

**ANALYSIS OF WORKLOAD OF TEMPORARY
POSTS IN IRRIGATION DEPARTMENT
(SOUTH CIRCLE)**

**A STUDY REPORT BY PERSONNEL & ADMINISTRATIVE
REFORMS (AR3) DEPARTMENT
2016 -17**

**A STUDY REPORT
ON
WORKLOAD OF TEMPORARY POSTS IN
IRRIGATION DEPARTMENT (SOUTH CIRCLE) 2016-17**

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1. INTRODUCTION

- 1 Water Resources Department is responsible for formulating plans / programmes for the development and management of water resources in Kerala. Water, a precious natural resource to be planned, developed, conserved and managed on an integrated and environmentally sound basis, given its scarcity and growing demands. Kerala has limited surface and ground water resources. Rapid increase in population, urbanisation and climate change will make the scarcity of water more intense. Therefore, integrated and multi-sectoral approaches must be adopted for water resources management. In this context, Government of Kerala has formulated State Water Policy to govern planning and management of water resources and their equitable and optimum utilisation. Water Resource Department has taken every efforts to develop, conserve, utilise and manage this important resource in a sustainable manner. Ensuring the right of access to water for all citizens is transformed in to a reality is the prime objective of the State of Kerala towards water resources management.
- 2 Water Resources department takes the administrative level decisions of Irrigation Department. Promoting efficient irrigation practices and ensure the long term sustainability of water resources for future generation is the main motto of the Irrigation Department.

1.1. VISION

- 3 Water resources provide water for domestic, industrial and agricultural uses, contribute to keeping our environment healthy and provide opportunities for recreational use. Water resources in Kerala face many environmental challenges including land clearing, loss of riparian and wetland vegetation, erosion, sedimentation, weed invasion, increasing salinity, climate change and climate variability. To tackle these challenges, departmental activities are formulated in line with the State Water Policy and Kerala Irrigation and Water Conservation Acts Vision of the department is given hereunder:

- Water resources, being the most crucial element in developmental planning of the State, plan, develop, conserve, distribute, utilise and manage it in a sustainable and eco - friendly manner for the overall development of the State.
- Coping up with the water scarcity by the use of appropriate technologies and provide assured irrigation to facilitate sustainable agricultural production and food security.

1.2 FUNCTIONS

4 The functions of the Irrigation Department include the following:

1. Formulation of water management policies.
2. Monitoring irrigation.
3. Operation and upkeep of the irrigation systems.
4. Construction of irrigation projects that caters to the need of the people.
5. Construction and maintenance of canals and the distribution of canal waters.
6. Storage of water and construction of reservoirs.
7. Flood control and management
8. Restoration and maintenance of flood banks.
9. Ensure the irrigation potential created is fully utilised
10. Construction of revetments and spurs to prevent loss of land eroded by the river.
11. Construction of sea walls, groynes, revetments etc. for coastal protection.
12. Maintain the productivity of irrigation.
13. Establish a structure for planning, designing, installing, maintaining and managing a water efficient irrigation system in new construction or renovated projects.
14. Establish provisions for water management practices and water waste prevention for existing irrigation systems.

1.3. GENESIS OF THE STUDY

5 The Finance Department, while considering the proposal for continuance sanction to the temporary posts in Irrigation Department (South Circle), has mooted the idea of conducting a work measurement study about these temporary posts in order to find out whether these posts are absolutely deserving to accord continuance sanction and to explore the possibilities of redeployment. Accordingly, P&AR (AR3) Dept. had been assigned with the task of conducting a work study on the issue of continuance sanction to the temporary posts in Irrigation Department (South Circle). The organisation structure of the Irrigation South Circle is given below:

SI No.	Divisions		Sub Divisions		Sections	
1	Irrigation Division, Tvpm	1	Irrigation North Sub Division	1	Irrigation Section, Tvpm	
				2	Irrigation Section, Attingal	
				3	Irrigation Section, Varkala	
		2	Irrigation South Sub Division	1	Irrigation Section No. 1, Tvpm	
				2	Irrigation Section No.II, Tvpm	
		3	Channel Division, Neyyttinkara	Sub	1	Channel Section, Pallichal
					2	Channel Section, Neyyattinkara
					3	Dam Section, Neyyar Dam
					4	Channel Section, Parassala
					5	VIP Section, Nedumangadu
2	Irrigation Division, Kollam		Irrigation Division, Kollam	Sub	1	Irrigation Section, Kottiyam & Canal Office, Kollam
					2	Irrigation Section, Kollam

				3	Irrigation Section, Kottarakkara
			Irrigation Division, Chavara Sub	1	Irrigation Section, Sasthamkotta
				2	Irrigation Section, Karunagappally
				3	Irrigation Section, Chavara
			Irrigation Division, Pathanamthitta Sub	1	Irrigation Section, Thiruvalla
				2	Irrigation Section, Ranni
				3	Irrigation Section, Pathanamthitta
3	Irrigation Division, Kottayam	1	Irrigation Division, Kaduthuruthy Sub	1	Irrigation Section, Kadathuruthy
				2	Irrigation Section, Vaikom
				3	Irrigation Section, Kottayam
		2	Irrigation Division, Changanassery Sub	1	Irrigation Section, Kanjirappally
				2	Irrigation Section, Changanassery
				3	Irrigation Section, Kumily
		3	Irrigation Division, Thodupuzha Sub	1	Irrigation Section, Moolamattom
				2	Irrigation Section, Thodupuzha
				3	Irrigation Section, Munnar
4	Irrigation Division, Alappuzha	1	Irrigation Division, Alappuzha Sub	1	Irrigation Section, Thottappally
				2	Irrigation Section, Alappuzha
				3	Irrigation Section, Cherthala
		2	Irrigation Division, Mavelikkara Sub	1	Irrigation Section, Mavelikkara
				2	Irrigation Section, Kayamkulam

1.4 List of temporary posts in Irrigation Department (South Circle)

Sl. No.	Name of post	No. of posts
IRRIGATION SOUTH CIRCLE, THIRUVANANTHAPURAM		
1	Technical Assistant (AEE)	1
2.	Junior Superintendent	2
3.	U.D Clerk	3
4.	Part Time Sweeper	1
IRRIGATION DIVISION, THIRUVANANTHAPURAM		
1	Head Draftsman	1
2	Junior Superintendent	1
3	U.D Clerk	1
4	Tracer	1
5	Part Time Sweeper	1
6	Part Time Scavenger	1
IRRIGATION NORTH SUB DIVISION, THIRUVANANTHAPURAM		
1.	Head Clerk	1
2.	U. D Clerk	1
IRRIGATION SECTION, THIRUVANANTHAPURAM		
1.	Driver	1
IRRIGATION SOUTH SUB DIVISION, THIRUVANANTHAPURAM		
1.	Head Clerk	1
2.	U.D. Clerk	1
IRRIGATION SECTION No.1, THIRUVANANTHAPURAM		
1	3rd Grade Overseer	1

IRRIGATION SECTION No.2 THIRUVANANTHAPURAM		
1.	3rd Grade Overseer	1
2.	Driver	2
CHANNEL SUB DIVISION, NEYYATTINKARA		
1.	Head Clerk	1
2.	L.D Clerk	1
3.	Part Time Sweeper	1
CHANNEL SECTION, NEYYATTINKARA		
1	3rd Grade Overseer	3
2	Jeep Driver	1
3	Lascar	3
4	Worker Gr.II	1
CHANNEL SECTION, PALLICHAL		
1.	3rd Grade Overseer	3
2.	Lascar	4
3.	Part Time Sweeper	1
4.	SLR Worker	1
CHANNEL SECTION, PARASSALA		
1.	3rd Grade Overseer	3
2.	Lascar	4
3.	Part Time Sweeper	1
NIP DAM SECTION, NEYYARDAM		
1.	L.D.Clerk	1
2.	3rd Grade Overseer	3

3.	Lascar	7
4.	Line Man	1
5.	Boat Driver	1
6.	Butler	1
7.	Gate Sergeant	1
8.	Head Gardner	1
9.	Worker Grade II	12
10.	SLR Worker	18
11.	Part Time Scavenger	1
12.	Carpenter	1
13.	Blacksmith	1
14.	Spray Painter	1
VIP SECTION NEDUMANGAD		
1.	Asst. Engineer	1
2.	1st Grade Draftsman	1
3.	U.D Clerk	2
4.	U.D. Typist	1
5.	Office Attendant	1
6.	Part Time Sweeper	1
IRRIGATION DIVISION KOLLAM		
1.	Head Draftsman	1
2.	Junior Superintendent	1
3.	UD Clerk	2

IRRIGATION SUB DIVISION, KOLLAM		
1.	Head Clerk	1
2	UD Clerk	1
IRRIGATION SECTION, KOLLAM		
1.	3rd Grade Overseer	1
2.	Driver	1
IRRIGATION SECTION, KOTTIYAM		
1.	3rd Grade Overseer	1
IRRIGATION SECTION, KOTTARAKKARA		
1.	3rd Grade Overseer	1
IRRIGATION SUB DIVISION, CHAVARA		
1.	Asst. Executive Engineer	1
2.	Head Clerk	1
3.	UD Clerk	1
4.	LD Clerk	2
5.	LD Typist	1
6.	Office Attendant	2
7.	Ist Grade Draftsman	1
8.	II nd Grade Draftsman	1
9.	Jeep Driver	1
10.	Part Time Sweeper	1
IRRIGATION SECTION, CHAVARA		
1.	Asst.Engineer	1

2.	IIInd Grade Draftsman	1
3.	3rd Grade Overseer	3
4.	Lascar	1
IRRIGATION SECTION, SASTHAMCOTTA		
1.	Asst. Engineer	1
2.	2nd Grade Draftsman	1
3.	3rd Grade Overseer	3
4.	Lascar	1
5.	Part Time Sweeper	1
IRRIGATION SUB DIVISION, PATHANAMTHITTA		
1.	Asst. Executive Engineer	1
2.	Head Clerk	1
3.	UD Clerk	1
4.	LD Clerk	1
5.	LD Typist	1
6.	Office Attendant	2
7.	Driver	1
8.	Part Time Sweeper	2
IRRIGATION SECTION, RANNI		
1.	Asst Engineer	1
2.	1st Grade Draftsman	1
3.	2nd Grade Draftsman	1
4.	Lascar	1

5.	3rd Grade Overseer	2
6.	SLR Worker	1
IRRIGATION DIVISION, ALAPPUZHA		
1.	Head Draftsman	1
2.	Junior Superintendent	1
3.	UD Clerk	3
4.	Part Time Sweeper	1
IRRIGATION SUB DIVISION, ALAPPUZHA		
1.	Head Clerk	1
2.	Part Time Sweeper	1
IRRIGATION SECTION, ALAPPUZHA		
1.	Watcher	1
IRRIGATION SECTION, CHERTHALA		
1.	Part Time Sweeper	1
IRRIGATION SECTION, THOTTAPPALLY		
1.	Part Time Sweeper	1
IRRIGATION SUB DIVISION, MAVELIKARA		
1.	Head Clerk	1
IRRIGATION SECTION, MAVELIKARA		
1.	3rd Grade Overseer	1
IRRIGATION DIVISION, KOTTAYAM		
1.	Executive Engineer	1
2.	PA to Executive Engineer	1

3.	Head Draftsman	1
4.	1st Grade Draftsman	2
5.	2nd Grade Draftsman	2
6.	Tracer	1
7.	Blue Printer	1
8.	Divisional Accountant	1
9.	Junior Superintendent	1
10.	UD Clerk	4
11.	LD Clerk	1
12.	LD Typist	1
13.	UD Typist	1
14.	Office Attendant	3
15.	Watcher	1
16.	Part Time Sweeper	1
IRRIGATION SUB DIVISION, KADUTHURUTHY		
1.	Asst Executive Engineer	1
2.	1st Grade Draftsman	1
3.	2nd Grade Draftsman	1
4.	Head Clerk	1
5.	UD Clerk	1
6.	LD Clerk	2
7.	LD Typist	1
8.	Office Attendant	2

IRRIGATION SECTION, KADUTHURUTHY		
1.	Asst.Engineer	1
2.	1st Grade Draftsman	2
3.	2nd Grade Draftsman	2
4.	3rd Grade Overseer	4
IRRIGATION SECTION, KOTTAYAM		
1.	Asst. Engineer	1
2.	1st Grade Draftsman	2
3.	2nd Grade Draftsman	2
4.	3rd Grade Overseer	4
5.	Lascar	1
7.	Driver	1
IRRIGATION SECTION, VAIKOM		
1.	3rd Grade Overseer	3
2.	Lascar	1
IRRIGATION SUB DIVISION, CHANGANASSERY		
1.	Head Clerk	1
2.	UD Clerk	1
3.	Part Time Sweeper	1
IRRIGATION SECTION, CHANGANASSERY		
1.	3rd Grade Overseer	3
2.	Lascar	2
IRRIGATION SECTION, KANJIRAPPALLY.		
1.	Assistant Engineer	1

2.	1st Grade Draftsman	2
3.	2nd Grade Draftsman	2
4.	3rd Grade Overseer	4
5.	Lascar	1
IRRIGATION SECTION, KUMILY		
1.	Asst. Engineer	1
2.	1st Grade Draftsman	2
3.	2nd Grade Draftsman	2
4.	3rd Grade Overseer	4
IRRIGATION SUB DIVISION, THODUPUZHA		
1.	Asst. Executive Engineer	1
2.	1st Grade Draftsman	1
3.	2nd Grade Draftsman	1
4.	Head Clerk	1
5.	UD Clerk	1
6.	LD Clerk	2
7.	LD Typist	1
8.	Office Attendant	2
9.	Driver	1
10.	Part Time Sweeper	1
IRRIGATION SECTION, THODUPUZHA		
1.	Asst. Engineer	1
2.	1st Grade Draftsman	2

3.	2nd Grade Draftsman	2
4.	3rd Grade Overseer	4
5.	Lascar	1
IRRIGATION SECTION, MOOLAMATTAM		
1.	Asst. Engineer	1
2.	1st Grade Draftsman	2
3.	2nd Grade Draftsman	2
4.	3rd Grade Overseer	4
5.	Lascar	1
IRRIGATION SECTION, MUNNAR		
1.	Asst. Engineer	1
2.	1st Grade Draftsman	2
3.	2nd Grade Draftsman	2
4.	3rd Grade Overseer	4
5.	Lascar.	1

2 METHODOLOGY

6 Work study is being conducted by the Personnel & Administrative Reforms Department with the objective to improve the effectiveness of Government departments and ensuring the effective use of resources. The main procedures of the work study are as follows:

Work Measurement

Measuring the work content by appropriate techniques and to establish the time for a qualified worker to carry out a specified job at a defined level of performance.

Method Study

Systematic recording, analysis and critical examination of relevant facts with respect to the activities and responsibilities of a job and determining the most innovative way to accomplish the job.

7 The subject for study is on the relevance of the temporary posts in Irrigation Department. We need to examine whether the quantum of works is enough to accord continuance sanction to the temporary posts. So, the Study Team has purely concentrated on 'Work Measurement'. Analytical estimating and direct observation were adopted for work measurement. The performers were interviewed in order to supplement the data collected from the files, registers and other records kept at the relevant offices.

8 An outline of the sanctioned posts in various offices under Irrigation South Circle is given below:

Table 1

Sl No.	Office	Permanent posts	Temporary posts	Total Manpower
1	O/o the S.E, Irrigation South Circle	45	7	52
1	Irrigation Division office,	67	100	167

	Tvpm and 11 subordinate offices excluding Sections Attingal and Varkala*			
2	Irrigation Division office, Kollam and 12 subordinate offices	52	52	104
3	Irrigation Division, Alappuzha and 7 subordinate offices	69	13	82
4	Irrigation Division, Kottayam and 12 subordinate offices	9	126	135

* Irrigation sections at Attingal & Varkala were excluded because there were no temporary posts.

Category - wise list of temporary posts in various offices under Irrigation South Circle.

Table 2

Sl No.	Name of temporary post	Total No. of posts
1	Executive Engineer	1
2	Asst. Executive Engineer	5
3	Assistant Engineer	12
4	Divisional Accountant	1
5	P A to Executive Engineer	1
6	Head Draftsman	4
7	Draftsman	43
8	Overseer	60
9	Junior Superintendent	6
10	Head Clerk	11
11	L D/ U D Clerk	32

12	Typist	7
13	Tracer	2
14	Blue Printer	1
15	Lascar	29
16	Office Attendant	12
17	Driver	9
18	Boat Driver	1
19	Gate Sergeant	1
20	Head Gardner	1
21	Line Man	1
22	Worker Grade II	13
23	SLR Worker	20
24	Watcher	2
25	Part Time Sweeper	17
26	Carpenter	1
27	Blacksmith	1
28	Spray Painter	1
29	Part Time Scavenger	2
30	Butler	1
	Total	298

List of posts that are excluded from the purview of work study

Table 3

Sl No.	Name of post	No. of posts	Reason for exclusion
1	Assistant Engineer	1	This post of Assistant Engineer is in VIP Section, Nedumangadu. Vide G.O (Ms) No. 6/2017/WRD dated 28.01.2017, majority of posts in VIP Section, Nedumangadu have been abolished. It is informed by the authorities that this section is about to wind up soon.
2	Draftsman	1	Do
3	Clerk	5	The reason stated above is applicable to two posts of Clerks. With respect to the remaining, we are constrained to exclude the three temporary posts of Clerks in the Office of the Superintending Engineer, Irrigation South Circle for want of clear clarification from the Superintending Engineer as to whether these posts would include the 9 posts of Clerks abolished in the office of the Superintending Engineer vide G.O (Ms) No. 6/2017/WRD dated 28.01.2017.
4	Typist	1	As in column 1
5	Blue Printer	1	Blue Printer has no significant relevance in the present scenario. Administrative Department may take a decision on according continuance sanction to this post.
6	Tracer	2	Do
7	Office Attendant	12	The duties of the Office Attendant mainly involves receiving and distributing

			communications / documents. <i>It does not have a complex nature of work functions as in the case of clerical and technical posts and so the department could take a decision on according continuance sanction to this post</i>
8	Driver	9	As stated in the italics above.
9	Watcher	2	Do
10	Part Time Sweeper	17	Do
11	Part Time Scavenger	1	Do
Total		52	

- 9 It is to be noted that the entire posts of Tracer, Blue Printer, Office Attendant, Driver, Watcher, Part Time Sweeper and Part Time Scavenger have been excluded from the study. Temporary posts that are subjected for work measurement are given in the below table:

Table 4

SI No.	Technical posts	Ministerial posts	Class IV posts
1	Executive Engineer	Junior Superintendent	Lascar
2	Assistant Executive Engineer	Head Clerk	
3	Assistant Engineer	L D/ U D Clerk	
4	Head Draftsman		
5	Draftsman		
6	Overseer		

- 10 The following are the determinants that does have an impact on the assessment of workload of both the category of posts i.e. technical and ministerial:
- i. Number of projects / works and the size of the projects / works presently undertaken by the department (As the quantum of works is a variable factor, the Study Team compared the ongoing works with the works executed in the last five years to get a rational view)
 - ii. Water resources development and management has utmost importance given the challenges being faced by the State in the form of water pollution, climate change, increasing salinity, loss of wetlands, erosion, weed invasion etc. Irrigation department that equips the State to meet these challenges needs adequate staffing.
 - iii. Stagnation of promotion in Irrigation Department.
 - iv.. Formation of LSGD engineering cadre and the consequent slump in the quantum of works entrusted with Irrigation Dept.

Technical Staff

11 Factors brought for analysis of workload of technical posts

- A) Duties and responsibilities associated with each technical posts
- B) Details of ongoing works and the works executed during the last five years
- C) Site inspections conducted and reports submitted during 2016-17
- D) Works planned for next financial year

Executive Engineer

- 12 Executive Engineer controls the functioning of the main executive unit of the department i.e. the Division. The Executive Engineer is responsible for the proper execution of all works in his Division and also for the preparation of projects, designs and estimates, whether for new works or repairs. He has also powers of sanctioning estimates and entering into contracts within the

limits of powers delegated to him. It is also a part of his duty to organise and supervise the execution of works and to see that those works are suitably and economically carried out with material of good quality.

Assistant Executive Engineer

- 13 Assistant Executive Engineer is responsible to the Executive Engineer for management and execution of works with in his Sub - division. He has the powers, within his delegation, to sanction estimates, enter into contracts and make payments and to see that the works are executed in accordance with sanctioned estimates, specifications and drawings. He is required to ensure that the measurements of the works done or recorded in the measurement books promptly and to remain in constant and close touch with day today work of the Assistant Engineers.

Assistant Engineer

- 14 The lowest executive unit of the organizational set up is the section office which is under the control of an Assistant Engineer. In addition to executive functions, the Assistant Engineer has to maintain the primary records of all transactions relating to works, supplies and services under his control and renders accounts to his superior authorities as per rules. He is to take measurements of the works and to assist the Asst. Executive Engineer of Sub - division in measurements or check measurements. He is also required to keep vigilant control over expenditure and report progress of works to the Asst. Executive Engineer.

Draftsman

- i. Prepare drawings based on instructions given to him by the higher officers.
- ii. Prepare tracing of drawings.
- iii. Plot survey work based on field data furnished to him and mark contours in survey drawings.

- iv. Calculate quantities of various items of work involved from the designs and drawings of structures and prepare detailed estimate.
- v. Prepare data for items of work based on schedule of rates, and information received from field regarding leads and lifts involved etc.
- vi. Check contractor's bills with regard to the estimates received from subordinate offices.
- vii. Prepare tender schedules, agreements and tabulate tenders.

Overseer

- i Assist the Assistant Engineer for collection of all field data for preparing layout, designs and preliminary estimates.
- ii Prepare detailed drawings and detailed estimates based on field data and approved designs.
- iii To see that the plans and specifications are followed in the execution of each item of work.
- iv Check the quality of materials on arrival at site, and to see that the materials comply with the specifications while in use.
- v To watch the proportion of ingredients in mortars, concrete and bituminous premix, and ensure that they are as per standards specified for the particular item of work concerned.
- vi. Assist the Assistant Engineer in checking the detailed estimates for works and submit notes for issuing technical sanction or forwarding to higher offices.
- vii. Assist the Assistant Engineer in inviting tender, prepare tender schedule, acceptance of tender, executing agreement for works, passing bills and making payments and submitting notes for issuing orders.

Ministerial staffLD / UD Clerk

- 15 Clerks shall carry out any or all the ministerial duties involved in the business transactions of the office to which they are attached as prescribed in the Manual of Office Procedure. The actual scope of their work in any office will be decided by the head of the ministerial section with the approval of the head of office or subordinate officer entrusted with the responsibility. Clerks (LD clerks and UD clerks) in the Irrigation Department will also function as accountants.
- 16 The responsibilities of clerks shall include:
 1. Maintaining files and registers up-to-date.
 2. Deal with all matters having establishment nature.
 3. Safe custody of registers, files, papers, documents, books or any other valuables entrusted to their care.
 4. Putting up papers including correspondence files, connected files, notes etc., for orders of competent authority without delay.
 5. Bringing to the notice of the superior officer matters that need special attention.
 6. Taking prompt action on unanswered references by issue of timely reminders, putting up draft, Demi Official letters etc.
 7. Carrying out the accounting work in the office such as checking bills, posting of accounts, maintaining various account registers, compiling returns etc., as prescribed in KPWA Code and other Codes, when posted in the accounts branch.
 8. Handling and safe custody of cash, timely remittance of cash to Treasury, maintenance and rendering of prescribed account etc., as per rules.

