IRRIGATED AGRICULTURE MODERNISATION & WATER BODIES RESTORATION MANAGEMENT PROJECT

(IAMWARM)

GADILAM SUB BASIN

VILLUPURAM & CUDDALORE DISTRICTS

PUBLIC WORKS DEPARTMENT

WATER RESOURCES ORGANISATION

VELLAR BASIN DIVISION
VIRDHACHALAM

VELLAR BASIN CIRCLE
CUDDALORE

TN IAMWARM PROJECT

GADILAM SUB BASIN

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GADILAM SUB BASIN – AN OVER VIEW

1. Introduction :

Gadilam river is a major flood carrier originating from the tank surplus of Mariyanur Tank and the drainage from Melaphazhengoor Reserve forest in Kallakurichi Taluk of Villupuram District. The Gadilam River sub basin is located between Latitude 79^0 10'25" - 79^0 50'30" and Longitude 11^0 43'30" - 11^0 55'45" and its surrounded by Vellar river basin on the South side, Varahanadhi basin on the North side and Bay of Bengal on the east.

The Taluks covered in this Gadilam Sub basin are Sankarapuram, Thirukoilur and Ulundurpet taluks in Villupuram district, Panruti & Cuddalore Taluks in Cuddalore District. The Gadilam Sub Basin area receives an average annual rainfall of 920.79mm.

2. Details of Ayacut

There is no system tank in this basin and consists mainly non-system tanks which are rainfed. The Gadilam sub basin is having 91 Nos. of non-system tanks and 14 Nos. of Anaicuts which is having a total ayacut 9356.95Ha, being maintained by PWD.

The total Ayacut area under the sub-basin : 9356.95 Ha.

The total registered ayacut under PWD control is 9356.95 Ha with a gap of 1400.02Ha.

3. Soil Type and Crops Grown

The soil types found in this Sub Basin are combination of Inceptisol, Alfisol, Entisol and Vertisol.

Crops grown in this sub basin area are Paddy, Chillies, Cotton, Vegetables, Pulses, Fodder, Cholam, Ragi, Maize during first season and no Second Season crop in this sub basin.

4. Water Potential

Surface water potential	227.22 Mcum
Ground Water potential	473.36 Mcum
Total Water Potential	700.58 Mcum

4. 1. Present Water Demand.

Domestic	27.30	27.30 Mcum
Live Stock	24.85	24.85 Mcum
Industrial	50.26	50.26 Mcum
Irrigation	119.18	119.18 Mcum
WRO & PU	-	103.20 Mcum
	Total	**324.70 Mcum**

Therefore 700.58 Meum (700.58-103.20) is higher than the Current Demand

In spite of the surplus scenario, the reasons for substantial gap area are.

i) This system is a very old system having 91 Nos. of PWD tanks and 3 Nos. of Anicut for which no major works were carried out for more than 50 years. Therefore requires wide spread rehabilitation.

ii) The tanks and its supply channel are heavily silted up with thick vegetation growth obstructing free flow of water, bunds are eroded at many places which needs improvement.

iii) Fixing of boundary stones is necessary to prevent encroachment.

iv) The sluices and weirs of tanks need repairs.

v) Micro irrigation needs are to be propagated in the application of water to the fields.

vi) Most of the lands are in fragmented condition, consequently there is a lot of water loss in field to field irrigation.

vii) Farmers are not aware of modern techniques of irrigation and hybrid varieties of crops.

viii) Lack of efficient farm management.

5. Water Users Association (WUA)

It is proposed to form 99Nos. WUA's Covering an area for 9356.95Ha.

5.1. Stakeholders Consultations

In order to improve the system efficiency and productivity of irrigated agriculture, a multi disciplinary approach involving the following departments is envisaged.

i. Water Resources Department (WRD)

ii. Agriculture

iii. Agriculture Engineering (AED)

v. Agricultural Marketing and Agribusiness

vi. Tamil Nadu Agricultural University (TNAU)

vii. Fisheries

viii. Animal Husbandry and Veterinary Services.

WRD officials with the officials of the above line departments have conducted meetings with the stakeholders in the sub basin and also had **"Joint Walkthrough Surveys"** and the following table shows the constraints and countermeasures which emerged during these consultations.

5.2 Overview

Components	Constraints	Counter Measures
WRD.	The Tank feeder canals and tanks are silted up and it is required to be desilted and distribution system is to be rehabilitated	i) A holistic approach to be adopted to include all the PWD Tanks in the sub basin and improve their bunds & desilting to the minimum extent required to harvest rainwater. ii) WUAs are to be formed and further maintenance would be with their involvement. iii) Surplus weirs, tanks, sluice, are to be improved etc., iv) The rehabilitation of distribution system network is also proposed.
	Post irrigation management, over drawal by upper reaches, no water to lower reaches.	Proposed WUA shall take care of this with members from lower reaches in the WUA and regulatory systems shall be developed as bye laws of the WUA.
Agriculture	Traditional old practice being adopted.	i) Productivity linked demonstration by TNAU and by Agriculture Development is proposed. ii) Capacity Building of farmers and officials is proposed. iii) Extension of new Agricultural technology on application of optimum fertilizers, IPM measures are proposed through Agriculture, Horticulture Departments and TNAU Departments. iv) Supply of quality seeds to be ensured.

Agriculture Marketing, Horticulture, Agricultural Engineering	i) Farmers failed to adopt new technologies, and diversification mainly due to absence of correct market information. ii) For diversification of crops no proper extension advice is available. iii) Modern technologies like micro irrigation, to save water, are costly and require lot of frequent training etc., iv) The value addition technologies observed are absent.	i) Agri. Marketing Department and TNAU to assess the market trend and advise the WUA through Agribusiness Cell, Kiosks & Discussion meetings. ii) For value addition to products, grading arrangements, thrashing flood, could storages etc are proposed. iii) Adequate trainings are proposed. iv) Fisheries Department in consultation with the AED, and WUA propose inland fishing with the farm ponds etc., with provision for Kiosks for improved marketability.
		v) Deepening on the horticulture crops proposed, AED proposes to link installation of micro irrigation system netwok and wherever required pilot cases for buried pipe conveyance is also proposed.
Animal Husbandry and Fisheries	(i). Livestock population need health improvements schemes ii).Quality fodder is needed ii).Infrastructure development in existing veterinary sub centers is needed. iv).In service training to veterinarians are needed. v).Good fish fingerlings are required to promote inland fishery through farm ponds in the farmers' lands.	(i). A I Centre with improved infrastructure in existing veterinary sub centers have been proposed (ii).Sufficient fodder area is proposed to be cultivated with good quality fodder seeds supply. iii). Adequate trainings are proposed iv).Fisheries department in consultation with the AED and WUA propose inland fishing with the farm ponds etc., with provision for kiosks for improved marketability.

6. Details of Activities of Line Departments.

6.1. Water Resources Department (WRD)

6.1.1. Approach: To rehabilitate the irrigation system and service delivery.

a. Thematic Maps on land use, soils, crops, water bodies, and other agricultural and demographic attributes are prepared by IWS.
b. The crop water requirements for the crops during without and with Project situation are prepared by IWS. The crops proposed by Agriculture and Horticulture Departments will be tailored in consultation with Agriculture marketing Department and the Water Users Association.
c. The adequacy and status of the canal system, feeder channels to tanks, distribution system etc., have been assessed by the WRO (Both regional and Plan Formulation wing) as follows.

- Strengthening of tank bund by earthwork excavation using machineries.
- Desilting the supply channels by earthwork excavation using machineries.
- Providing retaining walls at vulnerable points in the tank bund.
- Providing Model Sections to maintain the TBL in the tanks.
- Reconstruction of Collapsed weirs.
- Repairs to the damaged weirs.
- Reconstruction of Collapsed Sluices
- Repairs to the damaged Sluices
- Providing S.G. Shutter/ Plug arrangements to Sluices, head Sluices Scour vents etc.,
- Removing, Repairing and refixing in position of the existing S.G. shuttering arrangements and providing locking arrangements etc.,
- Fixed boundary stones in the tanks to prevent encroachment.

Accordingly the following packages are proposed.

PACKAGE DETAILS

Sl. No.	Package Nos.	Name of the package	Package Amount in Lakhs.
1.	IWAMWARM/WRO, Gadilam/ Package No.1	Rehabilitation of Non System Tank and its supply channels from Yal tank to Pinnalvadi tank Gadilam sub basin under Gadilam Sub Basin in Sankarapuram, Tirukoilur and Ulundurpet Taluk of Villupuram District.	541.80
2.	IWAMWARM/WRO, Gadilam/ Package No.2	Rehabilitation of Non System Tank and its supply channels Form Arunkurukai tank to mathiyanur tank under Gadilam Sub Basin in Tirukoilur and Ulundurpet Taluk of Villupuram District.	499.05
3.	IWAMWARM/WRO, Gadilam/ Package No.3	Rehabilitation of Non System Tank 13 Nos and its supply channels under Gadilam Sub Basin in Ulundurpet Taluk of Villupuram District.	204.81
4.	IWAMWARM/WRO, Gadilam/ Package No.4	Rehabilitation of Non System Tank 8 Nos and its supply channels under Gadilam Sub Basin in Taluk of Villupuram District.	168.20
5.	IWAMWARM/WRO, Gadilam/ Package No.5	Rehabilitation of Non System Tank 6 Nos and its supply channels under Gadilam Sub Basin in Panruti Taluk of Cuddalore District.	192.46
6	IWAMWARM/WRO, Gadilam/ Package No.6	Rehabilitation of Non System Tank 4 Nos and its supply channels under Gadilam Sub Basin in Panruti Taluk of Cuddalore District.	249.82
7.	IWAMWARM/WRO, Gadilam/ Package No.7	Rehabilitation of 9Nos. of Non System Tank and Thiruvandhipuram Anicut under Gadilam Sub Basin in Cuddalore Taluk of Cuddalore District.	359.45
8.	IWAMWARM/WRO, Gadilam/ Package No.8	Rehabilitation of supply channel and Thiruvandhipuram Anicut under Gadilam Sub Basin in Cuddalore Taluk of Cuddalore District.	387.25
9.	IWAMWARM/WRO, Gadilam/ Package No.9	Rehabilitation of supply channel under Thiruvathigai Anicut and Vanamadevi Anicut under Gadilam sub basin in Cuddalore Taluk of Cuddalore District.	115.34
10.	Environmental Cell	--	16.70
11.	Ground water	--	--
		TOTAL	**2734.88**

6.1.2 Outcome indicators.

The indicators for evaluating the performance of WRO are as follows.

- The conveyance efficiency is expected to be improved from the present 81 % to 100%
- The present gap area of 1400.02 Ha will be bridged totally in the project
- Rehabilitation/ Reconstruction of Irrigation Infrastructure.

Besides this, the WRO is actively engaged in formation of WUAs as per TNFMIS Act 2000 and Rules by preparing the relevant documents such as maps showing the hydraulic boundary of WUA, land owners voters list etc. To help in the above collection of data involving social and field activities, it is proposed to enlist the services of NGOs, Agricultural Extension Officers, SHG's, etc. It is estimated that about 99 WUA shall have to be formed in this sub basin.

6.1.3. Tank components.

The practice of tank irrigation has been prevalent for time immemorial. Tanks help to store water for lean season and have played a significant role in the irrigation sector. They not only provide a source for irrigation but also help in recharging ground water under suitable conditions. There are 91 Non System tanks with an ayacut of 7672.75Ha and direct ayacut from 3 Nos. of anicut having an ayacut of 1684.20Ha. These tanks are quite old and are in urgent need of repair and rehabilitation. The irrigation potential of these tanks have been declined with siltation, poor maintenance of sluices, bund erosion and failure of the distribution system.

Under the IAMWARM project, the following investments are proposed to rehabilitate the PWD Tanks. Provisions has been made for turfing in the rear side slope of the entire tank bund length.

For improving the supply channels, desilting to restore capacity, improvements to bund, weirs and sluices in 91 PWD tanks, a sum of Rs. 15.32 Crores has been proposed.

6.1.4. Field Channel Lining

Provision of lining in the field channels for length of 50M immediately D/S of Irrigation Sluices has been made.

BRIEF NARRATION:

- Restoring the capacity of the irrigation Storage Structures like tanks by means of desilting and strengthening the tank bund.
- Restoring the original carrying capacity of supply channels from rain fed odai, from its own catchment, odai to feed the non system tanks.
- Reconstruction and Repairs of weirs and sluices of tanks. Operational arrangements by means of providing and replacing screw gearing arrangements.
- Fixing boundary stones in the tanks to prevent encroachment of tanks.
- Forming New Water Users Associations for Participatory Irrigation Management (PIM)
- Rehabilitation works of all irrigation structures to improve the conveyance Efficiency.

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2. SCOPE OF THE PROJECT

PRESENT STATUS OF THE SYSTEM

2.1 GENERAL

The Deficiencies in the structure and functions of Irrigation Network causes the inefficient functioning of the Gadilam Sub - Basin and creates hardship to the farming community.

2.2 SYSTEM DEFICIENCY

In Most of the command areas of the channels, tanks, irrigation channels etc., distribution are taken up to a certain limit only beyond this the water is left to be conveyed by the farmers themselves to the fields for irrigation. No technical attention is paid on the application of water to the fields. The farmers with out the proper awareness of irrigation leave most of the fields with zigzag boundaries and the field bunds are abnormal is in size which reduces the cultivatable area considerably.

The major problems being experienced in the Gadilam sub basin are as follows.

- Lack of efficient farm water management.
- Poor infrastructure facilities.
- Non - adoption of modern micro irrigation methods and new agricultural practices.
- Inadequate coordination among rural agencies, Government departments and other financial institution etc.,
- Lower crop yield.
- Low field application efficiency.
- Traditional method of farming.
- Excess use of chemical fertilizers and pesticides.
- Inadequate post harvest management facilities.

2.3 SCOPE OF THE PROJECT

The water resources Department in coordination with the following line department have proposed to improve the irrigation service delivery and productivity of irrigated agriculture with effective integrated water resources management in this sub basin. The line departments are

1. Agriculture Department
2. Department of Horticulture and plantation crops.
3. Agriculture Engineering Department
4. Tamil Nadu Agricultural University.
5. Department of Agricultural marketing and Agribusiness services.
6. Animal Husbandry and Veterinary Services.
7. Fisheries Department
8. Environmental cell of water Resources Organization.

2.4 Water Resources Department.

In order to improve the conveyance and operational efficiency, it is now proposed to improve and modernize the structural components in Gadilam Sub basin.

- Desilting the supply channels by earth work excavation using Machineries.
- Strengthening the tank bund by desilting the tank using Machineries
- Repairs to Head sluices
- Reconstruction of collapsed weirs
- Repairs to the damaged weirs
- Reconstruction of Collapsed sluices
- Repairs to the damaged sluices
- Providing Bathing Ghats, Retaining walls and Model section in selective area of the tanks
- Providing S.G shutters / Plug arrangements to sluices, Head Sluices, scour vent etc.,
- Removing, Repairing and refixing in position of the existing S.G shuttering arrangements to the sluices and providing locking arrangements etc.,
- Fixing Boundary stones in the tank bund and water spread area.

PROJECT PROPOSALS

WATER RESOURCES DEPARTMENT

CHAPTER-1.1
INTRODUCTION

INTRODUCTION

1.1.1 GENERAL

Agriculture is the dominant sector in the Indian economy. Tamil Nadu, depends largely on the surface water irrigation as well as ground water irrigation. The state has used the surface and ground water potentials to the maximum limit and hence the future development and expansion depends only on the efficient and economical use of water potential and resources.

To achieve higher water use efficiency it is necessary to improve and upgrade the existing conveyance system and also to introduce modern irrigation methods.

With the above objective, a comprehensive programme has been proposed with a Multi Disciplinary approach.

1.1.2 Description of the Gadilam Basin.

Gadilam River is a major flood carrier originating from the tank surplus of Marianur tank and the drainage from Melapazhangoor Reserve forest in Kallakurichi Taluk of Villupuram district.

The river runs about 120Km and finally confluences into Bay of Bengal near Devenampattinam Village in Cuddalore District. Sesha Nadhi and Malattar are the tributaries of Gadilam River.

There are fourteen anicuts across river Gadilam Eleven anicuts of located in Villupuram District irrigating direct ayacut of 18.61 Ha and through tank ayacut of 4401.03 Ha. and three anicuts are located in Cuddalore District irrigating direct ayacut of 1665.59 Ha and through tank ayacut of 3271.72 Ha.

There are 91 Tanks situated within the Gadilam Sub Basin.

91 Tanks are non system Tanks having an ayacut of 7672.75Ha and a direct ayacut of 1684.20 Ha.

1.1.1 CLUSTER CONVERGENCE TABLE -III RD PHASE SUB BASINS.

Name of Sub Basin : GADALIM SUB BASIN

District : Villupuram

Cluster	Sl.No.	Name of the cluster / Insfrastructure/ village	block	Name of the cluster revenue village	Total Ayacut (Ha)			Total area (Ha)			WRO		Agri culture		TNAU		Horti culture		Agri marketing		AED		Fisheries		Animal Husbandry	
					FI	PI	Gap	Wop	WP	Gap	Activities	Nos & Length	Activities	No. / Ha	Activities	No. / Ha	Activities	No. /Ha	Activities	No. /Ha	Activities	No. / Ha	Activities	No. /Ha	Activities	No. /Ha
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
		PASAR CLUSTER																								
1	1	Yal	Rishivanthiyam	Yal	32.64	19.58	13.06	52.22	65.28	-	Strengthening the Tank Bund	1540														
											Reconstruction of sluices	2														
											Reconstruction of weir	1														
											Supply Channel	2900														
	2	Melapangur	"	Melapangur	28.25	16.95	11.30	45.20	56.50	-	Strengthening the Tank Bund	1150														
											Reconstruction of sluice	1														

											Supply Channel	500															
	3	Peral	"	Peral	27.33	16.33	11.00	43.66	54.66	-	Strengthening the Tank Bund	1360															
											Reconstruction of sluices	1															
											Supply Channel	2900															
	4	Sathaputhur	"	Sathaputhur	21.56	12.93	8.63	34.49	43.12	-	Strengthening the Tank Bund	1000															
											Reconstruction of sluice	1															
											Reconstruction of weir	1															
											Supply Channel	2000															
	5	Pavandur	"	Pavandur	22.64	13.58	9.07	36.22	45.29	-	Strengthening the Tank Bund	1120															

											Reconstruction of sluice	1														
											Reconstruction of weir	1														
											Supply Channel	2000														

	6	Pasar	"	Pasar	62.48	37.49	25.00	99.97	124.97	-	Strengthening the Tank Bund	1000														
											Reconstruction of sluices	1														
											Supply Channel	2000														
			Total		**194.90**	**116.86**	**78.06**	**311.76**	**389.82**		**Strengthening the Tank Bund**	**7170**														
											Reconstruction of sluices	**7**														

											Reconstruction of Weir	**3**															
											Weir Repair	**-**															
											Supply Channel	**12300**															
		RISHIVANTHIYAM CLUSTER																									
2	7	Rishivanthiyam	"	Rishivanthiyam	36.99	22.19	14.79	59.18	69.97	4.00	Strengthening the Tank Bund	1220															
											Reconstruction of sluices	2															
											Supply Channel	3050															
	8	Vengalam	"	Vengalam	22.57	13.54	9.03	36.11	45.14		Strengthening the Tank Bund	1000															
											Reconstruction of sluices	1															
											Supply Channel	2000															
	9	Munivazhai	"	Munivazhai	26.00	15.60	10.39	41.60	51.99		Strengthening the Tank Bund	1000															

											Reconstruction of sluices	1															
											Supply Channel	2300															
	10	Kunniyur	"	Kunniyur	24.55	14.73	9.82	39.28	49.10		Strengthening the Tank Bund	850															
											Reconstruction of sluices	1															
											Reconstruction of weir	1															
											Supply Channel	1700															
											-20-																
	11	Thimmalai	Thiyagadurugam	Thimmalai	34.50	20.70	13.79	55.20	68.99		Strengthening the Tank Bund	1450															
											Reconstruction of weir	1															
											Supply Channel	1500															
			Total		**144.61**	**86.76**	**57.82**	**231.37**	**285.19**	**4.00**	**Strengthening the Tank Bund**	**5520**															

											Reconstruction of sluices	**5**																		
											Reconstruction of weir	**2**																		
											Supply Channel	**10550**																		
		KATTUEDAIYAR CLUSTER																												
3	12	Panapadi	Thirugovilur	Panapadi	29.31	17.59	11.72	46.90	58.62		NO ACTIVITIES																			
	13	Kattuedaiyur	Ulundurpet	Kattuedaiyur	77.03	46.22	30.81	123.25	154.06		Strengthening the Tank Bund	1390																		
											Reconstruction of sluices	3																		
											Reconstruction of weir	1																		
											Anicut repair	1																		
											Supply Channel	2700																		
	14	Memalur	Thirugovilur	Memalur	31.91	19.15	12.76	51.06	63.82		Strengthening the Tank Bund	1760																		
											Reconstruction of sluices	2																		
											Reconstruction of weir	1																		
											Repair to anicut	1																		
											Supply Channel	4000																		

	15	Kattusellur	Ulundurpet	Kattusellur	39.62	23.77	15.85	63.39	79.24		Strengthening the Tank Bund	1380															
											Reconstruction of sluices	1															
											Reconstruction of weir	1															
											Supply Channel	2000															
	16	Alur	Thirugovilur	Alur	35.07	21.04	14.02	56.11	70.13		Strengthening the Tank Bund	1630															
											Reconstruction of sluices	2															
											Reconstruction of weir	1															
											Repair to anicut	1															
											Supply Channel	2000															
											-21-																
	17	Periyakurukkai	Ulundurpet	Periyakurukkai	23.85	14.31	9.54	38.16	47.70		Strengthening the Tank Bund	1150															
											Reconstruction of sluices	2															
											Reconstruction of weir	1															
											Supply Channel	2000															

	18	Mohalar	Thirugovilur	Mohalar	30.92	18.55	12.36	49.47	61.83		Strengthening the Tank Bund	900															
											Reconstruction of sluices	2															
											Reconstruction of weir	1															
											Repair to anicut	1															
											Supply Channel	1500															
			Total		**267.71**	**160.63**	**107.06**	**428.34**	**535.40**		**Strengthening the Tank Bund**	**8210**															
											Reconstruction of sluices	**12**															
											Repair to sluice	**-**															
											Reconstruction of weir	**6**															
											Repair to weir	**-**															
											Supply Channel	**14200**															
											shutter	**-**															
											Repair to anicuts	**3**															
		KUNJARAM CLUSTER																										
4	19	Sikkadu	Ulundurpet	Sikkadu	22.36	13.42	8.94	35.78	44.72		Strengthening the Tank Bund	960															

											Reconstruction of sluices	1															
											Reconstruction of weir	1															
											Supply Channel	2000															
	20	Adhaiyur	"	Adhaiyur	22.86	13.72	9.14	36.58	45.72		Strengthening the Tank Bund	1230															
											Reconstruction of sluices	1															
											Reconstruction of weir	1															
											Supply Channel	2000															
	21	Kunjaram	"	Kunjaram	58.10	34.86	23.23	92.96	116.19		Strengthening the Tank Bund	1295															
											Reconstruction of sluices	3															
											Reconstruction of weir	1															
											Supply Channel	2000															
											-22-																
	22	Eraiyur	"	Eraiyur	27.14	16.28	10.86	43.42	52.78	1.50	Strengthening the Tank Bund	1250															

											Reconstruction of sluices	1														
											Reconstruction of weir	1														
											Supply Channel	2000														
	23	Veeramangalam	"	Veeramangalam	20.82	12.49	8.32	33.31	41.63		Strengthening the Tank Bund	1010														
											Reconstruction of weir	1														
											Supply Channel	1500														
	24	Vadukurumbur	"	Vadukurumbur	43.32	25.99	17.33	69.31	86.64		Strengthening the Tank Bund	1750														
											Reconstruction of sluice	2														
											Reconstruction of weir	1														
											Supply Channel	1500														

	25	S.Malaiyanur	"	S.Malaiyanur	29.02	17.42	11.60	46.45	58.05		Strengthening the Tank Bund	2298															
											Reconstruction of sluice	2															
											Reconstruction of weir	1															
											repair to anicut	1															
											Supply Channel	1100															
	26	Koovadu	"	Koovadu	45.55	27.33	18.21	72.88	91.09		Strengthening the Tank Bund	1240															
											Reconstruction of sluice	3															
											Reconstruction of weir	1															
											Supply Channel	2000															
	27	Naivanai	"	Naivanai	30.79	18.47	12.31	49.26	61.57		Strengthening the Tank Bund	1290															
											Reconstruction of sluice	2															
											Reconstruction of weir	1															
											Supply Channel	2000															

	28	Pinnalavadi	"	Pinnalavadi	31.51	18.91	12.6	50.42	63.02		Strengthening the Tank Bund	1124														
											Reconstruction of sluice	1														
											Supply Channel	2000														
			Total		**331.47**	**198.89**	**132.54**	**530.37**	**661.41**	**1.50**	**Strengthening the Tank Bund**	**13447**														
											Reconstruction of sluice	**16**														
											Repair to sluice	**-**														
											shutter	**-**														
											Reconstruction of weir	**9**														
											Repair to anicut	**1**														
											Supply Channel	**18100**														

		PUTHANANTHAL CLUSTER																								
5	29	Arukurykkai	Thiruvennai nallur	Arukurykkai	39.03	23.42	15.61	62.45	78.06		Strengthening the Tank Bund	1620														
											Reconstruction of sluice	2														
											Repair to weir	1														
											Repair to anicut	1														
											Supply Channel	2000														
	30	Dhamal	Ulundurpet	Dhamal	25.51	15.31	10.2	40.82	51.02		Strengthening the Tank Bund	1600														
											Reconstruction of sluice	1														
											Repair to weir	1														
											Repair to anicut	1														

											Supply Channel	3000														
											24															
	31	Kiliyur	"	Kiliyur	25.06	15.04	10.02	40.1	50.12		Strengthening the Tank Bund	1250														
											Reconstruction of sluice	3														
											Repair to weir	1														
											Supply Channel	1500														
	32	M.Kunnathur	"	M.Kunnathur	32.05	19.23	12.82	51.28	64.10		Strengthening the Tank Bund	1200														
											Reconstruction of sluice	1														
											Weir repair	1														

											Supply Channel	2000															
	33	Puthanant hal	"	Puthana nthal	25.5	15.3	10.2	40.8	51.00		Strengthening the Tank Bund	1510															
											Reconstruction of sluice	2															
											Weir repair	1															
											Repair to anicut	1															
											Supply Channel	2000															
	34	Nathamoo r	"	Nathamo or	41.21	24.73	16.49	65.94	82.43		Strengthening the Tank Bund	1250															
											Reconstruction of sluice	2															

											Repair to weir	1														
											Supply Channel	2000														
												25														
	35	Athur	Thirunvalaur	Athur	21.77	13.06	8.7	34.83	43.53	-	Strengthening the Tank Bund	675														
											Reconstruction of sluice	1														
											Repair to weir	1														
											Supply Channel	3600														
			Total		**210.13**	**126.09**	**84.04**	**336.22**	**420.26**		**Repair to anicut**	**3**														
											Strengthening the Tank Bund	**9105**														

											Reconstruction of sluice	**12**																
											Repair to sluice	**-**																
											Shutter	**-**																
											Reconstruction of weir	**-**																
											Repair to weir	**7**																
											Supply Channel	**16100**																
		KALAMARUTHUR CLUSTER																										
6	36	Adhanur	Thirunavalur	Adhanur	26.7	16.02	10.68	42.72	53.4		Strengthening the Tank Bund	1800																
											Reconstruction of sluice	2																
											Repair to weir	1																
											Supply Channel	2000																

	37	Kalamaruthur	"	Kalamaruthur	71.26	42.75	28.5	114.01	142.51		Strengthening the Tank Bund	2700														
											Reconstruction of sluice	2														
											Repair to weir	1														
											Supply Channel	3600														
												26														
	38	Orathur	"	Orathur	54.66	32.79	21.86	87.45	109.31		Strengthening the Tank Bund	2500														
											Reconstruction of sluice	2														
											Supply Channel	5000														
	39	Pa.killanur	"	Pa.killanur	22.36	13.42	8.94	35.78	44.72		Strengthening the Tank Bund	2700														

											Reconstruction of sluice	3														
											Supply Channel	2000														
	40	Pachapalayam	"	Pachapalayam	20.92	12.55	8.36	33.47	41.83		Strengthening the Tank Bund	2000															
											Reconstruction of sluice	2														
											Reconstruction of weir	1														
											Repair to anicut	1														
											Supply Channel	2700														

	41	U.Sellur	"	U.Sellur	21.46	12.88	8.58	34.34	42.92	-	Strengthening the Tank Bund	2300															
											Reconstruction of sluice	2															
											Repair to weir	1															
											Supply Channel	1500															

	42	Pandur	"	Pandur	41.22	24.73	16.48	65.95	82.43		Strengthening the Tank Bund	1200															
											Reconstruction of sluice	2															
											Supply Channel	3000															

	43	Arali	"	Arali	29.02	17.41	11.61	46.43	58.04		Strengthening the Tank Bund	955														
											Reconstruction of sluice	2														
											Supply Channel	2000														
			Total		**287.60**	**172.55**	**115.01**	**460.15**	**575.16**		**Repair to anicut**	**1**														
											Strengthening the Tank Bund	**16155**														
											Reconstruction of sluice	**17**														
											Reconstruction of weir	**1**														
											Repair to weir	**3**														

											Shutter	**-**															
											Supply Channel	**218 00**															
		PADUR CLUSTER																									
7	44	Semmangur	Thirunavalur	Semmangur	35.40	21.24	14.15	56.64	70.79		Strengthening the Tank Bund	1242															
											Reconstruction of sluice	2															
											Repair to weir	1															
											Supply Channel	1500															
											28																
	45	Nagar	"	Nagar	23.50	14.1	9.4	37.6	45.50	1.5	Strengthening the Tank Bund	1492															
											Reconstruction of sluice	1															
											Repair to weir	1															

											Supply Channel	1000																
	46	Sengurichi	"	Sengurichi	26.88	16.13	10.74	43.01	53.75		Strengthening the Tank Bund	1300																
											Reconstruction of sluice	1																
											Supply Channel	2000																
	47	Padur	"	Padur	122.88	73.72	49.15	196.6	245.75		NO ACTIVITIES																	
	48	Mathiyanur	"	Mathiyanur	23.31	13.99	9.32	37.3	46.62		Strengthening the Tank Bund	1370																
											Reconstruction of sluice	2																
											Repair to weir	1																
											Supply Channel	3000																

			Total		231.97	139.18	92.76	371.15	462.41	1.50	Strengthening the Tank Bund	5404														
											Reconstruction of sluice	6														
											Repair to sluice	-														
											shutter	-														
											Repair to weir	3														
											Supply Channel	7500														
		29																								
		KALATHUR CLUSTER																								

