85)	Total No of work -4 Ongoing works - 1 Completed work - 1 Tender stage - 2	2107.461	1953.461	By completing these works, it will be possible to reformation of vulnerable coastal areas		Budget allocation for the coastal protection work was insufficient to meet the actual requirement. (GO (Rt)No.871/2024/WRD dtd 17.11.2024- Prioritization of Plan schemes 2024-25- Restricting the plan expenditure to 50%). Actual expenditure includes projects were sanctioned in previous year.
2	Specialised Training Programme-XXXVIII-2701-80-003-99	This scheme aims to provide training on advanced technologies according to the work areas including computer training to technical officers of the department and also, to provide training to department staffs through various management institutes etc. for this purpose, provision has been made for expenditure.	0	40	0	0	32 Training programs were conducted in the financial year . 2024-25 till 31-03-2025 with the help of agencies like IMG, CWC, CWRDM, KSCSTE,ESCI, KERI Peechi to impart training in advanced technologles to the administrative and techical officers of the department	32 numbers of traning were targeted	40	32 numbers of training were Conducted	19.522	0.000	Equipped the officers to use modern technology in formulating schemes and familiarise the officers in the use of design tools		Most of the training programe in offline mode.

Sl No	Name of the Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/Physical outputs	Target fixed		Target Achieved			Projected outcomes	Period of implementation	Remarks/Risk factors
			Non Plan Budget	Plan Budget(GO (Rt)No.871/2024/WRD dtd 17.11.2024- Prioritization of Plan schemes 2024-25- Restricting the plan expenditure to 50%)	Complementary Extra Budgetary Resources	Central Assistance if Any		Physical	Financial	Physical	Financial	Additional Authrization Amount by Sanctioning Finance Department			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7			8	9	10
3	Modernisation of the Department and E-Governance-XXXVIII-2701-80-001-92	Departmental modernization and e-governance have been included in the expenditure incurred.	0	80	0	0	The implementation of the e-Office system across all offices up to the Division level has been completed and implementation in all Sub-Division and Section offices is progressing with hands on training. The successful upgrade of the official website to the Drupal 10 platform was done and launching a fully translated Malayalam version of the website is underway. Several offices were onboarded in Aadhaar-based biometric attendance systems and introduction of Face Authentication application is succeesfully deployed in our Department . These milestones were supported by the procurement and maintenance of necessary IT hardware , establishing K-FON high-speed internet connectivity across all departmental locations, and onboarding all offices to AeBAS system.	100%	80	Implemented E office in district level offices under the department and also subdivisions in seven districts. All headquarters, Circle offices and Division Offices and also subdivisions in seven districts have been onboarded to the eoffice system. An intensive drive to communicate all correspondence through e-Office is almost complete	79.008	0.000	Implementation of e Governance, in eoffice which made work environment more ease. And better and faster communication between Government interoffice and public and also these achievements made paperless documentation. Several offices were onboarded in Aadhaar based biometric attendance systems.Upgradation of the official website to the Drupal 10 platform increased security of the website.		
4	Study on coastal protection measures 2711-02-800-98	A detailed study of the coastal management sector is essential Because taking up coastal protection measures without proper study will worsen the condition of the coastal area.Therefore ,robust scientific study and site- specific design are required to overcome the issues, Along with this, the relevance and feasibility of hard and soft solutions should be formulated.	0	53 (26.5)	0	0	No sanction received under the Head till date	100%	53 (26.5)	Nil	15.595	0.000	The Kerala government has signed a MoU with NCCR, an expert institute for coastal studies in Chennai,Based on that, studies will be conducted to suggest suitable coastal protection methods, a draft report will be submitted, and the process of finalizing the report based on the comments is in progress.		Actual expenditure includes projects were sanctioned in previous year.

Sl No	Name of the Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/Physical outputs	Target fixed		Target Achieved			Projected outcomes	Period of implementation	Remarks/Risk factors
			Non Plan Budget	Plan Budget(GO (Rt)No.871/2024/WRD dtd 17.11.2024- Prioritization of Plan schemes 2024-25- Restricting the plan expenditure to 50%)	Complementary Extra Budgetary Resources	Central Assistance if Any		Physical	Financial	Physical	Financial	Additional Authrization Amount by Sanctioning Finance Department			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7			8	9	10
5	Costal Protection Works (RIDF) 2711-02-800-99	The unprotected coastal stretch should also be protected with suitable coastal defense mechanisms incorporating scientific methods which was necessitated by coastal studies performed. While proposing the coastal structures, sustainable measures such as beach nourishment, sand pumping, sand bypassing shall also be incorporated so as the "Goal 11 - sustainable cities and communities" can be achieved.	0	1500	0	0	No sanction received under the Head till date	100%	1500	Nil	0.000	0.000	The protection of vulnerable coast can be achieved by means of construction / repair works using RIDF assistance, thereby reducing coastal erosion and strengthening the coastal line.		
6	Thottappally Spillway 4701-21-800-96	To control the flood at Kuttanad area and to ensure the free flow of water into	0	500 (250)	0	0	Administrative Sanction accorded for 2 works with total estimate cost of Rs. 2.5Crores for the protection of both bank of Pampa river from U/S of Veeyapuram bridge to Melpadomin Veeyapuram panchayat.	100%	500 (250)	Total No of work -2 Ongoing work 2	109.933	0.000	Protection works to both banks of Pampa river form U/S of Veeyapuram bridge to Melpadom in Veeyapuram panchayat in Kuttanadu LAC (Rs.2.5Crores) . Both works expenditure will be expecting in the FY 2025-26		Actual expenditure includes projects were sanctioned in previous year. The expenditure of these works expected to be incurred in the current financial year 2025-26

Sl No	Name of the Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/Physical outputs	Target fixed		Target Achieved			Projected outcomes	Period of implementation	Remarks/Risk factors
			Non Plan Budget	Plan Budget(GO (Rt)No.871/2024/WRD dtd 17.11.2024- Prioritization of Plan schemes 2024-25- Restricting the plan expenditure to 50%)	Complementary Extra Budgetary Resources	Central Assistance if Any		Physical	Financial	Physical	Financial	Additional Authrization Amount by Sanctioning Finance Department			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7			8	9	10
7	NGT 2702-01-800-86	This scheme envisaged for the implementation of action plan proposed for rejuvenation and pollution abatement in 21 polluted stretches in rivers	0	200(100)	0	0	Administrative sanction was issued in the FY 2024-25for 7 works an amount of Rs.100lakhs	100%	200 (100)	Total No of work- 7 Ongoing work-3 Completed works-2 Tendering stage -2	108.541	0.000	Abatement of pollution and increase water carrying capacity		Actual expenditure includes projects were sanctioned in previous year. Expenditure for the works arrainged during 2024-25 is expected in the current financial year 2025-26
8	2702-03-101-98-02-34-3 Repairs to MI Structures	To carry out urgent repair works on the high number of non–functioning schemes under minor irrigation. Maintenance of the canals in the LI Schemes and MI structures	0	250 (200)	0	0	Administrative sanction accorded for12 works amounting Rs193lakhs	100%	250 (200)	Total No of work-12 Ongoing work- 7 Non started works - 5	288.379	38.379	By proper maintenance of checkdam and other water holding structures will ensure that the ground water table will rise and their by reduces the scarcity of water in near by area. Increase in crop output which includes paddy, grainsand vegitables.		Actual expenditure includes projects were sanctioned in previous year. The works takenup during the FY 2024-25 are progressing and they will be completed in the FY 2025-26
9	Detailed Investigation of MI structures 2702-80-005-99 00-34-30	Scheme is for the deatiled investigation of projects	0	50	0	0	Adninistrative sanction accorded for 12works an amount of Rs.43 laks	100%	50	Out of 12 works 5 works ongoing , 7 works nonstarted	50.284	0.284			

Sl No	Name of the Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/Physical outputs	Target fixed		Target Achieved			Projected outcomes	Period of implementation	Remarks/Risk factors
			Non Plan Budget	Plan Budget(GO (Rt)No.871/2024/WRD dtd 17.11.2024- Prioritization of Plan schemes 2024-25- Restricting the plan expenditure to 50%)	Complementary Extra Budgetary Resources	Central Assistance if Any		Physical	Financial	Physical	Financial	Additional Authrization Amount by Sanctioning Finance Department			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7			8	9	10
10	MI CLASS I 4702 00-101-99	Minor works lilke construction and improvements to tanks and rivulets,construction of check dams, sluice , regulators, bunds,VCB,SWB, lay out of channels and drainage structures etc that serve an area more than 50 ha up to 2000 ha	0	1600 (593)	0	0	s Department's overall scheme expenditure to 5	100%	1600 (593)	Total no of works - 7 Ongoing works - 4 Non Started work - 3	1597.713	0.000	Improvement in ground water table . Increase in Yield , Increase farmers profit and efficient use of water .These projects aims to irrigate small commanded area by diverting water from rivers and canals to implement proper drainage by constructing side walls,sluice cross bars etc		4 Works are at different stage of excecution.The expenditure of these works expected to be incurred in the current financial year 2025-26.Actual expenditure includes projects were sanctioned in previous years.
11	MI Class I Schemes under Haritha Keralam4702-00-101-66	For the conservation of water and soil number of works have been identified and prioritized in the plan with the assistance of various departments that of peoples representatives and farmers. Also,Infrastructural development of paddy fields and development of irrigation facilities are targeted	0	1710 (700)	0	0	ocation stands at ₹700 lakh. Administrative sanc	100%	1710 (700)	Total no of works - 4 Ongoing works 1 Non started works - 3	592.005	0.000	Water shead projects of 914 panchayat out of total 941 panchayat has been completed and implementing Community Microirrigation projects under Harithakeralam		Out of 2 non stareted work , One Work to be executed by KIIDC and anthor work Not executed by our dept. Actual expenditure includes projects were sanctioned in previous year. Actual expenditure includes projects were sanctioned in previous year.
12	MI CLASS I NABAR D 4702-00-101-93	Aims to Construct RCBs, SWECBs, ponds, VCBs, check dams, storage weirs, cross bars, and protection works etc.	0	4200	0	0	In the year 2023-24, three works costing to Rs. 32.49 Crores were sanctioned by the Chief Enginerr I&A These works are onoing. In the year 2024-25 three works costing to Rs. 102.44 Cr were submitted by the Chief Engineer I&A . The tender process of one work costing Rs.35.28 Crores sanctioned in the year 2024-25 is also in progress	100%	4200	Total No of work - 10 (Tranche 27 to 30) Ongoing works - 6 Nonstarted works - 3	5187.125	987.125	Increase in Agriculture area, Facilitate drinking water supply, Improve the ground water recharge, control flood, increase water storage etc.		Presently works under NABARD RIDF XXVII to XXX are in progress. And these works are at different stage of excecution.