9. Carrying out any other duties of a ministerial nature assigned to them by superior officers.
10. Preparing draft letters on all matters and putting up for approval of the superior officers.
11. Posting entries in Service book and keeping the same.
12. Prepare contingent bills, salary bills, arrear bills, leave surrender bills etc.
13. Initiate action on representations received from the public.
14. Assist the Head Clerk/ Junior Superintendent for preparing statement of facts / Counter Affidavit in cases that are filed in High Courts / District Courts.

Analysis of workload of Ministerial staff

17. The study team adopted various work measurement techniques such as 'Time Study' and 'Analytical Estimating' to determine the time required for a ministerial employee to carry out a specified work. Accordingly, we set a standard time for doing a defined work at a defined quality. For example preparation of salary bill of an employee, processing of an application for NRA or NLC, preparation of statement of facts in a court case, making entries in a register viz. estimate register or distribution register etc. Thereafter, the number of works / the quantum of works under each subject - head for an entire year has been assessed. Finally, the quantity of time required for an employee to complete the works assigned to him for the entire year has been found and it is presumed as Total Annual Man -hours. The accepted principle is that a government employee should work 1700 hours in a year and the figure is considered as Standard Annual Man - hours. Man Power Index is calculated by:

$$\text{Man Power Index} = \frac{\text{Total Annual Man - hours}}{\text{Annual standard Man - hours}}$$

3 FUNCTIONS OF VARIOUS OFFICES IN IRRIGATION DEPARTMENT

3.1 Head Quarters (Chief Engineer's Office)

18 The Chief Engineer is the administrative and professional head of the department (Irrigation & Administration) and is the technical advisor to Government on all matters in which his advice is desired. He is to monitor the Budget Estimates, allotment and expenditure on works in progress and to suggest any appropriation of funds depending upon requirement intimated to him by the Superintending Engineers working under him. It is the duty of the Chief Engineer to see that the budget allotments of the year are fully expended in so far as is consistent with general economy and the prevention of large expenditure in the last months of the year for the sole purpose of avoiding lapses. He will ensure that any money which is not likely to be needed during the year is promptly surrendered so as to allow of its appropriation, for other purposes by the proper authority. The Chief Engineer is at liberty to correspond with all heads of departments on all matters in regard to or other works concerning them.

3.2 Circle Office

19 The Administrative unit of the department is the circle under the control of a Superintending Engineer who is responsible to the Chief Engineer for the administration and general professional control of public works within his circle. The Superintending Engineer has also powers of sanctioning estimates and entering into contracts within the limits of financial powers delegated to him. He is to inspect the state of various works in his circle and to satisfy himself that the system of management prevailing is efficient and economical. He has to inspect each Division in his circle to examine the mode of preparation of estimates, contract agreements, contractor account and system of recording plans and office work in general. Further it is the incumbent Superintending Engineer to apprise the Chief Engineer of any serious and glaring irregularities or other matter of importance noticed during inspection or on which his orders are required. Besides, a Superintending Engineer is required to proceed to the site in his circle to

report any important design or work or any serious accident or threatened danger to the works.

3.3 Division Office

20 The main executive unit of the department is the division under the control of an Executive Engineer, who controls the work of all the subdivisions under his jurisdiction. The Executive Engineer is responsible for the proper execution of all works in his Division and also for the preparation of projects, designs and estimates, whether for new works or repairs. He has also powers of sanctioning estimates and entering into contracts within the limits of powers delegated to him. It is also a part of his duty to organise and supervise the execution of works and to see that those works are suitably and economically carried out with material of good quality. Immediately on completion of the work the Executive Engineer is required to close accounts and to prepare completion reports. As disbursing officer of the Department, all payments for works, supplies and services shall be made by the Executive Engineer in the Division or through the Sub Divisions and Sections under him by presenting pay bills to the treasury. He is required to render account of all the transactions of the month to the Accountant General. The Executive Engineer is further expected to inspect each of the Sub Divisions under his jurisdiction and to suggest measures for protection of structures and works and to prevent encroachments on Government lands in his charge.

3.4 Sub Division Office

21 The work of sections is controlled by a sub-division under the control of an Assistant Executive Engineer who is responsible to the Executive Engineer for management and execution of works with in his Sub - division. He has the powers, within his delegation, to sanction estimates, enter into contracts and make payments and to see that the works are executed in accordance with sanctioned estimates, specifications and drawings. He has to maintain and render accounts as prescribed in the rules and orders in force. He is

required to ensure that the measurements of the works done or recorded in the measurement books promptly and to remain in constant and close touch with day today work of the Assistant Engineers.

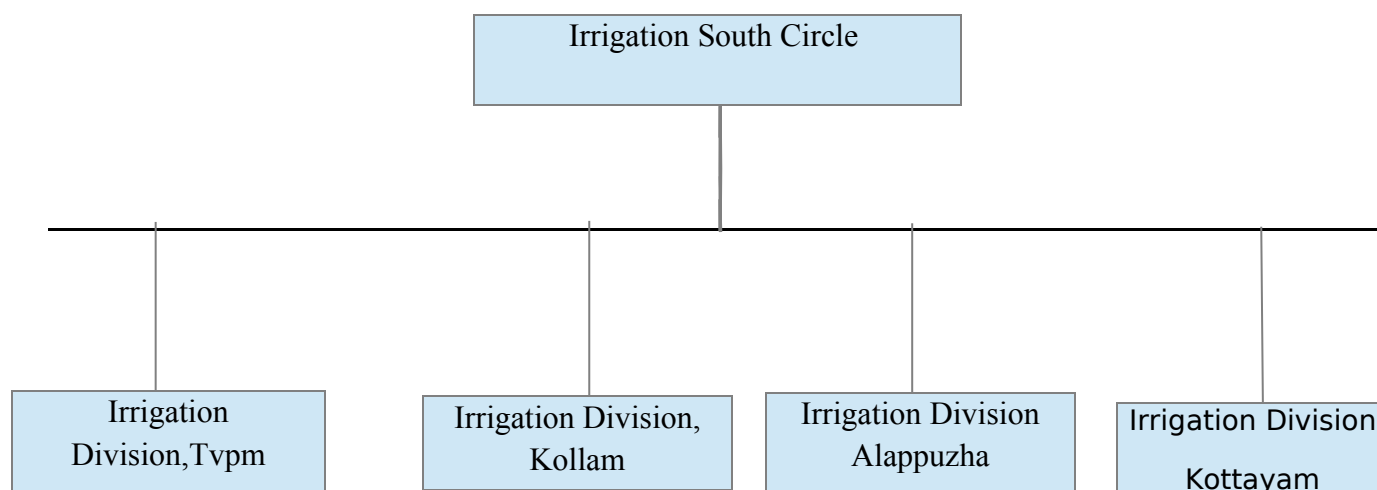
3.5 Section office

- 22 The lowest executive unit of the organizational set up is the section office which is under the control of an Assistant Engineer. For carrying out executive and supervisory functions, the section will have the required number of Overseers and other staff like Lascar, Drivers etc. In addition to executive functions, the Assistant Engineer has to maintain the primary records of all transactions relating to works, supplies and services under his control and renders accounts to his superior authorities as per rules. He is to take measurements of the works and to assist the Asst. Executive Engineer of Sub - division in measurements or check measurements. He is also required to keep vigilant control over expenditure and report progress of works to the Asst. Executive Engineer.

4 Irrigation Department (South Circle)

23. The Irrigation Department (South Circle) is headed by a Superintending Engineer who is responsible to the Chief Engineer for the administration and general professional control of irrigation works within his circle. There are four executing units called divisions under the south circle, which have a combined jurisdiction over six districts viz. Thiruvananthapuram, Kollam, Pathanamthitta, Alappuzha, Kottayam and Idukki. These districts are blessed with many rivers, lakes, inlets, estuaries and backwaters. It is the mission of the Circle to conserve these major sources of water and preserving the ecosystem healthy. In this regard, initiatives have been taken for the rejuvenation of canals, preserving the coastal areas and river basins.

Organisation Structure



Details of the projects / works in each divisions under Irrigation South Circle, Thiruvananthapuram during the 2016-17 financial year

Table 1

Sl No.	Name of Division	No. of works	Cost estimate
1	Irrigation Division, Tvpm	100	47,48,88,927
2	Irrigation Division, Kollam	119	58,29,59,083
3	Irrigation Division, Alappuzha	130	93,51,61,000
4	Irrigation Division, Kottayam	57	10,51,55,757
Total		406	209,81,64,767

Details of Staff

Table 2

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Superintending Engineer	1	-	1
2	Technical Assistant (AEE)	-	1	1
3	Personal Assistant to Superintending Engineer	1	-	1
4	Administrative Assistant	1	-	1
5	Finance Officer	1	-	1
6	Head Draftsman	1	-	1
7	Senior Supdt.	1	-	1
8	Junior Supdt.	1	2	3
9	Tracer	2	-	2
10	Blue Printer	1	-	1
11	LD/UD Clerks	17	3	20
12	LD/UD Typists	3	-	3
13	1 st Grade Draftsman	6	-	6
14	2 nd Grade Draftsman	4	-	4
15	Office Attendant	4	-	4
16	Driver	1	-	1
17	PTS	-	1	1

	Total	45	7	52

Findings and Recommendations

A) Technical Assistant

- 24 It is the duty of the Superintending Engineer in charge of an Irrigation Circle to the state of various works in his circle and to satisfy himself that system of management prevailing is efficient and economical. Table 1, shows the number of ongoing works in each division under South Circle and the total cost estimate involved. Huge amount is involved in these works and it is to be completed within the time frame to avoid financial loss. We felt that the presence of a Technical Assistant would help the Superintending Engineer to avoid unnecessary delays in executing the works. The service of the Technical Assistant could help in approving the detailed plans and estimates without error and thereby preventing irregularities. So we recommend that the temporary post of Technical Assistant (AEE) may be allowed to continue.

B) L.D / U.D Clerk

- 25 There is three temporary posts of L.D/ UD Clerk. As per G.O (Ms) No. 6/2017/WRD dated 28.01.2017 orders have been issued abolishing 1199 posts that were found as excess in Irrigation Department. Accordingly, nine posts of L.D/ U D Clerk have been abolished in the O/o the Superintending Engineer, Irrigation South Circle. According to the authorities, the nine posts so abolished would include the three temporary posts of Clerks and therefore, the question of continuance sanction does not matter. In compliance with the G.O mentioned above, number of sanctioned posts of LD / UD Clerk have been reduced / adjusted to twelve. *However, pending a clear clarification from the Superintending Engineer in this regard, we are constrained to avoid these three Clerical posts from the purview of the Study.*

C) Junior Superintendent

- 26 There is two temporary posts of Junior Superintendent. It is noted that there is no sanctioned post of Head Clerk and it is the duty of the J.S to co-ordinate the ministerial works and to execute the supervisory functions. Abolition of 9 posts of L D/ U D Clerks vide G.O (Ms) No. 6/2017/WRD dated 28.01.2017 does have an implication on the temporary posts of junior Superintendent. However, we are of the opinion that both the temporary posts of Junior Superintendent may be given continuance sanction taking into account of the factors specified in methodology of this report.

5 Analysis of workload in Divisions

Details of the projects / works in each Division under Irrigation South Circle during 2016-17 financial year.

Sl No.	Name of Division	No. of works	Cost estimate	No. of Sub Divisions under the Division	No. of Sections under each Sub Division
1	Irrigation Division, Tvpm	100	47,48,88,927	3	10
2	Irrigation Division, Kollam	119	58,29,59,083	3	9
3	Irrigation Division, Alappuzha	130	93,51,61,000	2	5
4	Irrigation Division, Kottayam	57	11,56,55,052	3	9
Total		406	209,81,64,767	11	33

Sum - up of posts in Division offices

Sl No.	Division Office	Permanent posts	Temporary posts	Total
1	Irrigation Division, Tvpm	28	6	34
2	Irrigation Division, Kollam	27	4	31
3	Irrigation Division, Alappuzha	27	6	33
4	Irrigation Division, Kottayam	-	23	23

- 27 On comparison of the datas shown in table 1 & 2, we noted the following:
1. Though, Irrigation Division, Kottayam executes least number of works in a year and the project costs involved therein are minimal (we have compared the works in 2016-17 to the works in last five years) but it employs most number of temporary staff.
 2. Irrigation Division, Alappuzha tops in terms of execution of works both qualitatively and quantitatively but it has least number of subordinate executive units.
- 28 We have noted that the organization structure and the staff pattern is not uniform. However, we are constrained to comment only on the necessity of temporary posts. The temporary posts in Division offices are of Head Draftsman, Junior Superintendent and L D / U.D Clerks. Detaile analysis of the necessity of temporary posts in Division offices is provided in the following chapters.

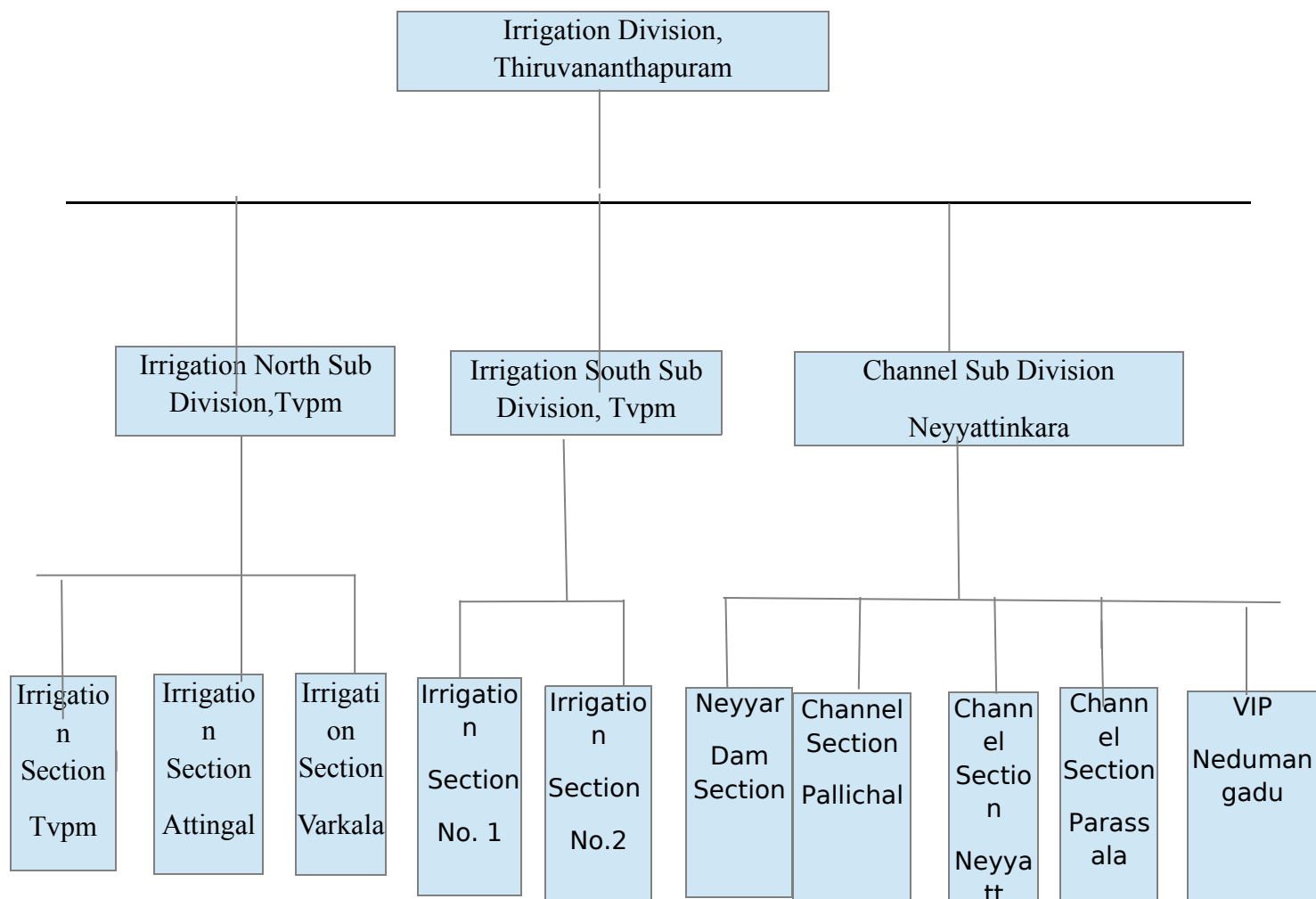
5.1 Irrigation Division, Thiruvananthapuram

29 Karamana river, Killiyar river, Neyyar river, Kallar river, Vamanapuram river, Vellayani lake, Akkulam backwater, Veli backwater, Parvathi puthanar (T.S Canal), are the important water bodies that nurtures Thiruvananthapuram district. Unregulated development of tourism, untreated sewage, domestic effluents and industrial pollution are heavily affecting the quality of these water resources.

Mission

- Protection of coastal regions at a distance of 72 Km ranging from Kollankode to Kappil.
- Flood control and river bank protection of Karamana river, Mamam river, Killi river and Vamanapuram river.
- Protection works of Veli lake, Ulloor thodu, Vanchiyoor thodu, Kannammoola thodu etc.
- Flood control and management of Thampanoor and East Fort urban areas.
- Protection of Estuaries at Poonthura, Poovar and Veli.
- Control and management of Neyyar Irrigation Project which has a Cultivable Command Area of 11740 hector agriculture land.

Organisation Structure



Abstract showing the projects / works in each Sub Divisions under Irrigation Division, Thiruvananthapuram during the 2016-17 financial year

Table 1

Sl No.	Name of Sub Division	No. of works	Cost estimate
1	Irrigation South Sub Division, Tvpm	28	16,96,29,000
2	Irrigation North Sub Division, Tvpm	26	22,26,21,853
3	Channel Sub Division, Neyyattinkara	46	8,26,38,074
Total		100	47,48,88,927

Details of Staff

Table 2

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Executive Engineer	1	-	1
2	Personal Assistant	1	-	1
3	Head Draftsman	-	1	1
4	Divisional Accountant	1	-	1
5	Senior Supdt	1	-	1
6	Junior Supdt.	1	1	2
7	Tracer	-	1	1
7	LD/UD Clerks	11	1	12
8	LD/UD Typists	2	-	2

9	1 st Grade Draftsman	3	-	3
10	2 nd Grade Draftsman	3	-	3
11	Office Attendant	3	-	3
12	Driver Grade II	1	-	1
13	PTS	-	1	1
14	Part Time Scavenger	-	1	1
	Total	28	6	34

- 30 One post of Head Draftsman, one post of Junior Superintendent and one post of Clerk are temporary. Work content to the ministerial posts has been critically assessed by verifying current files, disposed files, registers etc. Applying the methodology specified in Chapter 2, we calculated the Man Power Index of clerical staff. With respect to technical posts, we inspected the work sites and have had a close scrutiny on the ongoing works and compared the ongoing works with the works in the last five years.

Findings and Recommendations

- 31 From Table 1, it can be seen that a total of 100 works were undertaken by Irrigation Division, Thiruvananthapuram during 2016-17 financial year with an estimate totaling Rs. 47,48,88,927/-. All these works are connected with river bank protection and prevention of coastal erosion. Head Draftsman is the only temporary post in the category of technical staff. There are six Draftsmen working in permanent posts. To give proper guidance and better orientation to the works of Draftsmen, it is necessary to have a supervisory post. Therefore, we are of the view that the post of Head Draftsman may be given continuance sanction.
- 32 With respect to the ministerial posts, the temporary posts are that of Junior Superintendent and Clerk. The Man Power Index found is below 11 and it reveals that a maximum of 11 clerks is enough in this division i.e. the work load of Clerks is within the capacity of execution of works by the Clerks working in permanent posts. Therefore, we are of the view that a temporary post of Clerk may not be given continuance sanction. However, the post of Junior Superintendent may be given continuance sanction, taking in to consideration of the stagnation of promotion in the Department.

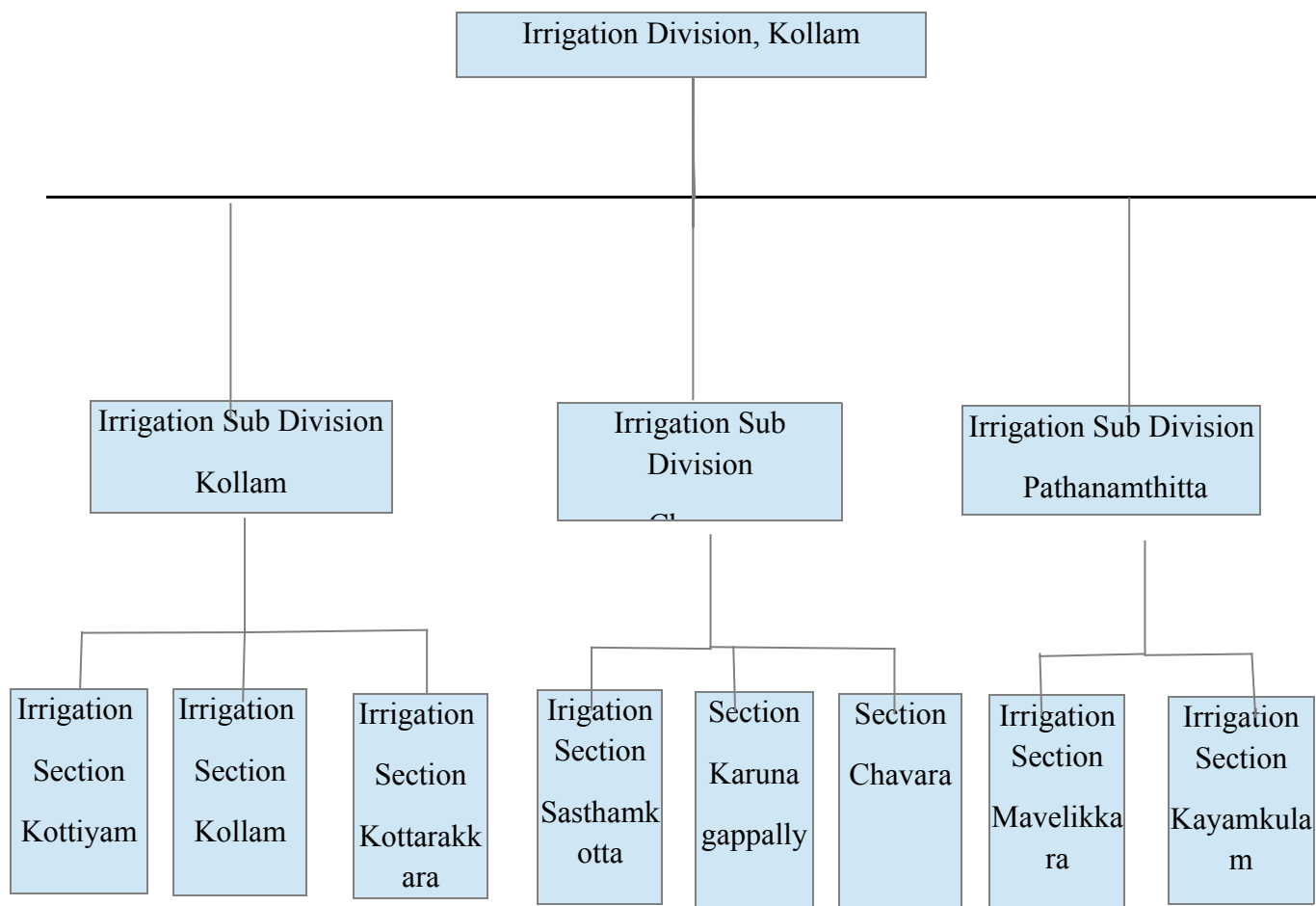
5.2 Irrigation Division, Kollam

33 Kollam district is nurtured by many water bodies such as lakes, lagoons, backwaters and rivers. Sasthamkotta Lake, the largest freshwater lake in Kerala is located in Kollam. Important rivers flow through the district are Kallada and Ithikkara, which drains in Arabian sea. The largest irrigation project in Kerala was built around Kallada river known as Kallada irrigation and Tree crop development scheme, which irrigates a net cultivable command area of 53514 Ha in 92 villages. Ashtamudi, a back water and lake which is renowned for tourism in the State is in Kollam district. Ashtamudi wetland eco-system has since been declared as a Ramsar site. Edava and Nadayara Lakes are also partly located in Kollam district. The district is having good network of waterways, which has tremendous tourism potential. Irrigation Division, Kollam is duty bound to design and implement projects for the preservation of these water bodies.