8	49	Koo.Kallakurichi	Thirunavalur	Koo.Kallakurichi	26.95	16.17	10.77	43.12	53.89		Strengthening the Tank Bund	1325														
											Reconstruction of sluice	2														
											Weir repair	1														
											Supply Channel	2000														
	50	Mattigai	"	Mattigai	23.1	13.86	9.24	36.96	46.2		Strengthening the Tank Bund	1600														
											Reconstruction of sluice	2														
											Repair to weir	1														
											Supply Channel	2000														
	51	Senthanadu	"	Senthanadu	39.12	23.47	15.64	62.59	78.23		Strengthening the Tank Bund	1060														
											Reconstruction of sluice	1														
											Repair to weir	1														
											Supply Channel	2000														

	52	Manalur	"	Manalur	59.32	35.58	23.72	94.9	118.62		NO ACTIVITIES																
	53	T. Kalattur	"	Kalattur	65.77	39.46	26.3	105.23	131.53		Strengthening the Tank Bund	2600															
											Rec onstruction of sluice	2															
											Repair to weir	1															
											Repair to anicut	1															
											Supply Channel	1500															
			Total		**214.26**	**128.54**	**85.67**	**342.8**	**428.47**		**Strengthening the Tank Bund**	**6585**															
											Rec onstruction of sluice	**7**															
											Repair to sluice	**-**															
											Repair to anicut	**1**															
											Shutter	**-**															
											Rec onstruction of weir	**-**															
											repair of weir	**4**															
											Supply Channel	**7500**															
		30																									

		VELLAIYUR CLUSTER																									
9	54	Anganur	Ulundurpet	Anganur	39.85	23.91	15.94	63.76	79.70		NO ACTIVITIES																
	55	Emam	"	Emam	21.59	12.95	8.64	34.54	43.18		Strengthening the Tank Bund	1060															
											Rec onstruction of sluice	1															
											Repair to weir	1															
											Supply Channel	2000															
	56	Vellaiyur	"	Vellaiyur	61.54	36.92	24.62	98.46	123.08		NO ACTIVITIES																
	57	Pu.Konanavadi	"	Pu.Konanavadi	23.2	13.92	9.28	37.12	46.40		Strengthening the Tank Bund	1140															
											Rec onstruction of sluice	1															

											Repair to weir	1														
											Supply Channel	2000														
	58	U.Keeranur	"	U.Keeranur	28.09	16.85	11.24	44.94	56.18		Strengthening the Tank Bund	1150														
											Rec onstruction of sluice	2														
											Repair to weir	1														
											Supply Channel	1500														
	59	Ulundur	"	Ulundur	27.52	16.51	11.01	44.03	50.21	4.83	Strengthening the Tank Bund	1200														
											Rec onstruction of sluice	1														
											Supply Channel	2000														

	60	Sirupakkam	"	Sirupakkam	24.35	14.61	9.74	38.96	48.70		Strengthening the Tank Bund	630													
											Reconstruction of sluice	1													
											Repair to weir	1													
											Supply Channel	2000													
			Total		**226.14**	**135.67**	**90.47**	**361.81**	**447.45**	**4.83**	**Strengthening the Tank Bund**	**5180**													
											Reconstruction of sluice	**6**													
											Repair to sluice	**-**													
											Shutter	**-**													

											Repair to weir	**4**														
											Supply Channel	**9500**														
		A. PUTHUR CLUSTER																								
10	61	Sembiyadevi	Ulundurpet	Sembiyadevi	23.95	14.37	9.58	38.32	47.9		Strengthening the Tank Bund	582														
											Reconstruction of sluice	1														
											Supply Channel	1500														
	62	Alangiri	"	Alangiri	26.72	16.03	10.68	42.75	53.43		Strengthening the Tank Bund	870														
											Reconstruction of sluice	1														
											Repair to weir	1														
											Supply Channel	2000														

	63	Salapakkam	"	Salapakkam	20.56	12.33	8.22	32.89	41.11		Strengthening the Tank Bund	920																
											Reconstruction of sluice	1																
											Repair to weir	1																
											Supply Channel	1500																
											32																	
	64	A.Puthur	"	A.Puthur	29.9	17.94	11.96	47.84	59.8		Strengthening the Tank Bund	700																
											Reconstruction of sluice	1																
											Supply Channel	1500																
			Total		**101.13**	**60.67**	**40.44**	**161.8**	**202.24**		**Strengthening the Tank Bund**	**3072**																
											Reconstruction of sluice	**4**																
											Repair to sluice	**-**																

											Shutter	-															
											Repair to weir	2															
											Supply Channel	6500															
		Grand Total for Tanks in Villupuram District		2209.92	1325.84	883.87	3535.77	### ###	11.83																		

CHAPTER-1.2
HYDROLOGY

1.2.1. General

Gadilam Sub Basin forms part of Pennaiyar Basin.

1.2.2. Location :

Gadilam river originates from the tank surplus of Mariyanur Tank and the drainage from Melaphazhangoor reserve forest in Kallakurichi Taluk of Villupuram District. The river after traversing in Villupuram and Cuddalore District confluences into Bay of Bengal near Devanampattinam near Cuddalore Town.

1.2.3. Catchement area of Gadilam Sub Basin

The catchments area of Gadilam Sub Basin lies almost plain Terrain and the river meanders about 120Km before confluences into Bay of Bengal.

1.2.4. HYDRO METEOROLOGY

The Hydro Meteorology parameters include rainfall, temperature, humidity, wind velocity, evaporation and duration of sub shine which determine the climate of the basin.

1.2.4. RAIN FALL

Average annual rainfall of gauging stations influencing this sub basin is 1315.8mm

Sl. No.	North East Monsoon	Summer	South west monsoon	Winter	Annual.
1.	773.7	95.7	392.4	54.1	1315.3 mm

a. <u>CLIMATE :-</u>

The Gadilam sub basin lies in coastal belt having an annual average rainfall of 964mm. This basin receives a major share of its rainfall during NE Monsoon. This monsoon helps to build up storage in the non system tanks. For the measurement of Hydro Meteorological parameters in the basin area, there is one weather station at Cuddalore, its data is taken for the study.

b. <u>SOIL CLASSIFICATION</u> :-

In this sub basin, due to different stages, Weathering and parent material, the soil types are met with in combination of inceptisol, Alfisol and Vertisol. More prominent type is inceptisol.

Inceptisol	Red or brown or grey soil with surface horizon more developed than sub surface. They are developing soils, moderately deep, coarse loamy to loam moderately drained to well drained.	Suited for commonly grown crops with exceptions.
Alfisol	The red or brown soils having accumulation of alleviated clay in sub surface horizon it well drained, poor water and nutrient holding capacity	Annual crops with shallow roots systems cum up wells.
Vertisols	Block soil	Suitable for cotton Pulses etc.,

1.2.6. DEMOGRAPHY

Name of Sub Basin	Total No. of Blocks	Total No. of Villages	Population		
			2004	2010	2025
Gadilam Sub Basin	12	138			

1.2.7. WATER POTENTIAL

Surface Water potential : 227.22 Mcum.

Ground water yield : 473.36 Mcum

Total : 700.58 Mcum

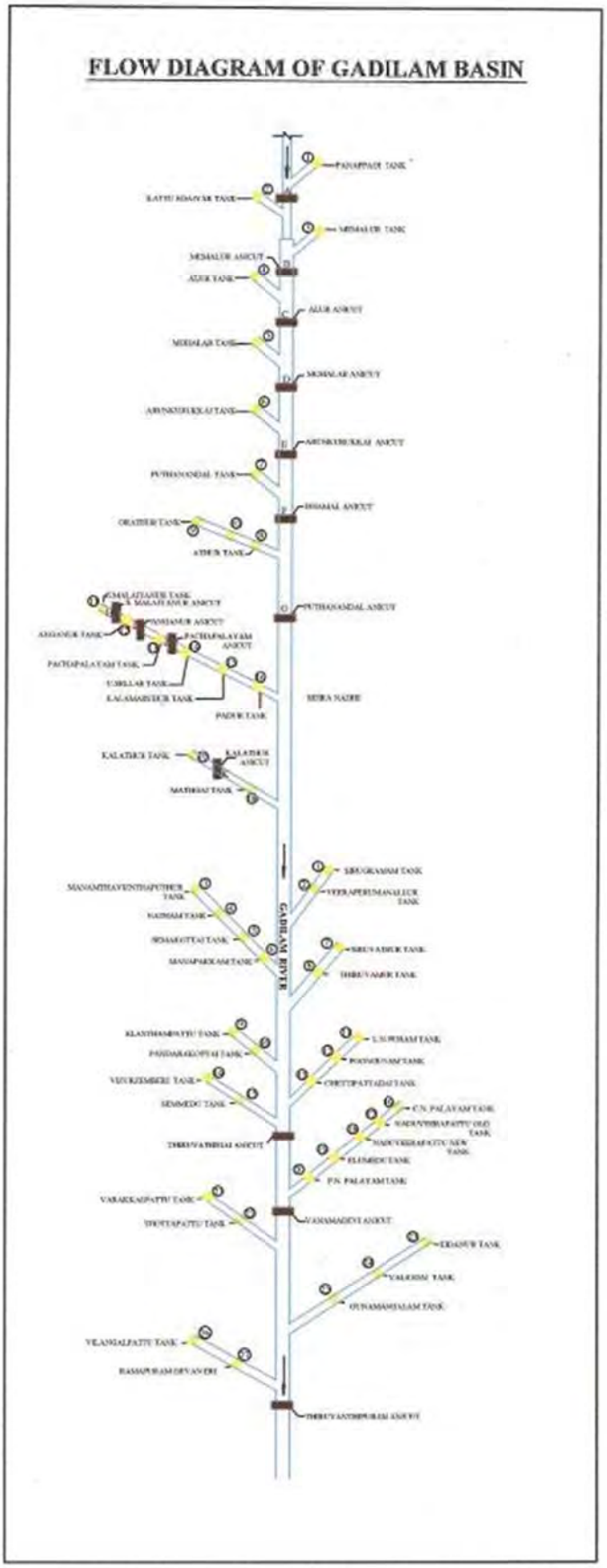
1.2.8. WATER DEMAND

			WITHOUT PROJECT	WITH PROJECT
i)	Domestic	:	27.30 Mcum	27.30 Mcum
ii)	Live Stock	:	24.85 Mcum	24.85 Mcum
iii)	Industrial	:	50.26 Mcum	50.26 Mcum
iv)	Irrigation(PWD Tanks)	:	119.18 Mcum	119.78 Mcum
v)	P.U. Tanks	:	103.20 Mcum	103.20 Mcum
	Total	:	324.79 Mcum	328.39 Mcum

1.2.9. WATER BALANCE

Surplus : 375.79 Mcum. 375.19 Mcum

FLOW DIAGRAM OF GADILAM BASIN



CROPPING PATTERN

Nam	**Gadila**	Fully	2203.82	Ha
Distr	Villupur	Partially	1322.29	Ha
Regi	4419.6	Gap	893.53	Ha
		Total	**4419.64**	Ha

S.No.	Crop	Without Project				With Project				Increase
		FI	PI	RF/G	TOTAL	FI	PI	RF/G	TOTAL	
I	**Perennial crop**									
1	Coconut	0.00	61.00	0.00	**61.00**	61.00	0.00	0.00	61.00	0
2	Fodder	3.00	1.00	0.00	**4.00**	10.00	0.00	0.00	10.00	6.00
3	Casuarina	0.00	160.00	0.00	**160.00**	200.00	0.00	0.00	200.00	40.00
4	Oilpalm	11.00	0.00	0.00	**11.00**	20.00	0.00	0.00	20.00	9.00
5	Cashew	0.00	20.00	0.00	**20.00**	30.00	0.00	0.00	30.00	10.00
6	Guava	16.00	16.00	0.00	**32.00**	40.00	0.00	0.00	40.00	8.00
	Sub Total	**30.00**	**258.00**	**0**	**288.00**	**361.00**	**0**	**0**	**361.00**	73.00
II	**Annual crop**									
1	Sugar Cane	687.06	0.00	0.00	**687.06**	687.06	0.00	0.00	687.06	0
2	Banana	12.00	0.00	0.00	**12.00**	20.00	0.00	0.00	20.00	8.00
3	Tapioca	0.00	90.00	75.00	**165.00**	223.00	0.00	0.00	223.00	58.00
4	Tuermeric	200.00	190.00	50.00	**440.00**	500.00			500.00	60.00
5	Water melon	20.00	0.00	0.00	**20.00**	25.00	0.00	0.00	25.00	5.00
	Sub Total	**919.06**	**280.00**	**125.00**	**1324.06**	**1455.06**	**0**	**0**	**1455.06**	**131.00**
III	**1st crop**									
1. a	Paddy	938.11	0.00	**0.00**	938.11	**0.00**	**0.00**	**0.00**	0	-938.11
b	Paddy - SRI		**0.00**	**0.00**	0	780.00	**0.00**	**0.00**	780.00	780.00
2	Blackgram	0.00	220.00	**250.00**	470.00	500.00	**0.00**	**0.00**	500.00	30.00
3	Maize	150.00	190.00	**59.17**	399.17	400.00	**0.00**	**0.00**	400.00	0.83
4	Groundnut	**79.65**	**194.99**	**275.36**	550.00	550.00	**0.00**	**0.00**	550.00	0
5	Gingely	0.00	**105.00**	**0.00**	105.00	50.75	**0.00**	**0.00**	50.75	-54.25
6	Cumbu	0.00	**74.30**	**161.17**	235.47	200.00	**0.00**	**0.00**	200.00	-35.47
7	Brinjal	30.00	**0.00**	**10.00**	40.00	45.00	**0.00**	**0.00**	45.00	5.00
8	Crossandra	12.00	**0.00**	**0.00**	12.00	15.00	**0.00**	**0.00**	15.00	3.00
9	Gourds	45.00	**0.00**	**0.00**	45.00	50.00	**0.00**	**0.00**	50.00	5.00
10	Buildings/others	0.00	**0.00**	**12.83**	12.83	0.00	**0.00**	**12.83**	12.83	0
	Sub Total	**1254.76**	**784.29**	**768.53**	**2807.58**	**2590.75**	**0**	**12.83**	**2603.58**	**-204.00**
	Grand Total (I+II+III)	**2203.82**	**1322.29**	**893.53**	**4419.64**	**4406.81**	**0**	**12.83**	**4419.64**	**0**
IV	**2 nd Crop**									
1. a	Paddy	-	**600.00**	**0.00**	600.00	**0.00**	**0.00**	**0.00**	0	-600.00
b	Paddy - SRI	-	**0.00**	**0.00**	0	600.00	**0.00**	**0.00**	600.00	600.00
2	Groundnut	-	50.00	**0.00**	50.00	475.00	**0.00**	**0.00**	475.00	425.00
3	Maize	-	0.00	**0.00**	0	650.00	**0.00**	**0.00**	650.00	650.00
4	Blackgram	-	**40.00**	**0.00**	40.00	550.00	**0.00**	**0.00**	550.00	510.00
5	Bhendi	-	**10.00**	**0.00**	10.00	25.00	**0.00**	**0.00**	25.00	15.00
6	Brinjal	-	**10.00**	**0.00**	10.00	20.00	**0.00**	**0.00**	20.00	10.00
7	Crossandra	-	20.00	0.00	20.00	25.00	**0.00**	**0.00**	25.00	5.00
8	Chillies	-	10.00	0.00	10.00	25.00	**0.00**	**0.00**	25.00	15.00
	Total	**0**	**740.00**	**0**	**740.00**	**2370.00**	**0**	**0**	**2370.00**	**1630.00**
V	**3rd Crop**									
	Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
	Great Grand Total	**2203.82**	**2062.29**	**893.53**	**5159.64**	**6776.81**	**0**	**12.83**	**6789.64**	**1630.00**
	Cropping Intensity				**116.45%**				**153.33%**	

EE (WRD) **JD (AH)** **TNAU** **DD** **JD(Agri)**

CROPPING PATTERN

Na	**Gadila**	Fully	2645.33	Ha
Distr	Cuddal	Partially	1772.66	Ha
Regi	4937.3	Gap	519.32	Ha
		Total	**4937.31**	Ha

S.No.	Crop	Without Project				With Project				Increase
		FI	PI	RF/G	TOTAL	FI	PI	RF/G	TOTAL	
I	**Perennial crop**									
1	Coconut		73.45	0.00	**73.45**	73.45	0.00	0.00	73.45	0
2	Mango			0.00	**0**	5.00	0.00	0.00	5.00	5.00
3	Sapota	2.00		0.00	**2.00**	12.00	0.00	0.00	12.00	10.00
4	Guava	198.00		0.00	**198.00**	303.00	0.00	0.00	303.00	105.00
5	Moringa	16.00		0.00	**16.00**	16.00	0.00	0.00	16.00	0
6	Casuarina			0.00	**0**	10.00	0.00	0.00	10.00	10.00
7	Oilpalm		17.00	0.00	**17.00**	17.00	0.00	0.00	17.00	0
	Sub Total	**216.00**	**90.45**	**0**	**306.45**	**436.45**	**0**	**0**	**436.45**	130.00
II	**Annual crop**									
1	Sugar Cane	326.00	850.26		**1176.26**	850.00	0.00	0.00	850.00	-326.26
2	Banana	218.00			**218.00**	343.00	0.00	0.00	343.00	125.00
3	Jasmine	52.00			**52.00**	77.00	0.00	0.00	77.00	25.00
4	Tapioca	134.00			**134.00**	134.00			134.00	0
5	Fodder				**0**	50.00	0.00	0.00	50.00	50.00
	Sub Total	**730.00**	**850.26**	**0**	**1580.26**	**1454.00**	**0**	**0**	**1454.00**	**-126.26**
III	**1st crop**									
1. a	Paddy	1593.33	696.95	**0.00**	2290.28	**0.00**	**0.00**	**0.00**	0	-2290.28
b	Paddy - SRI	**0.00**	**0.00**	**0.00**	0	1977.92	**0.00**	**0.00**	1977.92	1977.92
2	Pulses		6.00	**0.00**	6.00	360.00	**0.00**	**0.00**	360.00	354.00
3	Cumbu		69.00	**0.00**	69.00	50.00	**0.00**	**0.00**	50.00	-19.00
4	Ragi		**60.00**	**0.00**	60.00	70.00	**0.00**	**0.00**	70.00	10.00
5	Maize		**0.00**	**0.00**	0	251.00	**0.00**	**0.00**	251.00	251.00
6	Brinjal	43.00	**0.00**	**0.00**	43.00	158.00	**0.00**	**0.00**	158.00	115.00
7	Bhendi	31.00	**0.00**	**0.00**	31.00	121.00	**0.00**	**0.00**	121.00	90.00
8	Chillies	12.00	**0.00**	**0.00**	12.00	22.00	**0.00**	**0.00**	22.00	10.00
9	Gourds	20.00	**0.00**	**0.00**	20.00	30.00	**0.00**	**0.00**	30.00	10.00
10	Crossandra		**0.00**	**0.00**	0	0.00	**0.00**	**0.00**	0	0
11	Fallow		**0.00**	512.38	512.38		**0.00**	**0.00**	0	-512.38
12	Uncultivated/Buildin		**0.00**	6.94	6.94		**0.00**	**0.00**	6.94	6.94
	Sub Total	**1699.33**	**831.95**	**519.32**	**3050.60**	**3039.92**	**0**	**0**	**3046.86**	**3.20**
	Grand Total (I+II+III)	**2645.33**	**1772.66**	**519.32**	**4937.31**	**4930.37**	**0**	**0**	**4937.31**	**6.94**
IV	**2 nd Crop**									
1. a	Paddy	200.00	**649.00**	**0.00**	849.00	**0.00**	**0.00**	**0.00**	0	-849.00
b	Paddy - SRI	**0.00**	**0.00**	**0.00**	0	849.00	**0.00**	**0.00**	849.00	849.00
2	Groundnut	**0.00**	80.00	**0.00**	80.00	100.00	**0.00**	**0.00**	100.00	20.00
3	Maize	**0.00**		**0.00**	0	200.00	**0.00**	**0.00**	200.00	200.00
4	Pulses	0.00	**60.00**	**0.00**	60.00	300.00	**0.00**	**0.00**	300.00	240.00
5	Gingely	0.00	**10.00**	**0.00**	10.00	50.00	**0.00**	**0.00**	50.00	40.00
6	Brinjal	30.00	**0.00**	**0.00**	30.00	30.00	**0.00**	**0.00**	30.00	0
7	Bhendi	11.00	0.00	0.00	11.00	21.00	**0.00**	**0.00**	21.00	10.00
8	Chillies	18.00	0.00	0.00	18.00	48.00	**0.00**	**0.00**	48.00	30.00
	Total	**259.00**	**799.00**	**0**	**1058.00**	**1598.00**	**0**	**0**	**1598.00**	**540.00**
	Great Grand Total	**2904.33**	**2571.66**	**519.32**	**5995.31**	**6528.37**	**0**	**0**	**6535.31**	**546.94**
	Cropping Intensity				**110.91%**				**132.37%**	

EE (WRD) **JD (AH)** **TNAU** **DD** **JD(Agri)**

Crop Water Requirement Without Project

Sl. No	Name of Crop	Area in Ha	Crop water requirement in mm	Total Crop water requirement in Mcm	Irrigation water requirement at source Eff = 53%	Total Irrigation requirement in Mcm
I	**Perennial crop**					
1	Coconut	134.45	1063	1.429	2.70	2.70
2	Mango	0.00	592	0.000	0.00	0
3	Sapota	2.00	292	0.006	0.01	0.01
4	Guava	230.00	256	0.589	1.11	1.11
5	Moringa	16.00	256	0.041	0.08	0.08
6	Casurina	160.00	290	0.464	0.88	0.88
7	Oilpalm	28.00	290	0.081	0.15	0.15
8	Fodder cross	4.00	438	0.018	0.03	0.03
9	Cashew	20.00	644	0.129	0.24	0.24
	Sub Total	**594.45**		**2.76**	**5.20**	**5.20**
II	**Annual Crop**					
1	Sugarcane	1863.32	951	17.720	33.43	33.43
2	Banana	230.00	1024	2.355	4.44	4.44
3	Jasmine	52.00	509	0.265	0.50	0.50
4	Tapioca	224.00	538	1.205	2.27	2.27
5	Fodder	0.00	138	0.000	0.00	0
6	Turmeric	390.00	448	1.747	3.30	3.30
7	Watermelon	20.00	250	0.050	0.09	0.09
	Sub Total	**2779.32**		**23.34**	**44.03**	**44.03**
III	**I crop**					
1.a	Paddy	3228.39	786	25.375	47.88	47.88
1.b	Paddy - SRI	0.00	550	0.000	0.00	0
2	Maize	340.00	550	1.870	3.53	3.53
3	Pulses	226.00	302	0.683	1.29	1.29
4	Groundnut	274.64	635	1.744	3.29	3.29
5	Cumbu	143.30	357	0.512	0.97	0.97
6	Ragi	60.00	308	0.185	0.35	0.35
7	Brinjal	73.00	464	0.339	0.64	0.64
8	Bhendi	31.00	315	0.098	0.18	0.18
9	Chilies	12.00	1017	0.122	0.23	0.23
10	Gingelly	105.00	342	0.359	0.68	0.68
11	Gourds	65.00	268	0.174	0.33	0.33
12	Crossandra	12.00	350	0.042	0.08	0.08
13	Fallow	0.00	0	0.000	0	0
14	Buildings/others	0.00	0	0.000	0	0
	Sub Total	**4570.33**		**31.50**	**59.45**	**59.45**
	Grand Total (I+II+III)	**7944.10**		**57.60**	**108.68**	**108.68**
			Page 48			

IV	**II crop**					

1.a	Paddy	1449	304	4.405	8.32	8.32
b	Paddy - SRI	0	213	0.000	0	0
2	Maize	0	550	0.000	0	0
3	Pulses	100	300	0.300	0.57	0.57
4	Groundnut	130	211	0.274	0.52	0.52
5	Gingelly	10	342	0.034	0.06	0.06
6	Brinjal	40	464	0.186	0.35	0.35
7	Bhendi	21	315	0.066	0.12	0.12
8	Chilies	28	812	0.227	0.43	0.43
9	Crossandra	20	350	0.070	0.13	0.13
	Total	**1798.00**		**5.56**	**10.50**	**10.50**
	Great Grand Total	**9742.10**		**63.16**	**119.18**	**119.18**

Gadilam Sub Basin - Pennaiyar Basin

Crop Water Requirement With Project

Sl. No	Name of Crop	Area in Ha	Crop water requirement in mm	Total Crop water requirement in Mcm	Irrigation water requirement at source Eff = 56%	Total Irrigation requirement in Mcm
I	**Perennial crop**					
1	Coconut	134.45	1063	1.429	2.55	2.55
2	Mango	5.00	592	0.030	0.05	0.05
3	Sapota	12.00	292	0.035	0.06	0.06
4	Guava	343.00	256	0.878	1.57	1.57
5	Moringa	16.00	256	0.041	0.07	0.07
6	Casurina	210.00	290	0.609	1.09	1.09
7	Oilpalm	37.00	290	0.107	0.19	0.19
8	Fodder cross	10.00	438	0.044	0.08	0.08
9	Cashew	30.00	644	0.193	0.35	0.35
	Sub Total	**797.45**		**3.37**	**6.01**	**6.01**
II	**Annual Crop**					
1	Sugarcane	1537.06	951	14.617	26.10	26.10
2	Banana	363.00	1024	3.717	6.64	6.64
3	Jasmine	77.00	509	0.392	0.70	0.70
4	Tapioca	357.00	538	1.921	3.43	3.43
5	Fodder	50.00	138	0.069	0.12	0.12
6	Turmeric	500.00	448	2.240	4.00	4.00
7	Watermelon	25.00	250	0.063	0.11	0.11
	Sub Total	**2909.06**		**23.02**	**41.10**	**41.10**
III	**I crop**					
1.a	Paddy	0.00	786	0.000	0	0
1.b	Paddy - SRI	2757.92	550	15.174	27.10	27.10
2	Maize	651.00	550	3.581	6.39	6.39
3	Pulses	860.00	302	2.597	4.64	4.64
4	Groundnut	550.00	635	3.496	6.24	6.24
5	Cumbu	250.00	357	0.893	1.59	1.59
6	Ragi	70.00	308	0.216	0.39	0.39
7	Brinjal	203.00	464	0.942	1.68	1.68
8	Bhendi	121.00	315	0.381	0.68	0.68
9	Chilies	22.00	1017	0.224	0.4	0.4
10	Gingelly	50.75	342	0.174	0.31	0.31
11	Gourds	80.00	268	0.214	0.38	0.38
12	Crossandra	15.00	350	0.053	0.09	0.09
13	Fallow	0.00	0	0.000	0	0
14	Buildings/others	0.00	0	0.000	0	0
	Sub Total	**5630.67**		**27.95**	**49.89**	**49.89**
	Grand Total (I+II+III)	**9337.18**		**54.33**	**97.00**	**97.00**
			Page 50			

IV	**II crop**					
1.a	**Paddy**	0	304	0.000	0	0
b	**Paddy - SRI**	1449	213	3.083	5.51	5.51
2	**Maize**	850	550	4.675	8.35	8.35
3	**Pulses**	850	300	2.550	4.55	4.55
4	**Groundnut**	575	211	1.213	2.17	2.17
5	**Gingelly**	50	342	0.171	0.31	0.31
6	**Brinjal**	50	464	0.232	0.41	0.41
7	**Bhendi**	46	315	0.145	0.26	0.26
8	**Chilies**	73	812	0.593	1.06	1.06
9	**Crossandra**	25	350	0.088	0.16	0.16
	Total	3968.00		12.75	22.78	22.78
	Great Grand Total	13305.18		67.08	119.78	119.78
			Pag e 51			

Gadilam Sub Basin - Pennaiyar Basin

W

Surface Water Potential		=	227.22 Mcm
Ground Water Potential		=	473.36 Mcm
Total Potential		=	**700.58 Mcm**

W

Domestic		=	27.30 Mcm
Livestock		=	24.85 Mcm
Industrial		=	50.26 Mcm
Irrigation	WRO	=	119.78 Mcm
	PU & GW	=	103.20 Mcm
Total Water Demand		=	**325.39 Mcm**
Water Balance		=	**375.19 Mcm**

Gadilam Sub Basin - Pennaiyar Basin

Water

Surface Water		=	227.22 Mcm
Ground Water		=	473.36 Mcm
Total Potential		=	**700.58 Mcm**

Water

Domestic		=	27.30 Mcm
Livestock		=	24.85 Mcm
Industrial		=	50.26 Mcm
Irrigation	WRO	=	119.18 Mcm
	PU & GW	=	103.20 Mcm
Total Water Demand		=	**324.79 Mcm**
Water Balance		=	**375.79 Mcm**

CHAPTER-1.3
HYDRAULICS OF THE COMPONENTS

1.3.1 Hydraulics of Tanks NAME OF THE SUB BASIN : GADILAM

Sl. No.	Name of Tank	Village	Ayacut in Ha	Capacity Mcum.	No. Fillings	Annual Storage.
1	Yal	Yal	65.28	13.34	2	26.68
2	Melapangur	Melapangur	56.50	9.23	3	29.69
3	Peral	Peral	54.66	12.66	4	50.64
4	Sathaputtur	Sathaputtur	43.12	11.14	5	55.70
5	Pavandur	Pavandur	45.29	12.23	2	24.46
6	Pasar	Pasar	124.97	33.96	2	67.92
7	Rishivanthiyam	Rishivanthiyam	73.97	17.40	2	34.80
8	Vengalam	Vengalam	45.14	12.38	2	24.76
9	Munivzhai	Munivzhai	51.99	18.35	2	36.70
10	Kunniyur	Kunniyur	46.10	21.65	2	43.30
11	Thimmalai	Thimmalai	68.99	18.18	2	36.36
12	Panapadi	Panapadi	58.62	13.58	2	27.16
13	Kattu edaiyur	Kattu edaiyur	154.06	65.00	2	130.00
14	Alur	Alur	70.13	25.63	2	51.26
15	Memalur	Memalur	63.82	21.43	2	42.86
16	Mohalar	Mohalar	61.83	40.32	2	80.64
17	Arunkurukkai	Arunkurukkai	78.06	16.15	2	32.30
18	Dhamal	Dhamal	51.02	10.60	2	21.20
19	M. Kunnathur	M. Kunnathur	64.10	12.78	2	25.56
20	Kiliyur	Kiliyur	50.12	9.72	2	19.44
21	Nathamoor	Nathamoor	82.43	10.40	2	20.80
22	Periyakurukkai	Periyakurukkai	47.70	16.92	2	29.44
		Page 54				