Sl No	Name of the Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/Physical outputs	Target fixed		Target Achieved			Projected outcomes	Period of implementation	Remarks/Risk factors
			Non Plan Budget	Plan Budget(GO (Rt)No.871/2024/WRD dtd 17.11.2024- Prioritization of Plan schemes 2024-25- Restricting the plan expenditure to 50%)	Complementary Extra Budgetary Resources	Central Assistance if Any		Physical	Financial	Physical	Financial	Additional Authrization Amount by Sanctioning Finance Department			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7			8	9	10
13	MI CLASS II 4702-00-101-82	Minor Irrigation works which can serve below 50 ha come under the scheme. This envisages water availablity in rain shadow area of Palakkad,Idukki and Wayanad Districts. Also, for construction of check dams and water harvesting works	0	1600 (700)	0	0	Administrative sanction has been issued for 19 workd Amounting Rs. 699.40lakhs are received from this office and As received from Govt.are 1.Go(Rt) .740/2024/WRD ,tvm dtd, 27-09-2024 (100lakhs), 2.Go(Rt)22/2025/WRD dtd 10/01/25(75lakhs), 3.G.O.(Rt)119/2025/WRD dated 31/1/2025 (75), 4. G.O(Rt)132/2025/WRD dated 4/2/2025 (50lakhs), .GO(Rt).315/2025/WRDdtd, 29-03-2025 (100lakhs)	100%	1600 (700)	Total No of work- 24 Ongoing work- 23 Non started works-1	1482.353	0.000	Increase in Agriculture area, Facilitate drinking water supply, Improve the ground water recharge, control flood, increase water storage etc.		Actual expenditure includes projects were sanctioned in previous year. The works taken up during the Financial Year 2024-25 are progressing and they will be completed in the Financial Year 2025- 26.
14	MI Class II Schemes under Haritha Keralam4702-00-101-65	This scheme is envisaged to provide funding for all class-II work included in Watershed Plans prepared under Haritha Keralam	0	650 (425)	0	0	Administrative sanction accorded for 8 works amounting Rs.423.6lakhs	100%	650 (425)	Total No of work- 8 Ongoing work- 5 Non started works-3	921.308	271.308	Increase in Agriculture area, Facilitate drinking water supply, Improve the ground water recharge, control flood, increase water storage etc.		Actual expenditure includes projects were sanctioned in previous year. The works taken up during the Financial Year 2024-25 are progressing and they will be completed in the Financial Year 2025- 26
15	Lift Irrigation 4702-00-101-97	Works involving lifting of water by mechanical means with a command area not less than 40 hectares come under this category	0	1500 (200)	0	0	Administrative sanction accorded for two works amounting Rs. 194 lakhs	100%	1500 (200)	Total No of Works - 2 Non started works -2	628.842	0.000	Rehabilitation of defunct lift irrigation projects in the state is being implemented under the plan scheme. 2 new LI Projects are sanctioned in March 2025		Actual expenditure includes projects were sanctioned in previous year. These works will be completed in the Financial Year 2025- 26

Sl No	Name of the Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/Physical outputs	Target fixed		Target Achieved			Projected outcomes	Period of implementation	Remarks/Risk factors
			Non Plan Budget	Plan Budget(GO (Rt)No.871/2024/WRD dtd 17.11.2024- Prioritization of Plan schemes 2024-25- Restricting the plan expenditure to 50%)	Complementary Extra Budgetary Resources	Central Assistance if Any		Physical	Financial	Physical	Financial	Additional Authrization Amount by Sanctioning Finance Department			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7			8	9	10
16	Rehabilitation of LI Scheme 4702-00-101-73	The main works to be carried out under the scheme are repairs/replacement of pumps,electrical installation,repairs to pump houses ,pipe system and all the maintenance of fixtures for upkeeping of LI Scheme	0	200 (164.74)	0	0	Administrative sanction accored for ten works amounting Rs. 113.92 lakhs from this office As per G.O.(Rt)898/2024/WRD Dated,25/11/2024 Rs.50lakhs received from Govt.	100%	200 (164.74)	Total No of works- 10 works ongoing- 3 completed work -1 Nonstarted work- 6	519.534	319.534	The renovation & repair of defunct Lift Irrigation schemes will increase the efficiency of Lift irrigation appurtinances and will also stabilize the existing ayacut		The works taken up during the Financial Year 2024-25 three works are progressing and they will be completed in the Financial Year 2025-26.Actual expenditure includes projects were sanctioned in previous year.
17	MI PROJECTS IN CAUVERY BASIN 4702-00-101-77	To utilise a portion of water (21TMC) allocated by cauvery water dispute tribunal to kabani and pambar basin of Kerala and also store water in kabani river for facing acute drought situations in rainshadow areas	0	260 (189)	0	0	Administrative sanction accorded for seven works amounting Rs.189.45 lakhs	100%	260 (189)	Total No of work - 7 Ongoing works - 4 Non Started works - 3	399.048	139.048	By implementation of scheme will improve the ground water recharge, drinking water supply and provide irrigation facilities in Wayanad and Idukki Districts		Actual expenditure includes projects were sanctioned in previous year. .The works taken up during the Financial Year 2024-25, Four works are progressing and they will be completed in the Financial Year 2025- 26

Sl No	Name of the Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/Physical outputs	Target fixed		Target Achieved			Projected outcomes	Period of implementation	Remarks/Risk factors
			Non Plan Budget	Plan Budget(GO (Rt)No.871/2024/WRD dtd 17.11.2024- Prioritization of Plan schemes 2024-25- Restricting the plan expenditure to 50%)	Complementary Extra Budgetary Resources	Central Assistance if Any		Physical	Financial	Physical	Financial	Additional Authrization Amount by Sanctioning Finance Department			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7			8	9	10
18	Bhavani Basin check Dams in Attappadi - 4702-00-101-71	Minor Irrigation projects such as check dams and LIS are taken up under Bhavani basin for utilising water alloted (6TMC) to Bhavani basin by Cauvery water dispute tribunal.	0	180 (113.3)	0	0	Administrative sanction accorded for one work amounting Rs.99.90 lakhs	100%	180 (113.3)	one project has been implemented	228.991	48.991	Once the project implented ,it willl create an ayacut of about 235Ha.The project envisaged to enhance the ground water recharge,drinking water supply and irrigation facilities in Agali Panchayat in Palakkadu district, an under developed tribal area.		Actual expenditure includes projects were sanctioned in previous year. Expenditure for the works arrainged during 2024-25 is expected in the current financial year 2025-26
19	Renovation of Tanks &Ponds Schemes under Haritha Keralam 4702-00-101-63	Scheme envisages to undertake renovation and revamping of major existing public/ community ponds in the State	0	750 (446.6)	0	0	Administrative sanction accorded for 15 works amounting Rs. 446.2 lakhs As per . GO(RTNO).461/2024/WRD ,TVM dtd , 19-06-2024 as received froM Govt an amount of Rs.200 lakhs	100%	750 (446.6)	Total No of works - 16 Completed work - 1 Ongoing works -6 Nonstarted works- 9	830.512	80.512	Ponds are the main source of Irrigation in several parts of the state. The revival, conservation and upgradation of these traditional water sources will help to attain self sufficiency in food security, augmentation of food conservation and upgradation of local water sources, better water management etc		Expenditure for the works arrainged during 2024-25 is expected in the current financial year 2025-26.Actual expenditure includes projects were sanctioned in previous year.

Sl No	Name of the Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/Physical outputs	Target fixed		Target Achieved			Projected outcomes	Period of implementation	Remarks/Risk factors
			Non Plan Budget	Plan Budget(GO (Rt)No.871/2024/WRD dtd 17.11.2024- Prioritization of Plan schemes 2024-25- Restricting the plan expenditure to 50%)	Complementary Extra Budgetary Resources	Central Assistance if Any		Physical	Financial	Physical	Financial	Additional Authrization Amount by Sanctioning Finance Department			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7			8	9	10
20	Pradhan Manthri Krishi Sinchayee Yojana 4702-00-101-68	To achieve convergence of investments in irrigation at the field level by coordination of different schemes related to irrigation, agriculture, soil conservation, ground water development and rural develpment.	0	250	0	0	Based on the new guidelines approved in January 2022 for implementing projects under the Pradhan Mantri Krishi Sinchayee Yojana - Har Khet Ko Pani (PMKSY-HKKP), subordinate offices were directed to submit project proposals.Following this directive, the Pathanamthitta Divisional Office submitted Detailed Project Reports (DPRs) for four projects, estimated at ₹14.07 crore, to the State Technical Advisory Committee (STAC) meeting on April 17, 2024, where they received approval. Subsequently, these four DPRs were presented at the State Level Sanctioning Committee (SLSC) meeting held on September 12, 2024.The Director of Beach Erosion further instructed that the project sites must be completely free of encroachments, and the site was demarcated well.	100%	250	y free from encroach	0.000	0.000	To create new/additional ayacut, Renovate the existing water bodies , Increase agricultural production.		No sanction received under the Head till date
	TOTAL	.....	0	Total Plan Amount Rs 15727 After Plan cut Amount Rs 10354.99 Lakhs	0	0			Total Plan Amount Rs 15727 After Plan cut Amount Rs 10354.99 Lakhs		15166.154	3838.642			

ANNEXURE II

Trends in Expenditure viz-a-viz Budget Estimates/Revised Estimates in recent years

I&A Rupees in lakh

No.	Scheme/Programme	Major Head	Budget Allocation				Revised Estimate			Actual Expenditure		
			2022-23	2023-24	2024-25	2025-26	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Medium Irrigation-Plan	2701	120	120	120	390	85	52	120	84.87	114.81	98.53
2	Flood Control and Drainage-Capital Outlay - Plan	4711	1654	1654	154	154	4682	1654	126.85	4680.73	3524.91	2107.461
4	Major Head Flood Control	2711	53	53	1553	1553	57	53	1526.5	36.77	47.44	15.595
5	Medium Irrigation-Capital Outlay-Plan	4701	500	500	500	500	500	500	250	0	0	109.933
6	Minor Irrigation-Plan	2702	500	500	500	500	900.00	789	350	897.25	599.63	447.204
7	Minor Irrigation-Capital Outlay - Plan	4702	14140	14140	12900	15418	17,499.00	18140	7981.64	17287.7	18418	12387.431
		Total	**16967**	**16967**	**15727**	**18515**	**23,723.00**	**21,188.00**	**10,354.99**	**22987.32**	**22704.79**	**15166.154**

Annexure I

FORMAT OF TABLES IN CHAPTER III OF PERFORMANCE BUDGET 2024- 25

Project I

(Rupees In Lakhs)

Sl.No.	Name of Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/Physical output	Target Fixed		Target Achieved		Projected out comes	Period of implementation	Remarks/Risk factors
			Non plan Budget	Plan Budget LAKHS	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
1	Banasurasagar irrgation project at wayanad district	The project is orginally proposed for an ayacut of 2800Ha. As per the recommendation of planning board, the partial commissioning of project is proposed for an ayacut of 840 Ha in revised proposal	0	2500 out of 2000lakhs under RIDF-NABARD scheme	0	0	nil	nil	nil	nil	983.20	completion of on going works of previous year only	one year	Budget provision of 2000 lakhs is under RIDF-NABARD.Balance poration was cut for All works are being replanned as 50% reduction in plan fund proposal as per plan prioritization scheme. Vide GO (P) No. 76/2024/Fin dtd.31/08/2024.RIDF proposal submitted but was not santioned by Govt.Hence no work was imple mented during 2024-25
2	Chittur puzha project Palakkad	Stabulization of 20440 Ha Ayacut area of Chitturpuzha	300.00	1200 (RIDF)	0	0	Nil	Nil	Nil	Nil	422.02	completon of privious work	1 year	Works proposedunder RIDF was not sanctioned by Govt
3	CADA field chanels	Modernisation of CADA Field channel	0	1110.00	0	0	Rectification & Renovation of field chanels	66 works	1100	31	981.36	31works completed	1 year	Remaining works are under various stages of completion.
4	Karapuzha Irrigation Project Division, Kalpetta	To irrigate ayacut area of 5221 Ha. through canal system	0	3200 out of 2700 lakhs under RIDF-NABARD scheme	0	0	completion of 14 works for Improvement water distribution through canals to achive.Action to achive revised target of 2538Ha irrigation	14 works	14	4	1169.74	4works completed	1 year	1.Slow Progress in Land Acquisition 2.lack of sufficient fund 3.Rehabilitation and resettlement issue 4.Court cases related to remuneration issues during land acquisition.RIDF proposal submitted but was not santioned by Govt.
5	Kuttiyadi irrigation project,Kozhikode	Improvement of Canal	288	500	0	0	Completion of 25 works for Improvement of Canal	25 works	500	24	793.54	22 works completed	1 year	Nil