Mission

1. Projects for river basin management
2. Renovation of canals
3. Coastal protection

Organisation Structure



Details of the projects / works in each Sub Divisions under Irrigation Division, Kollam during the 2016-17 financial year

Table 1

Sl No.	Name of Sub Division	No. of works	Cost estimate
1	Irrigation Sub Division, Kollam	47	43,17,36,807
2	Irrigation Sub Division, Chavara	4	95,89,113
3	Irrigation Sub Division, Pathanamthitta	68	14,16,33,163
Total		119	58,29,59,083

Details of Staff

Table 2

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Executive Engineer	1	-	1
2	Personal Assistant	1	-	1
3	Head Draftsman	-	1	1
4	Divisional Accountant	1	-	1
5	Senior Supdt	1	-	1
6	Junior Supdt.	1	1	2
7	LD/UD Clerks	10	2	12
8	LD/UD Typists	3	-	3
9	1 st Grade Draftsman	3	-	3
10	2 nd Grade Draftsman	2	-	2

11	Tracer	1	-	1
12	Office Attendant	3	-	3
	Total	27	4	31

Findings and Recommendations

L.D/ U.D Clerks

- 34 The Man Power Index of Clerks found is 10. It reveals that the duties and responsibilities of Clerks can be executed by the 10 clerical staff working in permanent posts. There is also a reduction in workload not only in the case of technical staff but also the clerical staff since the formation of LSG Engineering cadre. So we are not recommending the two temporary posts of Clerks for continuance sanction.

Junior Superintendent

- 35 The immediate higher post to Clerks in this division is Junior Superintendent. There is no sanctioned post of Head Clerk to guide the ministerial employees. Taking in to consideration of the aspect that the opportunities for promotion in Irrigation Department are limited, we are recommending that the post of Junior Superintendent may be continued.

Head Draftsman

- 36 In this Division, there is five posts of Draftsman. Projects / works in this Division is largely centered on protecting the coastal areas. To give proper guidance and better orientation to the works of Draftsmen, it is necessary to have a supervisory post. So, we are of the opinion that the service of a Head Draftsman will be beneficial. So, we are recommending this post for continuance sanction.

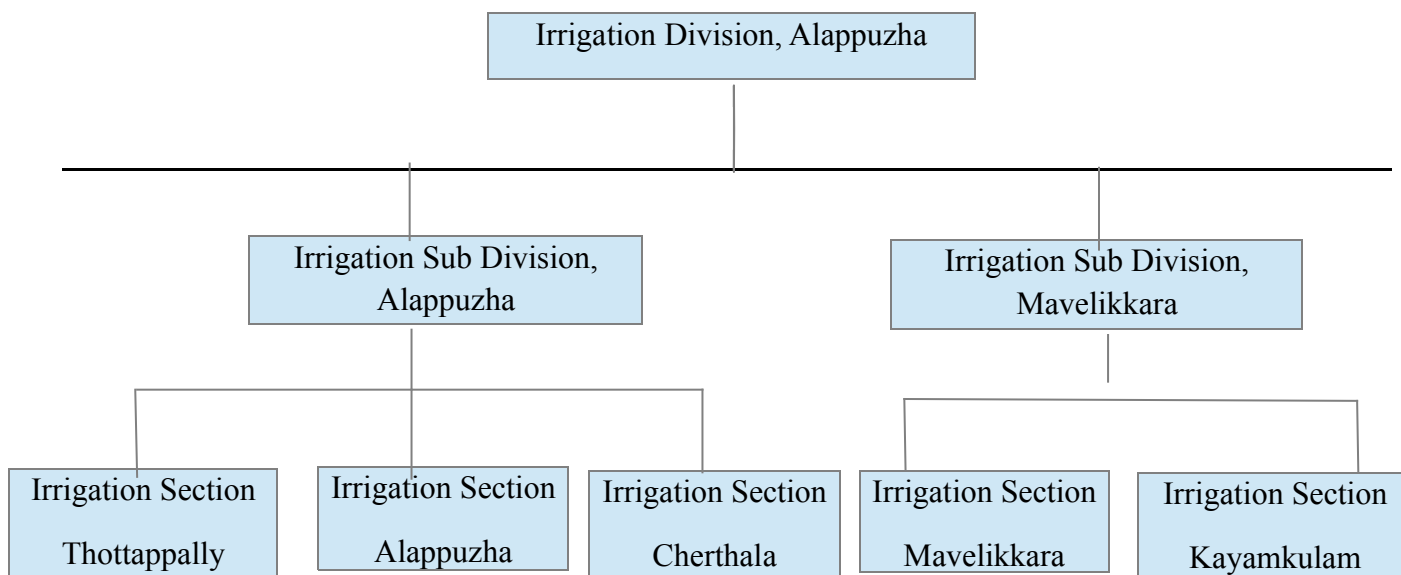
5.3 Irrigation Division, Alappuzha

37 Irrigation Division, Alappuzha is most notable for providing its services to the Kuttanad Wetland Ecosystem, one of the most fertile regions in the world. Dr. M S Swaminathan Foundation, Chennai, which was entrusted to formulate plans for mitigating the agrarian distress in Kuttanad has identified 'Irrigation' as the most important sector that need rigorous developments for strengthening the ecological security of the Kuttanad Wetland Ecosystem and uplift of sustainable livelihood opportunities of the people living there. Dr. M S Swaminathan Foundation recommended a variety of programmes to be implemented as a package with a total cost outlay of Rs.1840/- crores, which is since called 'Kuttanad Package'. A lion's share of the outlay has been provided to the Irrigation sector and the projects undertaken has been implemented through the Irrigation Department. Irrigation Division, Alappuzha also plays an important role in promoting tourism in Alappuzha district. The district is blessed with beaches, canals, backwaters and lagoons. The Scenic backwaters of Alappuzha and navigable canals makes this place as one of the finest tourist destinations in Kerala.

Mission

- a) Protect the sea cost ranging from Aroor to Thottappally
- b) Maintenance and construction of sea wall and groynes
- c) Protection and deepening works of canals, strengthening the banks of the canals.
- d) Construction of boat jetties, station buildings, dredging of boat route for State Water Transport Dept.
- e) Cleaning of entire canals in Alappuzha district for smooth navigation

Organisation Structure



Details of the projects / works in each Sections under Irrigation Division, Alappuzha during 2016-17 financial year

Table 1

Sl No.	Name of Sub Division	No. of works	Cost estimate (in lakhs)
1	Irrigation Sub Division, Alappuzha	85	6527.66
2	Irrigation Sub Division, Mavelikkara	45	2823.95
Total		130	9351.61

Details of Staff

Table 2

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Executive Engineer	1	-	1
2	Personal Assistant	1	-	1
3	Head Draftsman	-	1	1
4	Divisional Accountant	1	-	1
5	Senior Supdt.	1	-	1
6	Junior Supdt.	1	1	2
7	LD/UD Clerks	10	3	13
8	LD/UD Typists	3	-	3
9	1 st Grade Draftsman	3	-	3
10	2 nd Grade Draftsman	3	-	3
11	Office Attendant	3	-	3
12	PTS	-	1	1

	Total	27	6	33

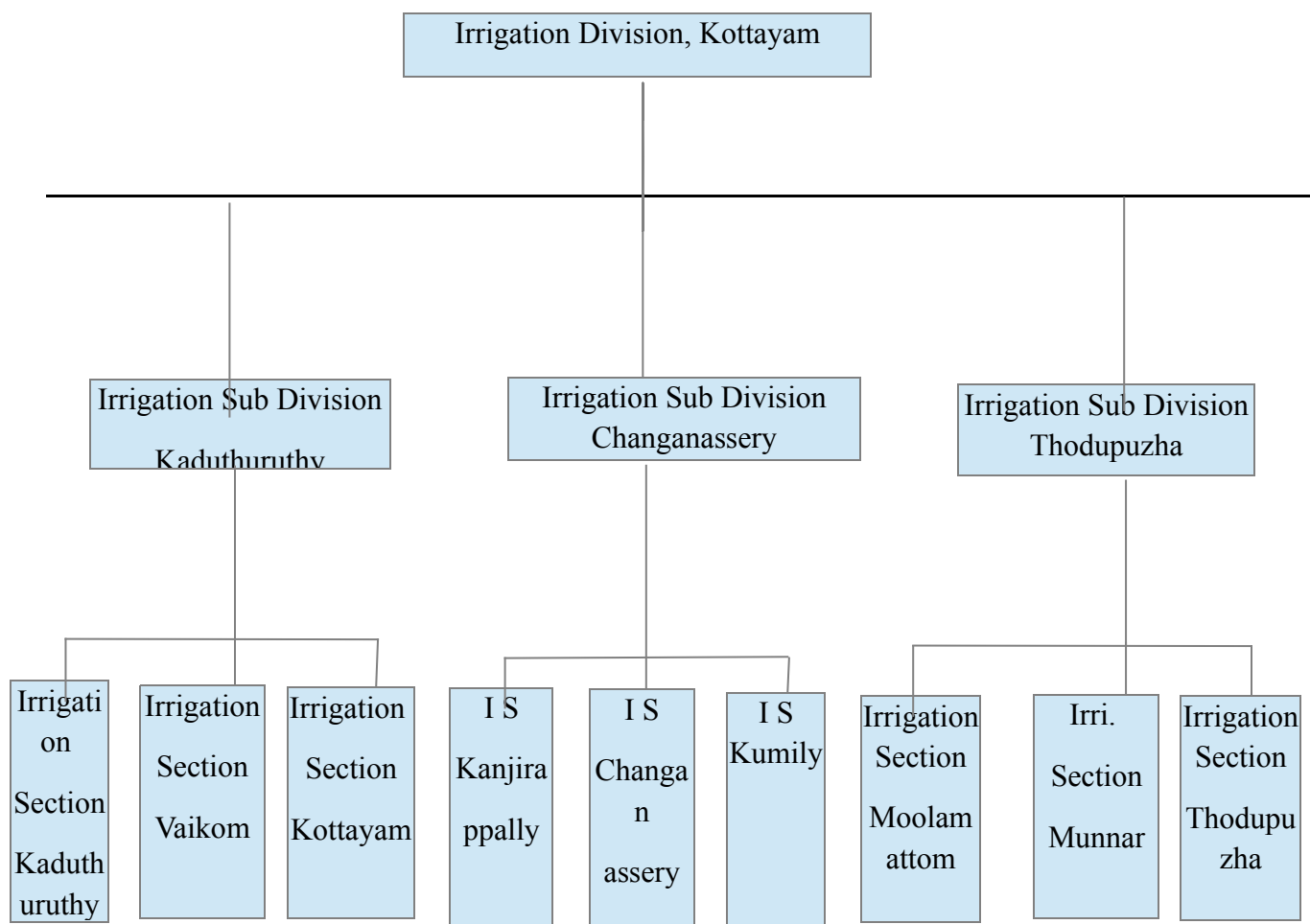
Findings and Recommendations

- 38 Temporary posts are of Head Draftsman, Junior Superintendent, L D/ U D Clerks and Part Time Sweeper. A total of 133 works were undertaken by this division during the 2016-17 financial year with an estimate totaling Rs.9351.61 crores. All these works are connected with river bank protection and prevention of coastal erosion. Works arise due to natural calamities are to be completed within a limited time frame.
- 39 The drawing branch of the Division is headed by the Head Draftsman and it is his duty to assist the Executive Engineer in preparing of all preliminary and detailed estimates of all original works on the basis of site data received from the Sub - Divisional Offices. He is responsible for preparing/checking of special/annual repairs or other related estimates for all type of works in the Division. The quantum of works in the Division shows that the post of Head Draftsman has considerable workload and is vital for executing the projects. Therefore, we are of the view that the post of Head Draftsman is to be continued.
- 40 There is 13 posts of Clerks in which 10 are permanent. The number of works and the size of the works wouldn't have considerable impact on the workload of Clerks. So we are not recommending continuance sanction to 3 temporary clerical posts. Also, the Man Power Index for executing the clerical works is below 10. As a supervisory post leading 10 clerks, the temporary post of Junior Superintendent may be continued.

5.4 Irrigation Division, Kottayam

41 Kottayam is renowned for being the centre of Kerala's spice and rubber trade. Kottayam has a mountainous terrain as well as low-lying areas very close to sea level. A wide network of rivers and backwaters surrounds the low lying lands, where rice is extensively cultivated. Kottayam ranks the 3rd highest rice cultivating district in Kerala. Meenachil river, Manimala, Muvattupuzha, Periyar and Thodupuzhayar are the important rivers flowing through the district. Kumarakom bird sanctuary, an ecologically important place which is located on the coast of Vembanad Lake, is home to migratory birds. These rich source of water bodies is to be conserved and maintained on an ecologically sound manner. That being the objective, Government ordered the formation of Irrigation Division, Kottayam as per G.O (Rt) No. 35/92/Irrigation dated 16.10.1992 by deploying the staff from the erstwhile KIP (MCS) Division No. V Kottarakkara.

Organisation Structure



Details of the projects / works in each Sub Divisions under Irrigation Division, Kottayam during 2016-17 financial year

SI No.	Name of Sub Division	No. of works	Cost estimate
1	Irrigation Sub Division, Kaduthuruthy	19	5,07,56,245
2	Irrigation Sub Division, Changanassery	19	1,22,57,000
3	Irrigation Sub Division, Thodupuzha	19	4,21,42,512
Total		57	10,51,55,757

Details of Staff

SI No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Executive Engineer	-	1	1
2	Personal Assistant to Executive Engineer	-	1	1
3	Head Draftsman	-	1	1
4	Divisional Accountant	-	1	1
5	Junior Supdt	-	1	1
6	LD/UD Clerks	-	5	5
7	LD/UD Typists	-	2	2
8	1 st Grade Draftsman	-	2	2
9	2 nd Grade Draftsman	-	2	2
10	Tracer	-	1	1
11	Blue Printer	-	1	1

12	Office Attendant	-	3	3
13	Watcher	-	1	1
14	Part Time Sweeper	-	1	1
	Total	-	23	23

Findings and Recommendations

- 42 Irrigation Division, Kottayam was formed by deploying the staff from erstwhile KIP (MCS) Division No. V Kottarakkara. Hence all the posts are temporary including the head of the office, Executive Engineer. On a comparison with the other three divisions under the South Circle, it can be seen that Kottayam division employs most number of temporary staff though the quantum of works are low. We recommend that the temporary posts at serial no.1 to 9 may be given continuance sanction. With respect to the posts mentioned at serial number 10 to 14, see Methodology at chapter 2.

6 Analysis of workload in Sub Divisions

Abstract showing the details of projects / works in each Sub Division under Irrigation South Circle during 2016 -17 financial year.

Sl No.	Sub Division	No. of Sections	No. of works	Cost estimate
1	Irrigation North Sub Division	3	26	22,26,21,853
2	Irrigation South Sub Division	2	28	16 ,96,29,000
3	Channel Sub Division, Neyyttinkara	5	46	8,26,38,074
4	Irrigation Sub Division, Kollam	3	47	43,17,36,807
5	Irrigation Sub Division, Chavara	3	4	95,89,113
6	Irrigation Sub Division, Pathanamthitta	3	68	14,16,33,163
7	Irrigation Sub Division, Kaduthuruthy	3	19	5,07,56,245
8	Irrigation Sub Division, Changanassery	3	19	1,22,57,000
9	Irrigation Sub Division, Thodupuzha	3	19	4,21,42,512
10	Irrigation Sub Division, Alappuzha	3	85	65,27,66,000
11	Irrigation Sub Division, Mavelikkara	2	45	28,23,95,000

An overview of posts in Sub Divisions

SI No.	Sub Division	No. of permanent posts	No. of temp. posts
1	Irrigation North Sub Division	8	2
2	Irrigation South Sub Division	8	2
3	Channel Sub Division, Neyyattinkara	8	3
4	Irrigation Sub Division, Kollam	9	2
5	Irrigation Sub Division, Chavara	-	12
6	Irrigation Sub Division, Pathanamthitta	1	10
7	Irrigation Sub Division, Kaduthuruthy	-	10
8	Irrigation Sub Division, Changanassery	8	3
9	Irrigation Sub Division, Thodupuzha	-	12
10	Irrigation Sub Division, Alappuzha	9	2
11	Irrigation Sub Division, Mavelikkara	9	1

- 43 We have classified the Sub Divisions as '**Sub Divisions having normal workload**' and '**Sub Divisions having less workload**' based on the total cost estimate involved in the works during 2016-17 financial year. The parameter set for distinguishing the two class of Sub Divisions is the cost estimate which equals 10 crores and above is treated as Sub Divisions having normal workload and cost estimate amounting less than 10 crores is treated as Sub Divisions having less workload”.

- 44 Applying the above parameter, it can be seen that out of the 11 Sub Divisions, 6 Sub Divisions have normal workload and 5 have less workload.

Sub Divisions having normal workload

Sl No.	Sub Division	No. of executive units/ Sections	Cost estimate of total works for 2016-17	Total posts	No. of temporary posts
1	North Sub Division, Tvpm	3	22,26,21,853	10	2
2	South Sub Division, Tvpm	2	16,96,29,000	10	2
3	Sub Division, Kollam	3	43,17,36,807	11	2
4	Sub Division, Pathanamthitta	3	14,16,33,163	11	10
5	Sub Division, Alappuzha	3	65,27,66,000	11	2
6	Sub Division, Mavelikkara	2	28,23,95,000	10	1

Sub Divisions having less workload

Sl No.	Sub Division	No. of executive units/ Sections	Cost estimate of works for 2016-17	Total posts	No. of temporary posts
1	Channel Sub Division, Neyyattinkara	5	8,26,38,074	11	3
2	Sub Division, Chavara	3	95,89,113	12	12
3	Sub Division, Changanassery	3	1,22,57,000	11	3

4	Sub Division, Kaduthuruthy	3	5,07,56,245	10	10
5	Sub Division, Thodupuzha	3	4,21,42,512	12	12

Findings

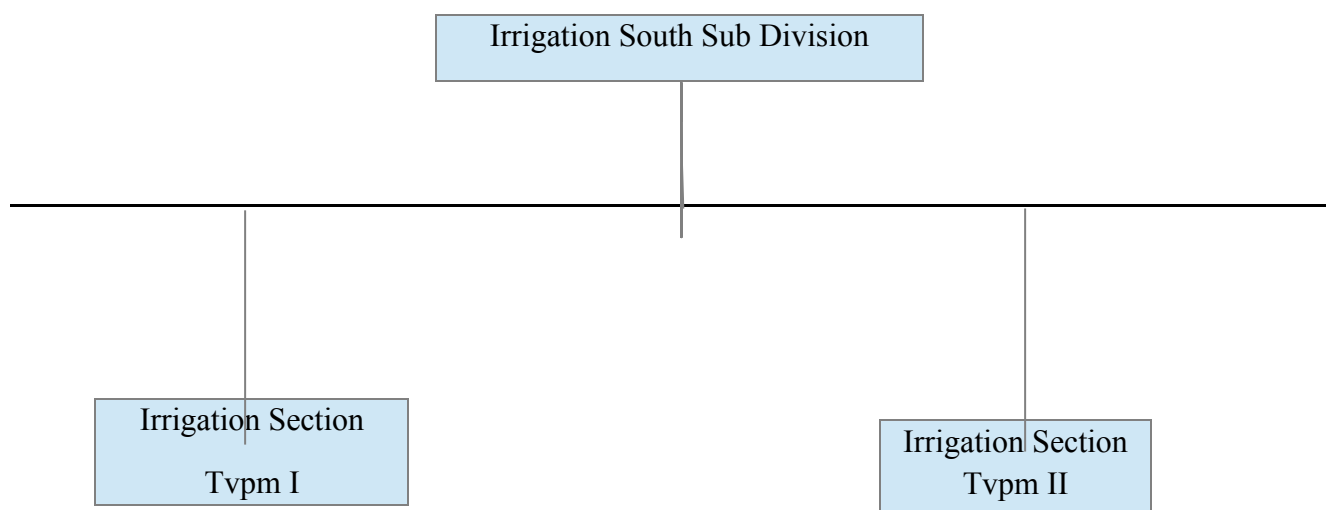
- There is uniformity in staff strength among the Sub Divisions, which ranges from 10-12.
 - In Sub Divisions having normal workload except Sub Division, Pathanamthitta, there were not sanctioned temporary posts more than 2.
 - Among the Sub Divisions having less workload, three Sub Divisions, Viz. Sub Division, Chavara, Sub Division, Kaduthuruthy and Sub Division, Thodupuzha are fully functioning on temporary staff.
- 45 Mainly temporary posts in Sub Divisions are of Draftsman, Head Clerk, L D/ U D Clerks. An in - depth analysis of the relevance of temporary posts in each Sub Division with reference to the methodology prescribed in chapter 2 are detailed in the following chapters.

7 Sub Divisions having normal workload

7.1 Irrigation South Sub Division, Thiruvananthapuram

46 Protecting the banks of Killi river, Karamana river and Neyyar river is the primary function of Irrigation South Sub Division, Thiruvananthapuram. Construction of sea wall from Panathurakkara to Kollamcode, flood mitigation programmes in Thiruvananthapuram Corporation, construction of check dams in the aforementioned rivers etc. are also the responsibilities of this Sub Division.