23	Puthananthal	Puthananthal	51.00	74.10	2	148.20
24	Athur	Athur	43.53	9.00	2	18.00
25	Pachapalayam	Pachapalayam	41.83	5.12	2	10.24
26	Adanur	Adanur	53.40	10.99	2	21.98
27	Neivanai	Neivanai	61.57	12.76	2	25.52
28	Koovadu	Koovadu	91.09	18.80	2	37.60
29	Pa. killanur	Pa. killanur	44.72	10.00	2	20.00
30	Orathur	Orathur	109.37	22.50	2	45.00
31	Kalamaruthur	Kalamaruthur	142.51	117.32	2	234.64
32	Pandur	Pandur	82.43	19.92	2	39.84
33	Arali	Arali	58.04	12.10	2	24.20
34	U. Sellur	U. Sellur	42.92	10.58	2	21.16
35	Semmanagur	Semmanagur	70.79	19.57	2	39.14
36	U. Keeranur	U. Keeranur	56.18	11.57	2	23.14
37	Ulundur	Ulundur	55.04	11.15	2	22.30
38	Nagar	Nagar	47.00	9.70	2	19.40
39	Mathiyanur	Mathiyanur	46.62	10.40	2	20.80
40	Koo. Kallakurichi	Koo. Kallakurichi	53.89	26.90	2	53.80
41	Mattigai	Mattigai	46.20	16.11	2	32.22
42	Senthanadu	Senthanadu	78.23	9.15	2	18.30
43	Manalur	Manalur	118.62	13.36	2	26.72
44	Kalattur	Kalattur	131.53	23.10	2	46.20
45	Padur	Padur	245.75	50.58	2	101.16
		Page 55				

46	Sengurichi	Sengurichi	53.75	12.06	2	24.12
47	Pu. Konanalavadi	Pu. Konanalavadi	46.40	25.50	2	51.00
48	Vellaiyur	Vellaiyur	123.08	25.30	2	50.60
49	Sirupakkam	Sirupakkam	48.70	10.15	2	20.30
50	Anganur	Anganur	79.69	12.57	2	25.14
51	A Puthur	A Puthur	59.80	51.95	2	103.90
52	Kunjaram	Kunjaram	116.19	34.36	2	12.24
53	Eraiyur	Eraiyur	54.28	51.95	2	103.90
54	Adhaiyur	Adhaiyur	45.78	16.13	2	32.26
55	Sikkadu	Sikkadu	44.72	8.50	2	17.00
56	Sempiyamadevi	Sempiyamadevi	47.90	9.87	2	19.74
57	Veeramangalam	Veeramangalam	41.63	8.58	2	17.16
58	Pinnalavadi	Pinnalavadi	63.02	15.97	2	31.94
59	S. Malaiyanur	S. Malaiyanur	58.05	11.97	2	23.94
60	Vadukurmbur	Vadukurmbur	86.64	17.50	2	35.00
61	Salapakkam	Salapakkam	41.11	10.37	2	20.74
62	Alangiri	Alangiri	53.43	10.20	2	20.40
63	Kattusellur	Kattusellur	79.24	9.96	2	19.92
64	Emam	Emam	43.18	17.38	2	34.76
65	Natham	Natham	259.04	53.32	2	106.64
66	Semakotti	Semakotti	70.85	14.58	2	29.16
67	Manamthavizhnthaputhur	Manamthavizhnthaputhur	62.13	12.50	2	25.00
68	L.N. Puram	L.N. Puram	122.68	25.25	2	50.50
		Page 56				
69	Poongunam	Poongunam	86.29	17.76	2	35.52

70	P.N.Palayam	P.N.Palayam	68.62	14.12	2	28.24
71	Veeraprumanallur	Veeraprumanallur	259.03	106.63	2	213.26
72	Sirugramam	Sirugramam	191.50	78.83	2	157.66
73	Siruvathur	Siruvathur	214.26	88.20	2	176.40
74	Manapakkam	Manapakkam	57.51	23.27	2	46.54
75	Semmedu	Semmedu	46.56	20.40	2	40.80
76	Vizur zamberi	Vizur zamberi	58.04	23.89	2	47.78
77	Thiruvamur	Thiruvamur	30.60	18.67	2	37.34
78	Chetipattadai	Chetipattadai	274.52	113.84	2	227.68
79	Pandarakotti	Pandarakotti	41.25	16.97	2	33.94
80	Elumedu	Elumedu	117.41	48.33	2	96.66
81	C N Palayam	C N Palayam	50.20	20.67	2	41.34
82	Elanthampattu	Elanthampattu	156.29	26.05	2	52.10
83	Ramapuram Devan Eri	Ramapuram Devan Eri	77.70	32.00	2	64.00
84	Vilangalpattu Tnk	Vilangalpattu Tnk	78.91	16.00	2	32.00
85	Naduveerapatu Tank	Naduveerapatu Tank	106.84	34.00	2	68.00
86	Thottapattu Tank	Thottapattu Tank	66.48	7.20	2	14.40
87	Varakalpattu tank	Varakalpattu tank	114.56	13.50	2	27.00
88	Gunamangalam Tank	Gunamangalam Tank	252.50	26.85	2	53.70
89	Eidanur Tank	Eidanur Tank	135.16	22.87	2	45.74
90	Vali Odai Tank	Vali Odai Tank	222.40	39.00	2	78.00
91	Naduveerpattu old tank	Naduveerpattu old tank	106.88	34.00	2	68.00

1.3.1 HYDRAULIC PARTICULARS

NAME OF THE SUB BASIN : GADILAM **ANICUT**

Sl.No	Name of Anicut	Village / Block	Ayacut	Length of Anicut (M)	Crest level of Anicut	Front	Free Sq.Km	Combined Sq.km	Maximum flood discharge cumecs / Cusecs	Head Sluice Location	Vent (M)	Sill Level Sluice	Discharge Cumecs	Supply Channel					Remarks.
														Length (M)	Bed Width (M)	FSD (M)	Bed slope	Sluice	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
I	**Ulundurpet Section**																		
	Gadilam River																		
1	Kattu Edaiyar	Kattu Edaiyar / Ulunderpet	154.06	50	100.00					**RS**	**Open of take**			2700	3.00	0.80	1/200		
2	Memalur	Memalur / Thirukoilur	63.82	50	100.00					**LS**	**Open of take**			4000	3.00	0.90	1/200		
3	Alur	Alur / Thirukoilur	70.13	90	100.00					**LS**	**Open of take**			2000	3.00	1.80	1/200		
4	Arunkurukkai	Arunkurukkai / T. V. Nallur	78.06	70	100.00					**LS**	**Open of take**			2000	3.00	0.90	1/200		
5	Mohalar	Mohalar / Thirukoilur	61.83	80	100.00					**RS**	**Open of take**			1500	3.00	1.60	1/200		
6	Thamal	Thamal / Ulunderpet	51.02	150	100.00					**RS**	**Open of take**			3000	3.00	1.80	1/200		
7	Puthananthal	Puthananthal / Ulunderpet	246.96	150	100.00					**RS**	**1 x 0.60**			2000	3.00	1.80	1/200		

8	S. Malayanur	S. Malayanur Ulunderpet	58.05	80	100.00					**LS**	**1 x0.90**			1100	3.00	0.90	1/200		
9	Ankanur	Ankanur Ulunderpet	18.62	47	100.00					**LS**	**Open of take**				2.00	1.50	1/200		
10	Paachapalayam	Paachapalayam Thirunavalur	41.83	56	100.00					**LS**	**Open of take**			2700	4.00	0.90	1/200		
11	Kalathur	Kalathur Thirunavalur	118.62	230	100.00					**RS**	**Open of take**			1500	2.00	0.90	1/200		
II	**Panruti Section**																		
12	Thiruvathigai	Panruti Panruti	6469.39	524	55.7	51.3			201216 c/s	Left bank of anicut	6'1"x4'6"x3	51.3	150 c/s	13600	6	198 c/s	1:01		
13	Thiruvanthipuram	Cuddalore Cuddalore	3000.00	132.89	5.47				30298 c/s		3'6"x5'6"x2	4.03		6800	6	100 c/s	1/2500		
14	Vanamadevi	Cuddalore Cuddalore	839.00	156.16	12.1				-		2'3'3"x 6'x9"	10.28		8000	6	101 c/s	1/2500		
											Total length of supply channel under Anicuts			**50900**					

1.3.2 TANKS (Separate statement for system & Non System Tanks)

NAME OF THE SUB BASIN : GADILAM

Sl.No.	District	Taluk	Name of Tank	Ayacut in Ha	Capacity in Mcft	Number of filling	Combined catchmemt in Sq.Km	Water spread area (Sq.Km)	FTL in M	MWL in M	No.of Sluices	Nos and Length of weir (m)		Length of bund (M)	Length of Supply channel (M)	Upper Tank	Lower Tank
												Nos	Length in m				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
I	**Sankarapuram Section**																
1	Villupuram	Sankarapuram	Yal	65.28	13.34	2	1.90	42.80	100.00	100.60	2	1	36.00	1540	2900	Myyanur	Sitheri
2	Villupuram	Sankarapuram	Melapangur	56.5	9.23	3	2.50	46.34	100.00	100.60	2	1	9.00	1150	500	Forest	Nooroli Tank
3	Villupuram	Sankarapuram	Peral	54.66	12.66	4	2.30	36.38	100.00	100.60	1	1	10.00	1360	2900	Forest	Sathaputhur
4	Villupuram	Sankarapuram	Sathaputtur	43.12	11.14	5	2.80	56.34	100.00	100.60	2	2	15.00	1000	2000	Peral	Pasar
5	Villupuram	Sankarapuram	Pavandur	45.29	12.23	2	2.20	50.30	100.00	100.60	1	2	16.00	1120	2000	Forest	Pasar
6	Villupuram	Sankarapuram	Pasar	124.97	33.96	2	3.50	145.84	100.00	100.60	4	2	11.00	1000	2000	Pavadur	River
7	Villupuram	Sankarapuram	Rishivanthiyam	73.97	17.4	2	1.90	57.30	100.00	100.60	2	1	15.00	1220	3050	Forest	Vengalam
8	Villupuram	Sankarapuram	Vengalam	45.14	12.38	2	2.40	22.30	100.00	100.60	2	1	20	1000	2000	Rishivandiyam	Munivzhai
9	Villupuram	Sankarapuram	Munivzhai	51.99	18.35	2	3.10	59.35	100.00	100.60	2	2	15.00	1000	2300	Vengalam	River
			Page 60														

10	Villupuram	Sankarapuram	Kunniyur	46.1	21.65	2	1.70	63.40	100.00	100.60	2	1	37.00	850	1700	Forest	Gadilam River
11	Villupuram	Sankarapuram	Thimmalai	68.99	18.18	2	2.50	76.92	100.00	100.60	2	1	50	1450	1500	Forest	Gadilam River
II	**Ulundurpet Section**																
12	Villupuram	Thirukoilur	Panapadi	58.62	13.58	2		85.50	50.000	50.600	1	1	11.60			M. thangal	kattuEdiyar
13	Villupuram	Ulundurpet	Kattu edaiyur	154.06	65.00	2	0.75	92.44	50.000	50.600	5	1	52.30	1390	2700	Panapady	Memalur
14	Villupuram	Thirukoilur	Alur	70.13	25.63	2		74.40	50.000	50.600	2	1	26.00	1630	2000	Memalur	Mohlar
15	Villupuram	Thirukoilur	Memalur	63.82	21.43	2	1.180	85.50	50.000	50.600	2	2	39.00	1760	4000	Kattue daiyar	Alur
16	Villupuram	Thirukoilur	Mohalar	61.83	40.32	2	1.05	25.35	50.000	50.600	2	1	17.00	900	1500	Alur	Arunkurukkai
17	Villupuram	Thirukoilur	Arunkurukkai	78.06	16.15	2		46.80	50.000	50.600	2	1	22.00	1620	2000	Mohalar	Damal
18	Villupuram	Ulundurpet	Dhamal	51.02	10.60	2	0.50	30.61	50.000	50.600	3	1	14.50	1600	3000	Arunkurukkai	Puthananthal
19	Villupuram	Ulundurpet	M. Kunnathur	64.10	12.78	2	0.67		50.000	50.600	2	1	18.30	1200	2000	Damal	Puthananthal
20	Villupuram	Ulundurpet	Kiliyur	50.12	9.72	2	0.56		50.000	50.600	3	1	16.30	1250	1500	Nathamur	M. Kunnathur
			Page 61														

21	Villupuram	Ulundurpet	Nathamoor	82.43	10.40	2		46.40	50.000	50.600	2	1	12.00	1250	2000	Periya kurukkai	Kiliur
22	Villupuram	Ulundurpet	Periyakurukkai	47.70	16.92	2	0.87	28.62	50.000	50.600	2	1	13.70	1150	2000	Kattu sellur	Nathamoor
23	Villupuram	Ulundurpet	Puthananthal	51.00	74.10	2		25.02	50.000	50.600	2	1	32.60	1510	2000	Kunnadur	Athur
24	Villupuram	Ulundurpet	Athur	43.53	9.00	2	0.47	95.03	50.000	50.600	1	1	16.50	675	3600	Puthananthal	Kalamarudur
25	Villupuram	Ulundurpet	Pachapalayam	41.83	5.12	2	0.70	61.99	50.000	50.600	1	1	25.00	2000	2700	Anganur	U.sellur
26	Villupuram	Ulundurpet	Adanur	53.40	10.99	2	0.76	76.20	50.000	50.600	2	1	22.60	1800	2000	Neyvani	Kalamarudur
27	Villupuram	Ulundurpet	Neivanai	61.57	12.76	2	0.48	36.94	50.000	50.600	2	3	20.00	1290	2000	Vadakurumbur	Adanur
28	Villupuram	Ulundurpet	Koovadu	91.09	18.80	2	15.26	61.94	50.000	50.600	3	1	65.70	1240	2000	Eraiyur	Neyvanai
29	Villupuram	Ulundurpet	Pa. killanur	44.72	10.00	2	0.37	64.09	50.000	50.600	4	2	29.80	2700	2000	Kalamaruthur	Orathur
30	Villupuram	Ulundurpet	Orathur	109.37	22.50	2	4.15	162.00	50.000	50.600	2	1	15.80	2500	5000	Killanur	Padur
31	Villupuram	Ulundurpet	Kalamaruthur	142.51	117.32	2	4.48	211.20	50.000	50.600	4	1	41.00	2700	3600	Athanur	Killanur
32	Villupuram	Ulundurpet	Pandur	82.43	19.92	2	3.67	46.40	50.000	50.600	2	2	28.80	1200	3000	Konara vadi	Arali
			Page 62														

33	Villupuram	Ulundurpet	Arali	58.04	12.10	2	0.36	86.02	50.000	50.600	2	2	28.10	955	2000	Pandur	Semmangur
34	Villupuram	Ulundurpet	U. Sellur	42.92	10.58	2	0.57	64.48	50.000	50.600	2	1	24.00	2300	1500	Pachapalayam	Pandur
35	Villupuram	Ulundurpet	Semmanagur	70.79	19.57	2	0.41	104.91	50.000	50.600	2	1	35.15	1242	1500	Arali	Nagar
36	Villupuram	Ulundurpet	U. Keeranur	56.18	11.57	2	7.86	80.60	50.000	50.600	2	1	37.00	1150	1500	Konala vadi	Uundur
		Ulundurpet															
37	Villupuram	Ulundurpet	Ulundur	55.04	11.15	2	0.87	33.02	50.000	50.600	1	1	16.00	1200	2000	keeranur	Nagar
38	Villupuram	Ulundurpet	Nagar	47.00	9.70	2	0.32	69.60	50.000	50.600	1	1	13.70	1492	1000	Ulundur	Senkurichi
39	Villupuram	Ulundurpet	Mathiyanur	46.62	10.40	2	1.27	86.46	50.000	50.600	2	2	15.00	1370	3000	Pu. Mampakkam	Koo. Kallakurichi
40	Villupuram	Ulundurpet	Koo. Kallakurichi	53.89	26.90	2	0.97	195.00	50.000	50.600	2	1	13.80	1325	2000	Mathi yanur	Mattigai
41	Villupuram	Ulundurpet	Mattigai	46.20	16.11	2	0.37	116.02	50.000	50.600	2	2	13.90	1600	2000	Koo. Kallakurichi	Senthanadu
42	Villupuram	Ulundurpet	Senthanadu	78.23	9.15	2	0.56	79.66	50.000	50.600	1	2	10.60	1060	2000	Mattigai	manalur
			Page 63														

43	Villupuram	Ulundurpet	Manalur	118.62	13.36	2	0.47	60.06	50.000	50.600	2	1	11.60			Senthanadu	kalathur
44	Villupuram	Ulundurpet	Kalattur	131.53	23.10	2	19.78	75.50	50.000	50.600	3	1	22.10	2600	1500	Koo. Kallakurichi	manalur
45	Villupuram	Ulundurpet	Padur	245.75	50.58	2	1.72	121.80	50.000	50.600	3	2	180.00			U. sellur	Senkurichi
46	Villupuram	Ulundurpet	Sengurichi	53.75	12.06	2	0.37	79.86	50.000	50.600	1	1	17.80	1300	2000	Nagar	Padur
47	Villupuram	Ulundurpet	Pu. Konanalavadi	46.40	25.50	2		27.84	50.000	50.600	2	1	41.80	1140	2000	Vellaiyur	U. Keeranur
48	Villupuram	Ulundurpet	Vellaiyur	123.08	25.30	2	1.70	83.69	50.000	50.600	2	2	54.50			Emam	Konalavadi
49	Villupuram	Ulundurpet	Sirupakkam	48.70	10.15	2	0.47	33.12	50.000	50.600	1	1	10.80	630	2000	Kumaramangalam	Anganur
50	Villupuram	Ulundurpet	Anganur	79.69	12.57	2	0.47	41.52	50.000	50.600	1	1	16.80			Sirupak kam	Pa chapalayam
51	Villupuram	Ulundurpet	A Puthur	59.80	51.95	2	0.76	104.82	50.000	50.600	1	1	30.50	700	1500	Sembimadevi	Pinnalavady
52	Villupuram	Ulundurpet	Kunjaram	116.19	34.36	2	1.50	79.01	50.000	50.600	3	1	76.60	1295	2000	Adiyur	Veera mangalam
53	Villupuram	Ulundurpet	Eraiyur	54.28	51.95	2	0.93	36.91	50.000	50.600	3	1	30.50	1250	2000	Kunjaram	Vada kurumbur
54	Villupuram	Ulundurpet	Adhaiyur	45.78	16.13	2	0.84	31.09	50.000	50.600	1	1	30.00	1230	2000	Sikkadu	Kunjaram
			Page 64														

55	Villupuram	Ulundurpet	Sikkadu	44.72	8.50	2	0.47	30.41	50.000	50.600	1	1	43.50	960	2000	Sembimadevi	Athaiyur
56	Villupuram	Ulundurpet	Sempiyamadevi	47.90	9.87	2	0.76	71.03	50.000	50.600	1	1	10.50	582	1500	Salapa kkam	Alangiri
57	Villupuram	Ulundurpet	Veeramangalam	41.63	8.58	2	0.72	61.77	50.000	50.600	1	1	29.00	1010	1500	Pinnala vadi	S.malayanur
58	Villupuram	Ulundurpet	Pinnalavadi	63.02	15.97	2	0.46	42.85	50.000	50.600	2	2	19.70	1124	2000	Alangiri	Veeramangalam
59	Villupuram	Ulundurpet	S. Malaiyanur	58.05	11.97	2	0.76	39.47	50.000	50.600	2	1	32.20	2298	1100	Vadakurumbur	Neyvanai
60	Villupuram	Ulundurpet	Vadukurmbur	86.64	17.50	2	7.26	58.92	50.000	50.600	2			1750	1500	Eraiyur	S. malayanur
61	Villupuram	Ulundurpet	Salapakkam	41.11	10.37	2	5.18	27.95	50.000	50.600	1	1	12.00	920	1500	Sembimadevi	Alangiri
62	Villupuram	Ulundurpet	Alangiri	53.43	10.20	2	1.62	76.66	50.000	50.600	1	1	51.00	870	2000	Salapa kkam	Pinnalvadi
63	Villupuram	Ulundurpet	Kattusellur	79.24	9.96	2	1.65	47.54	50.000	50.600	1	2	20.40	1380	2000	Kattu ediyur	Periya kurukai
64	Villupuram	Ulundurpet	Emam	43.18	17.38	2	5.47	29.35	50.000	50.600	1	3	22.50	1060	2000	Sirupa kkam	Vellaiyur
			Page 65														

III	**Panruti Section**																
65	Cuddalore	Panruti	Natham	259.04	53.32	2			2.43	2.61	3	2	3.70+27.10	2700	4000	Manamthavizhnthaputhur	Semakottai
66	Cuddalore	Panruti	Semakotti	70.85	14.58	2			2.49	2.67	2	1	22.00	1500	3000	Natham	Siruvathur
67	Cuddalore	Panruti	Manamthavizhnthaputhur	62.13	12.5	2			2.45	2.63	2	1	20.00	1500	4700		Natham
68	Cuddalore	Panruti	L.N. Puram	122.68	25.25	2			2.00	2.18	1	1	18.00	1700	7700		Poongunam
69	Cuddalore	Panruti	Poongunam	86.29	17.76	2			1.8	1.98	2	1	8.00	1550	3600	LN Puram	Chetti pattadai
70	Cuddalore	Panruti	PN Palayam	68.62	90.46	2			2.10	2.60	3			1700	2500	Poongunam	
71	Cuddalore	Panruti	Veeraprumanallur	259.03	106.6	2			2.24	2.42	3	1	34	1600	4000	Sirugramam	
72	Cuddalore	Panruti	Sirugramam	191.50	78.83	2			2.02	2.2	3	1	22		1500		Veeraperumanallur
73	Cuddalore	Panruti	Siruvathur	214.26	88.2	2			3.35	3.53	4	1	45	2800	4500	Elantham pattu	
74	Cuddalore	Panruti	Manapakkam	57.51	23.27	2			2.46	2.64	2	1	15		2200	Manamthavizhnthaputhur	
75	Cuddalore	Panruti	Semmedu	46.56	20.4	2			2.37	2.56		1	8	600			
76	Cuddalore	Panruti	Vizur zamberi	58.04	23.89	2			2.37	2.56	2	1	12	1500			
77	Cuddalore	Panruti	Thiruvamur	30.60	18.67	2			2.66	2.84	2	1	25	750	2000		
78	Cuddalore	Panruti	Chetipattadai	274.52	113.8	2			2.43	2.62	5	1	12	3400	22100		Elumedu
79	Cuddalore	Panruti	Pandarakotti	41.25	16.97	2			2.27	2.45	2	1	15	1600		Oraiyur	
			Page 66														

80	Cuddalore	Panruti	Elumedu	117.41	48.33	2			1.93	2.11	4	2	6+40	2100	6500	Chetipatadai	
81	Cuddalore	Panruti	C N Palayam	50.20	20.67	2			1.46	1.64	2	1	17	1200			
82	Cuddalore	Panruti	Elanthampattu	156.29	26.05	2			2.2	2.38	4	1	40		1200	Natham	Siruvathur
IV	**Cuddalore Section**																
83	Cuddalore	Cuddalore	Ramapuram Devan Eri	77.70	32	2			1.52	2.13	1	1	11	600			
84	Cuddalore	Cuddalore	Vilangalpattu Tnk	78.91	16	2			1.68	2.28	1	1	15.4	775	3500		
85	Cuddalore	Cuddalore	Naduveerapatu New Tank	106.84	34	2			1.37	1.98	1	1	13.72	720	2300		Naduvera-pattu Old Tank
86	Cuddalore	Cuddalore	Thottapattu Tank	66.48	7.2	2			1.83	2.44	2	1	6	1500	1100	Vellapakkam	
87	Cuddalore	Cuddalore	Varakalpattu tank	114.56	13.5	2			1.83	1.44	2	1	10	1400			Verakal-pattu
88	Cuddalore	Cuddalore	Gunamangalam Tank	252.50	26.85	2			2.44	3.05	2	1	13	800	1800		
89	Cuddalore	Cuddalore	Eidanur Tank	135.16	22.87	2			2.44	3.05	2	1	8				
90	Cuddalore	Cuddalore	Vali Odai Tank	222.40	39	2			1.83	2.44	2	1	10	600	2000		
91	Cuddalore	Cuddalore	Naduveerpattu old tank	106.88	34	2			1.37	1.98	1	1	13.72	720	2500		Naduvera-pattu

		33315	82700
	GRAND TOTAL	**113163**	**206750**

1.3.2. SUPPLY CHANNELS HAVING DIRECT AYACUT

NAME OF THE SUB BASIN: GADILAM

Sl. No	Name of Supply Channel	Start Point		End Point		Length in metres	Bed Width in 'm'	Bed Slope	Side Slope	MFD	Depth of Flow 'm'	Remarks.
		Location	Sill level	Location	Sill level							
1	Anganur	Anicut	98.20	Vellaiyur		1200	2	1/2000	1:1	0.9	0.60	
2	Thiruvathigai anicut	Thiruvathigai	(+)55.70	Vellappakkam	48.98	16800	6	1:2500	1:1	198. c/s	2.05	-
3	Vanamadevi supply channel	Vanamadevi	(+)10.28	Thotti	(+) 7.08	8000	6	1:2500	1:1	101 c/s	2.06	-

1.4. PARTICIPATORY IRRIGATION MANAGEMENT (PIM)

SALIENT FEATURES OF IMPLEMENTATION OF PIM GADILAM SUB - BASIN

1) **The sub - basin :**

This is one of the seven sub basins of the Pennaiyar river basin. Totally 91 irrigation tanks and 14 Anicut are under the control of Water Resources Department (WRD) of Public works Department (PWD) in this sub - basin. The list of tanks covered with more details are furnished in the Annexure - 1. These 91 tanks are located within the sub - basin's hydraulic boundary spread over 91 Villages of Villupuram and Cuddalore District. The total command area under these 91 tanks works out to 9356.95Ha.

2) **Command area :**

under Non - System tanks (91 tanks)	-	7672.75 Ha
Anicut (3 Nos)	-	1684.20 Ha
Total	-	9356.95 Ha

3) **An assessment of number of WUA's**

i) Association Proposed to be formed under IAWARM Project covering 91 tanks and 3 nos. of anicuts villages only.	**100 Nos (8647.38Ha)**
	3 No. WUA formed under WRCP-I (709.57 Ha)

4) **An account of "Awareness creation"**

Activates undertaken and "Walkthrough Surveys" carried out.

i) There are 91 tanks in the sub-basin spread over 91 villages.

ii) As detailed out in Anexure - 01. All these villages were visited by the WRO officials and awareness about various activities, contemplated under IAMWARM Project has been created.

iii) Details of Villages covered, walkthrough surveys conducted, farmers attended, list of works suggested by the farmers, list of works officials are all furnished in the Annexure - 02.

5) Schedule for completion of delineation and preparation for WUA documents, comprising of :-

   i) Form - I : Details to be notified by District collectors, (End of March - 09)

   ii) Form - II : WUA document to be notified by district collectors (End of April-09)

   iii) Completion of preparatory works for the conduct of Elections for WUA's (End of May - 09)

6) Schedule for Conduct of Elections in the Sub - basin for farming management committees will be completed by end of Jan 2010.

7) Initiating and completing the process of publishing EOI to hire support Organisation at sub-basin level. (End Jun 2009)

8) Providing request for proposals (RFPs) to all the short listed agencies, and obtaining technical and cost proposals. (Middle of August 2009)

9) Selection and deployment of support Organisation to the sub - basin (End of sep 2009)

10) Appointment and the Role of competent Authorities.

   i) Section 26 of the Tamil Nadu Farmers Management of Irrigation Systems (TNFMIS) act provides for the appoint of "competent Authorities" to assist the respective farmers organization (WUA, Distributory committee and Project Committee) in the implementation and execution of all decisions taken by such farmers Organization similarly every farmer's organization shall extend such co-option or assistance as may be required by the competent authority, for carrying out all the tasks related to implementation of TNFMIS Act.

   ii) It is proposed to form 99WUAs only under IAMWARM Project to cover a command area of 8647.38Ha.

   iii) Appointment of competent Authorities for the WUAs proposed to be formed under IAMWARM Project is based on the WRO section officer wise" distribution as indicated below.

   Name of the WRO Sub Division officers working in the

GADILAM SUB BASIN

a. Assistant Executive Engineer W.R.O., P.W.D., Vellar Basin Sub Division

Kallakurichi	–	WUAs	-	1 – 64 GAM VPM
Cuddalore	–	WUAs	–	65 -103 GAM CUD

List of Competent Authorities.

a. Section officer, WRd Irrigation section Vellar Basin. Sankarapuram and Ulundurpet Basin : Gadilam Sub Basin	WUAs GAM – VPM 1 - 64
b. Section officer WRO Irrigation section Cuddalore & Panruti. Basin : Gadilam Sub Basin	WUAs GAM – CDM 65 - 103

11)**Involvement of farmers in the preparation "Scheme Modernisation Plans"**

i) Based on the outcome of the "Awareness Creation Programme" and walkthrough survey carried out with the involvement of farmers, a list of tasks proposed to be taken up for "Modernization" under IAMWARM project was discussed with No.of farmers from 103 villages and the tasks was also prepared and exhibited in the notice Board of the village Administrative officers and panchayat office.

ii) During the meeting, the farmers present were also informed that soon after finalization of contract for carrying out "Modernization of Irrigation systems" a Notice Board" with the details about the nature of works. its cost period of contract and name of the contractor will all be fixed at the site of the work as well as in the panchayath office, for information of the farmers. They have also been informed that they are free to supervise the work by the contractor and any lapse in the quality of work may be reported to the field officers of WRO as wall as the Executive Engineer of WRO, who has been designated as the Nodal officer for the sub - basin concerned.

iii) The field officers of WRO have all been informed about the problems in handing over the operation and maintenance responsibilities to the farmers concerned, if the tasks as desired by them are not included in the modernization of the system and also in case some of the tasks already planned are not implanted due to some reasons or other.

iv) The WRO officers were also informed that hey are personally responsible for handing over the irrigation systems after completing the tasks related to modernization of irrigation systems.

12) **Current status of Recovery of water charges.**

i) An enquiry conduced with the "village Administrative officers" (VAO's) of randomly selected villages (15 numbers out of 91 Village) the normal water charges recovery as informed by the VAO works out to 50-60% only. about the expected percentage of 80-90%.

ii) With the proposal to form New WUAs under IAMWARM in Gomukhi sub basin the managing committee will be trained to take up the responsibility of improving the water charges recovery percentage. These wll be followed up after completing the modernization tasks and handing over of the O & M responsibilities to WUAs.