Sl.No.	Name of Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/Physical output	Target Fixed		Target Achieved		Projected out comes	Period of implementation	Remarks/Risk factors
			Non plan Budget	Plan Budget LAKHS	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
6	Pazhassi Irrigation Project,Kannur	Introduction of re-commissioning project by the end of december 2025	55	1500out of 1300lakhs under RIDF-NABARD scheme	0	0	Improvement of water disribution & Re-commissioning project	6 works	200	work in progress	1209.22	Nil	2 year	works in progress.Recommissioning may be made by end of the december 2025
7	Kanhirappuzha Irrigation Project,Palkkad	Works relating to Kanhirappuzha Irrigation Projects Canal and others hydrolic structures	150	1000(RIDF)	0	0	Works for smooth water distribution & improve (efficience of canal and strengthening related structures)	Nil	Nil	nNil	128	completion of on going works of previous year only	Nil	RIDF proposal submitted but was not santioned by Govt
8	Attappady Irrigation Project,Plalakkad	AIP Construction of protection wall and providing safety measures to Goolikkadavu Chittur road	0.01	50	0	0	Nil	2 work	50	Nil	3.16	Nil	Nil	All works are being replanned as 50% reduction in plan fund proposal as per plan prioritization scheme. Vide GO (P) No. 76/2024/Fin dtd.31/08/2024.
9	Chamravattom Project,Malapuram	Routine maintenance		250	0	0	Maintenance of RCB	4 work	250	0	461.55	Nil	1 year	work in progress
10	Cheramagalam ,palakkad	Improvement of Canal	30	250	0	0	Nil	6 works	250	Nil	109.23	Nil	1 year	work in progress
11	MoolatharaRBC,Palakkad	Routine maintenance	16	100	0	0	Land acquisition	Nil	Nil	Nil	Nil	Nil	Nil	Fund already transferred for Phase I.No proposal received for current year for phase II
	Total		839.01	10460					2364	59	6261.02			

Annexure II

Trends In Expenditure vis-à-vis Budget Estimates/Revised Estimates/Actual Expenditure in recent years of PLAN schemes

Project I

Rupees in lakh

Sl.No	Scheme/Programme	Major Head	Budget Estimate				Revised Estimates			Actual Expenditure		
			2022-23	2023-24	2024-25	2025-26	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
1	2	3	4	5	6	7	10	9	10	11	12	13
1	Banasura sagar project	4700	1200	1800	500	0	800	1500	700	543.37	1414.48	983.2
2	Banasura sagar project NABARD-RIDF	4700	0	0	2000	2000	0	0	0	0	0	0
3	Chittur puzha project	4700	0	0	0	0	100	90	180	93.45	86.08	150.92
4	Chittur puzha project NABARD RIDF	4700	1200	1200	1200	1200	1200	1200	1200	117.95	86.08	422.02
5	Karapuzha Project Division	4701	1700	2000	500	0	1800	1800	650	1612.91	881.91	1195.56
6	Karapuzha Project Division NABARD-RIDF	4701	0	0	2700	2700	0	0	2700	0	0	0
7	Renovation of KyIP	4700	300	500	500	500	300	500	500	269.38	499.98	793.54
8	Pazhassi Project	4700	1000	1000	200	0	800	800	1250	671.51	859.65	1209.22
9	Pazhassi Project NABARD RIDF	4700	0	0	1300	1300	0	0	1300	0	0	0
10	CADA	4701	800	800	1110	1410	800	800	1200	665.91	1230.11	981.36
11	Cheramangalam	4701	250	250	250	250	200	220	150	202.38	215.24	109.23
12	Attappady Irrigation Project	4701	50	50	50	50	100	50	40	72.02	44.89	3.16
13	Kanhirappuzha Irrigation Project	4700	0	0	0	100	100	100	120	15.68	0	0
14	Kanhirappuzha Irrigation Project NABARD RIDF	4700	1000	1000	1000	1000	0	0	1000	0	0	128.6
15	Chamravattom RCB	4701	250	250	250	250	950	700	520	947.29	625.31	461.55
16	Moolathara RCB	4700	400	400	100	100	600	400	150	528.62	0	0
Total			8150	9250	11660	10860	7750	8160	11660	5740.47	5943.73	6438.36

FORMAT OF TABLES IN CHAPTER III OF PERFORMANCE BUDGET 2024-25

ANNEXURE – 1

Project II

(Rupees in Lakhs)

Sl No	Name of Scheme	Objectiv es	Outlay 2024-25				Quantifiable Deliverables/Physical output	Target fixed		Target Achieved		Projected Outcomes	Period of implementation	Remarks/ Risk factors
			Non Plan Budget	Plan Budget	Co plem entar y Extra Budg etary Reso urces	Ce nt ral Ass is ta n c e if a n y		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
1	MUVATTUPUZHA VALLEY IRRIGATION PROJECT.													
a	AIBP			0				0	0	0	0			
b	90 Distributors			40.01				20	40.01	10	10.779	Annual Maintenance of Peruva distributory, urgent maintenace of Edayar distributory . Annual maintennance of Kurumalloor distributory, Engaging labour for water distribution in Ettumanoor branch canal work. Annual maintenance of Ramamangalam MD, Marady branch canal RBMC canal, Palakkuzha LI schemes etc. done.		
c	91 Branches			6.55				2	6.545	0	0			
d	92 canals			26.67				6	26.76	2	3.39	Annual maintenance of LBMC at Ch. 25624 to 37100, cleared bamboo plants along the sides of canal bund road at Ch. 0m - 2000m. Bill under processing.		
e	93 Buildings			3.98				3	3.98	1	0	Urgent maintenance work for MVIP staff quarters at Mudavoor have been done. Bill under processing.		

Sl No	Name of Scheme	Objectiv es	Outlay 2024-25				Quantifiable Delivera bles/Physical output	Target fixed		Target Achieved		Projected Outcomes	Period of imple mentat ion	Remarks/ Risk factors
			Non Plan Budget	Plan Budget	Co plem entar y Extra Budg etary Reso urces	Ce nt ral Ass is ta n c e if a n y		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
f	97 Dam			1.14				1	1.14	0	0			
g	98 Reservoir			8.40				2	8.4	1	0	Work for upkeeping Muttom colany has been done. Bill under processing.		
h	4701- Priority works			0.00				0	0	0	0			
2	PAMBAR BASIN PROJECTS													
a	Pambar basin Projects- Reconstructionof Pattissery Dam and Canal System under Chengalar Scheme and appurtenant works H/A 4701-25-800-97)	As per final verdict of Cauvery Water dispute Tribunal, Kerala has been allocated a share of 3TMC water for Pambar Basin.Th e share of chengala r scheme is 0.8TMC from which 0.075TM C water can be utilized by reconstru cting Pattisser y dam	-	1400	Nil	Nil	Civil work	100%	1400	80.40%	598.19	Envisaged to irrigate an area of 240Ha	2024-25	As per the revised Administrative Order (GO(Rt) No.731/2024/WRD) dated 27.09.2024, an amount of Rs.60,34,57,817 has been sanctioned, out of which Rs.33,25,51,848 has been spent on civil, mechanical and instrumentation works. Pattissery Dam's civil work is 80.2% complete, mechanical work is 45%c complete, and instrumentation work is 48% complete, with electrical works till to be arranged. Civil work TOC extended up to 30.09.2025.

Sl No	Name of Scheme	Objectiv es	Outlay 2024-25				Quantifiable Delivera bles/Physical output	Target fixed		Target Achieved		Projected Outcomes	Period of imple mentat ion	Remarks/ Risk factors
			Non Plan Budget	Plan Budget	Co plem entar y Extra Budg etary Reso urces	Ce nt ral Ass is ta n c e if a n y		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
b	Pambar basin Projects-construction of Lowerchatta Munnar Dam in Thalayar Scheme.(H/A 4701-25-800-86)	As per final verdict of Cauvery Water dispute Tribunal, Kerala has been allocated a share of 3TMC water for Pambar Basin. The share of Thalayar scheme is 0.78 TMC from which 0.75TM C water can be utilized by construct ing Lower chatta Munnar Dam	0	50	0	0	NA	NA	50		11.415	Envisaged to irrigate an area of 1056.89Ha	2024-25	DPR under preparation based on DSR 2021

Sl No	Name of Scheme	Objectiv es	Outlay 2024-25				Quantifiable Delivera bles/Physical output	Target fixed		Target Achieved		Projected Outcomes	Period of imple mentat ion	Remarks/ Risk factors
			Non Plan Budget	Plan Budget	Co plem entar y Extra Budg etary Reso urces	Ce nt ral Ass is ta n c e if a n y		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
3	IDAMALAYAR IRRIGATION PROJECT	Idamalay ar Irrigation Project is a diversion scheme to the right side of Bhoothat hankettu barrage in Periyar river for utilising water of Periyar river for irrigating 14394 hecters of ayacut coming in Periyar and Chalakud y basins. This project was commenc ed in 1981. The main canal of length 32.278 kms and 14.863 The link canal is from Ch. 0 to 7.5 km intended for linking the IIP main canalwith Left Bank Canal of Chalakud y River Diversion Scheme in order to augment water availabilit y in the canal system of CRDS. The link canal from ch 0 to 2035m has been complete d.	Nil	244.66	Nil	Ni l	Complete d railway crossing works at Ch. 13818.5 of LLC and construct ion of flesh escape for tail end discharge at Ch. 14623 of LLC complete d. Achieved 100% of completio n of LLC. Fund utilized for the rectificati on and maintenance of canals and reconstru ction works of office building and quarters	8393Ha	244.66	4376 Ha.	467.24	Irrigated 8393 Ha ayacut area	1.The commissioning of IIP in 2024-25 was declared in the budget speech of 2022-23 by the Hon'ble Finance Minister, Kerala. For achieving this target, the revised Detailed Project Report (DPR) for link canal has been submitted to the Government on 20/06/2022. The project cost is 127 crores as per revised DPR with cost benefit ratio of 1.687. The Government have declared to complete and commission IIP in the year 2025 for which link canal is required to be completed on war footing . 2. The State Planning Board members reviewed the project report and conducted site inspection on 08/09/2023. They had given direction to adopt piped irrigation system in lieu of open canal to reduce project implementation period so as tocomplete the works to facilitate early commissioning and to materialize the benefits early.	
4	Wadakkanchery		76	Nil	NIl	Ni l	8 works	100%	76	2 works compl eted	1.26			
5	Chimmoni Scheme Maintenance		75	NIl	Nil	Ni l	10 works	100%	75	Nil	Nil			
6	Cheerakuzhy Scheme Maintenance		85	Nil	Nil	Ni l	21 works	100%	85	19 works compl eted	26.29			