Organisation Structure



Details of projects / works in each Sections under Irrigation South Sub Division, Thiruvananthapuram during 2016-17 financial year

Table 1

Sl No.	Name of the Section	No. of works	Cost estimate
1	Irrigation Section, Tvpm I	16	4,33,81,000
2	Irrigation Section, Tvpm II	12	12,62,46,000
	Total	28	16,96,29,000

Details of Staff

Table 2

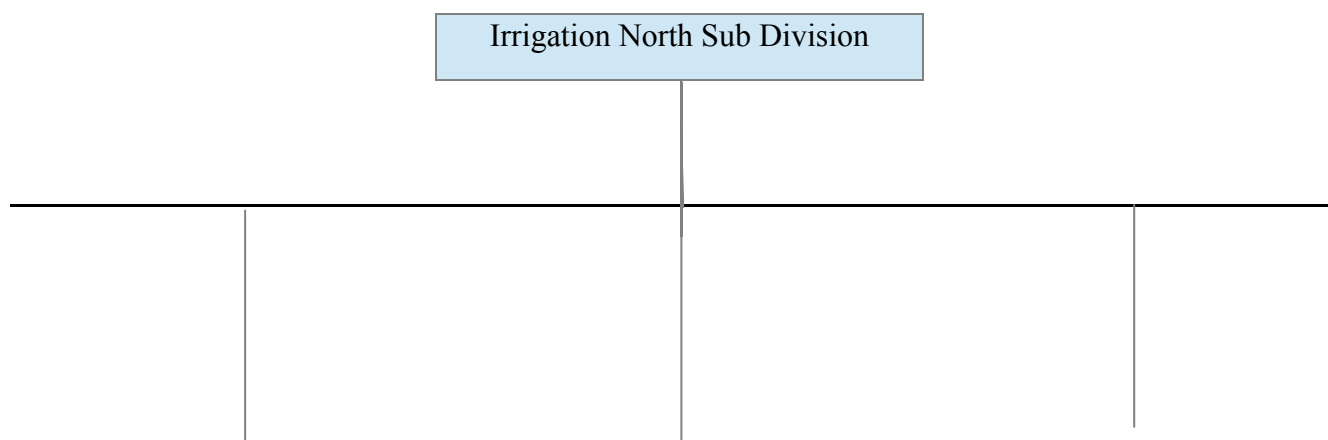
Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Asst. Executive Engineer	1	-	1
2	1 st Grade Draftsman	1	-	1
3	2 nd Grade Draftsman	1	-	1
4	Head Clerk	-	1	1
5	LD/UD Clerks	2	1	3
6	LD/UD Typists	1	-	1
7	Office Attendant	2	-	2
	Total	8	2	10

Findings and Recommendations

- 47 Man Power Index of the Clerks found is rounded to two. This shows that the clerical works in the Sub Division can satisfactorily be done with the personnel in permanent posts. So, we are not recommending continuance sanction to a temporary post of Clerk. Temporary post of Head Clerk may be granted continuance sanction given the scarcity of promotion opportunities in Irrigation Department.

7.2 Irrigation North Sub Division, Thiruvananthapuram

Organisation Structure



Irrigation Section
Attingal

Irrigation Section
Varkala

Irrigation Section
Tvpam

Details of the projects / works in each Sections under Irrigation North Sub Division, Thiruvananthapuram during the 2016-17 financial year

Table 1

Sl No.	Name of the Section	No. of works	Cost estimate
1	Irrigation Section, Attingal	12	1,63,25,189
2	Irrigation Section, Varkala	2	38,21,045
3	Irrigation Section, Thiruvananthapuram	12	20,24,75,619
	Total	26	22,26,21,853

Details of Staff

Table 2

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Asst. Executive Engineer	1	-	1
2	1 st Grade Draftsman	1	-	1

3	2 nd Grade Draftsman	1	-	1
4	Head Clerk	-	1	1
5	LD/UD Clerks	2	1	3
6	LD/UD Typists	1	-	1
7	Office Attendant	2	-	2
	Total	8	2	10

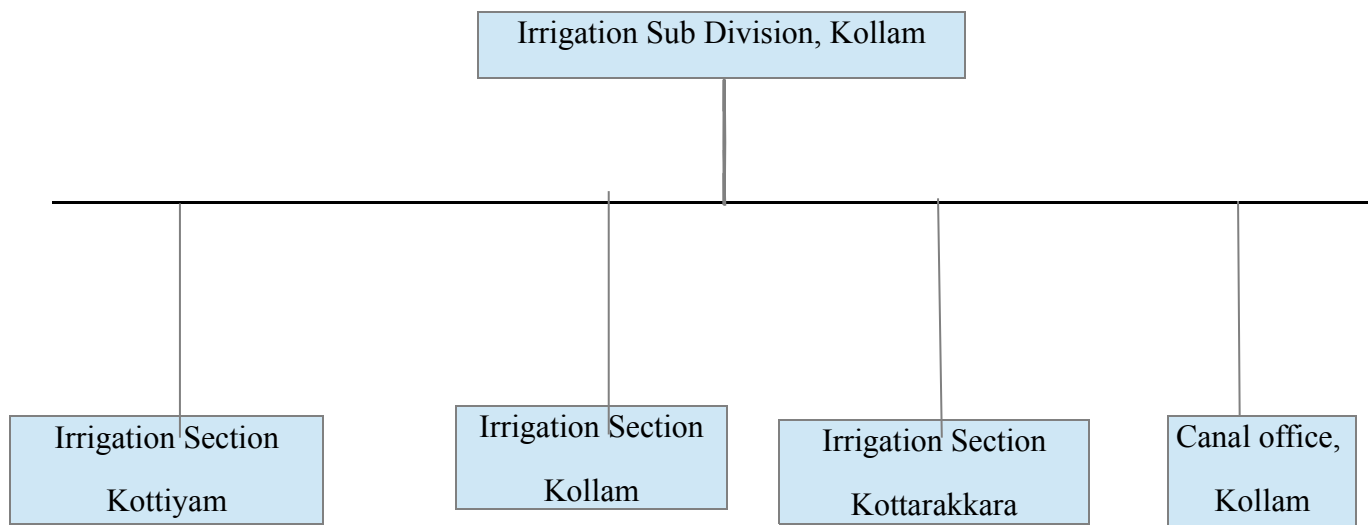
Findings and Recommendations

- 48 There are three Sections under Irrigation North Sub Division, Thiruvananthapuram. One post of Head Clerk and one post of L.D / U.D Clerk are the temporary posts in this Sub Division. Establishment matters and preparation of salary and allied bills of the staff working in the three Sections under this Sub Division are being dealt here. A few court cases in which the Chief Engineer, Irrigation & Administration has been impleaded as a respondent are present here. After analysing the facts and on calculation of Manpower Index as explained in chapter 2, the Study Team felt that the clerical works can be managed with the Clerks in permanent posts. So the temporary post of Clerk may not be given continuance sanction. As a supervisory post, the post of Head Clerk may be allowed to continue.

7.3 Irrigation Sub Division, Kollam

- 49 Irrigation Sub Division, Kollam is primarily responsible for designing and executing anti - sea erosion works on the entire coastal area of Kollam district and riverbank protection of some important rivers in the State.

Organisation Structure



Details of the projects / works in each Sections under Irrigation Sub Division, Kollam during the 2016-17 financial year

Table 1

Sl No.	Name of the Section	No. of works	Cost estimate
1	Irrigation Section, Kollam	11	28,73,61,405
2	Irrigation Section, Kottiyam	15	48294919
3	Irrigation Section, Kottarakkara	21	96080483
Total		47	431736807

Details of Staff

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Asst. Executive Engineer	1	-	1
2	1 st Grade Draftsman	1	-	1
3	2 nd Grade Draftsman	1	-	1
4	Head Clerk	-	1	1
5	LD/UD Clerks	2	1	3
6	LD/UD Typists	1	-	1
7	Office Attendant	2	-	2
8	Part Time Sweeper	1	-	1
Total		9	2	11

Findings and Recommendations

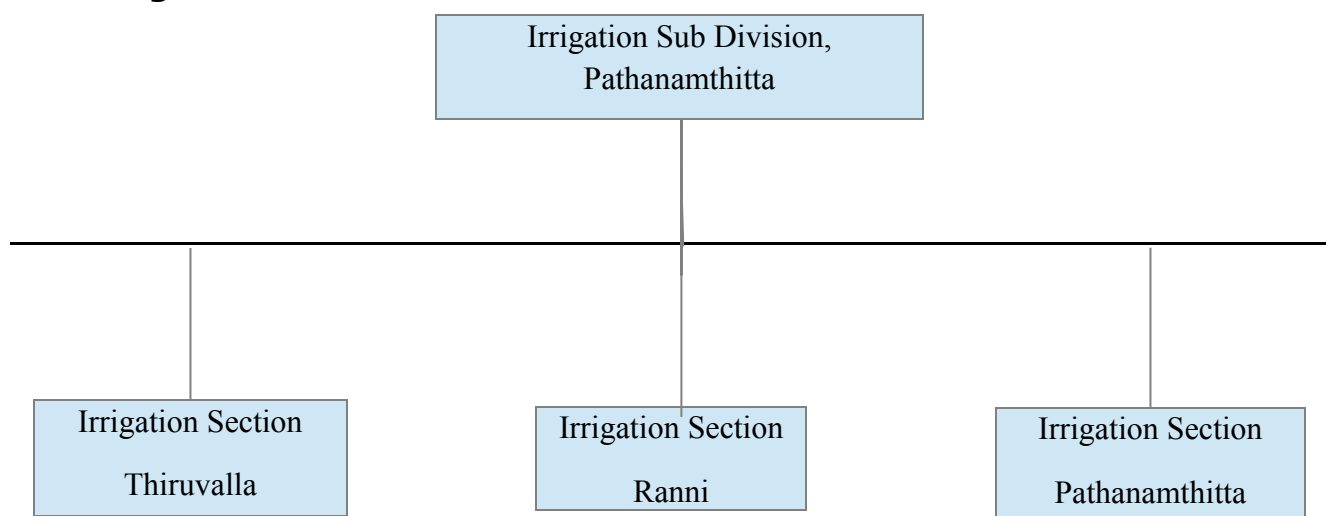
- 50 Analysis of Man Power Index in respect of the Clerks revealed that the clerical works in this Sub - division can easily be managed by the personnel in permanent posts. So we are not recommending continuance sanction to the temporary post of Clerk. The temporary post of Head Clerk may be

given continuance sanction as there is no other supervisory posts of ministerial staff to give proper orientation and guidance to the Clerks.

7.4 Irrigation Sub Division, Pathanamthitta

51 This is the only Irrigation Sub Division in Pathanamthitta District, which was formed as per G.O (Rt) No. 95/2008/WRD dated 24.01.2008. Important rivers passing through the district are Pamba, Achenkovil and Manimala river. The rich water bodies are utilized for power generation and irrigation purposes. The main irrigation project in the district is Pampa Irrigation Project (PIP) set for the utilization of the tail-race water of Sabarigiri Hydro Electric Project for irrigation purposes. The potential of the project is 21135 Ha in Ranni, Kozhencherry, Mallappally and Thiruvalla taluks in Pathanamthitta district and Chengannoor, Mavelikkara, Karthikappally and Kayamkulam taluks in Alappuzha district. Irrigation Sub Division, Pathanamthitta is also entrusted with the works relates to Pampa Action Plan, providing facilities for religious conventions at Maramon and Cherukolpuzha, making necessary arrangements for jalamelas etc.

Organisation Structure



Details of the projects / works in each Sections under Irrigation Sub Division, Pathanamthitta during the 2016-17 financial year

Sl No.	Name of Section	No. of works	Cost estimate
1	Irrigation Section, Pathanamthitta	45	8,73,25,150
2	Irrigation Section, Ranni	18	3,58,46,177
3	Irrigation Section, Thiruvalla	15	1,84,61,896
Total		78	14,16,33,163

Details of Staff

SI No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Asst. Executive Engineer	-	1	1
2	1 st Grade Draftsman	1	-	1
4	Head Clerk	-	1	1
5	LD/UD Clerks	-	2	2
6	LD/UD Typists	-	1	1
7	Office Attendant	-	2	2
8	Driver	-	1	1
9	Part Time Sweeper	-	2	2
	Total	1	10	11

Findings and Recommendations

- 52 The introductory part explains the importance of this Sub Division. The Study Team is having the opinion that the number of temporary posts in each category are in tune with the requirements. Therefore, we recommend that the entire temporary posts may be given continuance sanction.

7.5 IRRIGATION SUB DIVISION, ALAPPUZHA

Organisation Structure

Irrigation Sub Division, Alappuzha

Irrigation Section
Thottappally

Irrigation Section
Alappuzha

Irrigation Section
Cherthala

Abstract showing the projects / works in each Sections under Irrigation Sub Division, Alappuzha during the 2016-17 financial year

Table 1

Sl No.	Name of the Section	No. of works	Cost estimate (in lakhs)
1	Irrigation Section, Thottappally	21	2388.8
2	Irrigation Section, Alappuzha	43	2011.3
3	Irrigation Section, Cherthala	21	2127.56
	Total	85	6527.67

Details of Staff

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Asst. Executive Engineer	1	-	1
2	1 st Grade Draftsman	1	-	1
3	2 nd Grade Draftsman	1	-	1
4	Head Clerk	-	1	1
5	LD/UD Clerks	2	-	2
6	LD/UD Typists	1	-	1

7	Office Attendant	3	-	3
8	PTS	-	1	1
	Total	9	2	11

Analysis of the work content of temporary posts

- 53 The post of Head Clerk is the sole temporary post in Irrigation Sub Division, Alappuzha. The study team analysed the work load of the two clerical posts to reach a verdict on the work content to the post of Head Clerk.

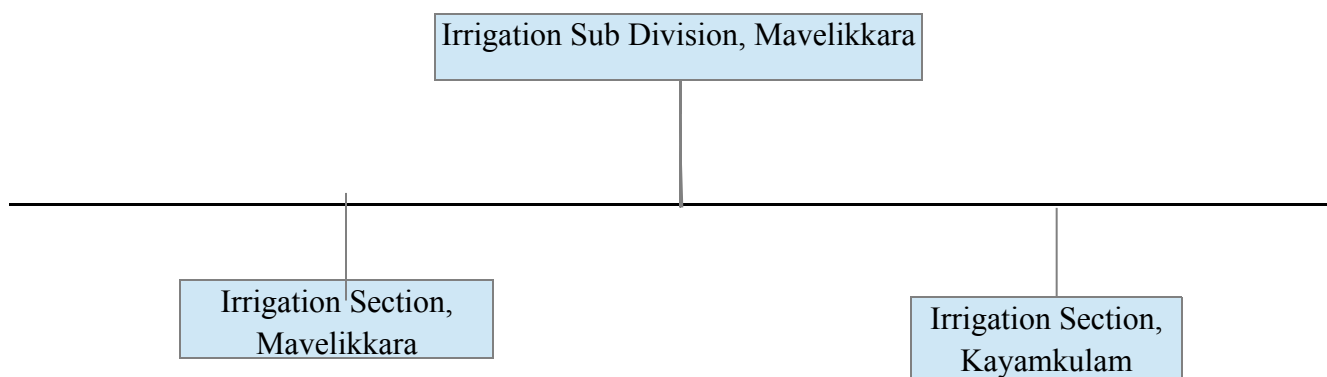
Findings and Recommendations

- 54 Torrential rain followed by strong tidal waves often makes life difficult for the people living in the coastal areas of Alappuzha. Lack of strong sea walls to contain sea waves has been cited as the reason for such flood-like situation. Irrigation Sub Division, Alappuzha is actively pondering options to prevent coastal erosion and flooding due to altering sea levels.
- 55 The study team verified the works executed in the last five years and is of the view that there is uniformity with respect to the work content and the number of staff. Besides, the Executive Engineer has a plan to clean all the canals under their jurisdiction and have prepared the estimates for more than works for the next financial year. The study team is of the view that the post of Head Clerk may be given continuance sanction given the importance of this office for providing timely mitigation to the people affected by natural calamity.

7.6 Irrigation Sub Division, Mavelikkara

- 56 Mavelikkara was located on the banks of the river Achenkovil. Protection works of Kayamkulam lake, Achenkovil river, Manimalayar, Pamba river etc. and coastal protection by constructing sea walls are being planned and executed here.

Organisation Structure



Details of the projects / works in each Sections under Irrigation Sub Division, Mavelikkara during the 2016-17 financial year

Table 1

SI No.	Name of the Section	No. of works	Cost estimate (in lakhs)
1	Irrigation Section, Mavelikkara	26	1311.55
2	Irrigation Section, Kayamkulam	19	1512.4
	Total	45	2823.95

Details of Staff

Table 2

SI No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Asst. Exe. Engineer	1	-	1
2	1 st Grade Draftsman	1	-	1
3	2 nd Grade Draftsman	1	-	1
4	Head Clerk	-	1	1
5	LD/UD Clerks	3	-	3
6	LD/UD Typists	1	-	1
7	Office Attendant	2	-	2
	Total	9	1	10

Findings and Recommendations

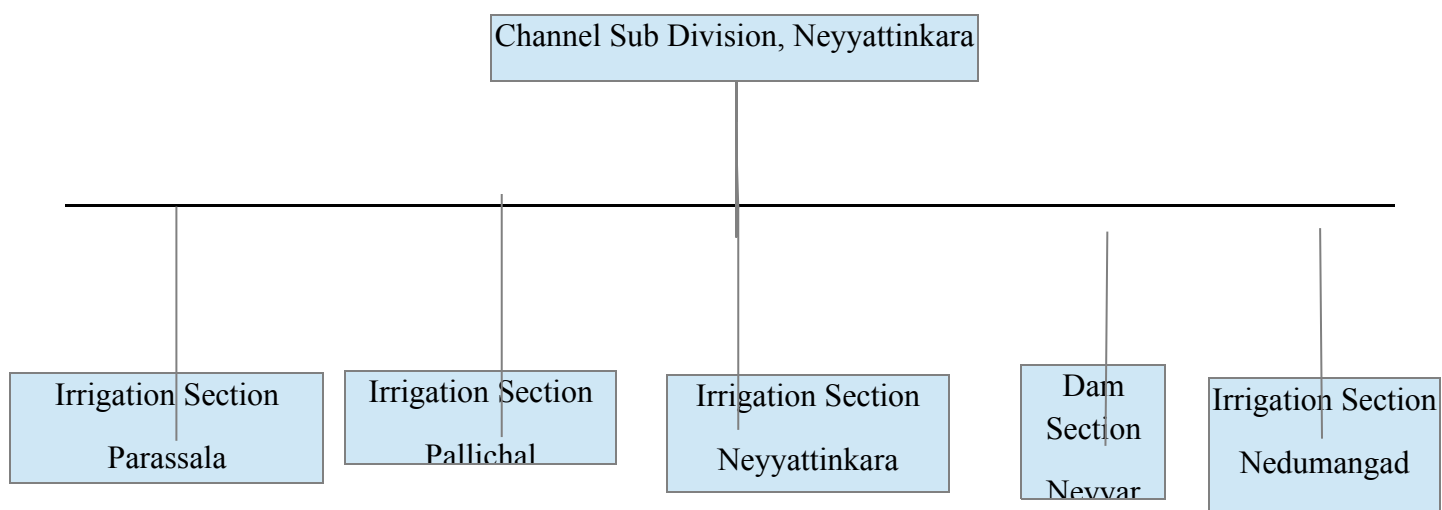
- 57 The post of Head Clerk is the sole temporary post in Irrigation Sub Division, Mavelikkara. The study team analysed the work load of the Head Clerk and also the three clerical posts to reach a verdict on the effectiveness of the post of Head Clerk. The Head Clerk is responsible for the smooth and efficient management of clerical works and has to coordinate the works of three Clerks under his control. Being the sole supervisory post, the Study Team is of the opinion that the post of Head Clerk may be continued.

8 Sub Divisions having less workload

8.1 Channel Sub Division, Neyyattinkara

58 Channel Sub Division, Neyyattinkara is responsible for the effective supervision of Neyyar Irrigation Project (NIP). The NIP, irrigates a Cultivable Command Area of 11740 Ha agricultural land in Thiruvananthapuram district. The water discharged from the Neyyar dam is utilized by means of two channels, one on right side and the other on left side. Right bank main canal has a length of 33.82 Km and the left bank main canal has a length of 33.4 Km. Total length of branch canals is 104.6 Km.

Organisation Structure



Details of the projects / works in each Sections under Channel Sub Division, Neyyattinkara during the 2016-17 financial year

Table 1

Sl No.	Name of the Section	No. of works	Cost estimate
1	Channel Section, Parassala	14	1,21,68,537
2	Channel Section, Pallichal	14	1,26,34,383
3	Irrigation Section, Neyyattinkara	12	97,21,189
4	Dam Section, Neyyar	6	4,81,13,965
5	VIP Section, Nedumanagad	-	-
	Total	46	8,26,38,074

Details of Staff

Table 2

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Asst. Executive Engineer	1	-	1
2	1 st Grade Draftsman	1	-	1
3	2 nd Grade Draftsman	1	-	1
4	Head Clerk	-	1	1
5	LD/UD Clerks	2	1	3
6	LD/UD Typists	1	-	1
7	Office Attendant	2	-	2
8	PTS	-	1	1
	Total	8	3	11

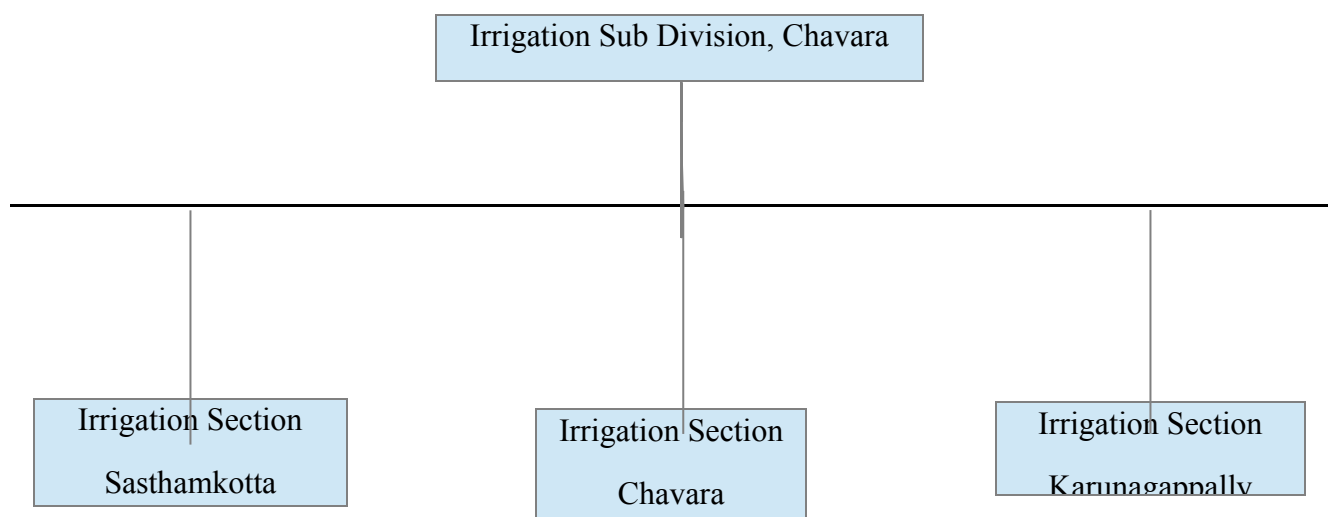
Findings and Recommendations

- 59 There are five Sections under Irrigation Sub Division, Neyyattinkara. One post of Head Clerk and one post of L.D / U.D Clerk are the temporary posts in this Sub Division. With respect to the work content of ministerial staff, the Study Team noted that establishment matters of the staff working in the five sections under this Sub Division are being dealt here. Many court cases, which are pending in various courts including the High Court of Kerala are being dealt here. These cases relate to encroachment of Government property especially the premises of Neyyar Dam and contractor disputes.
- 60 Relying on the above, the Study Team is of the view that the temporary posts of Head Clerk may be given continuance sanction. As the Manpower Index of Clerks is found as 2, the temporary post of Clerk doesn't deserve to be given continuance sanction.