13)"Capacity Building" of the WUA farmers:

i) The Support Organisation Group" will prepare "Training Modules" required for building the capacity of the WUA farmers. based on a "Training Needs" Analysis. They will also Organize various "Capacity building" Programmes at suitable locations within the sub - basin command area, to benefit the farmers of the WUAs in the sub - basin.

ii) The "Support Organization" will also arrange for organizing the "Study Tours" both within and outside the state to enhance their knowledge and experiences which will help them to improve the crop productivity and there by the farmer's income.

iii) The support Organization will also conduct necessary "awareness programme" and impart training to educate the farmers of the WUAs in all aspects of the TNFMIS act , TNFMS rules and election procedures for constituting the "Managing committees" of the WUAs

The competent Authorities appointed for the sub-basins will also be trained to effectively to interact with WUA farmers and maintain good rapport and relationship with the farming community in the sub-basin.

DETAILS OF WUA'S PROPOSED / EXISTING IN GADILAM SUB BASIN

Sl. NO	WUA NO.	Tank & village it covers	Name of the WUA	Ayacut area in Ha
Existing WUA's				
			Nil	
	Proposed WUA's			
1	01/GDM-VPM	Yal	Yal Tank Water Users Association	65.28
2	02/GDM-VPM	Melpangur	Melpangur Tank Water Users Association	56.50
3	03/GDM-VPM	Peral	Peral Tank Water Users Association	54.66
4	04/GDM-VPM	Sathaputhur	Sathaputhur Tank Water Users Association	43.12
5	05/GDM-VPM	Pavandur	Pavandur Tank Water Users Association	45.29
6	06/GDM-VPM	Pasar	Pasar Tank Water Users Association	124.97
7	07/GDM-VPM	Rishivandiyam	Rishivandiyam Tank Water Users Association	73.97
8	08/GDM-VPM	Vengalam	Vengalam Tank Water Users Association	45.14
9	09/GDM-VPM	Munivazhai	Munivazhai Tank Water Users Association	51.99
10	10/GDM-VPM	Kunniyur	Kunniyur Tank Water Users Association	49.10
11	11/GDM-VPM	Thimmalai	Thimmalai Tank Water Users Association	68.99
12	12/GDM-VPM	Kattu Edaiyar	Kattu Edaiyar Tank Water Users Association	154.06
13	13/GDM-VPM	memalur	memalur Tank Water Users Association	63.82
14	14/GDM-VPM	Kattusellur	Kattusellur Tank Water Users Association	79.24
15	15/GDM-VPM	Alur	Alur Tank Water Users Association	70.13
		PAGE 74		

16	16/GDM-VPM	Periyakurukkai	Periyakurukkai Tank Water Users Association	47.70
17	17/GDM-VPM	Mohalar	Mohalar Tank Water Users Association	61.83
18	18/GDM-VPM	Sikkadu	Sikkadu Tank Water Users Association	44.72
19	19/GDM-VPM	Adaiyur	Adaiyur Tank Water Users Association	45.72
20	20/GDM-VPM	Kunjaram	Kunjaram Tank Water Users Association	116.19
21	21/GDM-VPM	Eraiyur	Eraiyur Tank Water Users Association	54.28
22	22/GDM-VPM	Veeramangalam	Veeramangalam Tank Water Users Association	41.63
23	23/GDM-VPM	Vadakurumbur	Vadakurumbur Tank Water Users Association	86.64
24	24/GDM-VPM	S. Malaiyanur	S. Malaiyanur Tank Water Users Association	58.05
25	25/GDM-VPM	Koovadu	Koovadu Tank Water Users Association	91.09
26	26/GDM-VPM	Neivainai	Neivainai Tank Water Users Association	61.57
27	27/GDM-VPM	Pinnalvadi	Pinnalvadi Tank Water Users Association	63.02
28	28/GDM-VPM	Aurnkurukkai	Aurnkurukkai Tank Water Users Association	78.06
29	29/GDM-VPM	Damal	Damal Tank Water Users Association	51.02
30	30/GDM-VPM	Kiliyur	Kiliyur Tank Water Users Association	50.12
31	31/GDM-VPM	M. Kunnathur	M. Kunnathur Tank Water Users Association	64.10
32	32/GDM-VPM	Puthanandal	Puthanandal Tank Water Users Association	51.00
33	33/GDM-VPM	Nathamur	Nathamur Tank Water Users Association	82.43
		PAGE 75		
34	34/GDM-VPM	Athur	Athur Tank Water Users Association	43.53

35	35/GDM-VPM	Adanur	Adanur Tank Water Users Association	53.40
36	36/GDM-VPM	Kalamarudur	Kalamarudur Tank Water Users Association	142.51
37	37/GDM-VPM	Orathur	Orathur Tank Water Users Association	109.31
38	38/GDM-VPM	Pa. Killanur	Pa. Killanur Tank Water Users Association	44.72
39	39/GDM-VPM	Pachapalayam	Pachapalayam Tank Water Users Association	41.83
40	40/GDM-VPM	U. Sellur	U. Sellur Tank Water Users Association	42.92
41	41/GDM-VPM	Pandur	Pandur Tank Water Users Association	82.43
42	42/GDM-VPM	Arali	Arali Tank Water Users Association	58.04
43	43/GDM-VPM	Sennangur	Sennangur Tank Water Users Association	70.79
44	44/GDM-VPM	Nagar	Nagar Tank Water Users Association	47.00
45	45/GDM-VPM	Sengurichi	Sengurichi Tank Water Users Association	53.75
46	46/GDM-VPM	Padur	Padur Tank Water Users Association	245.75
47	47/GDM-VPM	Mathiyanur	Mathiyanur Tank Water Users Association	46.62
48	48/GDM-VPM	Koo. Kallakurichi	Koo. Kallakurichi Tank Water Users Association	53.89
49	49/GDM-VPM	Mattigai	Mattigai Tank Water Users Association	46.20
50	50/GDM-VPM	Sendanadu	Sendanadu Tank Water Users Association	78.23
		PAGE 76		

51	51/GDM-VPM	T. Kalathur	T. Kalathur Tank Water Users Association	131.53
52	52/GDM-VPM	Emam	Emam Tank Water Users Association	43.18
53	53/GDM-VPM	Pu. Konalavadi	Pu. Konalavadi Tank Water Users Association	46.40
54	54/GDM-VPM	U. Keeranur	U. Keeranur Tank Water Users Association	56.18
55	55/GDM-VPM	Ulundur	Ulundur Tank Water Users Association	55.04
56	56/GDM-VPM	Sirupakkam	Sirupakkam Tank Water Users Association	48.70
57	57/GDM-VPM	Sembiyanmadevi	Sembiyanmadevi Tank Water Users Association	47.90
58	58/GDM-VPM	Alangiri	Alangiri Tank Water Users Association	53.43
59	59/GDM-VPM	Salappakkam	Salappakkam Tank Water Users Association	41.11
60	60/GDM-VPM	A. Puthur	A. Puthur Tank Water Users Association	59.80
	Supply Channel	**Supply Channel**	**Cuddalore District**	
61	61/GDM-CUD	Manamthaviznthaputhur tank	Manamthaviznthaputhur tank Tank Water Users Association	62.17
62	62/GDM-CUD	Natham tank	Natham Tank Water Users Association (Formed under WRCP-I)	259.04
63	63/GDM-CUD	Sirugrammam tank	Sirugrammam Tank Water Users Association (Formed under WRCP-I)	191.50
64	64/GDM-CUD	Veeraperumanallur tank	Veeraperumanallur Tank Water Users Association (Formed under WRCP-I)	259.03
65	65/GDM-CUD	Thiruvamur tank	Thiruvamur Tank Water Users Association	30.60
66	66/GDM-CUD	Elanthampattu tank	Elanthampattu Tank Water Users Association	156.29
		PAGE 77		

67	67/GDM-CUD	Semmedu tank	Semmedu Tank Water Users Association	49.56
68	68/GDM-CUD	Vizur Zemberi tank	Vizur Zemberi Tank Water Users Association	58.04
69	69/GDM-CUD	Semakottai tank	Semakottai Tank Water Users Association	70.85
70	70/GDM-CUD	Manapakkam tank	Manapakkam Tank Water Users Association	57.51
71	71/GDM-CUD	Siruvathur tank	Siruvathur Tank Water Users Association	214.26
72	72/GDM-CUD	Pandarakottai tank	Pandarakottai Tank Water Users Association	41.25
73	73/GDM-CUD	L.N.Puram tank	L.N.Puram Tank Water Users Association	122.65
74	74/GDM-CUD	Poongunam tank	Poongunam Tank Water Users Association	86.29
75	75/GDM-CUD	Chettipattadai tank	Chettipattadai Tank Water Users Association	274.52
76	76/GDM-CUD	Elumedu tank	Elumedu Tank Water Users Association	117.41
77	77/GDM-CUD	P.N.Palayam tank	P.N.Palayam Tank Water Users Association	68.62
78	78/GDM-CUD	C.N.Palayam tank	C.N.Palayam Tank Water Users Association	50.2
79	79/GDM-CUD	Thottapattu tank	Thottapattu Tank Water Users Association	66.8
80	80/GDM-CUD	Varakkalpattu tank	Varakkalpattu Tank Water Users Association	70.45
81	81/GDM-CUD	Gunamangalam tank	Gunamangalam Tank Water Users Association	252.63
82	82/GDM-CUD	Eidanur tank	Eidanur tank Tank Water Users Association	135.22
83	83/GDM-CUD	Valiodai tank	Valiodai tank Tank Water Users Association	272.47
84	84/GDM-CUD	Naduveerapattu Old tank Naduveerapattu New tank	Naduveerapattu Old tank & Naduveerapattu New tank Water Users Association	147.79
		PAGE 78		
85	85/GDM-CUD	Vilangalpattu tank	Vilangalpattu tank Tank Water Users Association	78.90

86	86/GDM-CUD	Ramapuram Devan Eri	Ramapuram Devan Eri Tank Water Users Association	77.67
			Total	**7311.34**
	Thiruvathigai Anicut			
87	87/GDM-CUD	Muthukrishnapuram	Thiruvathigai anicut water users association	87.26
88	88/GDM-CUD	Agaram	Thiruvathigai anicut water users association	168.16
89	90/GDM-CUD	Palur	Thiruvathigai anicut water users association	187.53
90	91/GDM-CUD	Sithrarasur	Thiruvathigai anicut water users association	161.59
91	91/GDM-CUD	Kizarungunam	Thiruvathigai anicut water users association	42.57
92	92/GDM-CUD	Thotti	Thiruvathigai anicut water users association	138.65
93	93/GDM-CUD	Natham	Thiruvathigai anicut water users association	119.73
94	94/GDM-CUD	Melpathi	Thiruvathigai anicut water users association	42.51
95	95/GDM-CUD	Kudithangi	Thiruvathigai anicut water users association	110.99
96	96/GDM-CUD	Vaidipakkam Nesanoor	Thiruvathigai anicut water users association	132.89
		PAGE 79		

	Vanamadevi Aniucut			
97	97/GDM-CUD	Thirumanikuzhi	Vanmadevi anicut water users association	97.66
98	98/GDM-CUD	Vanamadeviu	Vanmadevi anicut water users association	123.25
99	99/GDM-CUD	Otteri	Vanmadevi anicut water users association	118.63
			Total	**9356.95**

Note:

a. St. TB -
b. RC Sluices -
c. RE Sluices -
d. RC weir -
e. RE weir -
f. DS chll -
g. RH.

GADILAM RIVER SUB BASIN

1.4.1. WALK THROUGH SURVEY

Sl. No	Walk Through Survey		Farmers request	Technical Solution								Proposals in Plan								Remarks
	Date	Location	WRO	WRO	Agri	Horti	AED	TNAU	AGMT	AHD	Fisheries	WRO	Agri	Horti	AED	TNAU	AGMT	AHD	Fisheries	
	Sankarapuram Section																			
1	8.11.2008	Yal	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
2	8.11.2008	Melpangur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
3	8.11.2008	Peral	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
4	8.11.2008	Sathapattu	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
5	8.11.2008	Pavanur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
6	8.11.2008	Pasar	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
			Page 81																	

7	8.11.2008	Rishivanthiyam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
8	8.11.2008	Vengalam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
9	8.11.2008	Minivazhai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
10	8.11.2008	Kunniyur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
11	8.11.2008	Timmalai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
	Ulundurpet Section																			
12	11.11.2008	Panapadi	Lining in field channel in requested	Rejected								Work already have been executed under NABARD scheme								
13	17.12.2008	Kattu Edaiyar	Left Bank of Canel breached during the year 200-08, 2008-09. Retaining wall is needed for a length of 50m. O & M is needed for about 3km. Sluice is to be required.	Accepted								Included in the IAMWARM Project								

14	11.11.2008	Memalur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Can be provided Can be provided To be repaired and reconstructed								Included in the IAMWARM Project								
15	18.11.2008	Kattuchellur	Sluice repair is needed	To be repaired and reconstructed								Included in the IAMWARM Project								
16	11.11.2008	Alur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Can be provided Can be provided To be repaired and reconstructed								Included in the IAMWARM Project								
17	11.11.2008	Periyakurukkai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Can be provided Can be provided To be repaired and reconstructed								Included in the IAMWARM Project								
18	11.11.2008	Mohalar	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Can be provided Can be provided To be repaired and reconstructed								Included in the IAMWARM Project								
19	17.12.2008	Sikkadu	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Can be provided Can be provided To be repaired and reconstructed								Included in the IAMWARM Project								
20	17.12.2008	Adhaiyur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Right Bank of Canel breached during the year 200-08, 2008-09. Retaining wall is needed for a length of 50m. O & M is needed for about 3km. Sluice is to be r	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
21	17.12.2008	Kunjaram	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed Retaining wall requested	Can be provided Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
			Page 83																	

22	17.12.2008	Eriyur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed Weir Repair is requested	Can be provided Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
23	17.12.2008	Veeramangalam	Tank bund to be strengthened Supply channel improvements is requested. Eviction is to be removed	Can be provided Can be provided Can be provided								Included in the IAMWARM Project								
24	17.12.2008	Vadakurumbur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir Repair is requested	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
25	16.12.2008	S. Malayanur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
26	18.12.2008	Koovadu	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir Repair is requested	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
27	13.12.2008	Neyvanai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir Repair is requested	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
28	18.12.2008	Pinnalvadi	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir Repair is requested Threashing floor is required	Can be provided Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
29	11.11.2008	Arunkurukkai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir Repair is requested Threashing floor is required	Can be provided Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
			Page 84																	

30	11.11.2008	Damal	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed Anicut is to be repaired	Can be provided Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
31	11.11.2008	Kiliyur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
32	18.12.2008	M. Kunnathur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed weir repair is required Threashing floor	Can be provided Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
33	11.11.2008	Puthananthal	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed weir repair is required Threashing floor	Can be provided Can be provided To be repaired and reconstructed Can be provided can be provided								Included in the IAMWARM Project								
34	11.11.2008	Nathamoor	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed weir repair is required	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
35	11.11.2008	Athur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Cane be provided Can be provided To be repaired and reconstructed								Included in the IAMWARM Project								
36	13.12.2008	Adanur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir Repair Eviction to be removed	Can be provided Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
			Page 85																	

37	14.11.2008	Kalamarudur	Supply channel improvements is requested. Sluice repair is needed Weir Repair Eviction to be removed	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
38	14.11.2008	T. Orathur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
39	14.11.2008	Pa. killanur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction to be removed	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
40	13.12.2008	Pachaplayam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir Repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
41	13.12.2008	U. Sellur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir Repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
42	14.11.2008	Pandur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
43	14.11.2008	Arali	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
44	14.11.2008	Semmanankur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Threashing floor is required	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
			Page 86																	

45	14.11.2008	Nagar	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Threashing floor is required Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided Can be provided								Included in the IAMWARM Project								
46	14.11.2008	Senkurichi	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Threashing floor is required Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided Can be provided								Included in the IAMWARM Project								
47	14.11.2008	Padur	Desilting work is required and capacity of the tank has to be increased	Rejected								Already have been executed under NABARD Scheme								
48	18.11.2008	Mathiyanur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Threashing floor is required Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided Can be provided								Included in the IAMWARM Project								
49	18.11.2008	Koo. Kallakurichi	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Threashing floor is required Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided Can be provided								Included in the IAMWARM Project								
50	18.11.2008	Mattigai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
51	18.11.2008	Senthanadu	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
52	18.11.2008	Manalur	Additional weir is required. Field channel lining is needed	Rejected								Already have been executed under NABARD Scheme								
			Page 87																	

53	18.11.2008	Kalathur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Threashing floor is required	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
54	18.11.2008	Ankanur	Field channel lining is required	Rejected								Already have been executed under NABARD Scheme								
55	13.12.2008	Emam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
56	18.11.2008	Vellaiyur	Weir repair work is requested	Rejected								Work already have been executed under PART scheme								
57	16.12.2008	Pu. Kolanavadi	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
58	16.12.2008	U. keeranur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair Eviction is to be removed	Can be provided To be repaired and reconstructed Can be provided Can be provided Can be provided								Included in the IAMWARM Project								
59	16.12.2008	Ulundur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair Eviction is to be removed	Can be provided To be repaired and reconstructed Can be provided Can be provided Can be provided								Included in the IAMWARM Project								
60	18.11.2008	Sirupakkam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
			Page 88																	

61	16.12.2008	Sembimadevi	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair Eviction is to be removed	Can be provided To be repaired and reconstructed Can be provided Can be provided Can be provided								Included in the IAMWARM Project								
62	18.12.2008	Alangiri	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
63	18.12.2008	Salapakkam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
64	16.12.2008	A. Puthur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
		Panruti																		
65	17.12.08	Natham	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
66	18.11.08	Elanthampattu	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
67	18.11.08	Siruvathur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
			Page 89																	

68	17.12.08	Semakottai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair Retaining Wall Threashing floor	Can be provided To be repaired and reconstructed Can be provided Can be provided Can be provided Can be provided								Included in the IAMWARM Project								
69	18.11.08	Manapakkam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
70	18.12.08	Manamthaviz n thapudur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
71	18.11.08	Semmedu	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
72	18.11.08	Thiruvamur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
73	18.12.08	LN Puram	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
74	18.12.08	Poongunam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed Threshing floor	Can be provided Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
			Page 90																	

75	18.12.08	Chettipattadai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
76	18.11.08	Veerperumanallur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
77	18.11.08	Sirugramam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
78	18.11.08	Vizur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
79	10.12.08	Elumedu	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
80	10.12.08	Thirvathigai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
81	11.12.08	P N Palayam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								

82	11.12.08	Pandarakottai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is need Weir repairs	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
83	10.12.08	C N Palayam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is need Weir repairs	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
		Cuddalore Section																		
84	16.12.08	Vilangalpattu	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is need Weir repairs Providing retaining wall	Can be provided Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
85	16.12.08	Ramapuram Devan Eri	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is need Weir repairs Threshering floor	Can be provided Can be provided To be repaired and reconstructed Can be provided Can be provided								Included in the IAMWARM Project								
86	12.11.08	Eidanur	Lining work in supply channel Culvert is to be repaired	Can be provided Can be provided								Included in the IAMWARM Project								
87	19.12.08	Vali Odai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is need Providing shutter	Can be provided Can be provided To be repaired and reconstructed Can be provided								Included in the IAMWARM Project								
			Page 92																	

88	19.12.08	Naduveerapattu Old	Check dam provided near Naduveerapattu across Gadilam river Bed dam provided across nariyan odai Tank bund to be strengthened Providing shutter Providng threshing floor Weir Repair Providing shutter arrangement in infall point of nariyan odai.	Can be provided Can be provided Can be provided Can be provided Can be provided Can be provided Can be provided								Included in the IAMWARM Project								
89	16.12.08	Thottapattu	Desilting the tank Strengthening of bund Providing retaining wall in Weeker section of the bund. Improvement to Supply channel Weir Repaired Encroachment is to be removed	Can be provided Can be provided Can be provided Can be provided Can be provided Can be provided								Included in the IAMWARM Project								
90	16.12.08	Varkkalpattu	Desilting the tank Strengthening of bund Improvement to Supply channel Providing revetment Providng new sluice Weir Repaired Providing lining the supply channel	Can be provided Can be provided Can be provided Can be provided Can be provided Can be provided Can be provided Can be provided								Included in the IAMWARM Project								
91	16.12.08	Gunaman galam	Desilting the tank Strengthening of bund Improvement to Supply channel Repair to sluice Providing lining the supply channel	Can be provided Can be provided Can be provided Can be provided Can be provided								Included in the IAMWARM Project								
92	19.12.08	Naduveera pattu New	Check dam provided near Naduveerapattu across Gadilam river Bed dam provided across nariyan odai Tank bund to be strengthened Providing shutter Providng threshing floor Weir Repair Providing shutter arrangement in infall point of nariyan odai.	Can be provided Can be provided Can be provided Can be provided Can be provided Can be provided Can be provided								Included in the IAMWARM Project								

Annexure -1

An Assessment of Command Area and WUAs under the Control of WRO of PWD in "GADILAM SUB BASIN"

Sl. No.	Name of Irrigation Systems and Tanks	Command Area in Ha	Location of the Command Area			Coverage of Command Area under Difference		Status of Formation of WUAs in the Sub basin	
			Village	Taluk	District	WRCP and Others	IAMWARM	Formed under WRCP (Code	To be formed under IAMWARM (Code)
1	Yal Tank	65.28	Rishivanthiyam	Sangarapuram	Villupuram	-----	65.28	-----	To be formed under IAMWARM
2	Melpangur	56.50	Rishivanthiyam	Sangarapuram		-----	56.50	-----	
3	Peral	54.66	Rishivanthiyam	Sangarapuram		-----	54.66	-----	
4	Sathaputhur Tank	43.12	Rishivanthiyam	Sangarapuram		-----	43.12	-----	
5	Pavandur Tank	45.29	Rishivanthiyam	Sangarapuram		-----	45.29	-----	
6	Pasar Tank	124.97	Rishivanthiyam	Sangarapuram		-----	124.97	-----	
7	Rishivandiyam Tank	73.97	Rishivanthiyam	Sangarapuram		-----	73.97	-----	
8	Vengalam Tank	45.14	Rishivanthiyam	Sangarapuram		-----	45.14	-----	
9	Munivazhai	51.99	Rishivanthiyam	Sangarapuram		-----	51.99	-----	
10	Kunniyur Tank	49.10	Rishivanthiyam	Sangarapuram		-----	49.10	-----	
11	Thimmalai Tank	68.99	Thiyagathurugam	Sangarapuram		-----	68.99	-----	
12	Kattu Edaiyar	154.06	Ulundurpet	Ulundurpet		-----	154.06	-----	
13	memalur	63.82	Thirukoilur	Thirukoilur		-----	63.82	-----	
14	Kattusellur	79.24	Ulundurpet	Ulundurpet		-----	79.24	-----	
15	Alur	70.13	Thirukoilur	Thirukoilur		-----	70.13	-----	
16	Periyakurukkai	47.70	Ulundurpet	Ulundurpet		-----	47.70	-----	

17	Mohalar	61.83	Thirukoilur	Thirukoilur		-----	61.83	-----	
18	Sikkadu	44.72	Ulundurpet	Ulundurpet		-----	44.72	-----	
19	Adaiyur	45.72	Ulundurpet	Ulundurpet		-----	45.72	-----	
20	Kunjaram	116.19	Ulundurpet	Ulundurpet		-----	116.19	-----	
21	Eraiyur	54.28	Ulundurpet	Ulundurpet		-----	54.28	-----	
22	Veeramangalam	41.63	Ulundurpet	Ulundurpet		-----	41.63	-----	
23	Vadakurumbur	86.64	Ulundurpet	Ulundurpet		-----	86.64	-----	
24	S. Malaiyanur	58.05	Ulundurpet	Ulundurpet		-----	58.05	-----	
25	Koovadu	91.09	Ulundurpet	Ulundurpet		-----	91.09	-----	
26	Neivainai	61.57	Ulundurpet	Ulundurpet		-----	61.57	-----	
27	Pinnalvadi	63.02	Ulundurpet	Ulundurpet		-----	63.02	-----	
28	Aurnkurukkai	78.06	T V. Nallur	Thirukoilur		-----	78.06	-----	
29	Damal	51.02	Ulundurpet	Ulundurpet		-----	51.02	-----	
30	Kiliyur	50.12	Ulundurpet	Ulundurpet	Villupuram	-----	50.12	-----	
31	M. Kunnathur	64.10	Ulundurpet	Ulundurpet		-----	64.10	-----	
32	Puthanandal	51.00	Ulundurpet	Ulundurpet		-----	51.00	-----	
33	Nathamur	82.43	Ulundurpet	Ulundurpet		-----	82.43	-----	
34	Athur	43.53	Thirunavalur	Ulundurpet		-----	43.53	-----	
35	Adanur	53.40	Thirunavalur	Ulundurpet		-----	53.40	-----	
36	Kalamarudur	142.51	Thirunavalur	Ulundurpet		-----	142.51	-----	
37	Orathur	109.31	Thirunavalur	Ulundurpet		-----	109.31	-----	
38	Pa. Killanur	44.72	Thirunavalur	Ulundurpet		-----	44.72	-----	
39	Pachapalayam	41.83	Thirunavalur	Ulundurpet		-----	41.83	-----	
40	U. Sellur	42.92	Thirunavalur	Ulundurpet		-----	42.92	-----	
41	Pandur	82.43	Thirunavalur	Ulundurpet		-----	82.43	-----	
42	Arali	58.04	Thirunavalur	Ulundurpet		-----	58.04	-----	
43	Sennangur	70.79	Thirunavalur	Ulundurpet		-----	70.79	-----	
44	Nagar	47.00	Thirunavalur	Ulundurpet		-----	47.00	-----	

45	Sengurichi	53.75	Thirunavalur	Ulundurpet		-----	53.75	-----	
46	Padur	245.75	Thirunavalur	Ulundurpet		-----	245.75	-----	
47	Mathiyanur	46.62	Thirunavalur	Ulundurpet		-----	46.62	-----	
48	Koo. Kallakurichi	53.89	Thirunavalur	Ulundurpet		-----	53.89	-----	
49	Mattigai	46.20	Thirunavalur	Ulundurpet		-----	46.20	-----	
50	Sendanadu	78.23	Thirunavalur	Ulundurpet		-----	78.23	-----	
51	T. Kalathur	131.53	Thirunavalur	Ulundurpet		-----	131.53	-----	
52	Emam	43.18	Ulundurpet	Ulundurpet		-----	43.18	-----	
53	Pu. Konalavadi	46.40	Ulundurpet	Ulundurpet	Villupuram	-----	46.40	-----	
54	U. Keeranur	56.18	Ulundurpet	Ulundurpet		-----	56.18	-----	
55	Ulundur	55.04	Ulundurpet	Ulundurpet		-----	55.04	-----	
56	Sirupakkam	48.70	Ulundurpet	Ulundurpet		-----	48.70	-----	
57	Sembiyanmadevi	47.90	Ulundurpet	Ulundurpet		-----	47.90	-----	
58	Alangiri	53.43	Ulundurpet	Ulundurpet		-----	53.43	-----	
59	Salappakkam	41.11	Ulundurpet	Ulundurpet		-----	41.11	-----	
60	A. Puthur	59.80	Ulundurpet	Ulundurpet		-----	59.80	-----	

Cuddalore District									
61	Manamthaviznthaputhur tank	62.17	Panruti	Panruti		-----	62.17	-----	
62	Natham tank	259.04	Panruti	Panruti		259.04	-----	Yes	-----
63	Sirugrammam tank	191.50	Panruti	Panruti		191.50	-----	Yes	-----
64	Veeraperumanallur tank	259.03	Panruti	Panruti		259.03	-----	Yes	-----
65	Thiruvamur tank,	30.60	Panruti	Panruti		-----	30.60	-----	
66	Elanthampattu tank	156.29	Panruti	Panruti		-----	156.29	-----	
67	Semmedu tank	49.56	Panruti	Panruti		-----	49.56	-----	
68	Vizur Zemberi tank	58.04	Panruti	Panruti		-----	58.04	-----	
69	Semakottai tank	70.85	Panruti	Panruti	Cuddalore	-----	70.85	-----	
70	Manapakkam tank	57.51	Panruti	Panruti		-----	57.51	-----	
71	Siruvathur tank	214.26	Panruti	Panruti		-----	214.26	-----	
72	Pandarakottai tank	41.25	Annagramam	Panruti		-----	41.25	-----	
73	L.N.Puram tank	122.65	Panruti	Panruti		-----	122.65	-----	
74	Poongunam tank	86.29	Panruti	Panruti		-----	86.29	-----	
75	Chettipattadai tank	274.52	Panruti	Panruti		-----	274.52	-----	
76	Elumedu tank	117.41	Annagramam	Panruti		-----	117.41	-----	
				Page 97					

77	P.N.Palayam tank	68.62	Annagramam	Panruti		-----	68.62	-----	
78	C.N.Palayam tank	50.2	Annagramam	Panruti		-----	50.2	-----	
79	Thottapattu tank	66.8	Cuddalore	Cuddalore		-----	66.8	-----	
80	Varakkalpattu tank	70.45	Cuddalore	Cuddalore		-----	70.45	-----	
81	Gunamangalam tank	252.63	Cuddalore	Cuddalore	Cuddalore	-----	252.63	-----	
82	Eidanur tank	135.22	Annagramam	Panruti		-----	135.22	-----	
83	Valiodai tank	272.47	Annagramam	Panruti		-----	272.47	-----	
84	Naduveerapattu Old tank & New tank	147.79	Cuddalore	Cuddalore		-----	147.79	-----	
85	Vilangalpattu tank	78.90	Cuddalore	Cuddalore		-----	78.90	-----	
86	Ramapuram Devan Eri	77.67	Cuddalore	Cuddalore		-----	77.67	-----	
	Thiruvathigai Anicut								
87	Muthukrishnapuram	87.26	Annagramam	Panruti		-----	87.26	-----	
88	Agaram	168.16	Annagramam	Panruti		-----	168.16	-----	
89	Palur	187.53	Annagramam	Panruti		-----	187.53	-----	
				Page 98					

90	Sittharasur	161.59	Annagramam	Panruti		-----	161.59	-----	
91	Kilarungunam	42.57	Annagramam	Panruti	Cuddalore	-----	42.57	-----	
92	Thotti	138.65	Annagramam	Panruti		-----	138.65	-----	
93	Natham	119.73	Annagramam	Panruti		-----	119.73	-----	
94	Melpathi	42.51	Annagramam	Panruti		-----	42.51	-----	
95	Kudithangi	110.99	Annagramam	Panruti		-----	110.99	-----	
96	Vaidipakkam, Nesanoor	132.89	Annagramam	Panruti		-----	132.89	-----	
	Vanamadevi Anicut								
97	Thirumanikuzhi	97.66	Cuddalore	Cuddalore		-----	97.66	-----	
98	Vanamadevi	123.25	Cuddalore	Cuddalore	Cuddalore	-----	123.25	-----	
99	Otteri	118.63	Cuddalore	Cuddalore		-----	118.63	-----	
		8842.76							

ABSTRACT

1 Command area already covered under WRCP and other projects/ schems 709.57

2 Command Area proposed to be covered under IAMWARM Project 8647.38 Ha

3 Total Command area controlled by WRO of PWD in the sub basin 9356.95Ha

4 Total No. of WUA's already formed under WRCP 3 Nos.

5 Total No. of WUA's proposed to be formed under IAMWARIM 96 Nos.

6 Total No. of WUA's that will cover the entire sub Basin 99 Nos.

Annexure -2

Details of "Awarness Creation Activities and Walk Through Surveys"

Na

Sl. No.	Date of Visit	Name if the Villages Visted	Awareness Programme (No. of Farmers attended) (Prepare the list of farmers with ackonolwdgement sperately and attach)	Walk Through Survey (No. of Farmers Participated) (Prepare the list of farmers with ackonolwdgement sperately and attach)	Remarks.
1	2	3	4	5	6
1	8.11.2008	Yal	10 Nos.	10 Nos.	
2	8.11.2008	Melpangur	13 Nos.	13 Nos.	
3	8.11.2008	Peral	11Nos.	11Nos.	
4	8.11.2008	Sathapattu	9Nos.	9Nos.	
5	8.11.2008	Pavanur	10 Nos.	10 Nos.	
6	8.11.2008	Pasar	14 Nos.	14 Nos.	
7	8.11.2008	Rishivanthiyam	5 Nos.	5 Nos.	
8	8.11.2008	Vengalam	7 Nos.	7 Nos.	
9	8.11.2008	Minivazhai	11 Nos.	11 Nos.	
		PAGE 100			

10	8.11.2008	Kunniyur	8 Nos.	8 Nos.	
11	8.11.2008	Timmalai	12 Nos.	12 Nos.	
12	11.11.2008	Panapadi	15 Nos.	15 Nos.	
13	11.11.2008	Memalur	9 Nos.	9 Nos.	
14	11.11.2008	Alur	8 Nos.	8 Nos.	
15	11.11.2008	Periyakurukkai	11 Nos.	11 Nos.	
16	11.11.2008	Mohalar	7 Nos.	7 Nos.	
17	11.11.2008	Arunkurukkai	13 Nos.	13 Nos.	
18	11.11.2008	Damal	6 Nos.	6 Nos.	
19	11.11.2008	Kiliyur	5 Nos.	5 Nos.	
20	11.11.2008	Puthananthal	8 Nos.	8 Nos.	
21	11.11.2008	Nathamoor	10 Nos.	10 Nos.	
22	11.11.2008	Athur	7 Nos.	7 Nos.	
23	12.11.08	Eidanur	11 Nos.	11 Nos.	
		PAGE 101			

24	14.11.2008	Kalamarudur	8 Nos.	8 Nos.	
25	14.11.2008	T. Orathur	9 Nos.	9 Nos.	
26	14.11.2008	Pa. killanur	7 Nos.	7 Nos.	
27	14.11.2008	Pandur	10 Nos.	10 Nos.	
28	14.11.2008	Arali	5 Nos.	5 Nos.	
29	14.11.2008	Semmanankur	11 Nos.	11 Nos.	
30	14.11.2008	Nagar	6 Nos.	6 Nos.	
31	14.11.2008	Senkurichi	8 Nos.	8 Nos.	
32	14.11.2008	Padur	7 Nos.	7 Nos.	
33	18.11.08	Elanthampattu	7 Nos.	7 Nos.	
34	18.11.08	Siruvathur	10 Nos.	10 Nos.	
35	18.11.08	Manapakkam	13 Nos.	13 Nos.	
36	18.11.08	Semmedu	11Nos.	11Nos.	
37	18.11.08	Thiruvamur	9Nos.	9Nos.	