Sl No	Name of Scheme	Objectiv es	Outlay 2024-25				Quantifiable Delivera bles/Physical output	Target fixed		Target Achieved		Projected Outcomes	Period of imple mentat ion	Remarks/ Risk factors
			Non Plan Budget	Plan Budget	Co plem entar y Extra Budg etary Reso urces	Ce nt ral Ass is ta n c e if a n y		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
7	Maintenance & Repair OR other irrigation works		291.30	Nil	Nil	Ni l	66 works	100%	291.30	20 works compl eted	149.86			
8	4701-80-800-76-02-00-PV Priority works			1 work(12221. 18)			1 works	100%	1221.18	Nil	Nil			
9	Kallada Irrigation Project	Bilding action Plan Maintena nce	450				Increase the drinking water facilities and agricultur al purpose	100%	100 %	80 %	62 %			
			80				Maintenance of Buildings							
10	Neyyar Irrigation Project													

Trends in Expenditure vis-a-vis Budget Estimates /Revised Estimate/Actual Expenditure in recent years

PLAN Schemes

Annexure-II

Project II Rupees in Lakh

Sl. No.	Scheme/ Programme	Major Head	Budget Estimates				Revised Estimates			Actual Expenditure		
			2022-23	2023-24	2024-25	2025-26	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
1	2	3	4	5	6	7	8	9	10	11	12	13
II	MVIP	4700-22-800-WORKS										
a		87 AIBP	0	0	0	0	63.14	0	0	74.56	56.78	0
b		90 Distributory	118.45	42.67	39.66	92.5	430	361	21.68	482.37	277.99	109.05
c		91 Branches	17.18	7.03	6.55	48.63	128.13	73.78	3.275	110.09	81.89	11.92
d		92 Canals	35.60	11.65	14.76	25.64	400	101.16	7.38	377.104	87.6	30.61
e		93 Buildings	7.17	3.19	3.98	301.81	56.42	12.59	1.49	59.69	20.54	12
f		97 Dam	2.05	0.91	1.14	5.21	33.26	177.55	1.14	29.4	150	11
g		98 Reservoir	15.30	6.80	8.5	3	18.76	28.82	8.5	31.4	11	23.16

Sl. No.	Scheme/ Programme	Major Head	Budget Estimates				Revised Estimates			Actual Expenditure		
			2022-23	2023-24	2024-25	2025-26	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
1	2	3	4	5	6	7	8	9	10	11	12	13
h		84 CADA	20	400	300	0	132.36	300	176.3	110.3	108.7	0
III	Pambar basin Projects											
1	Pambar basin Projects-Reconstruction of Pattissery Dam and Canal system under Chengalar Scheme and appurtenant works	4701-25-800-97	1400	1400	1400	1700				725.24196	126.80878	598.18085
2	Pambar basin Projects - construction of LowerchattaMunnar Dam in Thalayar Scheme.	4701-25-800-86	50	50	50	50				13.03569	9.35353	11.41562
3	Pambar basin Projects-construction of weir & Forebay Tank at ThalachoorKadavu	4701—25-800-85-01-PV (works)	0	0	1000	832				0	0	0

Sl. No.	Scheme/ Programme	Major Head	Budget Estimates				Revised Estimates			Actual Expenditure		
			2022-23	2023-24	2024-25	2025-26	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
1	2	3	4	5	6	7	8	9	10	11	12	13
4	MRVP-Construction of Mini Dam with Regulator cum bridge across Meenachil river at Arunapuram in Pala Municipality	4700-21-800-97	0	300	300	300				8.30898	0	0
IV	Idamalayar Irrigation Project	4700-20-800-92-PV-Canals	1027.58	489.32	244.66	0	883.72	636.39	420	975.001	631.903	467.238
		4700-20-800-97-PV - Dams & Appurtanents	99.75	47.5	23.75	0	4.99	87.11	10	67.48	83.41	0
	Total		2793.08	2759.07	3393.00	3358.79	2150.78	1778.40	649.77	3063.98	1645.98	1274.57

Annexure - 1

FORMAT OF TABLES IN CHAPTER III OF PERFORMANCE BUDGET 2024-25

IDRB

Rupees in Lakhs

Sl. No.	Name of Scheme/ Programme	Objective	Outlay 2024-25				Quantifiable / Deliverable / Physical outputs	Target fixed		Target Achieved		Projected outcomes	Period of implementation	Remarks/Risk factor
			4											
			4(i)	4(ii)	4(iii)	4(iv)								
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Modernisation of hydrology information system	modernizing of the existing Hydro-Meterological stations for collecting data in time for developing warning systems for extreme events like flood and drought. procurement of hydro-meterological equipments and renovation of data centers, and annual maintenance of Kerala WRIS website are planned under this scheme.	Nil	110	Nil	Nil	FS issued for Rs.109.41.Total expenditure including pending bill is Rs.79.09	35	110.00	28	88.14	Maintanance works of FCS,Procurement of Meteorological Equipments for FCS , Establishing Benchmarks of gauges ,Maintenance of Kannavam River Gauge Station,Reconstruction of Punnapuzha Cableway,Fencing work for Ambttampotty rain gauge station , Civil work for cable way at Manali river gauge station ,Construction of a new rain gauge station at Koottayi ,Maintenance of Level-1 Lab at Perumkadavila,Scale fixing at various river bridges etc completed		
2	Modernisation of Design Wing	Institutional strengthening of IDRB,KERI & Subordinate offices viz Quality control wings,Coastal Engineering Field Studies	Nil	200	Nil	Nil	FS issued for Rs.144.58 lakhs.Total expenditure including pending bill is Rs.101.33 lakhs	88	200	27	101.33	Modernization of IDRB and subordinate offices which includes IT equipments physical infrastructure up gradation, purchase of modern equipment for material testing labs of KERI and Quality control wing	1 year	Out of 88 Nos of works, 63 works are awarded. No bids received for 17 works, fund request submitted for10 works and 1 work under Deptl. execution.

Sl. No.	Name of Scheme/ Programme	Objective	Outlay 2024-25				Quantifiable / Deliverable / Physical outputs	Target fixed		Target Achieved		Projected outcomes	Period of implementation	Remarks/Risk factor
			4											
			4(i)	4(ii)	4(iii)	4(iv)								
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
3	Dam safety Organisation & Dam Safety Measures	Inspection of dams,technical visits, expenditure of training programs,conducting seminars	NIL	5	Nil	Nil	Total expenditure during the FY was Rs 2.48 lakhs		5	49.60%	2.48	Expenses related to trainings, capacity building		
4	Mullaperiyar Project- Dam and appurtenant works	This scheme intends to the Environmental Impact Assessment(EIA) study of Proposed new dam at Mullaperiyar and other works related to Mullaperiyar Dam.	Nil	50	Nil	Nil	Total expenditure during the FY was Rs 5,230/- only	Nil	50	Nil	5230	Completion of EIA study of New Mullaperiyar Dam		Bill submitted for Rs 12.40 lakhs. Also due to plan prioritization, 35 lakhs was surrendered to Govt.
5	Investigation of Irrigation Schemes	Main objective of the Scheme is the Investigation Works of various projects/schemes coming under Irrigation department.	Nil	234	Nil	Nil	F.S issued during the FY 2024-25 for Rs 115.7 lakhs. Total expenditure during the FY was Rs 215 lakhs	25	117	21	215	Investigation works for irrigation structures all over Kerala.		Due to plan prioritization,Budget allocation was limited to 50%(ie, 117 lakhs)
6	Dam Safety Organisation & Dam Safety Measures	Rectification of urgent emergency work of Dams	NIL	495	Nil	Nil	F.S issued during the FY 2024-25 for Rs 335 lakhs. Total expenditure during the FY was Rs 132 lakhs	80%	268	22.96%	132.00	Urgent maintenace works of the dams under WRD and also works arranged for the compliance of SDSO recommendation		

Sl. No.	Name of Scheme/ Programme	Objective	Outlay 2024-25				Quantifiable / Deliverable / Physical outputs	Target fixed		Target Achieved		Projected outcomes	Period of implementation	Remarks/Risk factor
			4											
			4(i)	4(ii)	4(iii)	4(iv)								
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
7	Dam Rehabilitation and Improvement Project (DRIP PHASE II)	DRIP Phase II- Rehabilitation and Improvement of basic facilities of 15 Dam projects	NIL	3000	-	NIL	Total expenditure is 605Lakhs.	-	3,000	-	605.00	DRIP PH II (2021-2027) Completed Works 1.Construction of DSHQ,PMG-Electrification of Block I 2.Construction of DSHQ,PMG- AC work of Block I 3.DRIP Phase II-PIP Investigation estimate for construction of new vehicular bridge at downstream of maniyar barrage for connecting existing roads on either side of the river for restricting entry of public and vehicles through Barrage top roads Ongoing Works 1.Stabilization of Kuttiyadi Dam 2.Replacement of 5nos Barrage shutters,2nos of river sluice shutter,chain hoist and overhauling of hoist mechanism etc of maniyar barrage 3.DRIP -Phase II Rehabilitation & Improvements of Basic facilities of Kanhirapuzha Dam 4. DRIP II- Parappar Dam, Thenmala(Mechanical) 5.Standardization of maniyar barrage-Renewal of Electrical installation and DG set-General Electrical work 6.Supply ,Installation,Testing and Commissioning of Instrumentation,Software Monitoring of dam along with required accessories and data collection for five years,comprehensive operation and maintenance with warranty of Instrumentation for 16 dams under Irrigation Department		As 3 works were terminated and due to slow progress of ongoing works, the expenditure remained low.Necessary measures have been initiated to rearrange the balance work and address the site-related challenges.

Sl. No.	Name of Scheme/ Programme	Objective	Outlay 2024-25				Quantifiable / Deliverable / Physical outputs	Target fixed		Target Achieved		Projected outcomes	Period of implementation	Remarks/Risk factor
			4											
			4(i)	4(ii)	4(iii)	4(iv)								
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
8	Flood Early Warning System	Installation of Real Time Data Acquisition System (RTDAS) in river basins of Kerala	Nil	100	Nil	Nil								The proposal was submitted to the Government for Administrative Sanction (AS) in the financial year 2024–25 and was approved on 29.03.2025. Therefore, execution could not be carried out during that year
9	Formation of River Basin Organisation	Physical Survey and collecting the Field Data for coastal erosion studies.	Nil	100	Nil	Nil	FS issued for Rs.53.27 lakhs.Total expenditure including pending bill is Rs.137.54 lakhs	10	100	0	137.54	To have a holistic approach for the Rejuvenation of River basin, impact of sea erosion needs to be assessed. To analyse this data collection of coastal area and its connected activities across Kerala coast are usually done this scheme.proposed under this scheme.	1 year	These 10 works are completed on 06/2025

Sl. No.	Name of Scheme/ Programme	Objective	Outlay 2024-25				Quantifiable / Deliverable / Physical outputs	Target fixed		Target Achieved		Projected outcomes	Period of implementation	Remarks/Risk factor
			4											
			4(i)	4(ii)	4(iii)	4(iv)								
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
10	Development of Kerala Engineering Research Institute - Stage II	Upgradation of KERI and Research activities	Nil	110	Nil	Nil	FS issued for Rs.92.45 lakhs.Total expenditure including pending bill is Rs.87.55 lakhs	26	110	26	87.55	Improvement of the infrastructure of the KERI, Peechi.	1 year	FS issued for an amount of Rs. 73.67 for 26 works. Q bill amount Rs. 18.77915. Hence 92.45 lakhs.
11	Post Facto Evaluation Studies	Post facto evaluation study of seven irrigation projects in Palakkad district and peechi irrigation project in Thrissur district.	Nil	26	Nil	Nil	Administrative Sanction is issued for an Amount of 69.96 lakhs during 2022-23 and this study is in the final stage.	6	26	5	25.032	Study of Techno Economic Efficiency , Flow measurement study , Questionnaire survey are completed . performance indicators and Service delivery indicators calculated.The benefits that were acured to the ayacut area in terms of productivity and enterprise are studied.		Administrative sanction is issued for an Amount of Rs 69.96 lakhs during 2022-23. Out of this, an amount of Rs 20.988 lakhs is incured as expenditure during 2023-24 and 25.032 lakhs is on 2024-25.
	Total			**4430**	**0**	**0**		**191**	**3986**	**108**	**6,624.07**			