8.2 Irrigation Sub Division, Chavara

61 Irrigation Sub Division, Chavara was formed as per G.O (Rt) No. 53/97/Irrn dated 29.4.1997 by deploying the staff of KIP RB Sub Division No. 12, Karunagappally (except Section No. 3/12). This Sub Division was formed with the objective to protect the coastal regions from sea erosion by constructing sea walls, groynes and revetments.

Organisation Structure



Details of the projects / works in each Sections under Irrigation Sub Division, Chavara during the 2016-17 financial year

Table 1

Sl No.	Name of the Section	No. of works	Cost estimate
1	Irrigation Section, Chavara	2	49,93,273
2	Irrigation Section, Karunagappally	-	-
3	Irrigation Section, Sasthamkotta	2	45,95,840
Total		4	9589113

Details of Staff

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Asst. Executive Engineer	-	1	1
2	1 st Grade Draftsman	-	1	1
3	2 nd Grade Draftsman	-	1	1
4	Head Clerk	-	1	1
5	LD/UD Clerks	-	3	3
6	LD/UD Typists	-	1	1
7	Office Attendant	-	2	2
8	Driver	-	1	1
9	Part Time Sweeper	-	1	1
	Total	-	12	12

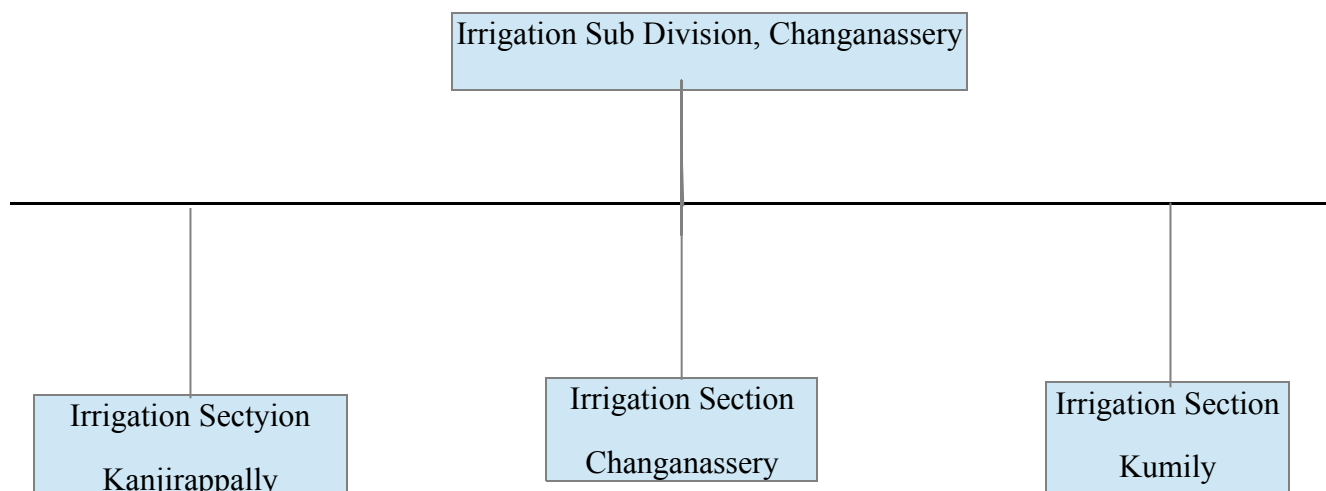
Findings and Recommendations

- 62 All the posts in this Sub Division are temporary including the post of Asst. Executive Engineer. Two posts of Draftsman is the standard strength for a Sub Division with considerable workload. Here, the workload is considerably low and therefore the continuity of both the posts of Draftsman is surely in question. But we noted that certain Sub Divisions that are grouped as Sub Divisions having less workload have two permanent posts of Draftsman. In that perspective, we recommend that for the time being, both posts may be given sanction for continuance. Being a supervisory post, the post of Head Clerk may also be deemed to be essential. The work content analysis of Clerks shows that the Sub Division needs only two clerical posts (Man Power Index is found as two). So we are not recommending continuance sanction to one of the L D/ U D clerical posts. The post of L.D/U.D Typist may be granted continuance sanction.

8.3 Irrigation Sub Division, Changanassery

63 Irrigation Sub Division, Changanassery was detached from Irrigation Division, Alappuzha in the year 1992 and brought to the administrative control of Irrigation Division, Kottayam.

Organisation Structure



Functions

1. Protection works of Manimala river, Meenachil river, Kodoor river, Azhutha river, Periyar river, Chittar thodu, Erumeli thodu, Vakathanam valiya thodu, and Vettikalar.
2. Protection works of Chethipuzha canal, Muttar - Neelamperoor canal, Muttom - Changanassery canal, Kdai canal and 60 Km of feeder canals of National Waterway III.
3. Construction of check dams, bridges and boat jetties.
4. Execution of NABARD funded projects.

Details of the projects / works in each Sections under Irrigation Sub Division, Changanassery during the 2016-17 financial year

Sl No.	Name of Section	No. of works	Cost estimate
1	Irrigation Section, Kanjirappally	4	3060000
2	Irrigation Section, Changanassery	6	8215000
3	Irrigation Section, Kumily	9	9,82,000
Total		19	12257000

Details of Staff

SI No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Asst. Executive Engineer	1	-	1
2	1 st Grade Draftsman	1	-	1
3	2 nd Grade Draftsman	1	-	1
4	Head Clerk	-	1	1
5	LD/UD Clerks	2	1	3
6	LD/UD Typists	1	-	1
7	Office Attendant	2	-	2
8	Part Time Sweeper		1	1
	Total	8	3	11

Findings and Recommendations

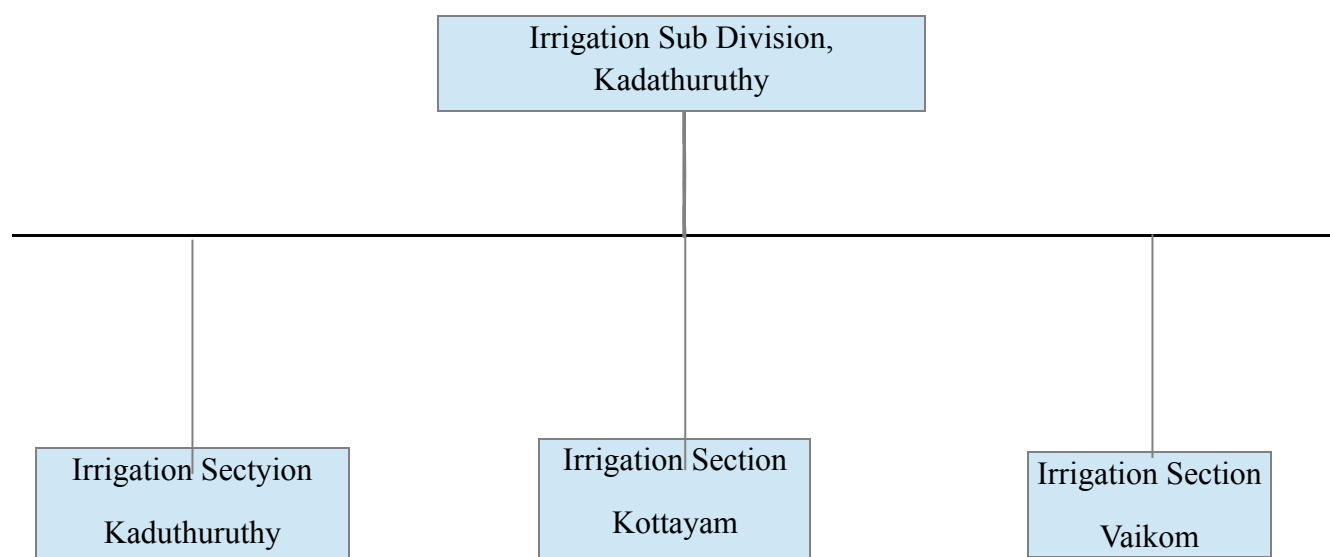
- 64 One post of Head Clerk and one post of L D / U D Clerk are temporary in Irrigation Sub Division, Changanassery. The Man Power Index indicates that the two posts of L D / U D Clerks is sufficient to satisfactorily performing the ministerial works in Changanassery Sub Division. Hence the temporary post of Clerk may not be given continuance sanction. As the post of Head Clerk is the only post that coordinates and supervises the clerical works, it may be granted continuance sanction.

8.4 Irrigation Sub Division, Kaduthuruthy

- 65 As per G.O (Ms) No. 35/1992/Irrn dated 16.10.1992 Irrigation Sub Division, Kaduthuruthy was formed by deploying the erstwhile KIP (MCS) Sub Division No.18, Kottiyam. The major rivers under the jurisdiction of Irrigation Sub Division, Kaduthuruthy are Meenachil river and Muvattupuzha river. Meenachil river flows through Meenachil, Vaikom and Kottayam taluks. The total catchment area of Meenachil River is 1208 sq km and is formed by several streams originating from the Western Ghats in Idukki district. It has

38 tributaries. The Muvattupuzha river originates from Idduki district flowing mostly through Vaikom taluk and joins with Vembanad Lake. These rivers are the sources of several drinking water projects that caters to the need of lakhs of people in central Kerala. This Sub Division look after the inland water ways such as Kottayam - Alappuzha, Kumarakom - Muhamma, Maniyapaerambu - Cheepunkal, Vaikom - Thavanakadavu. River bank protection works for a stretch of 100 Km and navigation facilities improvement for a length of 150 Km are being carried out here. NABARD aided projects, projects funded by the Kerala State Water Transport Dept. and Tourism Dept. are being executed by this Sub Division.

Organisation Structure



Details of the projects / works in each Sections under Irrigation Sub Division, Kaduthuruthy during the 2016-17 financial year

Table 1

Sl No.	Name of the Section	No. of works	Cost estimate
1	Irrigation Section, Kottayam	6	2680927.6
2	Irrigation Section, Vaikom	3	2548525.75
3	Irrigation Section, Kaduthuruthy	10	45526792
	Total	19	50756245

Details of Staff

Table 2

SI No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Asst. Executive Engineer	-	1	1
2	1 st Grade Draftsman	-	1	1
3	2 nd Grade Draftsman	-	1	1
4	Head Clerk	-	1	1
5	LD/UD Clerks	-	3	3
6	LD/UD Typists	-	1	1
7	Office Attendant	-	2	2
	Total	-	10	10

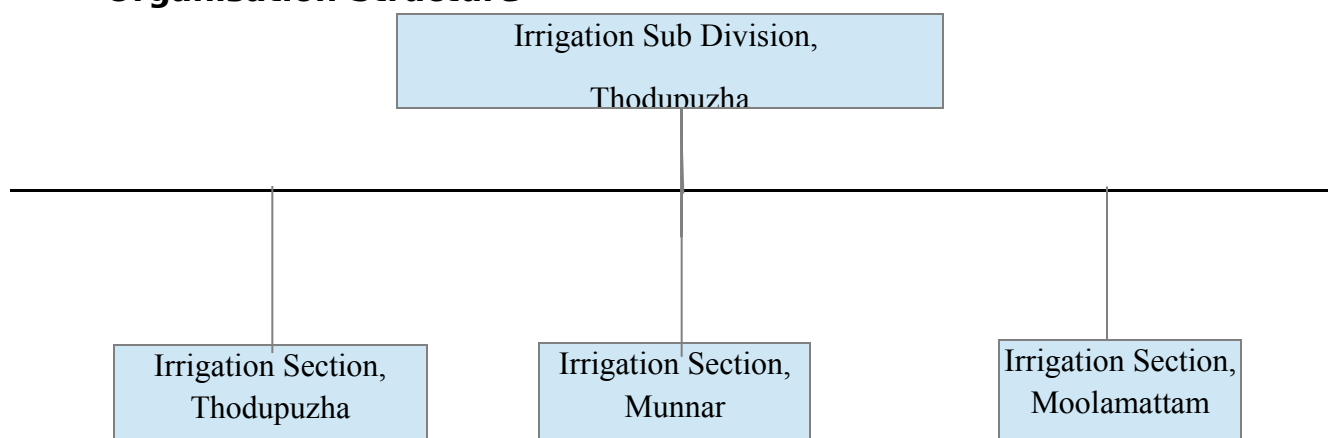
Findings and Recommendation

- 66 Sub Division, Kaduthuruthy is identical to Sub Division, Chavara. Hence we endorse the recommendation provided in the case of Sub Division, Chavara at para 62.

8.5 Irrigation Sub Division, Thodupuzha

- 67 Irrigation Sub Division, Thodupuzha is the sole Sub Division in Idukki Dt. Thodupuzha, Kaliyar, Muthirapuzha, Deviyar, Periyar, Thalayar, Edathanapuzha, Mullarigadu river, Valiyar and Nacharpuzha are the important rivers in the district. Mullaperiyar dam, Idukki dam, Idamalayar dam were constructed across the Periyar. Kundala Dam, Mattupetty Dam, Munnar head works, ponmudi dam and the kallarkutty Dam are constructed across the various tributaries of Periyar. There are a few natural lakes namely Eravikulam and Devikulam lakes in Idukki district.

Organisation Structure



Details of the projects / works in each Sections under Irrigation Sub Division, Thodupuzha during the 2016-17 financial year

Table 1

Sl No.	Name of the Section	No. of works	Cost estimate
1	Irrigation Section, Thodupuzha	19 (combined total)	42142512
2	Irrigation Section, Moolamattom		
3	Irrigation Section, Munnar		
	Total	19	42142512

Details of Staff

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Asst. Executive Engineer	-	1	1
2	1 st Grade Draftsman	-	1	1
3	2 nd Grade Draftsman	-	1	1

4	Head Clerk	-	1	1
5	LD/UD Clerks	-	3	3
6	LD/UD Typists	-	1	1
7	Office Attendant	-	2	2
8	Part Time Sweeper	-	1	1
9	Driver	-	1	1
	Total	-	12	12

Findings and Recommendations

- 68 Sub Division, Thodupuzha is identical to Sub Division, Chavara. Hence we endorse the recommendation provided in the case of Sub Division, Chavara at para 62.

9 Analysis of workload in Sections

We have classified the lowest executive units i.e. Sections as '**Sections having normal workload**' and '**Sections having less workload**'. A Section will be deemed to have normal workload if satisfy any of the following conditions:

- i. Average cost estimate (Total cost estimate of works in a Sub Division/ No. of Sections) will be at least 5 crore.
- ii. Average number of works (Total works in Sub Division/ No. of Sections) will be 15 or more.

69 We set the aforementioned parameters by making the sections under Irrigation Division, Alappuzha as reference. Irrigation Division, Alappuzha executes most number of works under Irrigation South Circle. Details of works is given below:

Sl No.	Name of the Section	No. of works	Cost estimate (in lakhs)
1	Irrigation Section, Thottappally	21	2388.8
2	Irrigation Section, Alappuzha	43	2011.3
3	Irrigation Section, Cherthala	21	2127.56
4	Irrigation Section, Mavelikkara	26	1311.55
5	Irrigation Section, Kayamkulam	19	1512.4

70 In all the above sections, sanctioned strength of Overseers is two except Alappuzha and Mavelikkara, where three Overseers are allowed. Functioning of these sections provides a clear picture on the requirement of posts in sections especially Overseer.

71 Applying the aforesaid parameters, 16 Sections will come to the category of Sections having normal workload and 17 will come to the category of Sections having less workload.

Sections having normal workload

Table 1

Sl No.	Section	Manpower (Overseers)	
		Permanent	Temp.
1	Attingal	2	-
2	Varkala	2	-
3	Tvpm	2	-
4	Section No.1, Tvpm	2	1
5	Section No.2, Tvpm	2	1
6	Kottiyam	2	-
7	Kollam	2	1
8	Kottarakkara	1	1
9	Thiruvalla	2	-
10	Ranni	-	2
11	Pathanamthitta	2	-
12	Thottappally	2	-
13	Alappuzha	3	-
14	Cherthala	2	-
15	Mavelikkara	2	1
16	Kayamkulam	2	-

Sections having less workload

Table 2

Sl No.	Section	Manpower (Overseers)	
		Permanent	Temp.
1	Channel Section, Pallichal	-	3
2	Channel Section, Neyyattinkara	-	3
3	Dam Section, Neyyar Dam	-	3
4	Channel Section, Parassala	-	3
5	VIP Section, Nedumangadu	-	-
6	Irrigation Section, Sasthamkotta	-	3
7	Irrigation Section, Karunagappally	-	-
8	Irrigation Section, Chavara	-	3
9	Irrigation Section, Kadathuruthy	-	4
10	Irrigation Section, Vaikom	-	3
11	Irrigation Section, Kottayam	-	4
12	Irrigation Section, Kanjirappally	-	4
13	Irrigation Section, Changanassery	-	3
14	Irrigation Section, Kumily	-	4
15	Irrigation Section, Moolamattom	-	4
16	Irrigation Section,	-	4

	Thodupuzha		
17	Irrigation Section, Munnar	-	4

Findings

a) Strength of Overseers in Sections having normal workload

72 Table 1 shows that the maximum strength of Overseers sanctioned in a Section having normal workload is three including a temporary post. As these Sections have considerable workload, we are of the view that the temporary post of Overseers in Sections falls under this category may be given continuance sanction provided that the workload of Overseers should be evaluated at specific intervals. In short, maximum strength of Overseers in an Irrigation Section, which is classified as Section having normal workload should be three.

b) Strength of Overseers in Sections having less workload

73 Table 2 shows the list of Sections that are characterised as Sections having less workload. It is clear that in terms of workload, these Sections are nowhere near the Sections termed as Sections having normal workload. Hence the strength of Overseers should be less than the strength of Overseers in a Section with considerable workload. It is notable that this class of Sections are totally functioning on temporary posts. We are of the view that the ideal strength of Overseers in this class of Sections shall be two i.e. one post less when comparing with the strength in a Section with considerable workload.

c) Continuance sanction to the post of Draftsman in sections

74 An anomaly has been noted in certain sections where temporary post of Draftsman is provided. It is further noted that these sections were created by deploying the staff from erstwhile KIP Sections. In fact, the post of Draftsman is not needed in Sections because the duties of the Draftsman such as preparation of designs and drawings of structures, plot survey work based on field data and preparation of detailed estimate are done by the drawing branches associated with Divisions and Sub Divisions. There is no work for Draftsman in an Irrigation Section as per the Manual followed by the department. The disparity has caused as a result of accommodating the excess staff in erstwhile KIP Sections. Hence, we have decided not to recommend continuance sanction to the post of Draftsman in sections.

- 75 Temporary posts in sections that are subjected for study are of Assistant Engineer and Overseer. Detailed analysis of these posts on section -wise is provided in the following chapters.

10 Sections having normal workload

10.1 Irrigation Section, Thiruvananthapuram

76 In Irrigation, Section, Thiruvananthapuram, the only temporary post is of Driver. The post of Driver has been excluded from the purview of the study. See Methodology at chapter 2.

10.2 Irrigation Section No.1, Thiruvananthapuram

77 Irrigation Section No.1, Thiruvananthapuram has control over the entire Karamana river and Neyyar river to make these water resources with limited yield but increasing demands, of pollution free and maintain the natural riverine environment. Construction of sea wall from Kollamcode to Vizhinjam is also falls under the responsibility of this Section.

Details of staff

Table 1

SI No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	1	-	1
2	Overseer Grade III	2	1	3
3	Driver	3	-	3
4	Lascar	2	-	2
	Total	8	1	9

List of ongoing projects / works in Irrigation Section No.1, Thiruvananthapuram

Table 2

SI No.	Name of the project/ work and a brief description	Estimate PAC (in lakhs)
1	Construction of Mini Dam in Karamana River D/s of Vellaikadavu road bridge in Vattiyoorkavu Constituency	94.53
2	Construction of Mini Dam in Karamana River D/s	96.15

	of Kundamonkadavu bridge in Kattakkada Constituency	
3	Construction of Balikaavu on the right bank of Karamana River near Srikrishna Temple at Thrikkannapuram in Thiruvananthapuram Corporation	22.40
4	Pollution of water in Balikadavu of Thiruvallam Parasurama Swamy Temple- Operation of the shutters of the VCB and upkeeping of premises of Thiruvallam Thodu in Thiruvananthapuram Dist for one year	6.15
5	Maintenance and cleaning of Thiruvallam Thodu and all four kadavus and maintenance of Aruvikkara check dam and balikadavu prior and after Karkkidakavavu Bali for the year 2016	2.85
6	Construction of protection wall and kadavu on the right bank of Karamana River near Arumboo Devi /temple in Pappanamcode	9.92
7	Construction of protection wall at Erayamcode purayidam south side of Karamana River	10.00
8	Construction of protection wall on the left bank of Karamana River upstream of Vellaikadavu bridge in Kattakkada Constituency	18.74
9	Construction of Balikadavu on the right bank of Karamana River near Sreechakrathil Siva Temple at Thrikkannapuram in Thiruvananthapuram Corporation	21.94
10	Construction of protection wall on the left bank of Karamana River behind Youvajana Sangham Library near Edagramam Junction, Thiruvananthapuram	24.92
11	Karamana River Scinetific Management (Pilot) (KRSM Project) Dhobighat in Karamana River at Kalady	14.75
12	Construction of protection wall on the right bank of Karamana River rear side of Pearl Garden at	16.75

	Thamalam in Mudavanmugal Ward	
13	Construction of Balikadavu on the right bank of Karamana River at Anandeswaram Temple in Aryanadu Village	20.61
14	RMF- Construction of protection wall and bathing gaht in the right bank of Karamana River at Erumode in Aryanadu Panchayat	24.26
15	Reformation of sea wall for a length of 60 m from Ch. 600 to 660m between CP 6044 and CP 6043 at Kollamcode	24.88
16	Reformation of sea wall for a length of 60 m from Ch. 670 to 730 m between CP 6044 and CP 6043 at Kollamcode	24.96
Total		433.81

Findings and Recommendations

- 78 The sole temporary post in Irrigation Section No. 1, Thiruvananthapuram is in the cadre of Overseer Grade III. 16 works with an estimated cost of Rs. 4,33,81,000/- have been undertaken by this Section for the year 2016-17. This Section has identified the works totaling a figure of 40 numbers to be done in 2017-18. Estimates have been submitted for approval and administrative sanction has been got in some cases. As this Section satisfies the parameter set for distinguishing a Section having normal workload, the temporary post of Overseer Grade III may be given continuance sanction.