38	18.11.08	Veerperumanallur	10 Nos.	10 Nos.	
39	18.11.08	Sirugramam	14 Nos.	14 Nos.	
40	18.11.08	Vizur	5 Nos.	5 Nos.	
41	18.11.2008	Kattuchellur	7 Nos.	7 Nos.	
42	18.11.2008	Mathiyanur	11 Nos.	11 Nos.	
43	18.11.2008	Koo. Kallakurichi	8 Nos.	8 Nos.	
44	18.11.2008	Mattigai	12 Nos.	12 Nos.	
45	18.11.2008	Senthanadu	15 Nos.	15 Nos.	
46	18.11.2008	Manalur	9 Nos.	9 Nos.	
47	18.11.2008	Kalathur	8 Nos.	8 Nos.	
48	18.11.2008	Ankanur	11 Nos.	11 Nos.	
49	18.11.2008	Vellaiyur	7 Nos.	7 Nos.	
50	18.11.2008	Sirupakkam	13 Nos.	13 Nos.	
51	10.12.08	Elumedu	6 Nos.	6 Nos.	
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52	10.12.2008	Thiruvathigai	5 Nos.	5 Nos.	
53	10.12.08	C N Palayam	8 Nos.	8 Nos.	
54	11.12.08	P N Palayam	10 Nos.	10 Nos.	
55	11.12.08	Pandarakottai	7 Nos.	7 Nos.	
56	13.12.2008	Neyvanai	11 Nos.	11 Nos.	
57	13.12.2008	Adanur	8 Nos.	8 Nos.	
58	13.12.2008	Pachaplayam	9 Nos.	9 Nos.	
59	13.12.2008	U. Sellur	7 Nos.	7 Nos.	
60	13.12.2008	Emam	10 Nos.	10 Nos.	
61	16.12.08	Vilangalpattu	5 Nos.	5 Nos.	
62	16.12.08	Ramapuram Devan Eri	11 Nos.	11 Nos.	
63	16.12.08	Thottapattu	6 Nos.	6 Nos.	
64	16.12.08	Varkkalpattu	8 Nos.	8 Nos.	
65	16.12.08	Gunamangalam	7 Nos.	7 Nos.	
		PAGE 104			

66	16.12.2008	S. Malayanur	7 Nos.	7 Nos.	
67	16.12.2008	Pu. Kolanavadi	10 Nos.	10 Nos.	
68	16.12.2008	U. keeranur	13 Nos.	13 Nos.	
69	16.12.2008	Ulundur	11Nos.	11Nos.	
70	16.12.2008	Sembimadevi	9Nos.	9Nos.	
71	16.12.2008	A. Puthur	10 Nos.	10 Nos.	
72	17.12.08	Natham	14 Nos.	14 Nos.	
73	17.12.08	Semakottai	5 Nos.	5 Nos.	
74	17.12.2008	Kattu Edaiyar	7 Nos.	7 Nos.	
75	17.12.2008	Sikkadu	11 Nos.	11 Nos.	
76	17.12.2008	Adhaiyur	8 Nos.	8 Nos.	
77	17.12.2008	Kunjaram	12 Nos.	12 Nos.	
78	17.12.2008	Eriyur	15 Nos.	15 Nos.	
79	17.12.2008	Veeramangalam	9 Nos.	9 Nos.	
		PAGE 105			

80	17.12.2008	Vadakurumbur	8 Nos.	8 Nos.	
81	18.12.08	Manamthavizn thapudur	11 Nos.	11 Nos.	
82	18.12.08	LN Puram	7 Nos.	7 Nos.	
83	18.12.08	Poongunam	13 Nos.	13 Nos.	
84	18.12.08	Chettipattadai	6 Nos.	6 Nos.	
85	18.12.2008	Koovadu	5 Nos.	5 Nos.	
86	18.12.2008	Pinnalvadi	8 Nos.	8 Nos.	
87	18.12.2008	M. Kunnathur	10 Nos.	10 Nos.	
88	18.12.2008	Alangiri	7 Nos.	7 Nos.	
89	18.12.2008	Salapakkam	11 Nos.	11 Nos.	
90	19.12.08	Vali Odai	8 Nos.	8 Nos.	
91	19.12.08	Naduveerapattu Old	9 Nos.	9 Nos.	
92	19.12.08	Naduveerapattu New	7 Nos.	7 Nos.	

Annexure -3

Details of Modernisation works as suggested by the Farmers and as finalised by the Officials of WRO

Name of the Sub Basin : Gadilam

Sl. No.	Date of Visit	Name if the Villages Visted	Out come of wald through survey and discussions with farmers.		Remarks.
			Works suggested by Farmers	Works finalized by WRO Officials	
1	2	3	4	5	6
1	8.11.2008	Yal	Tank bund to be strengthened Supply channel improvements is requested.	Included in the IAMWARM Project	
2	8.11.2008	Melpangur	Tank bund to be strengthened Supply channel improvements is requested.	Included in the IAMWARM Project	
3	8.11.2008	Peral	Tank bund to be strengthened Supply channel improvements is requested.	Included in the IAMWARM Project	
4	8.11.2008	Sathapattu	Tank bund to be strengthened Supply channel improvements is requested.	Included in the IAMWARM Project	
5	8.11.2008	Pavanur	Tank bund to be strengthened Supply channel improvements is requested.	Included in the IAMWARM Project	
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6	8.11.2008	Pasar	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Included in the IAMWARM Project	
7	8.11.2008	Rishivanthiyam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Included in the IAMWARM Project	
8	8.11.2008	Vengalam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Included in the IAMWARM Project	
9	8.11.2008	Minivazhai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Included in the IAMWARM Project	
10	8.11.2008	Kunniyur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Included in the IAMWARM Project	
11	8.11.2008	Timmalai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Included in the IAMWARM Project	
				PAGE 108	

12	11.11.2008	Panapadi	Lining in field channel in requested	Included in the IAMWARM Project	
13	11.11.2008	Memalur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Included in the IAMWARM Project	
14	11.11.2008	Alur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Included in the IAMWARM Project	
15	11.11.2008	Periyakurukkai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Included in the IAMWARM Project	
16	11.11.2008	Mohalar	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Included in the IAMWARM Project	
17	11.11.2008	Arunkurukkai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir Repair is requested Threashing floor is required	Included in the IAMWARM Project	
18	11.11.2008	Damal	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed Anicut is to be repaired	Included in the IAMWARM Project	
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19	11.11.2008	Kiliyur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Included in the IAMWARM Project	
20	11.11.2008	Puthananthal	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed weir repair is required Threashing floor	Included in the IAMWARM Project	
21	11.11.2008	Nathamoor	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed weir repair is required	Included in the IAMWARM Project	
22	11.11.2008	Athur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Included in the IAMWARM Project	
23	12.11.08	Eidanur	Lining work in supply channel Culvert is to be repaired	Included in the IAMWARM Project	
24	14.11.2008	Kalamarudur	Supply channel improvements is requested. Sluice repair is needed Weir Repair Eviction to be removed	Included in the IAMWARM Project	
25	14.11.2008	T. Orathur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Included in the IAMWARM Project	
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26	14.11.2008	Pa. killanur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction to be removed	Included in the IAMWARM Project	
27	14.11.2008	Pandur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Included in the IAMWARM Project	
28	14.11.2008	Arali	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Included in the IAMWARM Project	
29	14.11.2008	Semmanankur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Threashing floor is required	Included in the IAMWARM Project	
30	14.11.2008	Nagar	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Threashing floor is required Weir repair	Included in the IAMWARM Project	
31	14.11.2008	Senkurichi	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Threashing floor is required Weir repair	Included in the IAMWARM Project	
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32	14.11.2008	Padur	Desilting work is required and capacity of the tank has to be increased	Included in the IAMWARM Project	
33	18.11.08	Elanthampattu	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Included in the IAMWARM Project	
34	18.11.08	Siruvathur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Included in the IAMWARM Project	
35	18.11.08	Manapakkam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Included in the IAMWARM Project	
36	18.11.08	Semmedu	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Included in the IAMWARM Project	
37	18.11.08	Thiruvamur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Included in the IAMWARM Project	
38	18.11.08	Veerperumanallur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Included in the IAMWARM Project	
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39	18.11.08	Sirugramam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Included in the IAMWARM Project	
40	18.11.08	Vizur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Included in the IAMWARM Project	
41	18.11.2008	Kattuchellur	Sluice repair is needed	Included in the IAMWARM Project	
42	18.11.2008	Mathiyanur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Threashing floor is required Weir repair	Included in the IAMWARM Project	
43	18.11.2008	Koo. Kallakurichi	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Threashing floor is required Weir repair	Included in the IAMWARM Project	
44	18.11.2008	Mattigai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Included in the IAMWARM Project	
45	18.11.2008	Senthanadu	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Included in the IAMWARM Project	
46	18.11.2008	Manalur	Additional weir is required. Field channel lining is needed	Included in the IAMWARM Project	
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47	18.11.2008	Kalathur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Threashing floor is required	Included in the IAMWARM Project	
48	18.11.2008	Ankanur	Field channel lining is required	Included in the IAMWARM Project	
49	18.11.2008	Vellaiyur	Weir repair work is requested	Included in the IAMWARM Project	
50	18.11.2008	Sirupakkam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Included in the IAMWARM Project	
51	10.12.08	Elumedu	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Included in the IAMWARM Project	
52	10.12.2008	Thiruvathigai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Included in the IAMWARM Project	
53	10.12.08	C N Palayam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is need Weir repairs	Included in the IAMWARM Project	
54	11.12.08	P N Palayam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Included in the IAMWARM Project	
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55	11.12.08	Pandarakottai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is need Weir repairs	Included in the IAMWARM Project	
56	13.12.2008	Neyvanai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir Repair is requested	Included in the IAMWARM Project	
57	13.12.2008	Adanur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir Repair Eviction to be removed	Included in the IAMWARM Project	
58	13.12.2008	Pachaplayam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir Repair	Included in the IAMWARM Project	
59	13.12.2008	U. Sellur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir Repair	Included in the IAMWARM Project	
60	13.12.2008	Emam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Included in the IAMWARM Project	
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61	16.12.08	Vilangalpattu	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is need Weir repairs Providing retaining wall	Included in the IAMWARM Project	
62	16.12.08	Ramapuram Devan Eri	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is need Weir repairs Threshering floor	Included in the IAMWARM Project	
63	16.12.08	Thottapattu	Desilting the tank Strengthening of bund Providing retaining wall in Weeker section of the bund. Improvement to Supply channel Weir Repaired Encroachment is to be removed	Included in the IAMWARM Project	
64	16.12.08	Varkkalpattu	Desilting the tank Strengthening of bund Improvement to Supply channel Providing revetment Providng new sluice Weir Repaired Providing lining the supply channel	Included in the IAMWARM Project	
65	16.12.08	Gunamangalam	Desilting the tank Strengthening of bund Improvement to Supply channel Repair to sluice Providing lining the supply channel	Included in the IAMWARM Project	
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66	16.12.2008	S. Malayanur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Included in the IAMWARM Project	
67	16.12.2008	Pu. Kolanavadi	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Included in the IAMWARM Project	
68	16.12.2008	U. keeranur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair Eviction is to be removed	Included in the IAMWARM Project	
69	16.12.2008	Ulundur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair Eviction is to be removed	Included in the IAMWARM Project	
70	16.12.2008	Sembimadevi	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair Eviction is to be removed	Included in the IAMWARM Project	
71	16.12.2008	A. Puthur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Included in the IAMWARM Project	
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72	17.12.08	Natham	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Included in the IAMWARM Project	
73	17.12.08	Semakottai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair Retaining Wall Threashing floor	Included in the IAMWARM Project	
74	17.12.2008	Kattu Edaiyar	Left Bank of Canel breached during the year 200-08, 2008-09. Retaining wall is needed for a length of 50m. O & M is needed for about 3km. Sluice is to be required.	Included in the IAMWARM Project	
75	17.12.2008	Sikkadu	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed	Included in the IAMWARM Project	
76	17.12.2008	Adhaiyur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Right Bank of Canel breached during the year 200-08, 2008-09. Retaining wall is needed for a length of 50m. O & M is needed for about 3km. Sluice is to be r	Included in the IAMWARM Project	
				PAGE 118	

77	17.12.2008	Kunjaram	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed Retaining wall requested	Included in the IAMWARM Project	
78	17.12.2008	Eriyur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed Weir Repair is requested	Included in the IAMWARM Project	
79	17.12.2008	Veeramangalam	Tank bund to be strengthened Supply channel improvements is requested. Eviction is to be removed	Included in the IAMWARM Project	
80	17.12.2008	Vadakurumbur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir Repair is requested	Included in the IAMWARM Project	
81	18.12.08	Manamthavizn thapudur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Included in the IAMWARM Project	
82	18.12.08	LN Puram	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed	Included in the IAMWARM Project	
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83	18.12.08	Poongunam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Eviction is to be removed Threshing floor	Included in the IAMWARM Project	
84	18.12.08	Chettipattadai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Included in the IAMWARM Project	
85	18.12.2008	Koovadu	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir Repair is requested	Included in the IAMWARM Project	
86	18.12.2008	Pinnalvadi	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir Repair is requested Threashing floor is required	Included in the IAMWARM Project	
87	18.12.2008	M. Kunnathur	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed weir repair is required Threashing floor	Included in the IAMWARM Project	
88	18.12.2008	Alangiri	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Included in the IAMWARM Project	
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89	18.12.2008	Salapakkam	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is needed Weir repair	Included in the IAMWARM Project	
90	19.12.08	Vali Odai	Tank bund to be strengthened Supply channel improvements is requested. Sluice repair is need Providing shutter	Included in the IAMWARM Project	
91	19.12.08	Naduveerapattu Old	Check dam provided near Naduveerapattu across Gadilam river Bed dam provided across nariyan odai Tank bund to be strengthened Providing shutter Providng threshing floor Weir Repair Providing shutter arrangement in infall point of nariyan odai.	Included in the IAMWARM Project	
92	19.12.08	Naduveerapattu New	Check dam provided near Naduveerapattu across Gadilam river Bed dam provided across nariyan odai Tank bund to be strengthened Providing shutter Providng threshing floor Weir Repair Providing shutter arrangement in infall point of nariyan odai.	Included in the IAMWARM Project	

1.5 IRRIGATION INFRASTRUCTURE

1.5.1. LIST OF ANICUTS

Name of the Sub Basin : Gadilam

Sl. No	Anicuts	Village	Block	Taluk	District	Direct Ayacut Area in Ha
I	**Ulundurpet Section**					
1	KattuEdaiyur	KattuEdaiyur	Ulundurpet	Ulundurpet	Villupuram	
2	Memalur	Memalur	Thirukoilur	Thirukoilur	Villupuram	
3	Alur	Alur	Thirukoilur	Thirukoilur	Villupuram	
4	Mohalar	Mohalar	Thirukoilur	Thirukoilur	Villupuram	
5	Arunkurukkai	Arunkurukkai	T.V. Nallur	Thirukoilur	Villupuram	
6	Thamal	Thamal	Ulundurpet	Ulundurpet	Villupuram	
7	Puthananthal	Puthananthal	Ulundurpet	Ulundurpet	Villupuram	
8	S. Malayanur	S. Malayanur	Ulundurpet	Ulundurpet	Villupuram	
9	Anganur	Anganur	Ulundurpet	Ulundurpet	Villupuram	18.61
10	Pachapalayam	Pachapalayam	Thirnavalur	Ulundurpet	Villupuram	
11	T. Kalathur	T. Kalathur	Thirnavalur	Ulundurpet	Villupuram	

II	**Panruti Section**					
12	Thiruvathigai	Thiruvathigai	Panruti	Panruti	Cuddalore	134.17
	-do-	-do-	Annagramam	Panruti	Cuddalore	1191.88
	Cuddalore Section					
13	Vanamadevi	Vanamadevi	Cuddalore	Cuddalore	Cuddalore	339.54
14	Thiruvanthipuram	Thiruvanthipuram	Cuddalore	Cuddalore	Cuddalore	

1.5.2 LIST OF TANKS (Separate statement for Non System Tanks)
SYSTEM - NIL

Name of the Sub Basin: GADILAM

Sl. NO	Name of Tank	Village	Block	Taluk	District	Ayacut	Capacity in Mcum
	Villupuram District						
1	Yal Tank	Yal	Rishivanthiyam	Sankarapuram	Villupuram	65.28	13.34
2	Melpangur	Melpangur	Rishivanthiyam	Sankarapuram	Villupuram	56.50	9.23
3	Peral	Peral	Rishivanthiyam	Sankarapuram	Villupuram	54.66	12.66
4	Sathaputhur Tank	Sathaputhur	Rishivanthiyam	Sankarapuram	Villupuram	43.12	11.14
5	Pavandur Tank	Pavandur	Rishivanthiyam	Sankarapuram	Villupuram	45.29	12.23
6	Pasar Tank	Pasar	Rishivanthiyam	Sankarapuram	Villupuram	124.97	33.96
7	Rishivandiyam Tank	Rishivandiyam	Rishivanthiyam	Sankarapuram	Villupuram	73.97	17.40
8	Vengalam Tank	Vengalam	Rishivanthiyam	Sankarapuram	Villupuram	45.14	12.38
9	Munivazhai	Munivazhai	Rishivanthiyam	Sankarapuram	Villupuram	51.99	18.35
10	Kunniyur Tank	Kunniyur Tank	Rishivanthiyam	Sankarapuram	Villupuram	49.10	21.65
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11	Thimmalai Tank	Thimmalai	Thiyagathurugam	Sankarapuram	Villupuram	68.99	18.18
12	Panappadi	Panappadi	Thirukoilur	Thirukoilur	Villupuram	58.62	13.58
13	Kattu Edaiyar	Kattu Edaiyar	Ulundurpet	Ulundurpet	Villupuram	154.06	65.00
14	memalur	memalur	Thirukoilur	Thirukoilur	Villupuram	63.82	21.43
15	Kattusellur	Kattusellur	Ulundurpet	Ulundurpet	Villupuram	79.24	7.96
16	Alur	Alur	Thirukoilur	Thirukoilur	Villupuram	70.13	25.63
17	Periyakurukkai	Periyakurukkai	Ulundurpet	Ulundurpet	Villupuram	47.70	16.92
18	Mohalar	Mohalar	Thirukoilur	Thirukoilur	Villupuram	61.83	40.32
19	Sikkadu	Sikkadu	Ulundurpet	Ulundurpet	Villupuram	44.72	8.50
20	Adaiyur	Adaiyur	Ulundurpet	Ulundurpet	Villupuram	45.72	16.13
21	Kunjaram	Kunjaram	Ulundurpet	Ulundurpet	Villupuram	116.19	34.36
22	Eraiyur	Eraiyur	Ulundurpet	Ulundurpet	Villupuram	54.28	51.95
23	Veeramangalam	Veeramangalam	Ulundurpet	Ulundurpet	Villupuram	41.63	8.58
			Page 126				

24	Vadakurumbur	Vadakurumbur	Ulundurpet	Ulundurpet	Villupuram	86.64	17.50
25	S. Malaiyanur	S. Malaiyanur	Ulundurpet	Ulundurpet	Villupuram	58.05	11.97
26	Koovadu	Koovadu	Ulundurpet	Ulundurpet	Villupuram	91.09	18.80
27	Neivainai	Neivainai	Ulundurpet	Ulundurpet	Villupuram	61.57	12.76
28	Pinnalvadi	Pinnalvadi	Ulundurpet	Ulundurpet	Villupuram	63.02	15.97
29	Aurnkurukkai	Aurnkurukkai	T V. Nallur	Thirukoilur	Villupuram	78.06	16.15
30	Damal	Damal	Ulundurpet	Ulundurpet	Villupuram	51.02	10.60
31	Kiliyur	Kiliyur	Ulundurpet	Ulundurpet	Villupuram	50.12	9.72
32	M. Kunnathur	M. Kunnathur	Ulundurpet	Ulundurpet	Villupuram	64.10	12.78
33	Puthanandal	Puthanandal	Ulundurpet	Ulundurpet	Villupuram	51.00	74.10
34	Nathamur	Nathamur	Ulundurpet	Ulundurpet	Villupuram	82.43	10.40
35	Athur	Athur	Thirunavalur	Ulundurpet	Villupuram	43.53	9.00
36	Adanur	Adanur	Thirunavalur	Ulundurpet	Villupuram	53.40	10.99
			page 127				

37	Kalamarudur	Kalamarudur	Thirunavalur	Ulundurpet	Villupuram	142.51	117.32
38	Orathur	Orathur	Thiruvanvalur	Ulundurpet	Villupuram	109.31	22.50
39	Pa. Killanur	Pa. Killanur	Thiruvanvalur	Ulundurpet	Villupuram	44.72	10.00
40	Pachapalayam	Pachapalayam	Thiruvanvalur	Ulundurpet	Villupuram	41.83	5.12
41	U. Sellur	U. Sellur	Thiruvanvalur	Ulundurpet	Villupuram	42.92	10.58
42	Pandur	Pandur	Thiruvanvalur	Ulundurpet	Villupuram	82.43	19.92
43	Arali	Arali	Thiruvanvalur	Ulundurpet	Villupuram	58.04	12.10
44	Sennangur	Sennangur	Thiruvanvalur	Ulundurpet	Villupuram	70.79	19.57
45	Nagar	Nagar	Thiruvanvalur	Ulundurpet	Villupuram	47.00	9.70
46	Sengurichi	Sengurichi	Thiruvanvalur	Ulundurpet	Villupuram	53.75	12.06
47	Padur	Padur	Thirunavalur	Ulundurpet	Villupuram	245.75	50.58
48	Mathiyanur	Mathiyanur	Thirunavalur	Ulundurpet	Villupuram	46.62	10.40
49	Koo. Kallakurichi	Koo. Kallakurichi	Thirunavalur	Ulundurpet	Villupuram	53.89	26.90

50	Mattigai	Mattigai	Thirunavalur	Ulundurpet	Villupuram	46.20	16.11
51	Sendanadu	Sendanadu	Thirunavalur	Ulundurpet	Villupuram	78.23	9.15
52	Manalur.	Manalur.	Thirunavalur	Ulundurpet	Villupuram	118.62	13.36
53	T. Kalathur	T. Kalathur	Thirunavalur	Ulundurpet	Villupuram	131.53	23.10
54	Anganur	Anganur	Ulundurpet	Ulundurpet	Villupuram	79.70	12.57
55	Emam	Emam	Ulundurpet	Ulundurpet	Villupuram	43.18	17.38
56	Vellaiyur	Vellaiyur	Ulundurpet	Ulundurpet	Villupuram	123.08	25.30
57	Pu. Konalavadi	Pu. Konalavadi	Ulundurpet	Ulundurpet	Villupuram	46.40	25.50
58	U. Keeranur	U. Keeranur	Ulundurpet	Ulundurpet	Villupuram	56.18	11.57
59	Ulundur	Ulundur	Ulundurpet	Ulundurpet	Villupuram	55.04	11.15
60	Sirupakkam	Sirupakkam	Ulundurpet	Ulundurpet	Villupuram	48.70	10.15
61	Sembiyanmadevi	Sembiyanmadevi	Ulundurpet	Ulundurpet	Villupuram	47.90	9.87
62	Alangiri	Alangiri	Ulundurpet	Ulundurpet	Villupuram	53.43	10.20
			page 129				

63	Salappakkam	Salappakkam	Ulundurpet	Ulundurpet	Villupuram	41.11	10.37
64	A. Puthur	A. Puthur	Ulundurpet	Ulundurpet	Villupuram	59.80	51.95
			Total			**4419.64**	
	Cuddalore Distirct						
65	Manamthaviznthaputhur tank	Manamthaviznthaputhur	Panruti	Panruti	Cuddalore	62.17	12.50
66	Natham tank	Natham	Panruti	Panruti	Cuddalore	259.04	53.32
67	Sirugrammam tank	Sirugrammam	Panruti	Panruti	Cuddalore	191.50	78.83
68	Veeraperumanallur tank	Veeraperumanallur	Panruti	Panruti	Cuddalore	259.03	106.63
69	Thiruvamur tank	Thiruvamur	Panruti	Panruti	Cuddalore	30.60	18.67
70	Elanthampattu tank	Elanthampattu	Panruti	Panruti	Cuddalore	156.29	26.05
71	Semmedu tank	Semmedu	Panruti	Panruti	Cuddalore	49.56	20.40
72	Vizur Zemberi tank	Vizur	Panruti	Panruti	Cuddalore	58.04	23.89
73	Semakottai tank	Semakottai	Panruti	Panruti	Cuddalore	70.85	14.58
74	Manapakkam tank	Manapakkam	Panruti	Panruti	Cuddalore	57.51	23.27
			page 130				

75	Siruvathur tank	Siruvathur	Panruti	Panruti	Cuddalore	214.26	88.20
76	Pandarakottai tank	Pandarakottai	Annagramam	Panruti	Cuddalore	41.25	16.97
77	L.N.Puram tank	L.N.Puram	Panruti	Panruti	Cuddalore	122.65	25.25
78	Poongunam tank	Poongunam	Panruti	Panruti	Cuddalore	86.29	17.76
79	Chettipattadai tank	Thiruvathigai	Panruti	Panruti	Cuddalore	274.52	113.84
80	Elumedu tank	Elumedu	Annagramam	Panruti	Cuddalore	117.41	48.33
81	P.N.Palayam tank	P.N.Palayam	Annagramam	Panruti	Cuddalore	68.62	14.12
82	C.N.Palayam tank	C.N.Palayam	Annagramam	Panruti	Cuddalore	50.2	20.67
83	Thottapattu tank	Thottapattu	Cuddalore	Cuddalore	Cuddalore	66.8	7.20
84	Varakkalpattu tank	Varakkalpattu	Cuddalore	Cuddalore	Cuddalore	70.45	13.50
85	Gunamangalam tank	Gunamangalam	Cuddalore	Cuddalore	Cuddalore	252.63	26.85
86	Eidanur tank	Eidanur	Annagramam	Cuddalore	Cuddalore	135.22	22.87
87	Valiodai tank	Ariyirunthamangalam	Annagramam	Cuddalore	Cuddalore	272.47	39.00
			Page 131				

88	Naduveerapattu Old tank	Naduveerapattu	Cuddalore	Cuddalore	Cuddalore	40.91	34.00
89	Naduveerapattu New tank	Naduveerapattu	Cuddalore	Cuddalore	Cuddalore	106.88	34.00
90	Vilangalpattu tank	Vilangalpattu	Cuddalore	Cuddalore	Cuddalore	78.90	16.00
91	Ramapuram Devan Eri	Ramapuram	Cuddalore	Cuddalore	Cuddalore	77.67	32.00
						3271.72	
		Grand Total				**7691.36**	