ANNEXURE – II

Trends in Expenditure viz-a-viz Budget Estimates / Revised Estimates / Actual Expenditure in recent years

PLAN SCHEMES

IDRB

(Rupees in Lakhs)

No.	Scheme/Programme	Major Head	Budget Estimates				Revised Estimate			Actual Expenditure		
			2022-23	2023-2024	2024-2025	2025-26	2022-2023	2023-24	2024-2025	2022-23	2023-24	2024-25
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Modernisation of Hydrology Information System	2701-80-005-92	100	110	110	110	100	110	110	45.85	63.75	59.91
2	Modernisation of Design Wing	2701-80-005-93	200	200	200	200	200	200	200	89.38	184.63	101.32
3	Investigation and Design	2701-80-005-97	0.13				0.13			0.06		
4	Dam safety Organisation & Dam Safety Measures	2701-80-800-92	10	10	5	5	10	10	5	3.14	5.12	2.48
5	Mullaperiyar Project- Dam and appurtenant works	4700-29-800-97	50	50	50	50	50	50	50	16.05	33.63	0.05
6	Investigation of Irrigation Schemes	4700-80-005-99	220	220	234	234	220	220	234	149.00	105.67	215

No.	Scheme/Programme	Major Head	Budget Estimates				Revised Estimate			Actual Expenditure		
			2022-23	2023-2024	2024-2025	2025-26	2022-2023	2023-24	2024-2025	2022-23	2023-24	2024-25
1	2	3	4	5	6	7	8	9	10	11	12	13
7	Dam safety Organisation & Dam Safety Measures	4700-80-800-97	240	240	495	495	240	240	495	236.67	214.43	132
8	Flood Early Warning System	4701-80-800-69	50	90	100	100	50	90	100	50.00	-	-
9	Dam Rehabilitation and Improvement Project Phase II	4701-80-800-70	3,000	4,000	3,000	3,000	3,000	4,000	3,000	1,972.27	1,132.53	605.08
10	Bench marking of Irrigation Systems	4701-80-800-81	40				40			-		
11	Formation of River Basin Organisation	4701-80-800-88	100	100	100	500	100	100	100	61.89	71.3	137.54
12	Post Facto Evaluation Studies	4701-80-800-96	70	50	26	26	70	50	26	-	20.98	25.03
13	Development of KERI-Stage -II	4701-80-800-99	100	110	110	110	100	110	110	65.28	76.88	87.55
	Total		**4,180**	**5,180**	**4,430**	**4,830**	**4,180**	**5,180**	**4,430**	**2,689.59**	**1,908.92**	**1,365.96**

Annexure - 1

FORMAT OF TABLES IN CHAPTER III OF PERFORMANCE BUDGET 2024-25

Ground Water Department

Rupees in Lakhs

Sl.No.	Name of Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/ Physical outputs	Target fixed		Target achieved		Projected outcomes	Period of impementation	Remarks /Risk Factor
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
1	Groundwater investigation and development/ Head of Account: 2702-02-005-99.	This scheme aims for the realistic evaluation of the groundwater resources and for providing infrastructural facilities like drilling machines and other materials. This scheme envisages groundwater resource estimation, groundwater investigation, Construction of groundwater abstraction structures (borewell, tube well, Filtter point well) , Preparation of hydrogeological reports, Pumpinjg test analysis, groundwater data collection, data analysis and water quality studies will also be carried out under this scheme. Procurement of machineries and accessories and materials for well construction, maintenance of machineries and vehicles, procurement of new vehicles, procurement of IT hardware and softwares,Geophysical equipment and other field related instruments, chemicals for labs has also been included under this scheme	Nil	2200	Nil	Nil	All the programmes are demand based. The physical outputs proposed are Groundwater Investigation , Drilling Well logging Pumping test Analysis, Bore well developing Water sample analysis, Repair and Maintenance of existing machinery, purchase of stores and routine works of the Department	Groundwater Investigation - 8500 Drilling -...1500.. Well logging - 200 Pumping test Analysis - ...550 Bore well developing - ..450. Water sample analysis – 5500, All the physical targets are demand based however the targets are fixed based on the last five years average.	2200	Groundwater Investigation – 7508 Drilling - 1582 Well logging Geological- 99 Geophysical- 51 Pumping test Analysis - 562 Bore well developing - 438 Water sample analysis – 5203	1130.78	The groundwater investigation and drilling help the public to obtain suitable location for constructing bore wells/tube wells and other schemes for acheiving safe drinking water source.	As per the right to service act, 2012 the time frame fixed for groundwater investigation is 1 year.	
2	Scheme for Control & Regulation of Ground Water 2702-02-005-93	The objective of the scheme is to enforce Kerala groundwater (control & regulation) Act 2002 to avoid ground water depletion and to ensure equitable distribution of resources to all section of the society. Issuance of permits, granting NOCs to drinking water bottling plants and other industries which use groundwater as raw material conducting mass awareness programmes on groundwater conservation & management are also included under this scheme.	Nil	50	Nil	Nil	Proper enforcement of ground water act to avoide ground water depletion to ensure equitable distribution of resources to all section of the society.	Mass awareness programmes- 37 nos	50	permits issued for new well construction in notified areas- 261 nos conversion permits issued-133 nos Mass awareness programmes conducted – 37 nos, Rig Registration - 48 Nos. Rig Registration - Renewal - 23 Nos State Ground Water Authority Meeting - 2 Nos	18.01	Implementing ground water (control and regulation) act 2002	Through out the year	

Sl.No.	Name of Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/ Physical outputs	Target fixed		Target achieved		Projected outcomes	Period of impementation	Remarks /Risk Factor
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
3	Scheme for Training Personnal (2702-02-005-92)	The objectives of the scheme is to provide training to the Scientific, Technical and Administrative personnel in the department and exposed them in advancements in Groundwater investigation, Water well construction, Groundwater conservation and Management Practices, Modern computer application studies etc	Nil	10	Nil	Nil	To get scientific and administrative skills to Departmental Personnel	Demand based	10	1) Training of LAB personal for enhancing the performance of laboratores at SPM NIWAS, Kolkata- 07/05/2023 to 10/05/2024 – 1 officer attend 2) QGIS & QSWAT training at 06/08/2024 to 09/08/2024 at CWRDM kunnamangalam, kozhikode – 2 officers attend 3) Training on Geographical Information System at Kerala State Land Use Board – 06/08/2024 to 09/08/2024 – 1 officer attend 4) Training on Store purchase Manual at RDPC Building – 11/09/2024 - 28 officers attend 5) Training for uncertainity of measurement for physical and chemical parameters in water at RDPC buillding – 7 offciers attend 6) Training on Remote Sensing & GIS Application in Water Resources Managment at CWRDM Kunnamangalam Kozhikode from 02/12/2024 to 06/12/2024 – 1 officer attend 7) Training on Advanced GIS at ICFOSS from 11/12/2024 to 14/12/2024 – 3 officers attend 8) Introduction to Environment impact Assessment at CWRDM Kunnamangalam Kozhikode from 08/1/2025 to 10/01/2025 – 1 officer attend 9) Meso-Scale Landslide susceptibility Mapping at GSI TVM from 06/03/2025 to 09/03/2025 – 16 officers attend	4.73	The trainings helped the officers to expose various modern techniques in groundwater investigation and administration	Within the financial year.	

Sl.No.	Name of Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/ Physical outputs	Target fixed		Target achieved		Projected outcomes	Period of impementation	Remarks /Risk Factor
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
4	Scheme for Ground water conservation and recharge(4702-00-102-97)	This scheme envisages construction of artificial recharge structures to augment ground water level, borewell recharge. Small check dams are constructing under this scheme.	Nil	600	Nil	Nil	constuction of different groundwater conservation structures to achieve sustainable groundwater development	construction of 150 nos of different groundwater conservation structures to achieve sustainable groundwater development	600	Open well recharge/ Recharge pit scheme- 91 nos. Dug well recharge scheme - 25 nos small check dam -4 nos renovation of pond – 2.	488.85	The recharge structures helps to recharge the ground water and there by enhance water table of the area through which aquifer sustainabilty can be attained		
5	GroundWater Based Drinking Water Scheme 2702-02-103-99	The main objective of the scheme is to provide drinking water supply to non-covered/partially covered habitats, 25 to 100 families benefited by one scheme. Renovation of Miniwater Supply Schemes, Hand Pump Repair under this scheme.	Nil	158	Nil	Nil	To provide drinking water in non covered or partially covered habitats	Renovation of MWSS- 30 Nos, Hand Pump repair – 100 nos Renovation of existing ground water conservation structures – 15	158	Renovation of MWSS - 27 nos Hand Pump repair - 85nos, renovation of Aartificial Recharge Scheme: 3	79	Benefited to 2192 families and 17 institutions in the State State	Within the financial year.	

Sl.No.	Name of Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/ Physical outputs	Target fixed		Target achieved		Projected outcomes	Period of impementation	Remarks /Risk Factor
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
6	GroundWater Based Drinking Water Scheme 4702-00-102-94	The main objective of the scheme is to provide drinking water supply to non-covered/partially covered habitats, 25 to 100 families benefited by one scheme. Mini water supply schemes are implemented where the bore wells drilled have high yield whereas hand pump schemes are implemented in low yielding wells. The schemes are then handed over to the beneficiary committee who in turn operates and maintain the schemes.	Nil	400	Nil	Nil	To provide drinking water in non covered or partially covered habitats	Implementation of MWSS-60 nos, borewell / Tube well construction-90 nos etc..HP Scheme 15 nos	400	Mini water supply schemes - 30 nos, Bore well construction - 21 nos.	200		Within the financial year.	
7	Moderization of three lab and NABL Accreditation (4702-00-102-92)	Kerala Groundwater Department has 3 no of laboratories for Water Quality Testing at Thiruvananthapuram, Ernakulam, and Kozhikode. Each water quality testing laboratory have to be capability of analyzing a full range of physical, chemical, and microbiological parameters specific to drinking water quality. The competence of a lab to perform specific tests is approved once audited. Hence a new scheme has allotted to Department to conduct necessary upgradation works and to enhance other modern infrastructure facilities creating a good physio and chemical environment satisfies to get NABL criteria to the labs which will in turn helps to provide standardized water quality reports to public.	NIL	100	NIL	NIL	NABL Accreditation.		100	NABL accreditation to Lab, Ernakulam	25.2			
		Total		3518					3518		1946.57			

Annexure – II PLAN

Trends in Expenditure vis-à-vis Budget Estimates / Revised Estimate / Actual Expenditure in recent years of PLAN Schemes