10.3 Irrigation Section No.II, Thiruvananthapuram

- 79 Irrigation Section No.II, Thiruvananthapuram has jurisdiction over the entire Killi river. This Section undertakes the scientific projects designed to clean up the Killi river and revive it from its current depleted stage, which was once a rich source of water for the Thiruvananthapuram city.

Details of staff

Table 1

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	1	-	1

2	Overseer Grade III	2	1	3
3	Driver	-	2	2
	Total	3	3	6

**List of ongoing projects / works in Irrigation Section No.II,
Trivandrum**

Table 2

Sl No.	Name of the project/ work and a brief description	Estimate PAC
1	Protecting the banks of Killi River at essential reaches and removal of waste materials, jungle growth and deltas from Thozhuvancode bridge to Kaduvetty Bridge.- Revised as per new SOR 2012	1,51,27,000/-
2	Protecting the banks of Killi River at essential reaches and removal of waste materials, jungle growth and deltas from Kaduvetty regulator towards downstream from ch:00 to ch:425m	1,17,13,000/-
3	Protecting the both banks of Killi River at essential reaches and removal of waste materials, jungle growth and deltas from ch-455 downstream of Kaduvetty regulator to ch-1075m downstream.	97,62,000/-
4	Protecting the both banks of Killi River at essential reaches and removal of waste materials, jungle growth and deltas from ch-1080 downstream of Kaduvetty regulator to Maruthankuzhi Regulator ch-1625m.	45,63,000/-
5	Protecting the both banks of Killi River at essential reaches and removal of waste materials, jungle growth and deltas from Maruthankuzhy ch-00 to ch-960m downstream towards Pangode Bridge.	1,37,11,000/-

6	Protecting the right bank of Killi River from downstream of pangodu bridge ch.00 to 655m towards jagathy bridge,at essential reaches.	74,97,000/-
7	Protecting the right bank of Killi River near bund road Jagathy ,down stream of Pangodu Bridge 660m to ch 1460 m .	1,40,47,000/-
8	Protecting the left bank of Killi River from downstream of Pangodu bridge ch.00 to Jagathy bridge ch 1480 m at essential reaches and removal of waste materials jungle growth and delta.	95,57,000/-
9	Protecting the banks of Killi River at essential reaches and removal of waste materials, jungle growth and deltas from jagathy bridge ch-00 to Parachira bridge ch 305m down.	86,69,000/-
10	Protecting the banks of Killi River at essential reaches and removal of waste materials, jungle growth and deltas from PARACHIRA BRIDGE (ch.0 m to 480 m) - Revised as per new SOR-2012	1,47,60,000/-
11	Protecting both banks of Killi river at essential reaches and removal of waste materials jungle growth and delta from ch:975m downstream of Maruthankuzhy regulator to Pangode Bridge ch: 1715m - Balance work.	88,18,000/-
12	Protecting both banks of Killi river at essential reaches and removal of waste materials jungle growth and delta from Parachira Bridge (ch:500m to 1100m) downstream - Balance work.	80,22,000/-
	Total	12,62,46,000

Findings and Recommendations

80 12 big projects, all are pertaining to the rejuvenation of Killi river are progressing under the supervision of Irrigation Section No.II, Thiruvananthapuram. This Section also executes the projects designed by the Kerala State Council for Science & Technology and Trivandrum Development Authority. As this Section comes to the category of Section having normal workload, the Study Team is of the opinion that the temporary post of Overseer may be granted continuance sanction.

10.4 Irrigation Section, Kollam

81 Irrigation Section, Kollam serves Kollam, Kundara, Eravipuram and Chathannoor LA constituencies. Functions of this Section include anti - sea erosion works from Kappil to Sakthikulangara, ASC works, Flood control and flood damage, drought relief schemes, NABARD aided projects etc.

Details of Staff

SI No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	1	-	1
2	Overseer Grade III	2	1	3
3	Lascar	2	-	2
4	Driver Grade II	-	1	1
	Total	5	2	7

List of ongoing projects / works in Irrigation Section, Kollam

Table 2

SI No.	Name of the project/ work and a brief description	Estimate PAC
1	Reformation of damaged seawall for a length of 71 .00m north of 20.00m towards and south of 52.00m towards in CЕССР 358 at thirumullavaramin Kollam Constituency.	25,00,000.00
2	Reformation of damaged seawall for a length of 67 .00m towards north of 154.00 to 221.00m between CЕССР 348 and 349 near Mound Carmel School in Kollam Constituency.	14,96,074.00
3	Reformation of damaged seawall for a length of 135 .00m towards north of 0.00 to 135.00m between CЕССР 348 and 349 near Mound Carmel School in Kollam Constituency.	29,98,322.00
4	Renovation of Asramam Children Park at Kollam	18,00,000.00

5	Modernization of Walkway and Other Beautification works at Asramam Maidanam near the banks of Ashtamudi lake in Kollam	1,50,00,000.00
6	Development of Thanni Beach in Mayyanadu Panchayath in Kollam District.	87,00,000.00
7	Construction of Groins field Between Ch.6.800 to 7.600 KM near St: Micheals Church at Thanni in Eravipuram Constituency.	3,24,69,708.00
8	Construction of Groins field Between Ch.7.700 to 8.3000 KM at Thanni in Eravipuram Constituency.	3,13,27,261.00
9	Construction of Groins field Between Ch.9.000 to 10.000 KM near Kulathippadam to Garfil Nager area in Eravipuram Constituency.	3,61,81,101.00
10	Construction of Groins field Between Ch.10.450 to 11.050 KM at Kakkathoppu in Eravipuram Constituency.	3,48,88,939.00
11	Construction of Regulator across Kallada river at Kadapuzha	12,00,00,000.00
Total		28,73,61,405

Findings and Recommendations

- 82 Currently, Irrigation Section, Kollam has undertaken 11 works with an estimate totaling Rs. 28,73,61,405/-. This Section is having considerable work load and therefore the sole temporary post of Overseer may be given continuance sanction.

10.5 Irrigation Section, Kottiyam

- 83 Irrigation Section, Kottiyam oversees the preservation of Ithikkara river, Pallimon river and its tributaries. Its jurisdiction extend to 20 Gramapanchayaths in 7 LA constituencies.

Details of Staff

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	1	-	1
2	Clerk	1	-	1

3	Overseer Grade III	2	1	3
4	Lascar	2	-	2
	Total	6	1	7

List of ongoing projects / works in Irrigation Section, Kottiyam
Table 2

Sl No.	Name of the project/ work and a brief description	Estimate PAC
1	RMF- River bank protection work in Ithikkara river near Marthoma Science and Technology College in Chadayamangalam Panchayath.	3,181,084.00
2	RMF- protecting the eroded L/B of Ithikkara river and construction of Balikkadvu near Ayiravally temple in Ettaiva Pt.	2896573.58
3	RMF- protecting the eroded sides of Ithikkara river near Marthoma Science and Technology College Ayoor in Chadayamangalam Panchayath.-II	1497930.00
4	RMF- protecting the eroded R/B of Ithikkara river near KIP aqueduct in Aduchanlloor Pt.	1497930.00
5	RMF- protecting the eroded R/B of Ithikkara river near Kuzhinthagam at Kalavyal in Velinealloor Pt.	4495600.00
6	RMF- Protecting the eroded R/B of Ithikkara river near Kannor Kalavayal bhagam in Velinealloor Pt.	3399136.00
7	RMF- protecting the eroded R/B of Ithikkara river near Peringalloor bhagam in Edamulakkal Pt. in Punalur Constituency	4494955.00
8	RMF- protecting the eroded R/B of Ithikkara river down stream of Mulayamkadavu pump house in Elamadu Pt.	4296265.00
9	Investigation for the construction of check dam across Ithikkara river downstream of Arkkannoor bridge in Elamadu Pt. in Chadayamangalam constituency	299385.00
10	RMF- protecting the eroded R/B of Ithikkara	4349603.00

	river near Sree Ramasawamy temple in Velinelloor Pt	
11	Protecting the eroded R/B of Pallimon river near Elavoor Kizhakkekkara bhagam in Nedumpana Pt.	1500000.00
12	Tourism Circuit - Gateway II, near KSRTC bus station, Kollam - providing parking facilities, SS hand rails and other allied works.	4464109.00
13	Tourism Circuit - Gateway I, near KSRTC bus station, Kollam - providing parking facilities, SS hand rails and other allied works.	4422348.93
14	Tourism Development works for the betterment of meenmutty water falls in Chadayamangalalm constituency.	3000000.00
15	Construction of checkdam across Pallimon river near Pallimon pump house at Nedumpana Pt. in Kundara Constituency	4500000.00
Total		4,82,94,919

Findings and Recommendations

- 84 Main works of Irrigation Section, Kottiyam is associated with the river bank protection of Ithikkara river, the main feeder of Paravur lake and a source of drinking water, which is facing severe threats for its natural existence. To help survive the river from ecological degradation, the department has still a long way to go. Works against a cost estimate of Rs. 48294919/- is ongoing under the supervision of this Section. The temporary post of Overseer may be allowed to continue.

10.6 Irrigation Section, Kottarakkara

- 85 Irrigation Section, Kottarakkara has jurisdiction over Kallada river and its tributaries viz. Kazhuthurutty river, Kulathupuzha river and Chaliyakkara river. This Section is focused on protecting the banks of these rivers.

Details of Staff

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	1	-	1
2	Overseer Grade III	1	1	2

3	Lascar	2	-	2
	Total	4	1	5

List of ongoing projects / works in Irrigation Section, Kottarakkara
Table 2

Sl No.	Name of the project/ work and a brief description	Estimate PAC
1	Ponganpara recreation Tourism destination Kottarakkara, Kollam	4247025.64
2	Infrastructure development of Meenpidipapara Tourism Centre in Pulamonthodu at Kottarakkara	3659024.00
3	RMF - Construction of storage weir across Kallada river at D/S of Arattupuzha bridge in Pattazhy Pt.	37270048.00
4	RMF protecting the eroded R/B of Kallada river U/s of Njankadavu bridge in Pavithraeswaram Panchayath	2080836.00
5	RMF protecting the eroded L/B of kallada river near Kamukum cherry Thiruvilan -gonappan temple in Thalavoor Panchayath	4451390
6	RMF protection works at Muthiraparambu & Mulakkal kadavu in West Kallada Panchayath	1944149.00
7	RMF construction of retaining wall damaged portions of existing retaining wall upstream of Edapalayam church in Aryankavu village.	949888.00
8	Protecting the eroded L/B of Kallada river D/s of Enathu bridge towards Edinjakadavu in Kulakada Pt.	4496478.00
9	RMF - Protecting the eroded L/B of Kallada river U/s of Choorallookadavu in Pattazhy Pt.	2911491. 28
10	RMF - Protecng the eroded R/B of Kallada river D/s of Muthiraparambu Kadavu near Chaprayil Hospital in West Kallada Pt	3559163.3
11	RMF - Protecng the eroded R/B of Kallada river near VKC Junction in West Kallada Pt	4495664. 95

12	RMF - Protecting the eroded R/B of Kallada river near Kamkumcherry mattathukadavu in Piravanthoor Pt.	4496662.00
13	RMF - Protecting the eroded R/B of Kallada river near Idiyakkadau in East Kallada Pt.	2737810.00
14	RMF - Protecting the eroded L/B of Achankovil river near Kuttathilmannilbhgam Aryankavu Pt.	4488384.00
15	Protecting the eroded L/B of Kallada river U/s of Edinjakadavu in Kulakkada Pt.	2500000.00
16	Protecting the eroded L/B of Kallada river near KSRTC garage Punalur	2500000.00
17	Protecting the Nelpurakunnu bund road in West Kallada Pt.	3300000.00
18	Protecting the eroded R/B of Kallada river in the D/s of Arattupuzha bridge in Pattazhy Pt.	1500000.00
19	MLA - SDF-2016-17 Punalur Constituency constructing temporary bund over the existing checkdam across Kallada river for meeting the water requirement of KWA pumping of Nellippally for Punalur Municipality using the MLA - SDF of Hon'ble MLA Sri.K.Raju	323093.60
20	Investigation for the construction of checkdam cum bridge across Achankovil river in Achankovil ward of Aryankavu Pt.	169376.00
21	Providing boat landing facility walkway, bath ghatt etc. on the banks of Kallada river near suspension bridge at Punalur.	4000000.00
Total		9,60,80,483

Findings and Recommendations

- 86 Table 2 shows the enormity of the works undertaken by the Irrigation Section, Kottarakkara. Estimated cost of the entire works amounts to Rs. 96080483/-.Temporary post of Overseer may be granted continuance sanction.

10.7 Irrigation Section, Ranni

Functions

- i. Execution of projects connected to Sabarimala pilgrimage season.
- ii Projects related to Cherukolppuzha Hindumatha Parishathu
- iii Construction of check dams in Pamba, Kallar, Kakki and Kakkadu etc.

Details of Staff

Table 1

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	-	1	1
2	Draftsman Grade I	-	1	1
3	Draftsman Grade II	-	1	1
4	Overseer Grade III	-	2	2
5	Lascar	-	1	1
6	CLR Worker	-	1	1
	Total	-	7	7

List of ongoing projects / works in Irrigation Section, Ranni

Table 2

Sl No.	Name of the project/ work and a brief description	Estimate PAC
1	Protecting the L/B of Pamba river in the upstream of Bunglow Kadavu bridge in Vadasserikkara Panchayath.	949288/-
2	Providing protection works at Moozhikkal kadavu near Ranny bridge on the right bank of Pampa river in Ranny Pazhavangadi panchayat.	17,08,434.83

3	Sabarimala pilgrimage 2016-17 providing two temporary cross bund across Karakkad thodu near the PIP water escape near Vadasserikkara in Vadasserikkara panchayat.	532751
4	Sabarimala pilgrimage 2016-17 cleaning pampa Triveni removing silts, slurry clothes and slipped earth before and after pilgrimage season.	658814
5	Sabarimala pilgrimage 2016-17 providing two platforms cum Bed bar across Karakkadu thodu near PIP water escape in Vadasserikkara panchayat.	1013577
6	Sabarimala pilgrimage 2016- 17 providing temporary barricade and warning boards at various Kadavus in Pampa river and Karakkad river and erection of seasonal fencing waters at Pampa - Triveni	885848
7	Sabarimala pilgrimage 2016- 17 Annual maintenance of permanent irrigation structures like check-dams, office building etc at Pampa	1126700
8	Sabarimala pilgrimage 2016-17 providing temporary cross bund the mouth of Kakki river in the upstream of Pampa Triveni bridge.	917581
9	Sabarimala Pilgrimage 2016-17 providing a drainage system, protection wall and permanent fencing work in between the foot bridge and Arattukadavu VCB on the left bank of Pampa river in Pampa- Triveni	2638322
10	Sabarimala Pilgrimage 2016-17 Urgent construction and rectification works with steps, cut off wall, protection wall, foot path, bed bar etc, in between Balippura and ArattuKadavu V.C.B on either sides of Pampa river in Pampa Triveni	2121883
11	Sabarimala Pilgrimage 2016-17 providing a platform cum bed bar across Kakki river near Balippura at Pampa Triveni	2215945
12	Cherukolpuzha Hindu Matha Parishath 2017 urgent maintenance works in convention nagar and parking ground on both banks of	649708

	Pampa river in Ayroor & Cherukol panchayat.	
13	Construction of check dam across Kakkad river upstream of Angamoozhy bridge near Kochandy water supply scheme in Seethathodu Panchayat.	6187232.93/-
14	Urgent rectification of Chempon semi permanent check dam across Pampa river down stream of Chempon KWA intake well in Vadasserikkara Panchayat.	39,99329.43/-
15	Urgent rectification of Madamon semi-permanent checkdam across Pampa river downstream of Adichippuzha KWA intake well in Ranni Perinad	39,97,648.90/-
16	Construction of check dam across Kakkad river downstream of Paikara muddy scheduled cart water supply scheme in seethathodu panchayat.	5490452.20/-
17	Urgent rectification works Sabarimala pilgrimage 2015-16, emergency works at bathing ghat area between Balippura, Arattukadavu and rectification at various irrigation structures like VCBs, check dams etc temporary fencing works due to heavy rain and heavy flood at Pampa- Triveni	2,52,957/-
18	RBDP- Providing protection work and construction of Kadavu near Keepanal Kadavu in Ranny Panchayat.	499705/-
Total		3,58,46,177.29

Findings and Recommendations

- 87 From Table 2, it can be seen that the majority of the works relates to Sabarimala pilgrimage. Relying on the observations quoted below, we are of the opinion that the two temporary posts of Overseer may be given continuance sanction:
- i An Irrigation camp office is functioning at Sabarimala during the pilgrimage season to oversee the arrangements made ahead of the pilgrimage season are properly working. Staff from Rani Section has to be present in the camp office during this period. The works include cleaning of Pampa river, fixing of barricades and intimation boards, maintenance of 6 VCBs, constructing bunds at Triveni and Vadasserikkara for pilgrims etc.

- ii Presently, 18 works are progressing under the supervision of this Section.
- iii This Section has to engage in certain seasonal works relates to Cherukolpuzha Hindumatha Convention.

Since the duties of Draftsman is no way relates to the nature of work in a section, the post of Draftsman is not feasible. For the reasons stated in Chapter 9, temporary posts of Draftsman may be discontinued.

10.8 Irrigation Section, Cherthala

- 88 There is only one temporary post which belongs to Part Time Sweeper. The post of Part Time Sweeper has been excluded from the study.

10.9 Irrigation Section, Alappuzha

- 89 The one and only temporary post in this Section is of Watcher and it has been excluded from the study.

10.10 Irrigation Section, Thottappally

- 90 The sole temporary post in this Section is of Part Time Sweeper which has been excluded from the study.

10.11 Irrigation Section, Mavelikkara

- 91 Irrigation Section, Mavelikkara is entrusted with the projects / works associated with the riverbank protection. Majority of the financial outlay has been given towards the construction of structures called Groyne or Spur, on the riverbanks of Achenkovil, Pamba, Manimalayar etc. so as to limit the movement of the bank through flood. Jurisdiction of Irrigation Section, Mavelikkara extends to Mavelikkara Municipality and the Grama panchayaths viz. Bharanikavu, Nooranadu, Papalamel, Vallikunnam, Chunakkara, Thekkekara, Thamarakkulam, Chennithala, Thripperunthura, Edathuva, Thalavady, Muttar, Chettikulangara, Thrikkunnapuzha and Veeyapuram.

Details of the ongoing works in Mavelikkara Irrigation Section is shown below;

Sl No.	Name of the project/ work and a brief description	Estimate PAC (in lakhs)
1	KDS - Protection work to the left bank of Manimala river in front of S.C Colony east of Kumaramchira jetty in ward No. 8 of Veliyanadu Grama Pt. in Kuttanadu L.A Constituency.	7.46
2	KDS - Protecting the northern bank of Kaithathodu from Karukayil Kulikadavu towards east Valukulam padi in ward No. 10 of Muttar Panchayath Kuttanadu constituency.	7.98

3	KDS - Protection works to the western bank of Manimala river from Arupara Kulikadavu towards north to Vettuparambil Kulikadavu in ward No 7 of Muttar Panchayath.	14. 95
4	KDS - Protection works to the left bank Pamba river on the upstream side of Chakkulath bridge in ward No. 8 of Thalavady Panchayth.	13. 27
5	KDS - Protection work to the left bank Pamba river at Devasom Chira near Mamootil pady in ward No. 2 of Thalavady Grama Pt.	6. 49
6	KDS- Protecting the northern bank of Areethodu from Maliyil pady to Muapparathil pady in ward No. 9 of Thalavady Grama Pt.	9. 43
7	KDS-Protecting the western bank of Manimala river from Arupara culvert to Manali pady in ward No.5 of Muttar Pt.	13
8	Investigation estimate reconstruction of navigation of lock cum road bridge at Thrikkunnappuzha on national water way 3 in Harippad constituency Alappuzha District.	3. 42
9	KDS - Protecting the side of Manimala river from Arupara pady to Society pady in ward No.7 of Muttar Panchayath (Sony Scaira)	13
10	KDS- Protecting the western side of Palakkalam bridge in ward No.10 of Edathua Grama Pt.	5
11	KDS- Construction of Arattukadavu and protection works to the right bank of thodu behind Muttar Pt. office in Kuttanadu Constituency.	4
12	KDS- Protection work to the southern bank of pamba river from Kaleeckal pady to pullanthara pady in ward No.8 of Thalavady Grama Panchayath.	20
13	Protection works to the R/B of Pallanayar from Amparayil to Anchu Chira in Ward No. 1 of Thrikkunnappuzh Panchayath.	5
14	FC- Urgent protection work to the left bank of Achencovil river down stream of Mundoli Kadavu bridge in ward No. 18 of Chennithala Thripperumthura Grama Pt.	1.3
15	FC-Protection works to the river bank from PWD bridge towards west side of Parachira road with	17

	pile and slab in ward No.8 of Edathua Grama Panchayath in Kuttanad Constituency.	
16	Improvements of Thayamkary Kandamkary canal and construction of Karttable bridge near Mulamthanachira in ward No. 15 of Edathua Pt.	40.35
17	Improvements to the Ammar canal and construction of Carttable bridge across Ammar canal near Chuleayilpady in ward No 15 of Edathua pt.	34.03
18	Construction of Balikadavu near Karimpinkavu Moorthy Temple in ward No.4 of Thazhakara Panchayath	12
19	F.C - Protecting to Pazhyaya Pottamel kkadavu near Vazhuvadi Kadavu at the left bank of Achen covil river upstream of Pottamel bridge in Thazhakkara Panchayath	17.47
20	ASE- Works reformation of damaged seawall for a length of 700 m at Panoor between Ch.65.050 Km to 65.750 Km in Thrikkunnappuzha Panchayath	279
21	ASE work - Construction of sea wall from Ch:67.990 to 68.590 km at Pallana in Thrikkunnappuzha Panchayath in Harippadu consituency for a length of 432 m from Ch:68.000 to 68.432 km (limited to 341 m)	275.53
22	Construction of 4 Nos.Groynes (1 Groyne field) between Ch:63.400 km & Ch:64.000 km at Pallippattumuri in Thrikkunnappuzha Panchayath - Harippad Constituency in Alappuzha District.	463
23	RMFProtecting the right bank of Achen covil river and formation of mundote Pallathukadavu in ward No.10 of Venmani Grama Panchayath	14.9
24	RMF - Protection works to pampa river infornt of the house of Sri.Preedpkumar Head Constable BSF in ward No.12 of Edathua Pt.	2.8
25	ASE work - Natural Calamity - 2016-17 Urgent Protection work of coastal belt between Ch.60.000 to 68.590 km in Thrikkunnappuzha Panchayath of Harippad Constituency.	14.62
26	Payippadu Jalolsavam 2016 - Removal of payal from the boat race track in Achencovil river at	6.55

	Karichal and annual maintenance works to the pavilion in Veeyapuram Panchayath of Kuttanad L.A. Constiuecy.	
Total		1311.5

Details of Staff

SI No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	1	-	1
2	^{3rd} Grade Overseer	2	1	3
3	Lascar	2	-	2
	Total	5	1	6

Findings and Recommendations

- 92 Irrigation Section, Mavelikkara has a lead role in protecting some of the major rivers in Kerala from flood erosion without damage to the riverine environment and protecting the coastal areas as it is evident from the projects that are presently being carried out, which are enlisted in Table 1. For the successful implementation of projects designed to protect the riverbanks and for developing solutions for the mitigation of natural calamities, the Study Team is of the view that the sole temporary post of ^{3rd} Grade Overseer may be continued.