1.5.3 LIST OF SUPPLY CHANNEL

Name of the Sub Basin: GADILAM

Sl. NO	Name of Supply Channel	Length in M	Village	Block	Taluk	District
1	Yal	1500	Yal	Rishivanthiyam	Sangarapuram	Villupuram
2	Melpangur	1500	Melpangur	Rishivanthiyam	Sangarapuram	Villupuram
3	Peral	1500	Peral	Rishivanthiyam	Sangarapuram	Villupuram
4	Sathaputhur	1500	Sathaputhur	Rishivanthiyam	Sangarapuram	Villupuram
5	Pavandur	2500	Pavandur	Rishivanthiyam	Sangarapuram	Villupuram
6	Pasar	2500	Pasar	Rishivanthiyam	Sangarapuram	Villupuram
7	Rishivandiyam	1850	Rishivandiyam	Rishivanthiyam	Sangarapuram	Villupuram
8	Vengalam	2800	Vengalam	Rishivanthiyam	Sangarapuram	Villupuram
9	Munivazhai	2200	Munivazhai	Rishivanthiyam	Sangarapuram	Villupuram
10	Kunniyur	1700	Kunniyur	Rishivanthiyam	Sangarapuram	Villupuram
11	Thimmalai	1500	Thimmalai	Thiyagathuruga	Sangarapuram	Villupuram
12	Panappadi	-	Panappadi	Thirukoilur	Thirukoilur	Villupuram
13	Kattu Edaiyar	2700	Kattu Edaiyar	Ulundurpet	Ulundurpet	Villupuram
14	memalur	4000	memalur	Thirukoilur	Thirukoilur	Villupuram
15	Kattusellur	2000	Kattusellur	Ulundurpet	Ulundurpet	Villupuram
16	Alur	2000	Alur	Thirukoilur	Thirukoilur	Villupuram
17	Periyakurukkai	2000	Periyakurukkai	Ulundurpet	Ulundurpet	Villupuram
18	Mohalar	1500	Mohalar	Thirukoilur	Thirukoilur	Villupuram
19	Sikkadu	2000	Sikkadu	Ulundurpet	Ulundurpet	Villupuram
20	Adaiyur	2000	Adaiyur	Ulundurpet	Ulundurpet	Villupuram
21	Kunjaram	2000	Kunjaram	Ulundurpet	Ulundurpet	Villupuram
22	Eraiyur	2000	Eraiyur	Ulundurpet	Ulundurpet	Villupuram
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23	Veeramangalam	1500	Veeramangalam	Ulundurpet	Ulundurpet	Villupuram
24	Vadakurumbur	2000	Vadakurumbur	Ulundurpet	Ulundurpet	Villupuram
25	S. Malaiyanur	1100	S. Malaiyanur	Ulundurpet	Ulundurpet	Villupuram
26	Koovadu	2000	Koovadu	Ulundurpet	Ulundurpet	Villupuram
27	Neivainai	2000	Neivainai	Ulundurpet	Ulundurpet	Villupuram
28	Pinnalvadi	2000	Pinnalvadi	Ulundurpet	Ulundurpet	Villupuram
29	Aurnkurukkai	2000	Aurnkurukkai	T V. Nallur	Thirukoilur	Villupuram
30	Damal	3000	Damal	Ulundurpet	Ulundurpet	Villupuram
31	Kiliyur	2000	Kiliyur	Ulundurpet	Ulundurpet	Villupuram
32	M. Kunnathur	1500	M. Kunnathur	Ulundurpet	Ulundurpet	Villupuram
33	Puthanandal	2000	Puthanandal	Ulundurpet	Ulundurpet	Villupuram
34	Nathamur	2000	Nathamur	Ulundurpet	Ulundurpet	Villupuram
35	Athur	3600	Athur	Thirunavalur	Ulundurpet	Villupuram
36	Adanur	2000	Adanur	Thirunavalur	Ulundurpet	Villupuram
37	Kalamarudur	3600	Kalamarudur	Thirunavalur	Ulundurpet	Villupuram
38	Orathur	5000	Orathur	Thirunavalur	Ulundurpet	Villupuram
39	Pa. Killanur	2000	Pa. Killanur	Thirunavalur	Ulundurpet	Villupuram
40	Pachapalayam	2700	Pachapalayam	Thirunavalur	Ulundurpet	Villupuram

41	U. Sellur	1500	U. Sellur	Thirunavalur	Ulundurpet	Villupuram
42	Pandur	3000	Pandur	Thirunavalur	Ulundurpet	Villupuram
43	Arali	2000	Arali	Thirunavalur	Ulundurpet	Villupuram
44	Sennangur	1500	Sennangur	Thirunavalur	Ulundurpet	Villupuram
45	Nagar	1000	Nagar	Thirunavalur	Ulundurpet	Villupuram
46	Sengurichi	2000	Sengurichi	Thirunavalur	Ulundurpet	Villupuram
47	Padur	4700	Padur	Thirunavalur	Ulundurpet	Villupuram
48	Mathiyanur	3000	Mathiyanur	Thirunavalur	Ulundurpet	Villupuram
49	Koo. Kallakurichi	2000	Koo. Kallakurichi	Thirunavalur	Ulundurpet	Villupuram
50	Mattigai	2000	Mattigai	Thirunavalur	Ulundurpet	Villupuram
51	Sendanadu	2000	Sendanadu	Thirunavalur	Ulundurpet	Villupuram
52	T. Kalathur	1500	T. Kalathur	Thirunavalur	Ulundurpet	Villupuram
53	Emam	2000	Emam	Ulundurpet	Ulundurpet	Villupuram

54	Pu. Konalavadi	2000	Pu. Konalavadi	Ulundurpet	Ulundurpet	Villupuram
55	U. Keeranur	1500	U. Keeranur	Ulundurpet	Ulundurpet	Villupuram
56	Ulundur	2000	Ulundur	Ulundurpet	Ulundurpet	Villupuram
57	Sirupakkam	2000	Sirupakkam	Ulundurpet	Ulundurpet	Villupuram
58	Sembiyanmadevi	1500	Sembiyanmadevi	Ulundurpet	Ulundurpet	Villupuram
59	Alangiri	2000	Alangiri	Ulundurpet	Ulundurpet	Villupuram
60	Salappakkam	1500	Salappakkam	Ulundurpet	Ulundurpet	Villupuram
61	A. Puthur	1500	A. Puthur	Ulundurpet	Ulundurpet	Villupuram
	Supply Channel			**Cuddalore District**		
62	Manamthaviznthaputhur tank	4700	Manamthaviznthaputhur	Panruti	Panruti	Cuddalore
63	Natham tank	4000	Natham	Panruti	Panruti	Cuddalore
64	Sirugrammam tank	1500	Sirugrammam	Panruti	Panruti	Cuddalore
65	Veeraperumanallur tank	4000	Veeraperumanallur	Panruti	Panruti	Cuddalore
66	Thiruvamur tank	2000	Thiruvamur	Panruti	Panruti	Cuddalore
67	Elanthampattu tank	1200	Elanthampattu	Panruti	Panruti	Cuddalore
68	Semmedu tank	-	Semmedu	Panruti	Panruti	Cuddalore
69	Vizur Zemberi tank	-	Vizur	Panruti	Panruti	Cuddalore
70	Semakottai tank	3000	Semakottai	Panruti	Panruti	Cuddalore

71	Manapakkam tank	2200	Manapakkam	Panruti	Panruti	Cuddalore
72	Siruvathur tank	4200	Siruvathur	Panruti	Panruti	Cuddalore
73	Pandarakottai tank	-	Pandarakottai	Annagramam	Panruti	Cuddalore
74	L.N.Puram tank	7700	L.N.Puram	Panruti	Panruti	Cuddalore
75	Poongunam tank	3600	Poongunam	Panruti	Panruti	Cuddalore
76	Chettipattadai tank	22100	Thiruvathigai	Panruti	Panruti	Cuddalore
77	Elumedu tank	6500	Elumedu	Annagramam	Panruti	Cuddalore
78	P.N.Palayam tank	2500	P.N.Palayam	Annagramam	Panruti	Cuddalore
79	C.N.Palayam tank	-	C.N.Palayam	Annagramam	Panruti	Cuddalore
80	Thottapattu tank	1100	Thottapattu	Cuddalore	Cuddalore	Cuddalore
81	Varakkalpattu tank	-	Varakkalpattu	Cuddalore	Cuddalore	Cuddalore
82	Gunamangalam tank	1800	Gunamangalam	Cuddalore	Cuddalore	Cuddalore
83	Eidanur tank	1500	Eidanur	Annagramam	Panruti	Cuddalore

84	Valiodai tank	2000	Ariyirunthamangalam	Annagramam	Panruti	Cuddalore
85	Naduveerapattu Old tank	2300	Naduveerapattu	Cuddalore	Cuddalore	Cuddalore
86	Naduveerapattu New tank	2300	Naduveerapattu	Cuddalore	Cuddalore	Cuddalore
87	Vilangalpattu tank	3500	Vilangalpattu	Cuddalore	Cuddalore	Cuddalore
88	Ramapuram Devan Eri	-	Ramapuram	Cuddalore	Cuddalore	Cuddalore
89	Thiruvanthipuram Anicut		Thiruvanthipuram	Cuddalore	Cuddalore	Cuddalore
	Total length of Supply channel	**211150**				

1.5.4 List of Tanks / Anicuts Executed under various Schemes (Viz, Part II Scheme, NABARD, WRCP I etc.,) Since 2000

NAME OF SUB BASIN : GADILAM

Sl. No	Name of Anicut / Tanks	Ayacut	Scheme in which executed	Amount	Details of Components executed	Remarks
I	**Ulundurpet Section**					
1	Padur Tank	245.25	NABARD	66.82	Bund, Sluice and weir repair work have been completed	
2	Vellaiyur Tank	123.08	Part Scheme II	12.00	Bund, Sluice and weir repair work have been completed	
3	Panapadi Tank	58.62	NABARD	52.00	Bund, Sluice and weir repair work have been completed. Anicut is newly consturcted.	
4	Manalur Tank	118.62	NABARD	10.00	Bund, Sluice and weir repair work have been completed. Anicut is newly consturcted.	
5	Anganur Tank	61.08	NABARD	10.00	Bund, Sluice and weir repair work have been completed. Anicut is newly consturcted.	
II	**Panruti Section**					
6	Elumedu	117.41	MLA	10.00	Lining of field channel have been completed	
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7	Sirugramam	191.5	Part Scheme II	28.00	Bund work have been completed Field channel newly consturcted.	
8	Elanthambattu	156.29	NABARD	24.48	Bund work have been completed Field channel newly consturcted.	
9	Manapakkam	57.51	NABARD	18.46	Bund work have been completed Field channel newly consturcted.	
10	Thiruvamur	30.6	MLA	10.00	-	
11	Semmedu	49.56	MLA	10.00	Weir repair work have been completed	
III	**Cuddalore Section**					
12	Vilangalpattu Tank	78.9	MLA	10.00	Field channel newly consturcted.	
13	Eidanur Tank	135.22	Part Scheme II	20.00	Bund,Repair work Have been completted Field channel newly	

1.5.5 ABSTRACT ON THE DETAILS OF IRRIGATION INFRASTRUCTURE AVAILABLE AND WORKS TAKEUP UNDER IAMWARM PROJECT

NAME OF SUB BASIN : GADILAM													
Sl. No	DETAILS	ANICUT			SYSTEM TANK			NON SYSTEM TANK			ANY OTHER SUPPLY CHANNEL		REMARKS
		NOS	SUPPLY CHANNEL IN	DIRECT AYACUT	NOS	SUPPLY CHANNEL	DIRECT AYACUT	NOS	SUPPLY CHANNEL IN	AYACUT	LENGTH	DIRECT AYACU	
1	Available Infrastructure in Sub basin	14	52.10	1684.20	-	-	-	91	211.15	7672.75			
2	Infrastructure excluded in iamwarm project since works carried out	-	-	-	-	-	-	13	38.5	1413.61	-	-	
3	Infrastructures that does not require any rehabilitation works	1	-	-	-	-	-	-	-	-	-	-	
4	works taken up in iamwarm project.	-	-	-	-	-	-	-	-	-	-	-	
	a) Works taken up under other schemes but also taken up in IAMWARM Project	-	-	-	-	-	-	8	37.90	816.99	-	-	
	b) Works proposed in IAMWARM Project alone	13	52.10	1684.20	-	-	-	78	172.65	6855.76			

Total length of supply channels 263.25 km

1 Certified that the Panchayat Union Tanks are not considered in this project.

2 Certified that the executed under various scheme (Viz. WRCP I, NABARD, PART II Schemes etc.,) since 2000 were not proposed in this project.

DETAILS OF WORKS COMPLETED IN TANKS UNDER OTHER SCHEMES - PROPOSED UNDER IAMWARM

Sl. No	Name of Tank	Components executed under other schemes	Components proposed under IAMWARM
1	Sirugramam	a) Standardisation of Tank Bund completed	a) Reconstruction of Sluice - 2 Nos. b) Repairs to Weir - 1 No. c) Desilting of Supply Channel - 1500 m
2	Elanthampattu	a) Standardisation of Tank Bund completed	a) Reconstruction of Sluice - 1 Nos. b) Repairs to Sluice -1 No. c) Desilting of Supply Channel - 1200 m
3	Thiruvamur	- - -	a) Reconstruction of Sluice - 2 Nos. b) Reconstruction of Weir - 1 No. c) Desilting of Supply Channel - 2000 m
4	Semmedu	a) Repairs to Weir completed - -	a) Reconstruction of Sluice - 1 Nos. b) Standardisation of bund proposed
5	Manapakkam	a) Standardisation of Tank Bund completed	a) Reconstruction of Sluice - 2 Nos.

		-	b) Weir Repair - 1 No.
		-	c) Desilting of Supply Channel - 2200 m
6	Elumedu	a) Lining of field channels completed	a) Reconstruction of Sluice - 4 Nos.
			b) Repairs to weir - 1 No.
			c) Desilting of Supply Channel - 2200 m
			d) Standardisation of bund proposed
7	Eidanur	a) Standardisation of Tank Bund completed	a) Repair to Sluice 2 Nos.
		b) Desilting of Supply channel completed	
8	Villangalpattu	a) Field channel lining work completed	a) Standardisation of Bund proposed
			b) Reconstruction of Sluice - 1 Nos.
			c) Repairs to weir - 1 No.
			d) Desilting of supply channel

1.6 REHABILITATION OF IRRIGATION INFRASTRUCTURE

1.6 REHABILITAION OF IRRIGATION INFRASTRUCTURE OF THE GADILAM SUB BASIN

1.6.1 Structural Status & Deficiencies in the system.

The following are the present structural condition of the Gadilam Sub Basin system.

1. This system is a old system existing for more than 100 years as such requires Rehabilitation of tanks and its supply channels.
2. The tanks and its supply channels are heavily silted up which require strengthening of tank bund and improvements to supply channels.
3. The damaged (or) dilapidated condition of the sluices, weirs of tanks and head sluices of supply channels need repairs.
4. The damaged condition of the Anicuts and its supply channels which requires rehabilitation works.

In order to improve the conveyance and operational efficiency in irrigation. It is now proposed to improve and modernize the irrigation Infrastructures in Gadilam sub basin.

1. Repairs are proposed in this estimate for 13 Nos. of Anicuts.
2. Strengthening of tank bund by earthwork excavation using machineries.
3. Desilting the supply channels by earthwork excavation using machineries.
4. Providing Bed bars to maintain the bed level and inner slopes of the supply channels
5. Repairing Restoring the traditional water bodies (i.e. tanks)
   a. Restoring the capacity of the tanks, supply channels by desilting
   b. Strengthening the tank bund with free board of 1.50m with consolidation by power roller for effective storing the water and conveying it to the entire command area and also for conveying agriculture inputs to the field.
   c. Reconstruction of Collapsed weirs.
   d. Repairs to the damaged weirs
   e. Reconstruction of collapsed sluices
   f. Repairs to the damaged sluices.
   g. Providing Model Sections and retaining walls in selective area of the tanks.
   h. Providing S.G shutter / plug arrangements to sluices, Head sluices, scour vents etc.,
   i. Fixed boundary stones in the tanks to prevent encroachment.
   j. Removing, Repairing and refixing in position of the existing S.G. shuttering arrangements and providing locking arrangements etc.,
   k. Provisions has been made for turfing in the rear side slope of the entire tank bund

l. Provision of lining in the field channels for the length of 50 m immediately downstream of irrigation sluices has been made.

Desilting the Supply Channel :-

There are 91 tanks situated within Gadilam sub basin catchment area a Lesser quantum of water flows to the tanks and balance water is over flanked and flows into agricultural lands.

1.6.2 Outcome of the Project.

1. Enhancing in conveyance efficiency from **53% to 56%**
2. The present Gap area of 1400.02**. ha**, is covered as fully irrigated area
3. The irrigation infrastructure development works proposed in the sub basin are as detailed below:

a) Rehabilitation works for tanks under IAMWARM alone – 78 Tanks
b) Rehabilitation works for tanks taken under other schemes but also taken up under IAMWARM - 8 Tanks
c) Rehabilitation works for supply channels taken up under IAMWARM - 262.65 Kms.
d) Rehabilitation works for anicuts taken up under IAMWARM - 13 No.

6.1.4. Anicut Components:

There are 14 Anicuts situated across Gadilam River in Gadilam Sub Basin. 11 Anicuts are situated in Villupuram District for which only minor repairs and skin wall protection are proposed under the IAMWARM Project.

Three Anicuts are situated in Cuddalore District in Gadilam River namely,

1. Thiruvathigai Anicut
2. Vanamadevi Anicut
3. Thiruvanthipuram Anicut

and rehabilitation of these three anicuts are proposed.

1. Thiruvathigai Anicut.

Thiruvathigai Anicut is situated in Panruti Taluk of Cuddalore District which feeds an ayacut (Direct) of 1191.88 Ha. The anicut has to be rehabilitated as the anicut is not having any apron and cutoff wall on the U/S anicut and the D/S apron is badly damaged. Hence the anicut was designed to discharge 49,000 cusecs considering the existing section of the anicut and it is proposed to provide the following

a) Construction of additional scour vent
b) Construction of U/S cutoff wall and apron
c) Extending the D/S apron with necessary cutoff wall as per design
d) Construction of launching apron.

The cost of rehabilitation of Thiruvathigai Anicut is Rs. 328.33 Lakhs under Package VIII

2. Vanamadevi Anicut.

The following works are proposed for rehabilitation of Vanamadevi Anicut costing Rs.57.29 Lakhs under Package IX

a) Formation of left side Flood bank on U/S side
b) Formation of Right side flood bank on D/S side
c) Construction of retaining wall at the entry point of supply channel
d) Protecting the D/S apron by providing Talus.

3. Thriuvanthipuram Anicut:

The Thiruvanthipuram Anicut is the tail end anicut of Gadilam River and is situated 4km U/S of Confluence point with sea. The anicut proposed to rehabilitate with necessary U/S cutoff wall, D/S cutoff wall and aprons as per the design to prevent sea water intrusion and also to protect the anicut from further damages due to floods. The cost of rehabilitation of Thiruvanthipuram Anicut is Rs. 235.00 Lakhs under Package VII.

1.6.2. TANK DETAILS WITH FREE BOARD PROVIDED

Sl.No.	Name of the Tank		Maximum Height of Bund	Free Board		Length of Bund
				Provided Previously	Provided now	
I	**Sangarapuram Section**					
1	Yal		3.50	1.00	1.50	1050
2	Melapangur		4.20	1.02	1.50	1200
3	Peral		4.00	1.05	1.50	1175
4	Sathaputtur		3.80	0.98	1.50	1200
5	Pavandur		4.84	1.05	1.50	1300
6	Pasar		5.10	1.10	1.50	1500
7	Rishivanthiyam		5.20	1.20	1.50	1600
8	Vengalam		4.80	1.10	1.50	1150
9	Munivzhai		3.90	0.95	1.50	1200
10	Kunniyur		3.80	0.98	1.50	1000
11	Thimmalai		4.20	1.02	1.50	1320
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II	**Ulundurpet Section**					
12	Kattu edaiyur		4.70	1.00	1.50	1390
13	Alur		4.29	1.05	1.50	1630
14	Memalur		3.10	0.90	1.50	1760
15	Mohalar		5.50	1.10	1.50	900
16	Arunkurukkai		3.40	0.90	1.50	1620
17	Dhamal		3.70	0.95	1.50	1600
18	M. Kunnathur		5.10	1.20	1.50	1200
19	Kiliyur		4.80	1.10	1.50	1250
20	Nathamoor		5.10	1.10	1.50	1250
21	Periyakurukkai		3.80	0.95	1.50	1150
22	Puthananthal		3.10	0.92	1.50	1510
23	Athur		4.87	1.10	1.50	675

24	Pachapalayam		4.88	1.05	1.50	2000
25	Adanur		3.93	1.00	1.50	1800
26	Neivanai		4.63	1.05	1.50	1290
27	Koovadu		5.04	1.20	1.50	1240
28	Pa. killanur		5.16	1.20	1.50	2700
29	Orathur	1.8	4.08	0.95	1.50	2400
30	Kalamaruthur	2.4	3.98	0.95	1.50	2700
31	Pandur		4.60	1.05	1.50	3000
32	Arali	2.4	5.40	1.10	1.50	955
33	U. Sellur	2.4	4.23	1.00	1.50	2300
34	Semmanagur	2.4	16.45	1.00	1.50	1242
35	U. Keeranur	2.1	3.98	0.98	1.50	1180
36	Ulundur	1.8	4.49	1.00	1.50	1209
37	Nagar	2.1	5.36	1.15	1.50	1492
38	Mathiyanur	1.5	5.13	1.15	1.50	1370

39	Koo. Kallakurichi	2.7	5.63	1.20	1.50	1325
40	Mattigai	2.4	5.03	1.02	1.50	1600
41	Senthanadu	1.5	5.1	1.05	1.50	1060
42	Kalattur	3	5.00	1.05	1.50	2600
43	Sengurichi	8	3.80	0.95	1.50	1300
44	Pu. Konanalavadi	2.7	4.39	0.98	1.50	1140
45	Sirupakkam	2.4	4.36	0.98	1.50	630
46	A Puthur	3	4.31	0.95	1.50	700
47	Kunjaram		4.84	0.98	1.50	1295
48	Eraiyur	1.8	4.80	1.00	1.50	1250
49	Adhaiyur	3	4.90	1.05	1.50	1230

50	Sikkadu	2.1	4.73	1.00	1.50	960
51	Sempiyamadevi	2.4	5.30	1.20	1.50	582
52	Veeramangalam	2.4	4.84	1.05	1.50	1010
53	Pinnalavadi	2.4	4.78	1.05	1.50	1124
54	S. Malaiyanur	2.4	5.21	1.15	1.50	2298
55	Vadukurmbur	2	4.37	1.00	1.50	1750
56	Salapakkam	3	6.60	1.30	1.50	920
57	Alangiri	2.4	5.43	1.15	1.50	870
58	Kattusellur	1.8	4.26	1.10	1.50	1380
59	Emam	2.1	4.48	1.10	1.50	1060
III	**Panruti Section**					
60	Natham		2.90	0.80	1.25	2700
61	Semakotti		2.96	0.85	1.25	1500
62	Manamthavizhnthaputhur		2.92	0.80	1.25	1500
63	L.N. Puram		2.47	0.90	1.25	1700
64	Poongunam		2.28	0.90	1.25	1550
65	P.N.Palayam		2.68	0.85	1.25	1700
66	Veeraprumanallur		2.68	0.90	1.25	1600
67	Sirugramam		2.95	0.90	1.25	1900
68	Siruvathur		3.78	1.00	1.50	2800

69	Manapakkam		2.85	0.88	1.25	1250
70	Semmedu		2.82	0.85	1.25	600
71	Vizur zamberi		2.82	0.90	1.25	1500
72	Thiruvamur		3.10	0.90	1.50	750
73	Chetipattadai		2.88	0.85	1.25	3834
74	Pandarakotti		2.71	0.85	1.25	1600
75	Elumedu		2.38	0.85	1.25	2100
76	C N Palayam		1.92	0.75	1.25	1200
	Cuddalore Section					
77	Elanthampattu		2.90	0.80	1.25	2100
78	Ramapuram Devan Eri		3.05	0.90	1.50	600
79	Vilangalpattu Tnk		3.19	0.88	1.50	775
80	Naduveerapatu Tank		2.89	0.90	1.25	720
81	Thottapattu Tank		3.35	0.88	1.50	1500
82	Varakalpattu tank		3.39	0.85	1.50	1400
83	Gunamangalam Tank		3.40	0.95	1.50	800
84	Eaidanur		3.05	0.95	1.50	1600
85	Vali Odai Tank		3.35	0.90	1.50	600
86	Naduveerapatu old Tank		3.15	0.90	1.50	720

1) For
2) For

1.6.3.WRO COST TABLE

NAME OF THE SUB BASIN: GADILAM

Sl. No	Description of work	Length in 'M'	Quantity	Amount in Lakhs	Remarks
1. Tank Component					
1	Standardisation of tank Bund	**113163 Rm**	**1000290 M^3**	**590.73**	
2	Desilting of Supply Channel	**206750 Rm**	**743184 M^3**	**174.87**	
3	Repairs to Sluice		**4 Nos.**	**8.01**	
4	Reconstruction of Sluice		**144 Nos.**	**393.50**	
5	Repairs to Weir		**41 Nos.**	**158.87**	
6	Reconstruction of Weir		**34 Nos.**	**222.22**	
7	Providing New Shutter		**148 Nos.**	**40.47**	
8	Providing Measuring Device		**178 Nos.**	**18.01**	
9	Providing Bed Bar		**477 Nos.**	**7.09**	
10	Providing Lining to field channel	**8600 Rm**	**172 Nos.**	**165.76**	
	(50 m length D/s)				
	Sub Total			**1779.53**	
1. Non Tank Component					
1	Improvements to Flood Bank	**3120 Rm**	**120841M^3**	**70**	
2	Anicut Repairs		**8 Nos**	**747.95**	
3	Retaining Wall	**372 Rm**		**26.28**	
4	Desilting of Supply Channel	**55900 Rm**	**349824 M^3**	**83.95**	
5	Providing Bed Bar		**280 Nos.**	**4.24**	
6	Construction of Culvert		**1 Nos.**	**3.94**	
7	Providing New Shutter		**2 Nos.**	**1.12**	
8	Providing Measuring Device		**14 Nos.**	**1.40**	
	Sub Total			**938.65**	
	Environment cell			**16.70**	
	Ground water			**Nil**	
	Total			**955.35**	

1). Tank component	**=**	**1779.53**	
2). Non tank component	**=**	**938.65**	
3) Environment cell	**=**	**16.70**	
Grand Total		**2734.88**	

GADILAM SUB BASIN

COMPONENTWISE ABSTRACT

PACKAGE 1 to 9

Sl. No.	Package	Tank Bund		Improvements to Sluice				Shutter for Sluice		Improvements to weir				Shutter for Weir		Supply Channel				Bed Bar		Measuring Device		Lining Channel		Anicut		CULVERT	LS	Total Amount in Lakhs
		Proposed Length	Amount in Lakhs	No. of sluices to be reconstructed	Amount in Lakhs	No. of sluices to be repaired	Amount in Lakhs	Nos.	Amount in Lakhs	No. of weirs to be reconstructed	Amount in Lakhs	No, of weirs to be repaired	Amount in Lakhs	Nos.	Amount in Lakhs	Length to be desilted	Amount in Lakhs	Length of proposed retaining wall(m)	Amount in Lakhs	Nos.	Amount in lakhs	Nos.	Amount in Lakhs	Nos.	Amount in Lakhs	Nos.	Amount in Lakhs			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	I		175.70	40	120.31	-	-	40	8.00	19	68.24	5	12.68	-	-	55150	25.69	-	-	136	2.08	56	6.85	56.00	55.58	5	62.73	3.94		541.80
2	II	30664	158.86	35	77.84	-	-	35	7.00	1	9.07	13	50.00	-	-	45400	21.91	-	-	110	1.43	39	3.47	39.00	38.42	4	131.05			499.05
3	III	14837	82.63	17	45.00	-	-	17	3.40	-	-	10	37.60	-	-	23500	11.80	-	-	61	0.81	25	1.79	19.00	18.46	1	3.32			204.81
4	IV	8650	40.49	15	39.43	1	2.91	16	6.31	5	29.16	3	22.64	-	-	17400	10.62	-	-	41	0.59	19	1.90	19.00	14.15	-	-			168.20
5	V	9150	52.45	10	27.59	3	5.10	13	5.13	3	42.87	4	18.31	-	-	21000	27.15	-	-	35	0.56	13	1.30	12.00	12.00	-	-			192.46
6	VI	8400	46.08	14	49.59	-	-	14	5.52	5	63.29	-	-	-	-	31100	68.74	-	-	56	1.06	14	1.40	14.00	14.14	-	-			249.82
7	VII	7115	34.52	13	33.74	-		13	5.11	1	9.59	6	17.64	-	-	13200	8.96	-	-	38	0.56	13	1.30	13.00	13.03	1	235.00			359.45
		Page No. 150-1																												

8	VIII	-	-	-	-	-	-	2	1.12	-	-	-	-	-	-	29800	44.43	105	10.13	149	2.55	7	0.70			1	328.32			387.25
9	IX	-	-	-	-	-	-	-		-	-	-	-	-	-	26100	39.52	267	16.15	131	1.69	7	0.70			1	57.28			115.34
	Total		**590.73**	**144**	**393.50**	**4**	**8.01**	**150**	**41.59**	**34**	**222.22**	**41**	**158.87**			**262650**	**258.82**	**372**	**26.28**	**757**	**11.33**	**193**	**19.41**			**13**	**817.7**			**2718.18**
																										Envi ron			16.70
																				Gra nd								**2734.88**

GADILAM SUB BASIN

COMPONENTWISE ABSTRACT **PACKAGE NO I**

Sl. No.	Name of Tank	Tank Bund			Sluice					Shutter for Sluice		Weir					Shutter for Weir		Supply Channel				Bed Bar/ Culvert		Measuring Device		Lining Channel		Anicut		Total Amount in Lakhs
		Total Length	Proposed Length	Amount in Lakhs	Total No. of Sluices	No. of sluices to be reconstructed	Amount in Lakhs	No. of sluices to be repaired	Amount in Lakhs	Nos.	Amount in Lakhs	Total No. of weir	No. of weirs to be reconstructed	Amount in Lakhs	No, of weirs to be repaired	Amount in Lakhs	Nos.	Amount in Lakhs	Length to be desilted	Amount in Lakhs	Length of proposed retaining wall	Amount in Lakhs	Nos.	Amount in lakhs	Nos.	Amount in Lakhs	No of Sluices	Amount in Lakhs	Nos.	Amount in Lakhs	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	Yal Tank	1540	1540	7.20	2	2	7.43	-	-	2	0.40	1	1	1.39	-	-	-	-	2900	1.32	-	-					2	-	-	-	17.74
2	Melpangur	1150	1150	5.57	2	1	4.35	-	-	1	0.20	-	-	-	1	5.47	-	-	500	0.29	-	-					2		-	-	15.88
3	Peral	1360	1360	8.34	1	1	6.58	-	-	1	0.20	-	-	-	-	-	-	-	2900	0.77	-	-	Culvert 3.94				1		-	-	19.82
4	Sathaputhur Tank	1000	1000	5.30	2	1	3.34	-	-	1	0.20	1	1	1.99	-	-	-	-	2000	0.76	-	-					2		-	-	11.59
5	Pavandur Tank	1120	1120	5.76	2	1	4.32	-	-	1	0.20	1	1	1.22	-	-	-	-	2000	1.18	-	-					2		-	-	12.68
6	Pasar Tank	1000	1000	5.26	2	1	6.58	-	-	1	0.20	-	-	-	1	1.81	-	-	2000	0.48	-	-					2		-	-	14.33
7	Rishivandiyam Tank	1220	1220	6.23	2	2	8.85	-	-	2	0.40	-	-	-	1	1.81	-	-	3050	0.39	-	-					2		-	-	17.68
8	Vengalam Tank	1000	1000	4.89	2	1	6.58	-	-	1	0.20	-	-	-	1	1.73	-	-	2000	0.48	-	-					2		-	-	13.88
9	Munivazhai	1000	1000	4.89	2	1	4.32	-	-	1	0.20	-	-	-	1	1.86	-	-	2300	0.59	-	-					2		-	-	11.86