Ground Water Department

Rupees in Lakhs

Sl.No	Scheme / Programme	Major Head	Budget estimate				Revised Estimate			Actual Expenditure		
			2022-23	2023-24	2024-25	2025-26	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Ground Water Investigation & Development	2702	1500	1500	2200	2200	1500	1500	2200	835.73	1303.59	1130.78
2	Scheme for Groundwater Control & Regulation	2702	50	50	50	150	50	50	125	32.54	35.47	18.01
3	Scheme for training of personnel	2702	10	10	10	10	10	10	10	0.99	3.16	4.72
4	Groundwater Based Drinking Water Scheme	2702	158	158	158	158	158	158	158	130.51	69.89	79.00
5	Scheme for Groundwataer Conservation and Recharge	4702	900	900	600	600	900	900	600	540.82	272.76	488.85
6	Groundwater Based Drinking Water Scheme	4702	400	400	400	400	400	400	400	396.56	325.17	200.00
7	Modernization of three labs and nabl accreditation	4702			100	100			100			25.19
	Total	24914	3018	3018	3518	3618	3018	3018	3593	1937.15	2010.04	1946.55

ANNEXURE-I

FORMAT OF TABLES IN CHAPTER III OF PERFORMANCE BUDGET 2024-25

KUTTANAD PACKAGE

Rupees in Lakh

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantitiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected outcomes	Period of Implementation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
1	Kuttanad Package--FMP-Modernisation of Thanneermukkom Bund to manage salinity and minimize ecological decay.Construction of central Portion of Thanneermukkom Barrage(3rd stage works) in Alappuzha District.	Mitigation of Flood, Prevention of salt water intrusion.					428m long two lane Bridge and Regulator with 28nos of shutters.	100%	–	97%	–	Protection of 7076.37 Ha area of paddy field from flood damages in Alappuzha district. Preventing 39400 Ha area in Alappuzha & Kottayam districts from salt water intrusion.	2013 to continuing	

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantitiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected outcomes	Period of Implementation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
2	PLAN SCHEME 2019-20 to 2024-25	Mitigation of Flood,providing infrastructural facilities to padashekarams.					Length of bund formation	108,025	2850	20214.2	2524	Improving agricultural facilities in various Padasekharams	2023-25 to continuing	Out of 318 total works, 182 works were fully completed, (2019 - 2025) Expenditure incurred includes that of spill over works
							Desilting Length in (m)	7,335		710				
							Repair / New Motor Shed / motor thara /Pothumada(combined) (nos)	39		11				

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantitiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected outcomes	Period of Implementation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
							Ramp (nos)	28		1				
							New Retaining walls Length in (m)	71,975		8195.56				
							Repair/Raising for retaining wall in (m)	4,164		1194.95				
							Box Culverts/ sluices/ pipe culverts (nos)	17		2				
							Parakuzhy (nos)	3		0				
							Leading Channel (nos)	6		0				

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantitiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected outcomes	Period of Implementation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
							Pipe Crossing (nos)	1		0				
							Tractor Crossing	25		0				
							Delivery Pipe Replacement in(m)	1		1				
							Length of pile and slab	222		0				
							coir geo textile	36096		4023				
							construction of pump hiuse	1		0				
							construction of VCB	5		0				

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantitiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected outcomes	Period of Implementation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
							Thoompu (nos)	29		21				
3	Budgets speech 2022-23 &2023-2024 (4711-01-103-84-01-00-00-P-V Flood Management Programme In Kuttanad,works)	Mitigation of flood in the padasekharams and protecting outer bund of padasekharams for the improvement of agriulraual production					Length of bund formation	35791.91		9916.3				
							Length of reatining wall	32745.15		10792.34				
							Repair/Raising for retaining wall in (m)	1275.6		1275.6				
							Length of pile & slab	0		0				
							Coir Geotextile	0		0				

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantitiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected outcomes	Period of Implementation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
							Thoompu	1		1				
							Ramp	1		1				
							culvert (box and pipe)	3 box culvert		1 box culvert				
							Motorshed (including maintenance)	10		2				
							Motorthara	11		1				
							Desilting Length in (m)	14766		5206				
							construction of VCB	1		0				

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantitiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected outcomes	Period of Implementation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
							Pothumada	6		3				
4	NABARD 4711-01-103-83-01-00-V (FLOOD MANAGEMENT PROGRAMME IN KUTTANAD)	Mitigation of flood in the padasekharams and protecting outer bund of padasekharams for the improvement of agriulraual production					Length of bund formation	35,614.90		5,561.90	556			out of 11 works 7 works completed 4 works are ongoing (2020 onwards) Expenditure incurred includes that of spill over works
							Length of reatining wall	32,068.80		1325.45				
							Length of pile & slab	2424.85		1,074.85				
							Coir Geotextile	7941.65		7941.65				
							Thoompu	45		0 (achieved in previous year)				
							Ramp	8		3				
							culvert (box and pipe)	17		5				

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantitiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected outcomes	Period of Implementation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4(i)	4(ii)	4(iii)	4(iv)	5	6		7		8	9	10
							Motorshed (including maintenance)	11	–	5				
							Motorthara	7		3				
							CC wall	50		0				
							Pothumada	4		2				

ANNEXURE-II

Trends in Expenditure vis-a-vis Budget Estimates /Revised Estimate/Actual Expenditure in recent years of PLAN Schemes

Kuttanad Package

Rupees in lakh

Sl No	Scheme/ programme	Major Head	Budget Estimates				Revised Estimates			Actual Expenditure		
			2022-23	2023-24	2024-25	2025-26	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
1	2	3	4	5	6	7	8	9	10	11	12	13
1	PLAN SCHEME	Flood Mtigation, Infrastructural Development and Improvement works to padashekharams in various panchayaths in Kottayam and Alappuzha Districts. 4711-01-103-84-01-00-V (Flood Management in Kuttanad)	3300	3700	2850	5700				1766.09	1609.914	2523.987
2	Budget Speech	Flood Mtigation, Infrastructural Development and Improvement works to padashekharams in various panchayaths in Kottayam and Alappuzha Districts. 4711-01-103-84-01-00-V (Flood Management in Kuttanad)	NIL	10000	NIL	NIL						
3	NABARD	4711-01-103-83 (NABARD RIDF (XXVIII) ASSISTANCE FOR KUTTANAD)	2055.61	_	_	_	_	_	_	1025.41	1097.32	555.99
		Total	**5355.6**	**13700**	**2850**	**5700**				**2791.50**	**2707.23**	**3079.98**

Annexure - I

FORMAT OF TABLES IN CHAPTER VI OF PERFORMANCE BUDGET 2024-25

Kerala Water Authority

Rupees in Lakh

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected Outcomes	Period of Implementation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4 (i)	4 (ii)	4 (iii)	4 (iv)	5	6		7		8	9	10
1	Survey and Investigation - 2215-01-190-99(1)	To undertake investigation works and prepare detailed project reports for various water supply schemes, along with the procurement of modern survey equipment.	-	110	-55.21	-	Engineering reports based on detailed surveys have been prepared.	2	54.78	2	54.78	Engineering reports based on detailed surveys have been prepared, which will serve as a vital input for the planning and development of the water supply scheme in the concerned area.	2024-25	
2	NABARD Assisted Rural Water Supply Schemes - Rural Infrastructure Development Fund - 4215-01-102-98(1)	To provide piped water supply to rural areas of Kerala through the completion of NABARD-assisted schemes.	-	7000	-1636.07	-	Piped water supply has been provided to rural areas with NABARD assistance.	3	4922.96	3	4922.96	3 rural water supply schemes have been completed, providing improved services to approximately 3 Lakh beneficiaries.	2024-25	

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected Outcomes	Period of Implement ation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4 (i)	4 (ii)	4 (iii)	4 (iv)	5	6		7		8	9	10
3	Manufacturing Units for Bottled Water - 2215-01-190-96	To establish a bottled water plant at Thiruvananthapuram for ensuring safe and reliable drinking water supply.	-	64	-39.07	-	Good quality packaged/ bottled water has been made available to the public through KWA at a reasonable price.	1	24.92	1	24.92	All works have been successfully completed, and the Bottled Water Plant at Aruvikkara was formally handed over to KIIDC on 28.03.2020.	2024-25	
4	Construction/ Renovation of Civil Structures by KWA (erstwhile Renovation of existing civil structures owned by KWA) - 2215-01-190-92	To undertake the construction of new civil structures and the renovation of existing Kerala Water Authority assets to enhance infrastructure efficiency and service delivery.	-	300	-151.2	-	Ensure that all KWA buildings and tank sites are maintained in good condition through timely and systematic maintenance.	19	148.79	19	148.79	19 works have been completed, enhancing the infrastructure of KWA, including office buildings, guest houses, tanks, and pump houses.	2024-25	

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected Outcomes	Period of Implement ation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4 (i)	4 (ii)	4 (iii)	4 (iv)	5	6		7		8	9	10
5	Innovative Technologies and Modern Mangement Practices - 2215-01-101-97(1)	To reduce Non-Revenue Water (NRW), improve the efficiency of water supply schemes, minimize wastage of treated water, and modernize infrastructure through the installation of flowmeters, smart meters, and advanced network management solutions. The objective also includes the adoption of latest technologies in asset management, pump-house automation, and the utilization of solar energy.	-	100	-51.02	-	Reduction in Non-Revenue Water, efficiency improvement of water supply schemes, reduction in wastage of treated water, modernisation of schemes, increased revenue and increased efficiency of pump houses.	9	48.97	9	48.97	9 works have been completed, aimed at enhancing energy efficiency, reducing NRW, and installing CCTV systems to strengthen security.	2024-25	
6	Human Resource Development, Research & Development and Quality Control - 4215-01-800-91	To provide Human Resource Development and training activities within the Kerala Water Authority aimed at improving staff capabilities, implementing quality control measures, and promoting new research initiatives.	-	100	-83.71	-	Training programmes have been conducted for officers to enhance technical competency and foster socially responsible practices.	87	16.28	87	16.28	Training programmes have been successfully provided to 1,987 officials.	2024-25	

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected Outcomes	Period of Implement ation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4 (i)	4 (ii)	4 (iii)	4 (iv)	5	6		7		8	9	10
7	Sewerage Schemes of Kerala Water Authority - 4215-02-190-99	To upgrade undersized sewer lines to the required capacity, repair damaged manholes to prevent sewage overflow, and provide sewerage facilities to areas lacking any existing sewage disposal systems.	-	3500	-1928.79		Improvements and strengthening works of the existing sewerage network have been carried out to ensure sustainable and efficient service delivery. Sewerage network coverage has been expanded, thereby preventing pollution of groundwater, rivers, and other water bodies from sewage, while safeguarding the environment and protecting public health.	37	1571.20	36	1571.20	36 works have been completed, leading to significant improvements in sewerage infrastructure and contributing to the reduction of surface water pollution.	2024-25	
8	Rehabilitation/ Improvement Works of Urban Water Supply Schemes - UWSS - 4215-01-101-97	To improve water supply coverage in urban areas through the extension and replacement of worn-out pipelines, including pumping mains, gravity mains, and distribution lines, as well as the repair or replacement of pump sets and related accessories.	-	3400	-1705.95	-	Improved coverage and better water supply facilities to urban areas.	43	1694.04	15	1694.04	15 works have been completed, resulting in improved water supply to urban areas.	2024-25	