11 Sections having less workload

11.1 Dam Section, Neyyar

93 Dam Section, Neyyar takes control of Neyyar Dam, which is a straight gravity masonry dam built in 1973 for the purpose of irrigation named as Neyyar Irrigation Project. The Dam has a catchment area of 140 sq. Km.

Details of staff

Table 1

Sl No.	Name of post	No. of sanctioned posts		Total	In position
		Permanent	Temporary		
1	Assistant Engineer	1	-	1	1
2	Overseer Grade III	-	3	3	2
3	Clerk	-	1	1	1
4	Lascar	-	7	7	7
5	Scavenger	-	1	1	1
6	Watcher	-	1	1	-
7	Worker Grade II	-	12	12	2
8	Boat Driver	-	1	1	-
9	Line Man	-	1	1	-
10	Head Gardner	-	1	1	-
11	Butler	-	1	1	-
12	Gate Sergeant	-	1	1	-
13	Carpenter	-	1	1	-
14	Blacksmith	-	1	1	-
15	Spray Printer	-	1	1	-

16	SLR Worker	-	18	18	-
	Total	1	51	52	14

List of ongoing projects in Dam Section, Neyyar

Table 2

Sl No.	Name of the project/ work and a brief description	Estimate PAC
1	NIP-Protective works at ch. 10850m of Left Bank main canal.	4,99,570
2	NIP-Maintenance and repairing the outer ring road of Neyyar Dam Hospital.	25,33,660
3	NIP- Construction of bridge across Right Bank main canal at 14km of Mukkannoorkonam.	36,21,869
4	NIP- Protective works upstream of aqueduct near ch. 14900m of Left Bank main canal.	5,34,441
5	NIP- Urgent Protective works at Nirappil branch near ch. 1500m.	9,95,402
6	NIP(DRIP) Rehabilitation and basic facilities of Neyyar Irrigation Project - Civil work.	3,99,29,023
	Total	4,81,13,965

Findings and Recommendations

- 94 Majority of the temporary posts in Dam Section, Neyyar are vacant. Among the temporary posts, those that have adequate work content and is deserving to be given continuance sanction for the smooth functioning of the office are listed in the below table:

Table 3

Sl No.	Name of post	Reason for continuation
1	Overseer Grade II	Six works with an estimated cost totaling Rs. 4,81,13,965/- are currently undertaken by this Section. It falls to the category of Sections having less workload and therefore two temporary posts may be given continuous sanction as explained in Analysis part of this report.
2	Clerk	Neyyar dam, being a tourist attraction generates about lakhs in a year. There is also plans to set up adventure parks and rides for greater tourist attraction. For the supervision of tourism related matters and the collection of revenue, a post of clerk is necessary.
3	Lascar	<p>It is the duty of the Lascar to visit the canals on a daily basis and remove the blockades preventing the smooth flow of water. But unfortunately, canals are deposited with garbage resulting in low yield of water and also lowering of water levels in adjacent ponds and wells. Now the cleaning of canals is being done through the Mahatma Gandhi National Rural Employment Guarantee Scheme.</p> <p>In addition to the above routine work, Overseers have been assigned with the duty to regularly inspect the Government property in Neyyar Dam premises and to see whether encroachments have been made.</p>
4	Gate Sergeant	At present private security agencies has been providing security to dam site. However, as part of dam safety measures, the post may be continued.
5	Watcher	The post of Watcher may also be continued in view of the safety of the dam.
6	Part Time Scavenger	For cleaning the dam premises
7	Boat Driver	It was informed that a boat will be sanctioned to the Section for inspecting the Neyyar river catchment area.
8	Worker	Out of the 12 posts of Worker, 10 are vacant. The authorities remarked that the incumbents in two posts

		may be allowed to continue till superannuation.
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List of posts that are found surplus to requirements

Table 4

SI No.	Name of post	No. of post
1	Overseer	1
2	Worker Grade II	10
3	Line Man	1
4	Butler	1
5	Carpenter	1
6	Blacksmith	1
7	Spray Printer	1
8	SLR Worker	18
	TOTAL	34

11.2 Channel Section, Neyyattinkara

95 Channel Section, Neyyattinkara is entrusted with the timely repair and maintenance of the two main channels and the subsidiary channels of the Neyyar Dam.

Details of staff

Table 1

SI No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	1	-	1
2	Overseer Grade III	-	3	3

3	Jeep Driver	-	1	1
4	Lascar	-	3	3
5	Worker Grade II	-	1	1
	Total	1	8	9

List of ongoing projects / works in Channel Section, Neyyattinkara
Table 2

Sl No.	Name of the project/ work and a brief description	Estimate PAC
1	NIP Construction of retaining wall near ch. 1500m of Poovar West branch channel at Kanavila Colony in Kanjiramkulam Grama Panchayath	18,26,404
2	NIP- Clearing jungle of LB main canal from ch. 17000m to 23000m.	4,11,950
3	NIP- Protective works of Olathanni branch channel down stream of aqueduct at ch. 3178m and from 3565m and allied works.	14,62,524
4	NIP- Bund protection of canal upstream and downstream at ch. 417m of Poovar West branch channel.	693009
5	NIP- Removing slipped earth from ch. 2590m and protection works at ch. 2100m and ch.2500m of Poovar West branch channel.	5,49,807
6	NIP- Renovation of Perumpazhuthoor sub channel and maintenance of aqueduct at ch. 5872m of Vadakara branch channel and construction of shutters of Perumpazhuthoor.	3,66,781
7	NIP- Construction of shutters ch. 1667m bund raising at D/S of foot bridge at ch.	7,95,021

	1347 and protection of bund between ch. 9000m and 9050m of Poovar East branch channel.	
8	NIP-Restoration of Chaikottukonam branch channel downstream of aqueduct near ch. 4075m and maintenance of aqueduct and protection at downstream of ch. 5028m	16,48,253
9	NIP- Restoration and bund protection of Parayanvila field boothy from ch. 250m to 350m	7,79,773
10	Annual maintenance and Periodical removal of wastage and garbages from whole channel under Neyyattinkara Section for one year.	2,99,696
11	NIP- Silt removal of clearing pressure aqueduct near ch. 19450m of LB main canal at Thathiyoor,	2,89,682
12	Bund protection of canal U/S and D/S at ch. 417m of Poovar West branch channel.	5,98,289
	Total	97,21,189

Findings and Recommendations

- 96 This Section doesn't have considerable workload. Detailed analysis of works in sections as provided in Chapter have led to the conclusion that the Sections having less workload needs the service of a maximum of two Overseers. Therefore, two posts of Overseer Grade III may be allowed to continue.
- 97 Lascars are responsible to watch and regulate the inflow of Irrigation water in Command Area. Channel Section, Neyyattinkara has control over more than 50 Km of the canal system of the Neyyar Dam. Service of the three Lascars are essential for the proper upkeep of canals and the smooth flow of clean water. But the canals are filled with garbage and the solid wastes hinder the free flow of water. Now it was decided to clean the canals through NREGP scheme.
- 98 There is no specific work for the Worker Grade II. Therefore, the post may not be given continuance sanction.

11.3 Channel Section, Parassala

99 Channel Section, Parassala is bound to preserve the right bank main channel and the left bank main channel of Neyyar Dam.

Details of staff

SI No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	1	-	1
2	Overseer Grade III	-	3	3
3	Lascar	-	4	4
4	PTS	-	1	1
	Total	1	8	9

List of ongoing works in Channel Section, Parassala

SI No.	Name of the project/ work and a brief description	Estimate PAC
1	NIP- Protective works at ch. 1800m to 1900m (tail end) of Udiyankulangara Sub Channel.	4,49,097
2	NIP- Annual Cleaning of railway siphon near ch. 4260m and protective works upstream of SP 1/6 of Chenkal Major Branch channel.	5,99,565
3	NIP- Prevention of leakage down stream of SP 2/2 of Karumanoor RBC	6,99,585
4	NIP- Protective works between ch. 29500m and 29700m of LBC and providing off take shutters of Chenkal major branch channel - CC first and final	99,98,73
5	NIP- Urgent side protection work at ch. 1060m and restoration work between ch.0m and 2000m of Chenkal minor branch channel.	7,99,981

6	NIP- Protective works between ch.0m to 400m and other allied works at Arayoor Sub Channel.	10,39,766
7	NIP- Construction of a bridge at ch. 3060m of Kollayil branch channel and providing shutters at ch. 27000m of LBC.	12,29,266
8	NIP- Restoration of Chenkal major branch channel for a length of 1300m.	2,99,811
9	NIP- Maintenance of office building and compound wall of Parassala Section Office.	2,48,052
10	NIP- Annual maintenance-periodical removal of waste materials and garbages from whole channels under Parassala Section.	2,89,450
11	Bund protection and maintenance between ch.0m and tail end of Keezhammakam East Sub Channel.	4,94,353
12	Protective works at ch. 23060m of the LBC D/S of Manchavilakom bridge.	15,46,214
13	Natural calamities urgent protective works on the left side of Kollemcode branch channel.	33,65,975
14	NIP- Construction of a bridge at ch.31246m of LBC	1499139
	Total	1,35,60,127

Findings and Recommendations

- 100 This Section has been grouped into the class of Sections having less workload. Therefore, two posts of Overseer may be given continuance sanction. Owing to the reasons stated in Methodology, four posts of Lascar may be given sanction for continuance.

11.4 Channel Section, Pallichal

- 101 As in the case of Channel Section, Neyyattinkara and Channel Section, Parassala, maintenance of both the main channels and the subsidiary channels of Neyyar Dam is the responsibility of Channel Section, Pallichal

Details of staff

SI No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	1	-	1
2	Overseer Grade III	-	3	3
3	Lascar	-	4	4
4	SLR Worker	-	1	1
5	PTS	-	1	1
	Total	1	9	10

Details of ongoing projects

SI No.	Name of the project/ work and a brief description	Estimate PAC
1	NIP- Prevention of leakage between ch.4000m to 4500m and other allied works between ch. 4000m and 7000m of Vellayani West branch canal.	10,77,014
2	NIP-Protective works between Ch. 3800m and 3900m and providing a slab and prevention of leakage at the mouth of Chowara branch channel.	9,99,075
3	NIP- Rising of height and construction of cleaning wall near ch. 2600m and prevention of leakage near ch. 2400m and other allied works of Vellayani West branch channel.	7,95,280
4	NIP-Protection of leakage near ch. 1900m between ch.1100m and 1200m and raising length near ch. 1350 of Vellayani branch	6,75,971

	channel.	
5	Clearing of Channel removing silt and slipped earth from ch. 23000m to ch. 26000m and ch. 29000m to ch. 32000 of RB main canal.	15,96,176
6	NIP- Construction of fencing between ch. 19800 and 20000m and near ch. 17000m of Vizhinjam branch channel.	3,58,430
7	NIP- Rising of height and construction of cleaning wall near ch. 2600m and prevention of leakage near ch. 2400m and other allied works of Vellayani West branch channel.	7,95,280
8	Clearing of Channel removing silt and slipped earth from ch. 23000m to ch. 26000m and ch. 29000m to ch. 32000 of RB main canal.	15,96,176
9	NIP- Construction of fencing between ch. 19800 and 20000m and near ch. 17000m of Vizhinjam branch channel.	3,58,430
10	NIP- Protective works between ch. 19500m and 19600 of Vizhinjam branch channel.	7,49,561
11	NIP- Construction of retaining wall prevention of leakage near ch. 4100m and other allied works of Chowara branch channel.	8,96,973
12	NIP- Emergency side protection work at the breached portion near aqueduct 1/1 at ch.1000m of Vizhinjam branch channel	6,02,993
13	NIP- Prevention of leakage between ch. 11600m and 11700m between ch. 17500m and 18000m, cleaning well syphone and other allied works of Vizhinjam branch channel-	10,14,593
14	NIP- Prevention of leakage near 25450m and construction of retaining wall near ch. 26850m of RB main canal.	11,18,431

Total	1,26,34,383
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Findings and Recommendations

- 102 Channel Section, Pallichal is identical to that of Channel Section, Parassala with respect to staff strength and the quantum of works. The Study Team is of the view that two posts of 3rd Grade Overseer and four posts of Lascar may be given continuance sanction. A permanent establishment of SLR worker is not necessary since the Assistant Engineer is empowered to directly engage labourers for petty works.

11.5 Irrigation Section, Chavara

103 Irrigation Section, Chavara was formed as per G.O (Rt) No. 53/97/Irrn dated 29.4.1997. This Section is bound to maintain the navigable canals, anti - sea erosion works and conserving the lakes Vattakkayal and Kattakkakayal.

Details of Staff

SI No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	-	1	1
2	Draftsman Grade II	-	1	1
3	Overseer Grade III	-	3	3
4	Lascar	-	1	1
	Total	-	6	6

List of ongoing projects / works in Irrigation Section, Chavara

Table 2

SI No.	Name of the project/ work and a brief description	Estimate PAC
1	ASE work-reformation Seawall length 40m from ch:29.350km to 29.390km near IRE mining area -Karithura in Chvara Constituency.	1,343,273
2	Dredging in Ashtamudi Lake of mouth and inside of canal leading to kattakkal kayal in Shakthikulangara in Chavara Constituency	3,650,000
Total		49,93,273

Findings and Recommendations

104 Duties of Draftsman lies in Circle, Divisions and Sub Divisions. So, continuance sanction to the post of Draftsman Grade II is not recommended. This Section comes to the category of Sections having less workload. Two

temporary posts of Overseer is enough in such sections. Therefore, one post of Overseer shall not be given continuance sanction. All other posts may be given continuance sanction.

11.6 Irrigation Section, Sasthamkotta

105 Irrigation Section, Sasthamkotta was formed as per G.O (Rt) No. 53/97/Irrn dated 29.4.1997. The preservation and management of Sasthamkotta Lake, the largest fresh water lake in the State vests with Irrigation Dept. This lake is an internationally recognised wetland and is a Ramsar site. Protecting the right and left banks of Pallikkalar and Puthanar, two tributaries of Kallada River is also coming to the functions of this section.

Details of Staff

SI No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	-	1	1
2	Draftsman Grade II	-	1	1
3	Overseer Grade III	-	3	3
4	Lascar	-	1	1
5	Part Time Sweeper	-	1	1
	Total	-	7	7

List of ongoing projects / works in Irrigation Section, Sasthamkotta

Table 2

SI No.	Name of the project/ work and a brief description	Estimate PAC
1	Construction of check dam across Pallickal river at D/S of Anayadi bridge in Sooranadu North Panchayat, Kunnathur Constituency	4378751/-

2	Providing stones for indicating maximum water level at Sasthamcottah kayal.	217089/-
Total		45,95,840

Findings and Recommendations

- 106 Irrigation Section, Sasthamkotta is identical to Irrigation Section, Chavara. So, the recommendations made therein at para 104 is endorsed.

11.7 Irrigation Section, Kanjirappally

- 107 Irrigation section, Kanjirappally is mainly assigned with the preservation of Manimala River, Pamba river, Azhutha river and Kodoor river. During Mandala - Makaravilakku season, it arranges to provide facilities to minimise the scarcity of water to pilgrims.

Details of the ongoing works / projects and the works that are set for execution

Table 2

Sl No.	Name of the project/ work and a brief description	Estimate PAC
1	RMF - Protecting the right bank of Manimala river and Construction of bathing ghat at UPS kadavu , Erathuvadakara in Vellavoor Pt.	910000/-
2	RMF - Protrcting the bank of Azhutha river and Construction of bathing ghat near Kallidumkunnu bhgaom in Erumely Pt.	500000/-
3	Protecting the right bankof Chittarpuzha at Valumannelpurayidom at Anakkallu bhagom in Kanjirappally pt.	650000/-
4	Protecting the R/B of Manimala river D/s of Panchayat stadium near Sy No:335/1 ,335/2 , 335/3 in Vellavoor Village in Vellavoor Pt .	1000000/-
Total		3060000

Details of Staff

Table 3

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	-	1	1
2	Draftsman Grade I	-	2	2
3	Draftsman Grade II	-	2	2
4	Overseer Grade III	-	4	4
5	Lascar	-	1	1
	Total	-	10	10

Findings and Recommendations

- 108 The post of Draftsman is surplus to requirements because the duties of the Draftsman such as preparation of designs and drawings of structures, plot survey and preparation of detailed estimates are done by the drawing branches associated with Divisions and Sub Divisions. So, practically there is no duty for Draftsman in a section. Therefore, continuance sanction to the four posts of Draftsman shall not be accorded.
- 109 Table 3 shows the details of ongoing works. The workload in this section is moderate. Relying on the observations at para of the Methodology, two temporary posts of Overseer shall be given continuance sanction and two posts shall be discontinued.

11.8 Irrigation Section, Kumily

- 110 Irrigation Section, Kumily was formed in the year 1992. Rivers flowing across the jurisdiction of this Section are Periyar river, Chinnar river, Azhutha river, Mavadi river, Kallar, Amayar, Emakadavu river and Koottar river. Construction of check dams, flood management programs, drought relief schemes, NABARD funded projects etc. are being executed here.

Details of the ongoing works / projects and the works that are set for execution

Table 1

Sl No.	Name of the project/ work and a brief description	Estimate PAC
1	Drought relief Works-Providing temporary bund across Kokkayar River near RGDWS at Pulickathadam in Kokkayar Panchayath Idukki District	80,000
2	Drought relief Works-Providing temporary bund Keerikkara Thodu, Tributary of Periyar River in Vandiperiyar Panchayath Idukki District	42,000
3	Drought relief Works-Providing temporary bund across Periyar River near Vandiperiyar Bridge in Vandiperiyar Panchayath Idukki District	1,80,000
4	Drought relief Works-Providing temporary bund across Periyar River near Ayyappankovil in Vandiperiyar Panchayath Idukki District.	98,000
5	Drought relief Works-Providing temporary bund across Periyar River at Chandravanami8n Vandiperiyar Panchayath Idukki District.	1,12,000
6	Drought relief Works-Providing temporary bund across Kokkayar River near	90,000
7	Drought relief Works-Providing temporary bund across Kokkayar river near KWA pump House in Kodikuthy at Mulannkunnu in Kokkayar Panchayath Idukki District	95,000
8	Drought relief Works-Providing temporary bund across near manjumala 30 bridge in Vandiperiyar Panchayath Idukki District	1,00,000
9	Drought relief Works-Providing temporary bund across Periyar River at Vallakkadavu opposite to Ration shop in Vandiperiyar Panchayath Idukki Disrict	1,85,000
TOTAL		9,82,000

Details of Staff

Table 2

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	-	1	1
2	Draftsman Grade I	-	2	2
3	Draftsman Grade II	-	2	2
4	Overseer Grade III	-	4	4
	Total	-	9	9

Findings and Recommendations

- 111 This Section is identical to that of Irrigation Section, Kanjirappally in terms of staff strength. Relying on the findings arrived therein (para), we propose that four posts of Draftsman and two posts of Overseer shall not be given continuance sanction.

11.9 Irrigation Section, Changanassery

- 112 Irrigation Section, Changanassery is bestowed with the conservation of 12Km of Meenachil river in Arayakkunnam Gramapanchayath, 15 Km of Kodoor river in Puthuppally constituency, 15 km of Vettikalar and 5 Km of Manimala river in Paipad G P.

Details of the ongoing works / projects and the works that are set for execution

Table 2

Sl No.	Name of the project/ work and a brief description	Estimate PAC
1	Ptg. The banks of pandakasala canal from vegetable market to padakasala bridge in Changanacherry thaluk	2500000/-
2	Ptg the L/B of Muttathilkadavu canal D/S of Muttathilkadavu bridge in Kurichy Panchayath	1500000/-

3	Ptg. The banks of Kodoor river in connection with new proposed checkl dam D/S of kondody pumphouse in Puthuppally Panchayath	2000000/-
4	Removing waterweeds from A.C canal from Perunna boat basin to Onamkara bridge in Changanacherry thaluk	1470000/-
5	Removing waterweeds from Changanacherry-Alappuzha boatroute canal in Changanacherry thaluk	435000/-
6	Investigation estimatefor rectification worksof perumpuzhakadavu bridge in Changanacherry thaluk	310000/-
Total		8215000

Details of Staff

Table 3

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	1	-	1
2	Overseer Grade III	-	3	3
3	Lascar	-	2	2
	Total	1	5	6

Findings and Recommendations

- 113 Workload in this Section is moderate. So two posts of Overseer is obviously enough. Based on the observations made in chapter 9 we are not recommending continuance sanction to one post of Overseer.

11.10 Irrigation Section, Vaikom

114 Protecting the banks of Meenachil river, Muvatupuzha river, Valiyanapuzha river, Vembanadu lake and other water resources under its jurisdiction is the main responsibility of Irrigation Section, Vaikom. This Section is also engaged in construction of check dams and execution of NABARD aided projects.

Details of ongoing works

Table 1

Sl No.	Name of the project/ work and a brief description	Estimate PAC
1	Construction of check dam across Vallichira Puliyanoor thodu at Rajrahman (Chemmanam kulikadavu near St.Thomas Church Arunapuram)	248525.75
2	Providing temporary facilities improvements to Vaikom jetty in connection with Ashtami festival at Vaikom Mahadeva temple-2016	4,000,00
3	Urgent strengthening works of Pamakadavu Vettikkattumukku road U/s of Palamkadavu bridge in Thalayolaparambu Panchayath	19,000,00
Total		2548525.75

Details of Staff

Table 2

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	1	-	1
2	Overseer Grade III	-	3	3
3	Lascar	-	1	1
	Total	1	4	5

Findings and Recommendations

- 115 Based on the observations made at the analysis part of this report (Chapter 9), we are of the view that all temporary posts may be given continuance sanction except one post of Overseer.