10	Kunniyur Tank	850	850	4.58	2	1	3.37	-	-	1	0.20	1	1	1.02	-	-	-	-	1700	2.43	-	-					2		-	-	11.60
11	Thimmalai Tank	1450	1450	1.82	1	-	3.37	-	-	1	0.20	1			-	-	-	-	1500	1.21	-	-					1		-	-	6.60
12	Kattu Edaiyar	1390	1390	6.57	4	3	7.69	-	-	3	0.60	1	1	18.72	-	-	-	-	2700	1.17	-	-					4		1	10.79	45.54
13	memalur	1760	1760	8.05	2	2	4.36	-	-	2	0.40	1	1	1.76	-	-	-	-	4000	1.52	-	-					2		1	33.38	49.47
14	Kattusellur	1380	1380	6.45	2	1	2.35	-	-	1	0.20	1	1	5.56	-	-	-	-	2000	1.17	-	-					2		-	-	15.73
15	Alur	1630	1630	7.49	3	2	4.04	-	-	2	0.40	1	1	1.79	-	-	-	-	2000	0.97	-	-					3		1	5.83	20.52
16	Periyakurukkai	1150	1150	5.56	2	2	4.35	-	-	2	0.40	1	1	0.76	-	-	-	-	2000	0.97	-	-					2		-	-	12.04
17	Mohalar	900	900	4.52	2	2	4.40	-	-	2	0.40	1	1	4.69	-	-	-	-	1500	0.78	-	-					2		1	9.53	24.32
18	Sikkadu	960	960	7.00	2	1	2.46	-	-	1	0.20	1	1	0.39	-	-	-	-	2000	0.95	-	-					2		-	-	11.00

19	Adaiyur	1230	1230	8.81	2	1	2.55	-	-	1	0.20	1	1	0.90	-	-	-	-	2000	0.94	-	-					2		-	-	13.40
20	Kunjaram	1295	1295	6.12	3	3	7.34	-	-	3	0.60	1	1	10.04	-	-	-	-	2000	0.97	-	-					3		-	-	25.07
21	Eraiyur	1250	1250	6.00	2	1	2.40	-	-	1	0.20	1	1	1.77	-	-	-	-	2000	0.97	-	-					2		-	-	11.34
22	Veeramangalam	1010	1010	4.47	1	-	-	-	-	-		1	1	5.53	-	-	-	-	1500	0.82	-	-					1		-	-	10.82
23	Vadakurumbur	1750	1750	12.18	2	2	4.63	-	-	2	0.40	1	1	5.82	-	-	-	-	1500	1.09	-	-					2		-	-	24.12
24	S. Malaiyanur	2298	2298	10.22	2	2	3.91	-	-	2	0.40	1	1	1.91	-	-	-	-	1100	0.78	-	-					2		1	3.20	20.42
25	Koovadu	1240	1240	8.53	3	3	4.00	-	-	2	0.40	1	1	1.21	-	-	-	-	2000	0.97	-	-					3			-	15.11
26	Neivainai	1290	1290	5.71	2	2	4.42	-	-	2	0.40	1	1	1.77	-	-	-	-	2000	0.78	-	-					2		-	-	13.08

27	Pinnalvadi	1124	1124	8.18	2	1	2.32	-	-	1	0.20	-	-	-	-	-	-	-	2000	0.95	-	-					2		-	-	11.65
	Measuring device.															-							136	2.08	56	6.85					8.93
	Total	**34347.00**	**34347.00**	**175.70**	**56**	**40.00**	**120.31**			**40.00**	**8.00**	**20**	**19**	**68.24**		**12.68**			**55150.00**	**25.69**		**3.94**	**136**	**2.08**	**55**	**6.85**	**56**	**55.58**	**5**	**62.73**	**541.80**

Gr an **541.80**

GADILAM SUB BASIN

COMPONENTWISE ABSTRACT **PACKAGE NO II**

Sl. No.	Name of Tank	Tank Bund			Sluice					Shutter for Sluice		Weir					Shutter for Weir		Supply Channel				Bed Bar		Measuring Device		Lining Channel		Anicut		Total Amount in Lakhs
		Total Length	Proposed Length	Amount in Lakhs	Total No. of Sluices	No. of sluices to be reconstructed	Amount in Lakhs	No. of sluices to be repaired	Amount in Lakhs	Nos.	Amount in Lakhs	Total No. of weir	No. of weirs to be reconstructed	Amount in Lakhs	No, of weirs to be repaired	Amount in Lakhs	Nos.	Amount in Lakhs	Length to be desilted	Amount in Lakhs	Length of proposed retaining wall	Amount in Lakhs	Nos.	Amount in lakhs	Nos.	Amount in Lakhs	No of Sluices	Amount in Lakhs	Nos.	Amount in Lakhs	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	Aurnkurukkai	1620	1620	7.47	2	2	3.54	-	-	2	0.40	1	-	-	1	5.54	-	-	2000	1.47	-	-					2	-	1	22.34	40.76
2	Damal	1600	1600	7.50	1	1	2.26	-	-	1	0.20	2	-	-	1	7.02	-	-	3000	1.85	-	-					1		1	8.60	27.43
3	Kiliyur	1250	1250	6.02	3	3	6.84	-	-	3	0.60	1	-	-	1	4.35	-	-	1500	0.98	-	-					3		-	-	18.79
4	M. Kunnathur	1200	1200	5.80	2	1	2.61	-	-	1	0.20	1	-	-	1	5.94	-	-	2000	1.07	-	-					2		-	-	15.62
5	Puthanandal	1510	1510	7.12	2	2	4.35	-	-	2	0.40	1	-	-	1	2.97	-	-	2000	0.88	-	-					2		1	5.10	20.82
6	Nathamur	1250	1250	6.02	2	2	4.23	-	-	2	0.40	1	-	-	1	4.48	-	-	2000	0.98	-	-					2		-	-	16.11
7	Athur	675	675	3.61	1	1	2.27	-	-	1	0.20	1	-	-	1	4.41	-	-	3600	0.98	-	-					1		-	-	11.47

8	Adanur	1800	1800	8.31	2	2	4.41	-	-	2	0.40	3	-	-	1	0.83	-	-	2000	0.99	-	-					2		-	-	14.94
9	Kalamarudur	2700	2700	6.08	4	2	5.17	-	-	2	0.40	1	-	-	1	2.41	-	-	3600	1.76	-	-					4		-	-	15.82
10	Orathur	2500	2500	16.68	2	2	5.36	-	-	2	0.40	1	-	-	-	-	-	-	5000	2.34	-	-					2		-	-	24.78
11	Pa. Killanur	2700	2700	12.22	4	3	7.00	-	-	3	0.60	2	-	-	-	-	-	-	2000	0.89	-	-					4		-	-	20.71
12	Pachapalayam	2000	2000	8.97	2	2	4.08	-	-	2	0.40	1	1	9.07	-	-	-	-	2700	1.13	-	-					2		1	95.02	118.67
13	U. Sellur	2300	2300	10.22	2	2	4.41	-	-	2	0.40	1	-	-	1	9.94	-	-	1500	0.68	-	-					2		-	-	25.65
14	Pandur	1200	1200	20.64	2	2	4.85	-	-	2	0.40	2	-	-	-	-	-	-	3000	1.36	-	-					2		-	-	27.25
15	Arali	955	955	6.85	2	2	4.79	-	-	2	0.40	2	-	-	-	-	-	-	2000	0.98	-	-					2		-	-	13.02
16	Sennangur	1242	1242	5.88	2	2	2.68	-	-	2	0.40	1	-	-	1	0.73	-	-	1500	0.74	-	-					2		-	-	10.43

17	Nagar	1492	1492	6.90	1	1	2.62	-	-	1	0.20	1	-	-	1	0.68	-	-	1000	0.50	-	-					1		-	-	10.90
18	Sengurichi	1300	1300	6.11	1	1	2.22	-	-	1	0.20	1	-	-	-	-	-	-	2000	0.96	-	-					1		-	-	9.49
19	Mathiyanur	1370	1370	6.46	2	2	4.15	-	-	2	0.40	2	-	-	1	0.70	-	-	3000	1.37	5	-					2		-	-	13.08
	Measuring device.																						110	1.43	39	3.47	-				4.90
	Total	**30664**	**30664**	**158.86**	**39**	**35**	**77.84**			**35**	**7.00**	**26**	**1**	**9.07**	**13.00**	**50.00**			**45400**	**21.91**			**110**	**1.43**	**39**	**3.47**	39	38.42	**4**	**131.05**	**499.05**

GADILAM SUB BASIN

COMPONENTWISE ABSTRACT **PACKAGE NO III**

Sl. No.	Name of Tank	Tank Bund			Sluice					Shutter for Sluice		Weir					Shutter for Weir		Supply Channel				Bed Bar		Measuring Device		Lining Channel		Anicut		Total Amount in Lakhs
		Total Length	Proposed Length	Amount in Lakhs	Total No. of Sluices	No. of sluices to be reconstructed	Amount in Lakhs	No. of sluices to be repaired	Amount in Lakhs	Nos.	Amount in Lakhs	Total No. of weir	No. of weirs to be reconstructed	Amount in Lakhs	No, of weirs to be repaired	Amount in Lakhs	Nos.	Amount in Lakhs	Length to be desilted	Amount in Lakhs	Length of proposed retaining wall	Amount in Lakhs	Nos.	Amount in lakhs	Nos.	Amount in Lakhs	No of Sluices	Amount in Lakhs	Nos.	Amount in Lakhs	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	26	27	28
1	Koo. Kallakurichi	1325	1325	5.16	2	2	4.83	-	-	2	0.40	1	-	-	1	14.47	-	-	2000	0.79	-	-					2	-	-	-	25.65
2	Mattigai	1600	1600	12.01	2	2	4.87	-	-	2	0.40	2	-	-	1	1.61	-	-	2000	0.75	-	-					2		-	-	19.64
3	Sendanadu	1060	1060	5.58	1	1	2.35	-	-	1	0.20	1	-	-	1	3.89	-	-	2000	0.87	-	-					1		-	-	12.89
4	T. Kalathur	2600	2600	12.71	3	2	5.23	-	-	2	0.40	1	-	-	1	1.31	-	-	1500	0.78	-	-					3		1	3.32	23.75
5	Emam	1060	1060	5.58	1	1	2.81	-	-	1	0.20	3	-	-	1	4.91	-	-	2000	1.17	-	-					1		-	-	14.67
6	Pu. Konalavadi	1140	1140	8.38	2	1	2.92	-	-	1	0.20	1	-	-	1	0.81	-	-	2000	0.98	-	-					2		-	-	13.29
7	U. Keeranur	1150	1150	5.92	2	2	6.45	-	-	2	0.40	1	-	-	1	4.51	-	-	1500	0.79	-	-					2		-	-	18.07

8	Ulundur	1200	1200	6.16	1	1	2.89	-	-	1	0.20	1	-	-	-	-	-	-	2000	0.97	-	-					1		-	-	10.22
9	Sirupakkam	630	630	3.38	1	1	2.52	-	-	1	0.20	1	-	-	1	1.27	-	-	2000	0.98	-	-					1		-	-	8.35
10	Sembiyanmadevi	582	582	3.25	1	1	2.52	-	-	1	0.20	1	-	-	-	-	-	-	1500	0.78	-	-					1		-	-	6.75
11	Alangiri	870	870	4.72	1	1	2.52	-	-	1	0.20	1	-	-	1	0.18	-	-	2000	0.99	-	-					1		-	-	8.61
12	Salappakkam	920	920	4.62	1	1	2.52	-	-	1	0.20	1	-	-	1	4.64	-	-	1500	0.98	-	-					1		-	-	12.96
13	A. Puthur	700	700	5.16	1	1	2.57	-	-	1	0.20	1	-	-	-	-	-	-	1500	0.97	-	-					1		-	-	8.90
	Measuring device.																						61	0.81	25	1.79					2.60
	Total	**14837**	**14837**	**82.63**	**19**	**17**	**45.00**			**17**	3.40	**16**			**10**	**37.60**			**23500**	**11.80**			**61**	**0.81**	**25**	**1.79**	**19**	18.46	**1**	3.32	**204.81**

GADILAM SUB BASIN

COMPONENTWISE ABSTRACT **PACKAGE NO IV**

Sl. No.	Name of Tank	Tank Bund			Sluice					Shutter for Sluice		Weir					Shutter for Weir		Supply Channel				Bed Bar		Lining Channel		Measuring Device		Total Amount in Lakhs
		Total Length	Proposed Length	Amount in Lakhs	Total No. of Sluices	No. of sluices to be reconstructed	Amount in Lakhs	No. of sluices to be repaired	Amount in Lakhs	Nos.	Amount in Lakhs	Total No. of weir	No. of weirs to be reconstructed	Amount in Lakhs	No, of weirs to be repa	Amount in Lakhs	Nos.	Amount in Lakhs	Length to be desilted	Amount in Lakhs	Length of proposed retaining wall	Amount in Lakhs	Nos.	Amount in lakhs	No of Sluices	Amount in Lakhs	Nos.	Amount in Lakhs	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	Manamthavizinthaputhur tank	1500	1500	6.95	2	2	6.41	-	-	2	0.79	1	1	5.96	-	-	-	-	4700	2.66	-	-	10	0.14	2	1.99	2	0.20	25.10
2	Natham tank	2700	2700	12.52	3	3	8.83	-	-	3	1.18	2	2	12.48	-	-	-	-	4000	2.28	-	-	9	0.12	3	3.05	3	0.30	40.76
3	Sirugrammam tank	-	-	-	4	2	3.47	-	-	2	0.79	1	-	-	1	12.32	-	-	1500	1.19	-	-	4	0.07	4	2.00	4	0.40	20.24
4	Veeraperumanallur tank	1600	1600	7.43	3	3	8.48	-	-	3	1.18	2	-	-	1	7.96	-	-	4000	2.28	-	-	9	0.12	3	3.01	3	0.30	30.76
5	Thiruvamur tank	750	750	3.55	2	2	4.16	-	-	2	0.79	-	1	5.96	-	-	-	-	2000	1.13	-	-	5	0.07	2	2.03	2	0.20	17.89

6	Elanthampattu tank	-	-	-	3	1	3.82	1	2.91	2	0.79	-	-	-	-	-	-	-	1200	1.08	-	-	4	0.07	3	-	3	0.30	8.97
7	Semmedu tank	600	600	2.90	1	1	2.39	-	-	1	0.40	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1.04	1	0.10	6.83
8	Vizur Zemberi tank	1500	1500	7.14	1	1	1.87	-	-	1	0.39	2	1	4.76	1	2.36	-	-	-	-	-	-	-	-	1	1.03	1	0.10	17.65
	Total	**8650**	**8650**	**40.49**	**19**	**15**	**39.43**	**1**	**2.91**	**16**	**6.31**	**8**	**5**	**29.16**	**3**	**22.64**			**17400**	**10.62**			**41**	**0.59**	**19**	14.15	**19**	**1.90**	**168.20**

GADILAM SUB BASIN

COMPONENTWISE ABSTRACT — PACKAGE NO V

Sl. No.	Name of Tank	Tank Bund			Sluice					Shutter for Sluice		Weir					Shutter for Weir		Supply Channel				Bed Bar		Measuring Device		Lining Channel		Total Amount in Lakhs
		Total Length	Proposed Length	Amount in Lakhs	Total No. of Sluices	No. of sluices to be reconstructed	Amount in Lakhs	No. of sluices to be repaired	Amount in Lakhs	Nos.	Amount in Lakhs	Total No. of weir	No. of weirs to be reco	Amount in Lakhs	No, of weirs to be repa	Amount in Lakhs	Nos.	Amount in Lakhs	Length to be desilted	Amount in Lakhs	Length of proposed retaining wall	Amount in Lakhs	Nos.	Amount in lakhs	Nos.	Amount in Lakhs	No of Sluices	Amount in Lakhs	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	Semakkottai	1500	1500	6.93	2	1	2.39	1	2.98	2	0.79	1	-	-	1	4.52	-	-	3000	1.70	-	-	7	0.10	2	0.20	2	2.00	19.61
2	Manapakkam	-	-	-	2	2	4.67	-	-	2	0.79	1	-	-	1	4.09	-	-	2200	2.34	-	-	6	0.10	2	0.20	1	1.00	12.19
3	Siruvathur	2800	2800	18.28	5	2	4.16	2	2.12	4	1.58	1	1	17.06			-	-	4500	4.83	-	-	10	0.17	4	0.40	4	4.00	48.60
4	Pandarakkottai	1600	1600	7.37	3	2	4.15	-	-	2	0.79	2	-	-	2	9.70	-	-	-	-	-	-	-	-	2	0.20	2	2.00	22.21
5	LN. Puram	1700	1700	10.93	1	1	4.54	-	-	1	0.39	1	1	12.84	-	-	-	-	7700	13.00	-	-	4	0.07	1	0.10	1	1.00	41.87
6	Poongunam	1550	1550	8.94	2	2	7.68	-	-	2	0.79	1	1	12.97	-	-	-	-	3600	5.28	-	-	8	0.12	2	0.20	2	2.00	35.98
	Total	**9150**	**9150**	**52.45**	**15**	**10**	**27.59**	**3**	**5.1**	**13**	**5.13**	**7**	**3**	**42.87**	**4**	**18.31**			**21000**	**27.15**			**35**	**0.56**	**13**	**1.30**	**12**	12.00	**192.46**

GADILAM SUB BASIN

COMPONENTWISE ABSTRACT — PACKAGE NO VI

Sl. No.	Name of Tank	Tank Bund			Sluice					Shutter for Sluice		Weir					Shutter for Weir		Supply Channel				Bed Bar		Measuring Device		Lining Channel		Total Amount in Lakhs
		Total Length	Proposed Length	Amount in Lakhs	Total No. of Sluices	No. of sluices to be reconstructed	Amount in Lakhs	No. of sluices to be repaired	Amount in Lakhs	Nos.	Amount in Lakhs	Total No. of weir	No. of weirs to be reconstructed	Amount in Lakhs	No, of weirs to be repaired	Amount in Lakhs	Nos.	Amount in Lakhs	Length to be desilted	Amount in Lakhs	Length of proposed retaining wall	Amount in Lakhs	Nos.	Amount in lakhs	Nos.	Amount in Lakhs	No of Sluices	Amount in Lakhs	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	Chettipattadai	3400	3400	23.08	5	5	19.62	-	-	5	1.97	2	2	32.24	-	-	-	-	22100	63.34	-	-	36	0.77	5	0.50	5	5.00	141.52
2	Elumedu	2100	2100	9.49	4	4	14.94	-	-	4	1.58	2	1	3.62	-	-			6500	3.90	-	-	14	0.19	4	0.40	4	4.05	34.12
3	PN Palayam	1700	1700	7.93	3	3	11.62	-	-	3	1.18	1	1	15.41	-	-			2500	1.50	-	-	6	0.10	3	0.30	3	3.05	38.04
4	CN Palayam	1200	1200	5.58	2	2	3.41	-	-	2	0.79	1	1	12.02	-	-	-	-	-	-	-	-	-	-	2	0.20	2	2.04	22.00
	Total	**8400**	**8400**	**46.08**	**14**	**14**	**49.59**			**14**	**5.52**	**6**	**5**	**63.29**					**31100**	**68.74**			**56**	**1.06**	**14**	**1.40**	14	14.14	**249.82**

GADILAM SUB BASIN

COMPONENTWISE ABSTRACT **PACKAGE NO VII**

Sl. No.	Name of Tank/Anicut	Tank Bund			Sluice					Shutter for Sluice		Weir					Shutter for Weir		Supply Channel				Bed Bar		Measuring Device		Lining Channel		Anicut		Total Amount in Lakhs
		Total Length	Proposed Length	Amount in Lakhs	Total No. of Sluices	No. of sluices to be reconstructed	Amount in Lakhs	No. of sluices to be repaired	Amount in Lakhs	Nos.	Amount in Lakhs	Total No. of weir	No. of weirs to be reconstructed	Amount in Lakhs	No, of weirs to be repaired	Amount in Lakhs	Nos.	Amount in Lakhs	Length to be desilted	Amount in Lakhs	Length of proposed retaining wall	Amount in Lakhs	Nos.	Amount in lakhs	Nos.	Amount in Lakhs	No of Sluices	Amount in Lakhs	Nos.	Amount in Lakhs	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
1	Thottapattu tank	1500	1500	7.68	1	1	2.61	-	-	1	0.39		-	-	1	3.23	-	-	1100	0.70	-	-	7	0.09	1	0.10	1	1.00	-	-	15.80
2	Varakkalpattu tank	1400	1400	7.03	2	2	5.93	-	-	2	0.79		-	-	1	2.28	-	-	-	-	-	-			2	0.20	2	2.01	-	-	18.24
3	Gunamangalam tank	800	800	3.58	2	2	5.81	-	-	2	0.79		-	-	1	3.15	-	-	1800	0.95	-	-	7	0.10	2	0.20	2	2.01	-	-	16.59
4	Eidanur tank	-	-	-	2	2	4.20	-	-	2	0.79		-	-	-		-	-	-	-	-	-	-		2	0.20	2	2.01	-	-	7.20
5	Valiodai tank	600	600	3.43	2	2	5.26	-	-	2	0.79		-	-	1	2.44	-	-	2000	1.54	-	-	6	0.10	2	0.20	2	1.99	-	-	15.75
6	Naduveerapattu Old Tank	720	720	3.46	1	1	2.31	-	-	1	0.39		-	-	-	-	-	-	2500	1.84	-	-	5	0.07	1	0.10	1	1.00	-	-	9.17
7	Naduveerapattu New tank	720	720	2.88	1	1	2.31	-	-	1	0.39	1	1	9.59	-	-	-	-	2300	1.32	-	-	6	0.10	1	0.10	1	1.00	-	-	17.69
8	Vilangalpattu tank	775	775	2.84	1	1	2.63	-	-	1	0.39		-	-	1	4.13	-	-	3500	2.61	-	-	7	0.10	1	0.10	1	1.00	-	-	13.80

9	Ramapuram Devan Eri	600	600	3.62	1	1	2.68	-	-	1	0.39		-	-	1	2.41	-	-	-	-	-	-	-	-	1	0.10	1	1.01	-	-	10.21
10	Thiruvanthipuram Anicut																											1	235.00	235.00
	Total	**7115**	**7115**	**34.52**	**13**	**13**	**33.74**			**13**	**5.11**	**1**	**1**	**9.59**	**6**	**17.64**			**13200**	**8.96**			**38**	**0.56**	**13**	**1.30**	**13.00**	**13.03**	**1.00**	**235.00**	**359.45**

GADILAM SUB BASIN

COMPONENTWISE ABSTRACT — PACKAGE NO VIII

Sl. No.	Name of Tank/Anicuts	Tank Bund			Sluice					Shutter for Sluice		Weir					Shutter for Weir		Supply Channel				Bed Bar		Measuring Device		Anicut		Total Amount in Lakhs
		Total Length	Proposed Length	Amount in Lakhs	Total No. of Sluices	No. of sluices to be reconstructed	Amount in Lakhs	No. of sluices to be repaired	Amount in Lakhs	Nos.	Amount in Lakhs	Total No. of weir	No. of weirs to be reconstructed	Amount in Lakhs	No, of weirs to be repa...	Amount in Lakhs	Nos.	Amount in Lakhs	Length to be desilted	Amount in Lakhs	Length of proposed retaining wall	Amount in Lakhs	Nos.	Amount in lakhs	Nos.	Amount in Lakhs	Nos.	Amount in Lakhs	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	26	27	28
1	Thiruvathigai Anicut																										1	328.33	328.33
2	Muthukrishana-puram channel									1	0.59								6800	9.79	20	2.25	34	0.58	1	0.10	-	-	13.31
3	Agaram Channel																		4200	7.82	30	2.70	21	0.36	1	0.10	-	-	10.98
4	Palur Channel									1	0.53								6400	9.67	-	-	32	0.55	1	0.10	-	-	10.85
5	Sitharasur Channel																		2400	3.03	-	-	12	0.21	1	0.10	-	-	3.34
6	Kilarungunam Channel																		4600	6.67	15	1.66	23	0.39	1	0.10	-	-	8.82
7	Thotti Channel																		1200	1.29	10	0.89	6	0.10	1	0.10	-	-	2.38
8	Natham Channel																		4200	6.16	30	2.63	21	0.36	1	0.10	-	-	9.25
	Total									**2**	**1.12**								**29800**	**44.43**	**105**	**10.13**	**149**	**2.55**	**7**	**0.70**			**387.26**

Grand **387.26**

GADILAM SUB BASIN

COMPONENTWISE ABSTRACT **PACKAGE NO IX**

Sl. No.	Name of Tank/Anicuts	Tank Bund			Sluice					Shutter for Sluice		Weir					Shutter for Weir		Supply Channel				Bed Bar		Measuring Device		Anicut		Total Amount in Lakhs
		Total Length	Proposed Length	Amount in Lakhs	Total No. of Sluices	No. of sluices to be reconstructed	Amount in Lakhs	No. of sluices to be repaired	Amount in Lakhs	Nos.	Amount in Lakhs	Total No. of weir	No. of weirs to be reconstructed	Amount in Lakhs	No, of weirs to be repaired	Amount in Lakhs	Nos.	Amount in Lakhs	Length to be desilted	Amount in Lakhs	Length of proposed retaining wall	Amount in Lakhs	Nos.	Amount in lakhs	Nos.	Amount in Lakhs	Nos.	Amount in Lakhs	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	Melpathi Channel																		6200	10.22	70	4.30	31	0.39	1	0.10	-	-	15.01
2	Kudithangi Channel																		4800	7.47	50	3.00	24	0.31	1	0.10	-	-	10.88
3	Vaidipakkam Channel																		2500	3.06	30	1.80	13	0.17	1	0.10	-	-	5.13
4	Nesanoor Channel																		5400	8.64	70	4.19	27	0.34	1	0.10	-	-	13.27
5	Vanamadevi																		3800	6.40	30	1.80	19	0.24	1	0.10	-	-	8.54
6	Thirumanikuzhi Chennel																		2000	2.40	10	0.61	10	0.14	1	0.10	-	-	3.25
7	Otteri Chennel																		1400	1.33	7	0.45	7	0.10	1	0.10	-	-	1.98
8	Vanamadevi Anicut									`																	1	57.29	57.29
	Total																		**26100**	**39.52**	**267**	**16.15**	**131**	**1.69**	**7**	**0.7**	**1**	**57.29**	**115.35**

Page No. 150-19 **Gr** **115.35**

1.6.4.PHYSICAL AND FINANCIAL PROGRAMME

NAME OF THE SUB BASIN : GADILAM

Sl. No.	Description of work	I Year(2009-2010)		II Year(2010-2011)		Total	
		Qty	Amt. in	Qty	Amt. in Lakhs	Quantity (Componen	Amount in Lakhs
1. Tank Component							
1	Standardisation of tank Bund	500000 M^3	295.28	500290 M^3	295.45	1000290 M^3	590.73
2	Desilting of Supply Channel	400000 M^3	88.10	393993 M^3	86.77	793993 M^3	174.87
3	Reconstruction of Sluice	80 Nos	218.61	64 Nos	174.89	144 Nos	393.50
4	Repairs to Sluice	2 Nos	4.00	2 Nos	4.01	4 Nos	8.01
5	Field channel in sluices	85 Nos	81.92	87 Nos	83.84	172 Nos	165.76
6	Improvements to weirs	21 Nos	81.37	20 Nos	77.50	41 Nos	158.87
7	Reconstruction of weir	20 Nos	130.72	14 Nos	91.50	34 Nos	222.22
8	New shutters	70 Nos	19.14	78 Nos	21.33	148 Nos	40.47
9	Providing Measuring Device	85 Nos	8.55	94 Nos	9.46	179 Nos	18.01
10	Bed bar	250 Nos	3.72	227 Nos	3.37	477 Nos	7.09
	Sub total		**931.41**		**848.12**		**1779.53**
	Non tank component						
1	Improvements to flood bank	60000 M^3	34.64	60841 M^3	35.13	120841 M^3	69.77
2	Anicut repairs	8 Nos	460.28	5 Nos	287.67	13 Nos	747.95
3	Desilting of Supply Channel	170000 M^3	40.80	179824 M^3	43.15	349824 M^3	83.95
4	Retaining wall	200 Nos	14.13	172 Nos	12.15	55900 Nos	26.28
5	Bed bar	140 Nos	2.14	140 Nos	2.10	280 Nos	4.24
6	Culvert	-		1 No	3.94	1 No	3.94
7	Shutter	1 No	0.56	1 No	0.56	2 Nos	1.12
8	Measuring Device	7 Nos	0.70	7 Nos	0.70	14 Nos	1.40
			553.25		***385.40***		***938.65***
	Environmental		8.35		8.35		16.70
	Sub Total		**561.60**		**393.75**		**955.35**

Tank Component	**931.41**	**848.12**	**1779.53**
Non tank component	**561.60**	**393.75**	**955.35**
Total	**1493.01**	**1241.87**	**2734.88**

2734.88

Gadilam Sub Basin

Package No. I

	Tank Component	
Sl.No	**Name of Tank/Anicut/Reservoir**	**Amount in Lakhs**
1	Yal Tank	17.74
2	Melpangur	15.88
3	Peral	19.83
4	Sathaputhur Tank	11.59
5	Pavandur Tank	12.67
6	Pasar Tank	14.33
7	Rishivandiyam Tank	17.67
8	Vengalam Tank	13.88
9	Munivazhai	11.86
10	Kunniyur Tank	11.60
11	Thimmalai Tank	6.60
12	Kattu Edaiyar	34.75
13	memalur	16.09
14	Kattusellur	15.73
15	Alur	14.69
16	Periyakurukkai	12.04
17	Mohalar	14.79
18	Sikkadu	11.00
19	Adaiyur	13.40
20	Kunjaram	25.07
21	Eraiyur	11.34
22	Veeramangalam	10.82
23	Vadakurumbur	24.12
24	S. Malaiyanur	17.23
25	Koovadu	15.11
26	Neivainai	13.08
27	Pinnalvadi	11.65
	Bed bar and Measuring device	8.81
	Lining for field channel (50m length D/S of sluices)	55.58
	Total	**478.95**
	Non Tank Component	
1	Kattu Edaiyar	10.79
2	memalur	33.38
3	Alur	5.83
4	Mohalar	9.53
5	S. Malaiyanur	3.20
	Sub Total	**62.73**
	Grand Total	**541.68**

Gadilam Sub Basin

Package No. II

	Tank Components	
Sl.No	**Name of Tank/Anicut/Reservoir**	**Amount in Lakhs**
1	Aurnkurukkai	18.42
2	Damal	18.83
3	Kiliyur	18.79
4	M. Kunnathur	15.62
5	Puthanandal	15.72
6	Nathamur	16.11
7	Athur	11.47
8	Adanur	14.94
9	Kalamarudur	15.82
10	Orathur	24.78
11	Pa. Killanur	20.71
12	Pachapalayam	23.65
13	U. Sellur	25.65
14	Pandur	27.25
15	Arali	13.02
16	Sennangur	10.43
17	Nagar	10.90
18	Sengurichi	9.49
19	Mathiyanur	13.08
	Bed bar and Measuring device	4.90
	Lining for field channel (50m length D/S of sluices)	38.42
	Total	**368.00**
	Non Tank Component	
1	Aurnkurukkai	22.33
2	Damal	8.60
3	Puthanandal	5.10
4	Pachapalayam	95.02
	Sub Total	**131.05**
	Grand Total	**499.05**

Gadilam Sub Basin

Package No. III

	Tank Component	
Sl.No	**Name of Tank/Anicut/Reservoir**	**Amount in Lakhs**
1	Koo. Kallakurichi	25.65
2	Mattigai	19.64
3	Sendanadu	12.89
4	T. Kalathur	20.43
5	Emam	14.67
6	Pu. Konalavadi	13.29
7	U. Keeranur	18.07
8	Ulundur	10.22
9	Sirupakkam	8.35
10	Sembiyanmadevi	6.75
11	Alangiri	8.61
12	Salappakkam	12.96
13	A. Puthur	8.90
	Bed bar and Measuring device	2.60
	Lining for field channel (50m length D/S of sluices)	18.46
	Total	**201.49**

Non Tank Component

1	T. Kalathur	3.32
	Sub total	**3.32**
	Grand Total	**204.81**

Gadilam Sub Basin

Package No. IV

	Tank Component	
Sl.No	**Name of Tank/Anicut/Reservoir**	**Amount in Lakhs**
1	Manamthaviznthaputhur tank	25.1
2	Natham tank	40.76
3	Sirugrammam tank	20.24
4	Veeraperumanallur tank	30.76
5	Thiruvamur tank	17.89
6	Elanthampattu tank	8.97
7	Semmedu tank	6.83
8	Vizur Zemberi tank	17.65
	Total	**168.20**

Non Tank Component

.- NIL -.