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected Outcomes	Period of Implement ation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4 (i)	4 (ii)	4 (iii)	4 (iv)	5	6		7		8	9	10
9	Rural Water Supply Schemes - 4215-01-102-97	To provide water supply to rural areas of the state by implementing new schemes and augmenting existing schemes in unserved and underserved regions, along with the completion of ongoing rural water supply projects.	-	1000	-505.77	-	Improved coverage and better water supply facilities to rural areas.	28	494.22	`15	494.22	15 works have been completed, resulting in improved water supply to rural areas.	2024-25	
10	Water Supply Scheme to Specified Institutions/ Locations - 4215-01-800-90	To ensure uninterrupted water supply to specified institutions and designated locations under this scheme.	-	500	-346.33	-	Ensure water supply to various institutions/ locations.	2	153.66	2	153.66	2 works have been completed including providing and enhancing the water supply to Govt Taluk Hospital Chittur and Central Prison & Correctional Home at Trikanapuram.	2024-25	

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected Outcomes	Period of Implement ation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4 (i)	4 (ii)	4 (iii)	4 (iv)	5	6		7		8	9	10
11	Optimisation of Production and Transmission - 4215-01-800-89	To replace or rehabilitate pipelines to ensure smooth and reliable drinking water supply, reduce Non-Revenue Water (NRW) losses, extend coverage through pipeline expansion, and rehabilitate Water Treatment Plants to bridge the gap between installed capacity and production capacity.	-	4500	-2420.15	-	Production and transmission of water supply in the various scheme areas have been optimised and enhanced.	83	2079.84	53	2079.84	53 works have been completed, including the replacement and extension of pipelines, and the installation of pumps and motors, thereby improving service delivery to water supply connections.	2024-25	
12	Kerala Water Supply Project, JICA (One time sustenance support under the State Plan) - 4215-01-800-88	To implement the JICA assisted Kerala Water Supply Project in Thiruvananthapuram, Meenad, Cherthala, Kozhikode, and Pattuvam.	-	300	-226.13	-	The balance works in distribution networks have been completed.		73.86		73.86	All works arranged under the JICA have been successfully completed.	2024-25	

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected Outcomes	Period of Implement ation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4 (i)	4 (ii)	4 (iii)	4 (iv)	5	6		7		8	9	10
13	Drinking Water - Drought Mitigation and Emergency Works - 2215-01-800-47	To undertake works aimed at ensuring uninterrupted water supply during natural calamities and other emergency situations.	-	750	-375	-	Adequate infrastructure has been established to address the challenges of uneven climate change. Immediate interventions have been carried out to manage natural calamities and emergency situations.	121	374.99	91	374.99	91 works have been completed, providing significant relief to the public in overcoming drought conditions.	2024-25	
14	Modernisation of Aruvikkara Pumping Station - 4215-01-101-96	To modernize existing water supply schemes that are currently operating using traditional methods.	-	100	105.79	-	Work Completed	1	205.79	1	205.79	Pumping efficiency of TWSS has been improved, thereby enhancing overall service delivery.	2024-25	

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected Outcomes	Period of Implementation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4 (i)	4 (ii)	4 (iii)	4 (iv)	5	6		7		8	9	10
15	E-Governance, GIS and Information Management - 2215-01-190-88	To maintain and develop the IT infrastructure of the Kerala Water Authority to enhance operational efficiency and service delivery.	-	100	-50.61	-	Procurement of tablets for Engineers, Procurement of high end desktop for GIS CELL, Procurement of high end desktop for Accounts Wing, Procurement of A3 multifunction printer for RAO office, Payment to KELTRON for AMC of DDFS.		49.38		49.38	Procurement of tablets for Engineers, Procurement of high end desktop for GIS CELL, Procurement of high end desktop for Accounts Wing, Procurement of A3 multifunction printer for RAO office, Payment of KLETRON for AMC of DDFS	2024-25	
16	Source Improvement and Water Conservation - 4215-01-800-92	To enhance storage capacity at water sources, improve the efficiency of water supply schemes, and mitigate seasonal variations in water levels.	-	200	-107.02	-	Measures have been implemented to ensure water availability at the source and to improve its sustainability.	4	92.97	2	92.97	2 works have been completed, resulting in the strengthening of source of the water supply scheme.	2024-25	

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected Outcomes	Period of Implementation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4 (i)	4 (ii)	4 (iii)	4 (iv)	5	6		7		8	9	10
17	Jal Jeevan Mission (NRDWP) - 50% State Share - 4215-01-102-92(02)	To provide 50% state share for ongoing ARWSS and ensure functional household tap connections for every rural household.	-	55000	90193.52	-	Provide Functional Household Tap Connections to every rural households.		124057.53	1.37 lakh connections	124057.5	During the financial year 2024–25, a total of 1,37,550 household connections were provided under JJM, benefiting the rural population.	2024-25	
18	Jal Jeevan Mission (NRDWP) Scheme (50 % CSS) - Central share 4215-01-102-92(01)	To provide 50% central share for ongoing ARWSS and ensure functional household tap connections for every rural household.	-	-	-	220000			124057.53		124057.5		2024-25	

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected Outcomes	Period of Implement ation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4 (i)	4 (ii)	4 (iii)	4 (iv)	5	6		7		8	9	10
19	ADB Assisted Kerala Urban Water Supply Improvement Project - KUWSIP (EAP) - 4215-01-101-94	The ADB-assisted KUWSIP aims to improve water supply in Kochi and Thiruvananthapuram Corporations by rehabilitating aging production components and distribution networks, thereby achieving 24×7 water supply, significantly reducing Non-Revenue Water (NRW), and enhancing overall operational efficiency.	-	7500	-7500	-	Provide 24x7 Water Supply in Kochi and Thiruvananthapuram Corporations.		0		0		2024-25	
20	Works for the Prevention of River Pollution and Creating Awareness for the Compliance of NGT Direction - 2215-02-106-97	To prevent sewage pollution in rivers through the establishment of Sewage Treatment Plants (STPs) at feasible locations and by conducting public awareness programs, including gatherings, posters, and print and visual media campaigns on the importance of maintaining river water quality.	-	250	-127.73	-	Works have been completed to reduce pollution in water bodies, thereby improving their environmental quality.	3	122.26	2	122.26	2 works have been completed, contributing to the reduction of pollution in water bodies.	2024-25	

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected Outcomes	Period of Implementation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4 (i)	4 (ii)	4 (iii)	4 (iv)	5	6		7		8	9	10
21	Energy Efficiency Improvement, Optimisation of Electromechanical Items, Safety Audit and Ensuring Safety in Operation of WTPs and Pump Houses - 4215-01-800-87	To improve energy efficiency within the Kerala Water Authority, thereby reducing operating costs and annual power charges, lowering overall power consumption, and enhancing workplace safety by minimizing accidents.	-	500	-325.38	-	Losses due to electrical faults and old electromechanical devices have been prevented by replacing them with new systems, and by providing capacitors, energy-efficient motors, and pumps.	26	174.62	14	174.62	14 works have been completed, enhancing the energy efficiency of the system, reducing operational losses, and facilitating the installation of new energy-efficient motors, pumps, and other electrical equipments.	2024-25	
22	Infrastructure Development and Surveilance Activities Under Quality Control Wing of KWA - 4215-01-800-86	To upgrade existing laboratories associated with major Water Treatment Plants, providing public access for testing and facilities to analyze water and sewage samples.	-	250	-145.02	-	2 works have been completed.	2	104.97	2	104.97	2 works have been completed.	2024-25	

Sl No	Name of Scheme	Objectives	Outlay 2024-25				Quantifiable Deliverables/ Physical Outputs	Target Fixed		Target Achieved		Projected Outcomes	Period of Implement ation	Remarks/ Risk Factors
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance if any		Physical	Financial	Physical	Financial			
1	2	3	4 (i)	4 (ii)	4 (iii)	4 (iv)	5	6		7		8	9	10
23	Enterprise Resource Planning - 2215-01-4-99	To implement an Enterprise Resource Planning (ERP) system in the Kerala Water Authority to enable enterprise-wide information sharing, support business planning and decision-making, enhance efficiency, and improve productivity by streamlining processes and eliminating redundant data entry.	-	100	-63.92	-	Procurement of case search software for Legal wing, AMC for DDFS software.		36.07		36.07	Procurement of case search software for Legal wing, AMC for DDFS software.	2024-25	
	TOTAL			**85624**	**72455.23**	**220000**			**260559.63**		**260559.63**			

Annexure - II of Chapter VI

Trends in Expenditure vis-a-vis Budget Estimates/ Revised Estimates/ Actual Expenditure in recent years of PLAN SCHEMES

Kerala Water Authority

Rupees in lakhs

Sl No.	Scheme/ Programme	Major Head	Budget Estimates				Revised Estimates			Actual Expenditure		
			2022-23	2023-24	2024-25	2025-26	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Survey and Investigation	2215-01-190-99-01	110.00	110.00	110.00	110.00	71.44	68.82	54.79	71.44	68.8	54.78
2	NABARD Assisted Rural Water Supply Schemes - Rural Infrastructure Development Fund	4215-01-102-98(1)	8020.00	8000.00	7000.00	7000.00	3897.66	2000.60	5363.93	3999.35	4904.62	4922.96
3	Manufacturing Units for Bottled Water	2215-01-190-96	90.00		64.00	25.00	0.00	38.19	24.93		38.19	24.92
4	Construction/ Renovation of Civil Structures by KWA (erstwhile Renovation of existing civil structures owned by KWA)	2215-01-190-92	500.00	500.00	300.00	500.00	185.54	310.94	148.80	185.53	310.57	148.79
5	Innovative Technologies and Modern Mangement Practices	2215-01-101-97-01	100.00	100.00	100.00	100.00	23.38	79.94	48.98	23.38	79.93	48.97
6	Human Resource Development, Research & Development and Quality Control	4215-01-800-91	100.00	100.00	100.00	100.00	28.12	47.59	16.29	28.12	47.58	16.28
7	Sewerage Schemes of Kerala Water Authority	4215-02-190-99	3005.00	3405.00	3500.00	3000.00	1024.88	2211.96	1571.21	928.37	2211.96	1571.2

Sl No.	Scheme/ Programme	Major Head	Budget Estimates				Revised Estimates			Actual Expenditure		
			2022-23	2023-24	2024-25	2025-26	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
1	2	3	4	5	6	7	8	9	10	11	12	13
8	Rehabilitation/ Improvement Works of Urban Water Supply Schemes - UWSS	4215-01-101-97	4500.00	4500.00	3400.00	3400.00	325.82	2663.03	1694.05	325.8	2663.02	1694.04
9	Rural Water Supply Schemes	4215-01-102-97	1000.00	1000.00	1000.00	1500.00	432.34	1438.23	494.23	432.33	1438.22	494.22
10	Water Supply Scheme to Specified Institutions/ Locations	4215-01-800-90	200.00	200.00	500.00	500.00	71.28	121.78	153.67	71.27	121.21	153.66
11	Optimisation of Production and Transmission	4215-01-800-89	5000.00	5000.00	4500.00	4700.00	1928.66	2713.86	2079.85	1928.62	2712.19	2079.84
12	Kerala Water Supply Project, JICA (One time sustenance support under the State Plan)	4215-01-800-88	500.00	500.00	300.00	300.00	163.41	858.50	73.87	163.4	858.5	73.86
13	Drinking Water - Drought Mitigation and Emergency Works	2215-01-800-47	1000.00	1000.00	750.00	750.00	627.17	648.89	375.00	627.15	648.9	374.99
14	Modernisation of Aruvikkara Pumping Station	4215-01-101-96	100.00	100.00	100.00	18.00	4.28	75.13	205.79	4.28	75.12	205.79
15	E-Governance, GIS and Information Management	2215-01-190-88	100.00	100.00	100.00	100.00	52.73	38.09	49.39	52.73	38.09	49.38
16	Source Improvement and Water Conservation	4215-01-800-92	200.00	200.00	200.00	200.00	18.41	174.00	92.98	18.4	174	92.97