11.11 Irrigation Section, Kottayam

- 116 Irrigation Section, Kottayam is responsible for the proper management of certain areas of the river banks of Meenachil river and Kodoor river thereby preserving the natural ecosystem. Maintenance of Kottayam - Vaikom canal, Athirampuzha - Mannanam canals, Neendoor canals and several other boat route canals are also include the functions of this Section. Besides, this Section is entrusted with NABARD funded works in National Waterway III, RMF works, drought relief works etc.

List of ongoing works in Irrigation Section, Kottayam

Table 1

Sl No.	Name of the project/ work and a brief description	Estimate PAC
1	Salt water prevention works 2015-16 -Constructing temporary bund across Meenachil river (Neelimangalam Branch) to prevent salt water intrusion near kallumada bridge in Kottayam District	1185000
2	Salt water prevention works 2015-16 -Constructing temporary bund across Arthootti thodu to prevent salt water intrusion in Kottayam District	732354.93
3	Salt water prevention works 2015-16 -Constructing temporary bund across Meenachil river (Neelimangalam Branch) to prevent salt water intrusion at the down stream side of Kudamaloor pump house in Kottayam District	1488917.6
4	Salt water prevention works 2015-16 -Constructing temporary bund across Anjunny thodu to prevent salt water intrusion in Kottayam District	275873
5	Salt water prevention works 2015-16 -Constructing temporary bund across Panampalam Mannanam thodu to prevent salt water intrusion at the downstream side of Nerekadavu culvert near Medical College in	306067

	Kottayam District	
6	Protecting the right bank of Meenachil river near Chiramel kadavu bhagom in Ward No.XII of Aymanam Panchayath	1192010

Details of Staff

Table 2

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	-	1	1
2	Draftsman Grade I	-	2	2
3	Draftsman Grade II	-	2	2
4	Overseer Grade III	-	4	4
5	Lascar	-	1	1
6	Driver	-	1	1
	Total	-	11	11

Findings and Recommendations

- 117 Irrigation Section, Kottayam was formed by deploying the staff from the erstwhile KIP (MCS) Sub Division No. 71/18. The post of Draftsman is surplus to requirements because the duties of the Draftsman such as preparation of designs and drawings of structures, plot survey and preparation of detailed estimate are done by the drawing branches associated with Divisions and Sub Divisions. So, practically there is no duty for Draftsman. Therefore, continuance sanction to the four posts of Draftsman is not recommended. Based on the observations at the Analysis part in Chapter 9, two posts of Overseer may be given continuance sanction.

11.12 Irrigation Section, Kaduthuruthy

118 Irrigation Section, Kaduthuruthy is engaged in the works to protect the rivers, lakes, ponds, streams and canals under its jurisdiction namely Meenachilar, Muvattupuzhayar, Valachira Canal, Chullithodu, Valiyathodu, Kattachira Canal, Ezhumam Kayal, K V Canal, Mullamangalam Mudakkali Canal, Appanchira Canal and Pannagam thodu.

List of ongoing works

Sl No.	Name of the project/ work and a brief description	Estimate PAC
1	Improvements to Appanchira Canal in Kaduthuruthy Panchayath.	1,95,03,824
2	Protecting the right bank of Meenachil river near Appachavayal in Ward No.1 of Thalappalam Panchayath	20,000,00
3	Protecting the bank of Mathakkal canal near Almanar School in Erattupeta GramaPanchayath	10,61,904
4	Protecting the bank of Meenachilriver upstream of Erattupetta bridge near Muttom Junction (Vattakaym) Erattupetta Pachayath	14,98,218
5	Construction of storage weir across Valiyathodu near Kanakkancherry bridge in Njeezhoor Panchayath	24,97,271.75
6	Construction of Check dam cum bridge across Parakkayam thodu near Narimattom Junction in Munnilavu Panchayath	44,88,725
7	Renovation and side protection works at Kidangoor check dam in Kidangoor Panchayath	44,76,850
8	Tourism improvements by the side of Appanchira canal at Kaduthuruthy in Kottayam District	50,000,00
9	Tourism improvements by the side of Ezhumanthuruthu kayal at Kaduthuruthy in Kottayam District	50,000,00
10	Construction of storage weir cum culvert across Valiyathodu canal near Kattanani colony kadavu in Njeezhoor Panchayath	44,84,497

20.3 (iii) Details of Staff

Sl No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Asst. Engineer	-	1	1
2	1 st Grade Draftsman	-	2	2
3	2 nd Grade Draftsman	-	2	2
4	3 rd Grade Overseer	-	4	4
	Total	-	9	9

Findings and Recommendations

- 119 Irrigation Section, Kadathuruthy was formed by deploying the staff from the erstwhile KIP (MCS) Sub Division No. 72/18. This Section is quite identical to Irrigation Section, Kottayam. Relying on the observations made therein (para 117), we are of the view that continuance sanction to the four posts of Draftsman and two posts of Overseer shall not be granted.

11.13 Irrigation Section, Thodupuzha

120 Irrigation Section, Thodupuzha was formed by deploying the staff of erstwhile KIP (MCS) Section No. 73/19.

Details of Staff

SI No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	-	1	1
2	Ist Grade Draftsman	-	2	2
3	II nd Grade Draftsman	-	2	2
4	Overseer Grade III	-	4	4
5	Lascar	-	1	1
6	Driver	-	1	1
	Total	-	11	11

121 Recommendations at para 125

11.14 Irrigation Section, Moolamattom

122 Irrigation Section, Moolamattom was formed by deploying the staff of erstwhile KIP (MCS) Section No. 74/19.

Details of Staff

SI No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	-	1	1
2	I st Grade Draftsman	-	2	2

3	II nd Grade Draftsman	-	2	2
4	Overseer Grade III	-	4	4
5	Lascar	-	1	1
	Total	-	10	10

123 Recommendations at para 125

11.15 Irrigation Section, Munnar

124 Irrigation Section, Munnar was formed by deploying the staff of erstwhile KIP (MCS) Section No. 75/19.

Details of Staff

SI No.	Name of post	No. of sanctioned posts		Total
		Permanent	Temporary	
1	Assistant Engineer	-	1	1
2	I st Grade D' man	-	2	2
3	II nd Grade D' man	-	2	2
4	Overseer Grade III	-	4	4
5	Lascar	-	1	1
	Total	-	10	10

Details of works/ projects for the year 2016-17 in Irrigation Sections, Thodupuzha, Moolamattoam and Munnar

SI No.	Name of the project/ work and a brief description	Estimate PAC
1	Renovation of public bathing ghat along Thodupuzha river in ward No-34 of Thodupuzha Municipality.	898,784.00
2	Construction of Check dam across Edathanapuzha at	4,797,352.00

	Pattayakudy in Anakuzhy of Vannappuram Panchayath.	
3	Construction of Check dam across Mullaringadupuzha near Pothanampuzhy purayidam in Vannappuram Panchayath.	6,488,746.00
4	Protecting the Right bank of Thodupuzha river, constuction of a bathing ghat at Kanjiramattom in Ward No.24 of Thodupuzha Municipality.	2,161,552.00
5	Strengthening the protection wall along the right bank of Thodupuzha river near Sreekrishna Temple in Thodupuzha Municipality.	2,343,364.00
6	Protecting the left bank of Thodupuzha river near Perumattom in Muttom Panchayath.	2,136,078.00
7	Renovation of Public bathing ghats along Thodupuzha river in ward No.25&27 of Thodupuzha Municipality.	838,370.00
8	Protecting the left bank of Thodupuzha river at the rear side of proposed Chittoor Creket Stadium in Manakkadu Panchayath - Reach 1.	2,396,371.00
9	Protecting the left bank of Mullaringadu river at Vellakkayam Chengalikavil Purayidam in Ward No.4 of Vannappuram Panchayath.	1,491,594.00
10	Protecting the left bank of Thodupuzha river near Kochumathampady and rennovation of bathing ghat in Edavetty panchayath.	599,230.00
11	FD-Protecting the left bank of Thodupuzha river u/s of Thottiyilkadavu in Olamattom of Thodupuhza Municipality.	1,499,369.00
12	Protecting the right bank of Thodupuzha river upstream of Vengalloor bridge in Thodupuzha Municipality.	1,788,994.00
13	FC-FD-Protecting the Right bank of Thodupuzha river Parayanickalpadi in Edavetty Panchayat.	1,791,154.00
14	Protecting right side of Thodpuzha river downstream of Vengalloor bridge in Thodupuzha Municipality.	1,977,673.00
15	Protecting the right bank of Mundiyadi thodu near bridge at Manakkadu in Thodupuzha Municipality.	1,792,931.00
16	FD/FC protecting the left bank of Thodupuzha river between Kollessery and Arukalilkadavu in Manakkadu Panchayath.	1,983,443.00
17	Protecting the left bank of Kaliyar river in SY. No.14/4 of Neyyassery Village near Thommankuthu Water fall	1,490,708.00

	of Puliyanath Purayidam.	
18	Protecting the left bank of Thodupuzha river in Ward No.25 in Oalamattom near Mini Industry of Thodupuzha Municipality.	1,981,431.00
19	Improvements to left bank of Thodupuzha river downstream of Moopilkadavu bridge in Thodupuzha Municipality.	3,685,368.00
Total		4,21,42,512

Findings and Recommendations

- 125 All the posts in Irrigation Sections at Thodupuzha, Moolammattom and Munnar are temporary. These three Sections were formed by deploying the staff from various presently non existing sections of the Kallada Irrigation Project. Cost estimate of works in these three sections totals to an amount of Rs. 4,21,42,512. We have grouped these sections to the class of 'Sections having less workload' (see chapter 9) Based on the points mentioned at chapter 9, we recommend that the post of Draftsman should be discontinued in these sections. As the workload is minimal, each section warrants a maximum of two posts of Overseer.

12 SUMMARY OF FINDINGS AND RECOMMENDATIONS

Introduction

126 Temporary staff in Irrigation South Circle hails from Technical, Ministerial and Class IV categories. Workload of Technical and Ministerial employees has been assessed as specified in the Methodology & Analysis referred in Chapters 2, 5 & 9. We analysed the workload on unit basis i.e. Division / Sub Division / Section - wise. We set the parameters determining the Division / Sub Division / Section having normal workload and less workload.

Temporary posts that are subjected for work measurement study are given in the below table:

Table 1

SI No.	Technical posts	Ministerial posts	Class IV posts
1	Executive Engineer	Junior Superintendent	Lascar
2	Assistant Executive Engineer	Head Clerk	
3	Assistant Engineer	L D/ U D Clerk	
4	Head Draftsman		
5	Draftsman		
6	Overseer		

127 In the above mentioned posts, Executive Engineer, Assistant Executive Engineer and Assistant Engineer are functioning as the head of Division, Sub Division and Section respectively. We have pointed out in previous chapters that the Kottayam Division and 12 subordinate offices under this division are fully functioning on temporary posts. Two other Sub Divisions will also come to this kind. As the existence of these kind of offices depends on temporary posts, we are of the view that the aforementioned posts may be given continuance sanction irrespective of the workload. We made such an observation because of the following aspects:

- i. Water resources development and management has utmost importance given the challenges being faced by the State in the form of water pollution, climate change, increasing salinity, loss of wetlands, erosion, weed invasion etc. Irrigation department that equips the State to meet these challenges needs adequate staffing.
- ii. Stagnation of promotion in Irrigation Department.

Temporary posts that may be given continuous sanction irrespective of work content.

Table 2

Sl No.	Name of post	Reason for giving continuous sanction
1	Executive Engineer	The sole temporary post of Executive Engineer is in Kottayam Division. Executive Engineer is the head of a Division, which is the main executive unit of the department. This Division controls the works in two districts viz. Kottayam and Idukki.
2	Asst. Executive Engineer	Sub Divisions are under the control of Assistant Executive Engineers. Asst. Executive Engineers are responsible for management and execution of works in Sub Divisions. Being the head of a Sub Division, this post may be retained.
3	Assistant Engineer	Temporary post of Assistant Engineer is in Section. As an Irrigation Section is headed by A E, granting continuance sanction to this post is inevitable.
4	Head Clerk / Junior Superintendent	Temporary posts of Head Clerk / Junior Superintendent is sanctioned in Divisions/ Sub Divisions to help and guide the LD/ UD Clerks towards fulfilling their duties and responsibilities. Being supervisory in nature, these posts are deemed to be necessary for the effective functioning of Division / Sub Division.
5	Head Draftsman	The post of Head Draftsman is sanctioned in Divisions. To give proper orientation and guidance

		to the work of Draftsmen working under him, this post may be continuance sanction.
6	Lascar	Lascars are responsible to watch and regulate the inflow of Irrigation water in Command Area. It is the duty of the Lascar to visit the canals on a daily basis and remove the blockades preventing the smooth flow of water. Service of Lascars are essential for the proper upkeep of canals and the smooth flow of clean water.

List of posts that are excluded from the purview of work study

Table 3

Sl No.	Name of post	No. of posts	Reason for exclusion
1	Assistant Engineer	1	This post of Assistant Engineer is in VIP Section, Nedumangadu. Vide G.O (Ms) No. 6/2017/WRD dated 28.01.2017, majority of posts in VIP Section, Nedumangadu have been abolished. It is informed by the authorities that this section is about to wind up soon.
2	Draftsman	1	Do
3	Clerk	5	The reason stated above is applicable to two posts of Clerks. With respect to the remaining, we are constrained to exclude the three temporary posts of Clerks in the O/o the Superintending Engineer, Irrigation South Circle for want of clear clarification from the Superintending Engineer as to whether these posts would include the 9 posts of Clerks abolished in the office of the Superintending Engineer vide G.O (Ms) No. 6/2017/WRD dated 28.01.2017.
4	Typist	1	As in column 1

5	<i>Blue Printer</i>	1	Blue Printer has no significant relevance in the present scenario. Administrative Department may take a decision on according continuance sanction to this post.
6	<i>Tracer</i>	2	Do
7	<i>Office Attendant</i>	12	The duties of the Office Attendant mainly involves receiving and distributing communications / documents. <i>It does not have a complex nature of work functions as in the case of clerical and technical posts and so the department may take a decision on according continuance sanction to this post</i>
8	<i>Driver</i>	9	As stated in the italics above.
9	<i>Watcher</i>	2	Do
10	<i>Part Time Sweeper</i>	17	Do
11	<i>Part Time Scavenger</i>	1	Do
Total		52	

Serial No. 5-11 have been avoided completely

128 Excluding the posts shown in the above table, temporary posts that are surplus to requirements are of Overseer, Draftsman and L D/ U D Clerk. Temporary posts of Overseer and Draftsman are sanctioned in Sections whereas temporary post of L D/ U D Clerk is sanctioned in Divisions and Sub Divisions. Analysis of workload of Divisions, Sub Divisions and Sections have led us to the following conclusions:

- 1) A strength of three Overseers is absolutely enough in an irrigation section which is classified as **Irrigation Section having normal workload** and a strength of two Overseers is enough in an irrigation section which is classified as **Irrigation Section having less workload**.
- 2) The post of Draftsman is not needed in sections because the duties of the Draftsman such as preparation of designs and drawings of structures, plot

survey work based on field data and preparation of detailed estimate are done by the drawing branches associated with Divisions and Sub Divisions. There is no work for Draftsman in an Irrigation Section as per the Manual followed by the department. But certain sections, which were created by deploying the staff from erstwhile KIP Sections have the post of Draftsman. The disparity has caused as a result of accommodating the excess staff.

- 3) The duties and responsibilities associated with Clerks in Divisions and Sub Divisions are quite able to be fulfilled by the incumbent Clerks in permanent posts.

A consolidation of the surplus temporary posts is given in the below table:

Table 4

Sl No.	Post	No. of total posts	No. of excess posts
1	Overseer	60	22
2	Draftsman	43	32
3	L D/ U D Clerk	32	14
	Total	135	68

List of posts that are lying vacant and have no relevance at the present scenario:

Table 5

Office	Post	No. of posts
Dam Section, Neyyar	Worker Grade II	10
	Lineman	1
	Butler	1
	Carpenter	1
	Sparay Painter	1
	Blacksmith	1
	SLR Worker	18
Channel Section, Neyyattinkara	Worker Grade II	1
Channel Section, Pallichal	SLR Worker	1
Total		35

Break - up of temporary posts showing the surplus posts, posts to be given continuance sanction etc.

Table 6

Total temporary posts	No. of posts excluded from the purview of the study	No. of posts to be abolished	No. of posts to be discontinued/ redeployed	No. of posts to be given continuance sanction
1	2	3	4	5
298	52	35	68	143

Recommendation

- 129 **The Study Team has been entrusted to explore possibilities of redeployment if excess staff is found. Therefore, we recommend that the Irrigation Department should take steps for redeploying the excess staff (22 Overseers, 32 Draftsmen and 14 L D / U D Clerks) to the housing project of the Kerala Government (LIFE Mission), Harithakeralam Mission, Ardrum Project and Education Mission. The posts shown in table 5 which have no relevance at the present scenario and are lying vacant for a long time shall be abolished.**

13 Other suggestions

- 130 Formation of experts who are capable of offering advices regarding water resources management will be beneficial. Experts selected from Universities, Research Institutions, NGOs and connected government agencies could make critical suggestions on preserving the water bodies pollution free, prevent erosion, beautification of river-basins etc.
- 131 Despite putting huge investments, many parts of the coastal areas remain acutely vulnerable to the threat of heavy sea erosion. There is widespread call from various corners that cost effective measures should also be promoted for tackling coastal erosion along with construction of sea walls. In several countries, cost effective measures has been promoted along with construction of sea walls and it has been proved successful. Dune Grass Planting, Sloping Structures made of wood, strong wire cage with pebbles called Gabions, Beach Nourishment, Sand Bag Structures may also be considered in accordance with the suitability of the ecosystem.
- 132 Facilities shall be arranged in every tourist centres to make the people aware of the need for protecting the water resources by way of displaying slides, notice boards, banners etc. In number of Kerala's tourism centres, the Government had established large aquariums filled with variety of water species, leisure parks, recreation sites, boating centres etc. and these centres were built around water bodies. So these tourism destinations should be the knowledge centres as well for educating the people the necessities of conserving the water resources.
- 133 Neyyar Dam is one of the beautiful tourism spot in Thiruvananthapuram District. It has good boating facilities, children's park, aquarium etc. Tourism potential of Neyyar Daam site is not under par to similar dam sites of Malampuzha and Thenmala. But it generates less revenue compared with Malampuzha and Thenmala dam sites which is due to the absence of advanced recreation facilities such as rope way, adventure zones etc. Though the dam is situated only 30 kms away from Thiruvananthapuram city, it attracts less tourists than other tourist centres in Thiruvananthapuram Dt viz. Museum & Zoo, Kovalam etc. Neyyar Dam site shall be declared as an eco - tourism spot and developed in to a full-fledged park with lawns, gardens, fountain, rope way, adventure parks, parking lots and advanced recreation facilities.
- 134 A link may be opened in the official web portal of Irrigation Department for the public to express their views / suggestions.
- 135 The details of the ongoing works in each division may be published in the official website of the Irrigation Department.

14 CONCLUSION

- 136 Workload of temporary posts in Irrigation Department (South Circle) need to be assessed at specific intervals. The current assessment has been done taking 2016-17 financial year as base year. Redployment of surplus staff from Irrigation Department could catalyse the functioning of Harithakeralam Mission and other high profile projects of the Government of Kerala. The proposed redeployment would surely ensure the availability of staffing.

Annexure 1**List of offices and the details of temporary posts that are found to be surplus to requirements**

Sl No.	Name of office	Name of post			Total
		Overseer	Draftsman	Clerk	
1	Irrigation Division, Tvpm	-	-	1	1
2	Irrigation Division, Kollam	-	-	2	2
3	Irrigation Division, Alappuzha	-	-	3	3
4	Channel Sub Division, Neyyattinkara	-	-	1	1
5	Irrigation Sub Division, Tvpm South	-	-	1	1
6	Irrigation Sub Division, Tvpm North	-	-	1	1
7	Irrigation Sub Division, Kollam	-	-	1	1
8	Irrigation Sub Division, Chavara	-	-	1	1
9	Irrigation Sub Division, Kaduthuruthy	-	-	1	1
10	Irrigation Sub Division,	-	-	1	1

	Changanassery				
11	Irrigation Sub Division, Thodupuzha	-	-	1	1
12	Irrigation Section, Neyyar	1	-	-	1
13	Irrigation Section, Pallichal	1	-	-	1
14	Irrigation Section, Parassala	1	-	-	1
15	Irrigation Section, Neyyattinkara	1	-	-	1
16	Irrigation Section, Sasthamkotta	1	1	-	2
17	Irrigation Section, Chavara	1	1	-	2
18	Irrigation Section, Ranni	-	2	-	2
19	Irrigation Section, Vaikom	1	-	-	1
20	Irrigation Section, Kaduthuruthy	2	4	-	6
21	Irrigation Section, Changanassery	1	-	-	1
22	Irrigation	2	4	-	6

	Section, Kottayam				
23	Irrigation Section, Kanjirappally	2	4	-	6
24	Irrigation Section, Kumily	2	4	-	6
25	Irrigation Section, Moolamattom	2	4	-	6
26	Irrigation Section, Thodupuzha	2	4	-	6
27	Irrigation Section, Munnar	2	4	-	6
Total		22	32	14	68

Annexure 2**Category - wise list of the temporary posts and the number of posts to be given continuance sanction**

Sl No.	Name of temporary post	Total No. of posts	No. of posts excluded from the purview of the study	No. of posts found as surplus including the vacant posts	No. of posts to be granted continuance sanction	Remarks
1	Executive Engineer	1	-	-	1	
2	Asst. Executive Engineer	5	-	-	5	
3	Assistant Engineer	12	1	-	11	
4	Divisional Accountant	1	-	-	1	
5	P A to Executive Engineer	1	-	-	1	
6	Head Draftsman	4	-	-	4	
7	Draftsman	43	1	32	10	
8	Overseer	60	-	22	38	
9	Junior Superintendent	6	-	-	6	
10	Head Clerk	11	-	-	11	
11	L D/ U D	32	5	14	13	

	Clerk					
12	Typist	7	1	-	6	
13	Tracer	2	2	N A	N A	
14	Blue Printer	1	1	N A	N A	
15	Lascar	29	-	-	29	
16	Office Attendant	12	12	N.A	N.A	
17	Driver	9	9	N.A	N.A	
18	Boat Driver	1	-	-	1	
19	Gate Sergeant	1	-	-	1	
20	Head Gardner	1	-	-	1	
21	Line Man	1	-	1	-	
22	Worker Grade II	13	-	11	2	Two posts may be abolished after the retirement of the current incumbents
23	SLR Worker	20	-	19	1	
24	Watcher	2	2	N.A	N.A	
25	Part Time Sweeper	17	17	N.A	N.A	
26	Carpenter	1	-	1	-	
27	Blacksmith	1	-	1	-	

28	Spray Painter	1	-	1	-	
29	Part Time Scavenger	2	1	-	1	
30	Butler	1	-	1	-	
	Total	298	52	103	143	

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