Sl No.	Scheme/ Programme	Major Head	Budget Estimates				Revised Estimates			Actual Expenditure		
			2022-23	2023-24	2024-25	2025-26	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
1	2	3	4	5	6	7	8	9	10	11	12	13
17	Jala Jeevan Mission (NRDWP) - Central Share	4215-01-102-92(01)	100000.00	100000.00	220000.00	224000.00	100000.00	100000.00	220000.00	174192.88	146541	124057.53
18	Jal Jeevan Mission (NRDWP) - 50% State Share	4215-01-102-92(02)	50000.00	50000.00	55000.00	56000.00	157629.11	120715.41	145193.52	174167.64	144853	124057.53
19	ADB Assisted Kerala Urban Water Supply Improvement Project - KUWSIP (EAP)	4215-01-101-94	10000.00	10000.00	7500.00	7500.00	0.00					
20	Works for the Prevention of River Pollution and Creating Awareness for the Compliance of NGT Direction	2215-02-106-97	250.00	250.00	250.00	250.00	77.70	118.09	122.27	77.69	118.09	122.26
21	Energy Efficiency Improvement, Optimisation of Electromechanical Items, Safety Audit and Ensuring Safety in Operation of WTPs and Pump Houses	4215-01-800-87	500.00	500.00	500.00	500.00	61.43	135.35	174.62	61.42	135.35	174.62
22	Infrastructure Development and Surveilance Activities Under Quality Control Wing of KWA	4215-01-800-86	300.00	300.00		250.00	12.46	95.39	104.98	12.45	95.38	104.97
23	Enterprise Resource Planning	2215-01-004-99	100.00	100.00	100.00	100.00	4.42	63.48	36.08	4.42	63.48	36.07

Sl No.	Scheme/ Programme	Major Head	Budget Estimates				Revised Estimates			Actual Expenditure		
			2022-23	2023-24	2024-25	2025-26	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
1	2	3	4	5	6	7	8	9	10	11	12	13
24	Scheme for Special Assistance to States for capitral investment - Water Supply Projects	4215-01-800-83(01)					4792.77			4792.77		
	TOTAL		**185675.00**	**185965.00**	**305374.00**	**310903.00**	**271433.01**	**234617.27**	**378079.23**	**362169.44**	**308197.20**	**260559.63**

Annexure-I

FORMAT OF TABLES IN CHAPTER VI OF PERFORMANCE BUDGET 2024-25

KERALA RURAL WATER SUPPLY AND SANITATION AGENCY

Rupees in Lakhs

Sl. No	Name of Scheme/ Programme	Objectives	Outlay 2024-25				Quantifiable Deliverables/Physical Outputs	Target Fixed		Target Achieved		Projected outcomes	Period of Implementation	Remarks /Risk factor
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance, if any		Physical	Financial	Physical	Financial			
			4(i)	4(ii)	4(iii)	4 (iv)								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Completion of Water Supply Schemes under Jalanidhi-II Project.	Implementation of the project in 115 Grama Panchayaths	Nil	125.00	Nil	Nil	Settlement of bills in respect of completed scheme	Nil	125.00	Settlement of bills done partially	122.01	Settlement bills only	Spill over works of Jalanidhi-II schemes scheduled for completed by 2021-22. Settlement of bills was being done there after	Necessary fund is not available for complete settlement of pending bills.
2	Scaling up of Rain Water Harvesting and GWR Programme through KRWSA	To popularise the Rain Water Harvesting Activities in the State through KRWSA.	Nil	1000.00	Nil	Nil	Construction of Household RWH Structures and installation of Open Well Recharge Systems	1289 nos of House Hold RWH Structures including GWR	1000.00	Completed 740 nos of House Hold RWH units	587.68	1289 nos of House Hold RWH Structures including GWR	2024-25 (one year)	The entire amount of budget provision was not obtained

Sl. No	Name of Scheme/ Programme	Objectives	Outlay 2024-25				Quantifiable Deliverables/Physical Outputs	Target Fixed		Target Achieved		Projected outcomes	Period of Implementation	Remarks /Risk factor
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance, if any		Physical	Financial	Physical	Financial			
			4(i)	4(ii)	4(iii)	4 (iv)								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
3	Sustainability Support to Community Managed Water Supply Schemes	To extend financial and technical support for restoration /rehabilitation of partially /fully defunct water supply schemes built under Jalanidhi-I project	Nil	3090.00	Nil	Nil	Restoration and rehabilitation of partially / fully damaged small community managed water supply schemes and made functional .	Restoration of 518 Nos of defunct small water supply schemes	3090.00	Completed the restoration works of 121 Nos of small Water Supply Schemes and works were in progress in respect of 397 Nos of Schemes	1389.33	restoration/rehabilitation of 518 Nos partially /fully damaged water supply schemes	Proposed to complete before 31-03-2025	The entire amount of budget provision was not obtained
4	Conversion of Domestic Wells in to Protected Drinking Water Sources.	to protect and recharge domestic wells in order to convert as reliable sources of drinking water and to replenish dwindling ground water table	Nil	400.00	Nil	Nil	Number of recharged domestic wells in to protected drinking water sources	Conversion of 489 wells in reliable source of drinking water	400.00	Completed the conversion works of 102 Nos of wells and works were in progress in respect of 274 wells	159.05	Conversion of 489 nos of domestic wells in to protected and reliable source of drinking water.	Proposed to complete before 31-03-2025	The entire amount of budget provision was not obtained

Sl. No	Name of Scheme/ Programme	Objectives	Outlay 2024-25				Quantifiable Deliverables/Physical Outputs	Target Fixed		Target Achieved		Projected outcomes	Period of Implementation	Remarks /Risk factor
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance, if any		Physical	Financial	Physical	Financial			
			4(i)	4(ii)	4(iii)	4 (iv)								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
5	Water Quality Monitoring and Surveillance and Grey Water Management	To set up regular monitoring and timely mitigation in the case of Water Quality issues of the community managed small water supply schemes and to take up grey water management in colonies of vulnerable groups.	Nil	350.00	Nil	Nil	setting up of regular monitoring system for mitigating water quality issues and schemes for treating grey water in colonies of vulnerable groups.	setting up 42 water quality monitoring scheme (WQMS)and 13 grey water treatment schemes	350.00	completed 4 WQMS schemes and works of 38 schemes spilled over 2 Nos of grey water treatment plants have been completed and the remaining were spilled over .	27.06	setting up 42 water quality monitoring scheme (WQMS)and 13 grey water treatment schemes	Proposed to complete before 31-03-2025	The entire amount of budget provision was not obtained
6	Research and Development in Rural Water Technologies	To provide appropriate and innovative technologies and O&M models to the vulnerable groups for managing small water supply schemes. .	Nil	6.00	Nil	Nil	Creation of innovative development models for management of small water supply schemes.	feasibility study regarding the intervention of water security in the midland area is going on at satsthamcotta and adjoining GPs.	6.00	study ongoing	2.97	feasibility study regarding the intervention of water security in the midland area is going on at satsthamcotta and adjoining GPs.	Proposed to complete before 31-03-2025	The fund has been received during the last week of March-2025 and full amount of budget provision was also not obtained

Sl. No	Name of Scheme/ Programme	Objectives	Outlay 2024-25				Quantifiable Deliverables/Physical Outputs	Target Fixed		Target Achieved		Projected outcomes	Period of Implementation	Remarks /Risk factor
			Non Plan Budget	Plan Budget	Complementary Extra Budgetary Resources	Central Assistance, if any		Physical	Financial	Physical	Financial			
			4(i)	4(ii)	4(iii)	4 (iv)								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
7	IEC, Capacity Building & Training and Jalasree Club.	To carry out Information Education and Communication activities by building capacities of different stakeholders of community managed water supply schemes and also proposed to create awareness among younger generation by establishing Jalasree clubs in schools.	Nil	15.00	Nil	Nil	Formation of Jalasree Clubs at schools and conducting of different IEC activities	Setting up of 150 Nos of Jalasree clubs and other IEC & Capacity Building activities.	15.00	Formed 162 Nos of Jalasree cubs	5.40	Formation of Jalasree Clubs at schools and conducting of different IEC activities	2024-25 (one year)	The entire amount of budget provision was not obtained
8	Rejuvenation of Water Bodies for ensuring Source Sustainability of Water Supply Scheme.	To assess the feasibility of conserving the water bodies at identified locations (identification based on pre-defined parameters) in the State and taking up the conservation and rejuvenation of neglected water bodies.	Nil	100	Nil	Nil	Rejuvenation and conservation of Sasthamcotta Lake Kollam District		100		0.00		Proposed to complete before 31-03-2025	The fund has been received during the last week of March-2025 and full amount of budget provision was also not obtained
Total			0.00	5086.00	0.00	0.00		0.00	5086.00	0.00	2293.50			

Annexure-II of Chapter VI

Trends in Expenditure viz-a-viz Budget Estimates /Revised Estimates /Actual Expenditure in recent years of PLAN Schemes

Rs in Lakhs

Jalanidhi

Sl. No	Scheme/ Programme	Major Head	Budgetted Estimate				Revised estimate			Actual Expenditure		
										6		
			2022-23	2023-24	2024-25	2025-26	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Scaling up of Rain Water Harvesting and GWR Programme through KRWSA	2215	1000	1000	1000	1150	1000	1000	702.96	567.86	527.32	587.68
2	Sustainability Support in Community manged Water Supply Schemes	4215	3000	3090	3090	2961	3000	3090	1421.4	1911.30	515.77	1389.33
3	Completion of Schemes under Jalanidhi-II project	4215	125	125	125	125	125	125	125	123.37	66.15	122.01

Sl. No	Scheme/ Programme	Major Head	Budgetted Estimate				Revised estimate			Actual Expenditure		
										6		
			2022-23	2023-24	2024-25	2025-26	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
1	2	3	4	5	6	7	8	9	10	11	12	13
4	Conversion of Homestead Wells into Protected and Sustainable Drinking Water Sources	4215	400	400	400	400	400	400	100.64	35.31	159.05	73.68
5	Water Quality Monitoring and Subservience & Grey Water Management	4215	350	350	350	350	350	350	130	0	0	102.94
6	R&D in Rural Water Technologies and Management	4215	6	6	6	6	6	6	3	0	2.97	0
7	IEC , Capacity Building and Training & Jalasree club	2215	15	15	15	15	15	15	7.5	5.63	5.40	4.54

Sl. No	Scheme/ Programme	Major Head	Budgetted Estimate				Revised estimate			Actual Expenditure		
										6		
			2022-23	2023-24	2024-25	2025-26	2022-23	2023-24	2024-25	2022-23	2023-24	2024-25
1	2	3	4	5	6	7	8	9	10	11	12	13
8	Rejuvenation of Water bodies for ensuring Source Sustainability of Water Supply Schemes	4215	0	0	100	100	0	100	50	0	0	0
	Total		4896	4986	5086	5107	4896	5086	2540.5	2643.47	1276.66	2280.18

GOVERNMENT OF KERALA

PERFORMANCE BUDGET 2024-25

WATER RESOURCES DEPARTMENT

FINANCE DEPARTMENT