Gadilam Sub Basin

Package No. V

	Tank Component	
Sl.No	**Name of Tank/Anicut/Reservoir**	**Amount in Lakhs**
1	Semakottai tank	21.61
2	Manapakkam tank	13.19
3	Siruvathur tank	52.6
4	Pandarakottai tank	24.21
5	L.N.Puram tank	42.87
6	Poongunam tank	37.98
	Total	**192.46**

Non Tank Component

.- NIL -.

Gadilam Sub Basin

Package No. VI

	Tank Component	
Sl.No	**Name of Tank/Anicut/Reservoir**	**Amount in Lakhs**
1	Chettipattadai tank	146.52
2	Elumedu tank	38.17
3	P.N.Palayam tank	41.09
4	C.N.Palayam tank	24.04
	Total	**249.82**

Non Tank Component

.- NIL -.

Gadilam Sub Basin

Package No. VII

	Tank Component	
Sl.No	**Name of Tank/Anicut/Reservoir**	**Amount in Lakhs**
1	Thottapattu tank	15.80
2	Varakkalpattu tank	18.24
3	Gunamangalam tank	16.59
4	Eidanur tank	7.20
5	Valiodai tank	15.75
6	Naduveerapattu Old Tank	9.17
7	Naduveerapattu New tank	17.69
8	Vilangalpattu tank	13.80
9	Ramapuram Devan Eri	10.21
	Total	**124.45**

Non Tank Components

1	Rehabilitation of Thiruvanthipuram Anicut	235.00
	Sub total	**235.00**
	Grand Total	**359.45**

Gadilam Sub Basin

Package No. VIII

Tank Component

.- NIL -.

	Non Tank Component	
Sl.No	**Name of Tank/Anicut/Reservoir**	**Amount in Lakhs**
1	Rehabilitation of Thiruvathigai Anicut	328.33
2	Muthukrishnapuram Channel	13.31
3	Agaram Channel	10.98
4	Palur Channel	10.85
5	Sittharasur Channel	3.34
6	Kilarungunam Channel	8.82
7	Thotti Channel	2.38
8	Natham Channel	9.25
	Total	**387.26**

Gadilam Sub Basin

Package No. IX

	Tank Component	
	.- NIL -.	

	Non Tank Component	
Sl.No	**Name of Tank/Anicut/Reservoir**	**Amount in Lakhs**
	Thiruvathigai Anicut	
1	Melpathi Channel	15.01
2	Kudithangi Channel	10.88
3	Vaidipakkam Channel	5.13
4	Nesanoor Channel	13.27
5	Rehabilitation of Vanamadevei Anicut	57.29
6	Thirumanikuzhi Chennel	3.25
7	Vanamadevi Chennel	8.54
8	Otteri Chennel	1.98
	Total	**115.35**

PACKAGE - I
1.6.9.Construction Methodology

NAME OF THE SUB BASIN:GADILAM

Sl. No	Description of Item	Working Months																			
		1	2	3	4	5	6	7	8	9		10	11	12	13	14	15	16	17	18	Total
							Rainy season														
1	Earth Work Bund	23550	23550	23550	23550	23550				23550	**141300**	14140	14140	14140	14140	14140	17670	17670	17670	17662	423972 **m3**
2	Earth Work Channel	10950	10950	10950	10950	10950				10950	**65700**	6570	6570	6570	6570	6570	8220	8220	8220	8226	197136 **m3**
3	Earth Work Foundation	395	395	395	395	395				395	**2370**	980	980	980	980	980	2370	2370	2370	2359	19109 **m3**
4	Cement Concret 1:4:8	135	135	135	135	135				135	**810**	81	81	81	81	81	104	104	104	103	2440 **m3**
5	PCC 1:3:6	148	148	148	148	148				148	**888**	89	89	89	89	89	113	113	113	112	2672 **m3**
6	P.C.C. 1:2:4	344	344	344	344	344				344	**2064**	207	207	207	207	207	258	258	258	258	6195 **m3**
7	RCC 1:11/2:3	261	261	261	261	261				261	**1566**	157	157	157	157	157	197	197	197	196	4704 **m3**
8	Steel	38	38	38	38	38				38	**228**	23.00	23.00	23.00	23.00	23.00	30	30	30	30	691 **MT**
9	RR Masonry	103	103	103	103	103				103	**618**	62	62	62	62	62	77.00	77.00	77.00	77	1854 **m3**
10	RSDP	64	64	64	64	64				64	**384**	39	39	38	38	38	49	49	49	50	1157 **m2**

PACKAGE NO 1
1.6.8.REQUIREMENT OF EQUIPMENTS AND MATERIALS

NAME OF THE SUB BASIN:

PACKAGE NUMBER	EQUIPMENTS REQUIRED IN NUMBERS								MATERIAL REQUIRED					
	Hydraulic excavator + 0.90 m3/1 m3 -	Hydraulic excavator + 0.30 m3/1 m3	Tippers / Lorries	Power roller 8-10 T	Vibratory compactor (1+ 0.90 m width)	Truck mounted Water lorries (10000 - 15000 litres)	Concrete mixer machine	Concrete vibrator.	Cement IN M.T.	Sand in m3	Steel in M.T.	Metel 40MM. in m3	Metel 20 MM. in m3	RR IN m3
Package - I	2	2	8	2	2	2	5	5	1541.268	2607.72	228	729	4066.2	797

1.6.7.PACKAGE -1

Calculation of machineries Requirement

NAME OF THE SUB BASIN

Hydraulic excavator & 4 Tippers / Lorries for bund earthwork.	12 Hours / Day		
(2 No x 8 loads / hour x 12 Hr x 5 m3 / trip)		960 m3 / Day	
Hydraulic excavator for desilting supply channel.	12 Hours / Day		
(2 No x 20 m3 /hour x 10 Hr)		400 m3 / Day	
For 1 month (25 Working days)	25 x 960 m3	24000 m3 / month	
Total quantity of earth work	**141300+65700 =207000 m3**		
Working period for earth work	6 month.		
Machineries required for earth work: 1)Tank bund Earthwork = 141300 m3			
2) Supply channel Earthwork = 65700 m3			
1. Hydraulic excavator . + 0.90 m3/1 m3 - = 2 nos			
2. Hydraulic excavator . + 0.30 m3/1 m3 - = 2 nos			
2. Tippers / Lorries = 8 nos			

3. Power roller 8- 10 T = 2 nos				
4. Vibratory compactor . (1+ 0.90 m width) = 2 nos				
5. Truck mounted Water lorries . . (10000 -15000 litres) = 2 nos				
Mixer machine	2 m3 / Hour	For 7 hours / day		14 m3 / day
Total quantity of concrete		5328 m3		
Mixer machine required		**5 nos for 14 days / months**		6 month

PACKAGE - II
1.6.9.Construction Methodology

NAME OF THE SUB BASIN: GADILAM

Sl. No	Description of Item	Working Months																				
		1	2	3	4	5	6	7	8	9			10	11	12	13	14	15	16	17	18	Total
							Rainy season															
1	Earth Work Bund	22200	22200	22200	22200	22200				22200	**133200**	**111000**	13300	13300	13300	13300	13300	16650	16650	16650	16651	377301 **m3**
2	Earth Work Channel	11200	11200	11200	11200	11200				11200	**67200**	**56000**	6800	6800	6800	6800	6800	8340	8340	8340	8330	190550 **m3**
3	Earth Work Foundation	730	730	730	730	730				730	**4380**	**3650**	437	437	437	437	437	545	545	545	545	12395 **m3**
4	Cement Concret 1:4:8	68	68	68	68	68				68	**408**	**340**	41	41	41	41	41	52	52	52	55	1164 **m3**
5	P.C.C. 1:2:4	190	190	190	190	190				190	**1140**	**950**	114	114	114	114	114	143	143	143	143	3232 **m3**
6	PCC 1:3:6	172	172	172	172	172				172	**1032**	**860**	103	103	103	103	103	131	131	130	130	2929 **m3**
7	RCC 1:11/2:3	135	135	135	135	135				135	**810**	**675**	81	81	81	81	81	104	103	103	103	2303 **m3**
8	Steel	38	38	38	38	38				38	**228**	**190**	23	23	23	23	23	30	30	30	29	652 **MT**
9	RR Masonry	31	31	31	31	31				31	**186**	**155**	18	18	18	18	18	25	25	25	24	530 **m3**
10	RSDP	30	30	30	30	30				30	**180**	**150**	18	18	18	18	18	23	23	22	21	509 **m2**

PACKAGE NO 2
1.6.8.REQUIREMENT OF EQUIPMENTS AND MATERIALS

NAME OF THE SUB BASIN:

PACKAGE NUMBER	EQUIPMENTS REQUIRED IN NUMBERS								MATERIAL REQUIRED					
	Hydraulic excavator + 0.90 m3/1 m3 -	Hydraulic excavator + 0.30 m3/1 m3	Tippers / Lorries	Power roller 8-10 T	Vibratory compactor (1+ 0.90 m width)	Truck mounted Water lorries (10000 - 15000 litres)	Concrete mixer machine	Concrete vibrator.	Cement IN M.T.	Sand in m3	Steel in M.T.	Metel 40MM. in m3	Metel 20 MM. in m3	RR IN m3
Package - II	2	2	8	2	2	2	3	3	1008	1588.74	190	367	2683.8	265

1.6.7.PACKAGE - 2

Calculation of machineries Requirement

NAME OF THE SUB BASIN

Hydraulic excavator & 4 Tippers / Lorries for bund earthwork.	12 Hours / Day		
(2 No x 8 loads / hour x 12 Hr x 5 m3 / trip)		960 m3 / Day	
Hydraulic excavator for desilting supply channel.	12 Hours / Day		
(2 No x 20 m3 /hour x 10 Hr)		400 m3 / Day	
For 1 month (25 Working days)	25 x 960 m3	24000 m3 / month	
Total quantity of earth work	**111000+56000 =167000 m3**		
Working period for earth work	**6 month.**		
Machineries required for earth work: 1)Tank bund Earthwork = 111000 m3			
	2) Supply channel Earthwork = 56000 m3		
1. Hydraulic excavator . + 0.90 m3/1 m3 - = 2 nos			
2. Hydraulic excavator . + 0.30 m3/1 m3 - = 2 nos			
2. Tippers / Lorries = 8 nos			
3. Power roller 8- 10 T = 2 nos			

4. Vibratory compactor . (1+ 0.90 m width) = 2 nos				
5. Truck mounted Water lorries . . (10000 -15000 litres) = 2 nos				
Mixer machine	2 m3 / Hour	For 7 hours / day		14 m3 / day
Total quantity of concrete		2825 m3		
Mixer machine required		3 nos for 14 days / months		**6 month**

PACKAGE - III

1.6.9.Construction Methodology

NAM
E OF

Sl.No	Description of Item	Working Months																			
		1	2	3	4	5	6	7	8	9		10	11	12	13	14	15	16	17	18	Total
							Rainy season														
1	Earth Work Bund	11460	11460	11460	11460	11460				11460	**68760**	6875	6875	6875	6875	6875	8590	8590	8590	8589	137494 **m3**
2	Earth Work Channel	5325	5325	5325	5325	5325				5325	**31950**	3195	3195	3195	3195	3195	3995	3995	3995	3992	63902 **m3**
3	Earth Work Foundation	210	210	210	210	210				210	**1260**	126	126	126	126	126	157	157	157	157	2518 **m3**
4	Cement Concret 1:4:8	39	39	39	39	39				39	**234**	19	19	19	19	19	15	15	15	15	389 **m3**
5	PCC 1:3:6	117	117	117	117	117				117	**702**	70	70	70	70	70	88	88	88	87	1403 **m3**
6	PCC 1:2:4	58	58	58	58	58				58	**348**	35	35	35	35	35	43	43	43	44	696 **m3**
7	RCC 1:11/2:3	17	17	17	17	17				17	**102**	10	10	10	10	10	12	12	12	12	200 **m3**
8	Steel	12	12	12	12	12				12	**72**	7	7	7	7	7	9	9	8	8	141 **MT**
9	RR Masonry										**0**										0 **m3**
10	RSDP	13	13	13	13	13				13	**78**	8	8	8	8	8	10	10	10	9	157 **m2**

1386

58	58	58	58	58				58	**348**	35	35	35	35	35	43	43	43	44	696

PACKAGE NO 3
1.6.8.REQUIREMENT OF EQUIPMENTS AND MATERIALS

NAME OF THE SUB BASIN:

PACKAGE NUMBER	EQUIPMENTS REQUIRED IN NUMBERS								MATERIAL REQUIRED					
	Hydraulic excavator + 0.90 m3/1 m3 -	Hydraulic excavator + 0.30 m3/1 m3	Tippers / Lorries	Power roller 8- 10 T	Vibratory compactor (1+ 0.90 m width)	Truck mounted Water lorries (10000 - 15000 litres)	Concrete mixer machine	Concrete vibrator.	Cement IN M.T.	Sand in m3	Steel in M.T.	Metel 40MM. in m3	Metel 20 MM. in m3	RR IN m3
Package - III	1	1	4	1	1	1	2	2	385	624	72	211	1037	8

1.6.7.PACKAGE -3

Calculation of machineries Requirement

NAME OF THE SUB BASIN

Hydraulic excavator & 4 Tippers / Lorries for bund earthwork.	12 Hours / Day		
(2 No x 8 loads / hour x 12 Hr x 5 m3 / trip)		960 m3 / Day	
Hydraulic excavator for desilting supply channel.	12 Hours / Day		
(2 No x 20 m3 /hour x 10 Hr)		400 m3 / Day	
For 1 month (25 Working days)	25 x 960 m3	24000 m3 / month	
Total quantity of earth work	**68760+31950 =100710 m3**		
Working period for earth work	**6 month.**		
Machineries required for earth work: 1)Tank bund Earthwork = 68760 m3			
2) Supply channel Earthwork = 31950 m3			
1. Hydraulic excavator . + 0.90 m3/1 m3 - = 1 no			
2. Hydraulic excavator . + 0.30 m3/1 m3 - = 1 no			
2. Tippers / Lorries = 4 nos			
3. Power roller 8- 10 T = 1 no			
4. Vibratory compactor . (1+ 0.90 m width) = 1 no			

5. Truck mounted Water lorries (10000 -15000 litres) = 1 no				
Mixer machine	2 m3 / Hour	For 7 hours / day		14 m3 / day
Total quantity of concrete		**1386 M3**		
Mixer machine required		2 nos for 14 days / months		**6 month**

PACKAGE - IV
1.6.9.Construction Methodology

NAME OF

Sl.No	Description of Item	Working Months																			
		1	2	3	4	5	6	7	8	9		10	11	12	13	14	15	16	17	18	Total
							Rainy season														
1	Earth Work Bund	6000	6500	6000	6000	6000				5678	**36178**	3500	3400	3500	3000	4688	5000	4500	4500	4089	72355 **m3**
2	Earth Work Supply Channel	5000	5000	4500	4500	5500				3198	**27698**	3000	2800	2750	2700	2599	3500	3500	4000	2849	55396 **m3**
3	Earth Work Foundation	800	750	800	700	725				458	**4233**	400	500	425	450	342	525	550	450	591	8466 **m3**
4	Cement Concret 1:4:8	65	65	70	70	75				60	**405**	35	35	40	45	47	50	50	55	48	810 **m3**
5	PCC 1:3:6 Plain			3	3	4				3	**13**			2	2	3		2	2	2	26 **m3**
6	P.C.C. 1:2:4		210	210	200	250				187	**1057**		100	130	150	148	150	120	120	138	2113 **m3**
7	RCC 1:11/2:3		30	20	25	25				28	**128**		15	15	15	19	15	15	20	13	255 **m3**
8	Steel		20	15	25	25				18	**103**	10	10	10	10	11	15	10	10	17	206 **MT**
9	RR Masonry		20	25	25	10				18	**98**	10	5	5	10	19	10	10	15	14	196 **m3**
10	RSDP		30	25	25	20				50	**150**		15	15	20	28	20	20	20	18	306 **m2**

PACKAGE NO 4
1.6.8.REQUIREMENT OF EQUIPMENTS AND MATERIALS

NAME OF THE SUB BASIN:

PACKAGE NUMBER	EQUIPMENTS REQUIRED IN NUMBERS								MATERIAL REQUIRED					
	Hydraulic excavator + 0.90 m3/1 m3 -	Hydraulic excavator + 0.30 m3/1 m3	Tippers / Lorries	Power roller 8-10 T	Vibratory compactor (1+ 0.90 m width)	Truck mounted Water lorries (10000 - 15000 litres)	Concrete mixer machine	Concrete vibrator.	Cement IN M.T.	Sand in m3	Steel in M.T.	Metel 40MM. in m3	Metel 20 MM. in m3	RR IN m3
Package - IV	1	1	4	1	1	1	2	2	353	755	103	365	1078	117

1.6.7.PACKAGE - 4

Calculation of machineries Requirement

NAME OF THE SUB BASIN

Hydraulic excavator & 4 Tippers / Lorries for bund earthwork.	12 Hours / Day		
(2 No x 8 loads / hour x 12 Hr x 5 m3 / trip)		960 m3 / Day	
Hydraulic excavator for desilting supply channel.	12 Hours / Day		
(2 No x 20 m3 /hour x 10 Hr)		400 m3 / Day	
For 1 month (25 Working days)	25 x 960 m3	24000 m3 / month	
Total quantity of earth work	**118900+35000 =153900 m3**		
Working period for earth work	**6 month.**		
Machineries required for earth work: 1)Tank bund Earthwork = 118900 m3			
	2) Supply channel Earthwork = 35000 m3		
1. Hydraulic excavator . + 0.90 m3/1 m3 - = 2 nos			
2. Hydraulic excavator . + 0.30 m3/1 m3 - = 2 nos			
2. Tippers / Lorries = 8 nos			
3. Power roller 8- 10 T = 2 nos			
4. Vibratory compactor . (1+ 0.90 m width) = 2 nos			

5. Truck mounted Water lorries . . (10000 -15000 litres) = 2 nos				
Mixer machine	2 m3 / Hour	For 7 hours / day		14 m3 / day
Total quantity of concrete		**4686 m3**		
Mixer machine required		4 nos for 14 days / months		**6 month**

PACKAGE - V
1.6.9.Construction Methodology

NAM
E OF

Sl.No	Description of Item	Working Months																		
		1	2	3	4	6	7	8	9		10	11	12	13	14	15	16	17	18	Total
						Rainy season														
1	Earth Work Bund	3000	5000	8000	8000				14500	**30500**	1500	4500	5000	5000	8000	8000	6000	6000	4390	127390 **m3**
2	Earth Work Supply Channel	5000	8000	10000	10000				15000	**38000**	3000	5000	6000	8000	8000	10000	8000	5000	6759	155759 **m3**
3	Earth Work Foundation		300	350	500				850	**1500**	100	300	250	250	500	500	500	424		7124 **m3**
4	Cement Concret 1:4:8		34	40	56				115	**189**	12	34	23	23	56	56	56	35		819 **m3**
5	PCC 1:3:6 Plain		5	8	10				30	**43**	5	8	7	7	10	10	10	10	6	189 **m3**
6	PCC 1:2:4		85	100	200				250	**435**	50	70	100	100	140	120	150	150	39	2289 **m3**
7	RCC 1:11/2:3		20	40	40				10	**70**	10	15	15	10	15	20	20	15	14	334 **m3**
8	Steel		13	20	35				30	**63**	5	20	15	15	10	20	20	15	12	328 **MT**
9	RR Masonry			40	35				40	**80**	15	15	15	20	15	20	20	20	20	400 **m3**
10	RSDP			40	45				53	**93**			30	25	37	20	25	20	27	460 **m2**

PACKAGE NO 5
1.6.8.REQUIREMENT OF EQUIPMENTS AND MATERIALS

NAME OF THE SUB BASIN:

PACKAGE NUMBER	EQUIPMENTS REQUIRED IN NUMBERS								MATERIAL REQUIRED					
	Hydraulic excavator + 0.90 m3/1 m3 -	Hydraulic excavator + 0.30 m3/1 m3	Tippers / Lorries	Power roller 8-10 T	Vibratory compactor (1+ 0.90 m width)	Truck mounted Water lorries (10000 - 15000 litres)	Concrete mixer machine	Concrete vibrator.	Cement IN M.T.	Sand in m3	Steel in M.T.	Metel 40MM. in m3	Metel 20 MM. in m3	RR IN m3
Package - V	1	2	4	1	1	1	1	1	70	230	35	81	306	4

1.6.7.PACKAGE - 5

Calculation of machineries Requirement

NAME OF THE SUB BASIN

Hydraulic excavator & 4 Tippers / Lorries for bund earthwork.	12 Hours / Day		
(2 No x 8 loads / hour x 12 Hr x 5 m3 / trip)		960 m3 / Day	
Hydraulic excavator for desilting supply channel.	12 Hours / Day		
(2 No x 20 m3 /hour x 10 Hr)		400 m3 / Day	
For 1 month (25 Working days)	25 x 960 m3	24000 m3 / month	
Total quantity of earth work	**30500+38000 = 68500 m3**		
Working period for earth work	6 month.		
Machineries required for earth work: 1)Tank bund Earthwork = 30500 m3			
	2) Supply channel Earthwork = 38000 m3		
1. Hydraulic excavator . + 0.90 m3/1 m3 - = 1 no			
2. Hydraulic excavator . + 0.30 m3/1 m3 - = 2 nos			
2. Tippers / Lorries = 4 no			
3. Power roller 8- 10 T = 1 no			
4. Vibratory compactor . (1+ 0.90 m width) = 1 no			

5. Truck mounted Water lorries . . (10000 -15000 litres) = 1 no				
Mixer machine	2 m3 / Hour	For 7 hours / day		14 m3 / day
Total quantity of concrete		737 m3		
Mixer machine required		1 no for 14 days / months		6 month

PACKAGE - VI
1.6.9.Construction Methodology

NAME OF THE SUB BASIN: GADILAM

Sl. No	Description of Item	Working Months																					
		1	2	3	4		5	6	7	8	9			10	11	12	13	14	15	16	17	18	Total
								Rainy season															
1	Earth Work Bund	7000	7000	6500	6800	10000	7000				7900	**28400**	**35200**	4500	4000	4000	4100	4510	5250	5000	5000	5880	84440 **m3**
2	Earth Work Supply Channel	18000	15500	16000	16500	10000	16600				18200	**67700**	**84200**	10000	10500	10500	10000	9402	12500	12500	12600	12809	201611 **m3**
3	Earth Work Foundation	280	270	295	250	800	280				312	**1157**	**1407**	170	160	165	170	178	210	200	205	228	3373 **m3**
4	Cement Concret 1:4:8		80	80	85	90	80				94	**254**	**339**	40	45	40	40	44	50	55	40	64	837 **m3**
5	PCC 1:3:6 Plain				10	20	13					**0**	**10**				5	6			5	6	45 **m3**
6	PCC 1:2:4			290	280	300	290				299	**589**	**869**			200	190	190		195	195	190	2319 **m3**
7	RCC 1:11/2:3			30	30	30	53		0	0	0	0	**60**	0	0	0	30	41	0	0	30	41	345 **m3**
8	Steel			30	45	35	20				12	**42**	**87**			20	15	19			25	29	215 **MT**
9	RR Masonry			80	80	45	90				69	**149**	**229**			55	50	55		50	50	60	639 **m3**
10	RSDP			150	150	45	100				100	**250**	**400**			75	75	100		50	150	50	1000 **m2**
						440						843	1278										

PACKAGE NO 6
1.6.8.REQUIREMENT OF EQUIPMENTS AND MATERIALS

NAME OF THE SUB BASIN:

PACKAGE NUMBER	EQUIPMENTS REQUIRED IN NUMBERS								MATERIAL REQUIRED					
	Hydraulic excavator + 0.90 m3/1 m3 -	Hydraulic excavator + 0.30 m3/1 m3	Tippers / Lorries	Power roller 8-10 T	Vibratory compactor (1+ 0.90 m width)	Truck mounted Water lorries (10000 - 15000 litres)	Concrete mixer machine	Concrete vibrator.	Cement IN M.T.	Sand in m3	Steel in M.T.	Metel 40MM. in m3	Metel 20 MM. in m3	RR IN m3
Package - V	1	3	4	1	1	1	1	1	70	230	35	81	306	4

1.6.7.PACKAGE - 6

Calculation of machineries Requirement

NAME OF THE SUB BASIN

Hydraulic excavator & 4 Tippers / Lorries for bund earthwork.	12 Hours / Day		
(2 No x 8 loads / hour x 12 Hr x 5 m3 / trip)		960 m3 / Day	
Hydraulic excavator for desilting supply channel.	12 Hours / Day		
(2 No x 20 m3 /hour x 10 Hr)		400 m3 / Day	
For 1 month (25 Working days)	25 x 960 m3	24000 m3 / month	
Total quantity of earth work	**35200+84200 = 119400 m3**		
Working period for earth work	6 month.		
Machineries required for earth work: 1)Tank bund Earthwork = 35200 m3			
	2) Supply channel Earthwork = 84200 m3		
1. Hydraulic excavator . + 0.90 m3/1 m3 - = 1 no			
2. Hydraulic excavator . + 0.30 m3/1 m3 - = 3 nos			
2. Tippers / Lorries = 4 no			
3. Power roller 8- 10 T = 1 no			
4. Vibratory compactor . (1+ 0.90 m width) = 1 no			

5. Truck mounted Water lorries . . (10000 -15000 litres) = 1 no				
Mixer machine	2 m3 / Hour	For 7 hours / day		14 m3 / day
Total quantity of concrete		1278 m3		
Mixer machine required		1 no for 14 days / months		6 month

PACKAGE - VII
1.6.9.Construction Methodology

NAM
E OF

Sl.No	Description of Item	Working Months																		
		1	2	3	4	6	7	8	9		10	11	12	13	14	15	16	17	18	Total
						Rainy season														
1	Earth Work Bund	3100	3200	3200	3000				2600	**12100**	1900	2200	1800	1750	2000	2250	1850	2000	3600	49150 **m3**
2	Earth Work Supply Channel	7000	6500	8000	7500				9200	**30700**	5200	4000	4250	4300	4900	5000	6000	5750	5919	123419 **m3**
3	Earth Work Foundation		500	500	400				460	**1460**	325	225	250	250	333	350	340	320	379	6552 **m3**
4	Cement Concret 1:4:8		50	55	75				47	**152**	30	28	36	25	25	35	35	40	33	713 **m3**
5	PCC 1:3:6 Plain		150	135	150				159	**444**	87	70	72	75	75	95	90	95	79	1935 **m3**
6	PCC 1:2:4		350	345	330				365	**1060**	160	160	175	170	205	200	200	215	255	4555 **m3**
7	RCC 1:11/2:3		30	30	35				44	**104**	20	10	10	20	25	20	20	20	25	457 **m3**
8	Steel		20	15	15				18	**53**	10	8	9	10	10	10	10	12	15	240 **MT**
9	RR Masonry				6				6	**6**				3	3				6	36 **m3**
10	RSDP				10				11	**11**				5	5			6	5	64 **m2**

PACKAGE NO 7
1.6.8.REQUIREMENT OF EQUIPMENTS AND MATERIALS

NAME OF THE SUB BASIN:

PACKAGE NUMBER	EQUIPMENTS REQUIRED IN NUMBERS								MATERIAL REQUIRED					
	Hydraulic excavator + 0.90 m3/1 m3 -	Hydraulic excavator + 0.30 m3/1 m3	Tippers / Lorries	Power roller 8-10 T	Vibratory compactor (1+ 0.90 m width)	Truck mounted Water lorries (10000 - 15000 litres)	Concrete mixer machine	Concrete vibrator.	Cement IN M.T.	Sand in m3	Steel in M.T.	Metel 40MM. in m3	Metel 20 MM. in m3	RR IN m3
Package - VII	1	1	4	1	1	1	2	2	95	282	53	54	473	5

1.6.7.PACKAGE - 7

Calculation of machineries Requirement

NAME OF THE SUB BASIN

Hydraulic excavator & 4 Tippers / Lorries for bund earthwork.	12 Hours / Day		
(2 No x 8 loads / hour x 12 Hr x 5 m3 / trip)		960 m3 / Day	
Hydraulic excavator for desilting supply channel.	12 Hours / Day		
(2 No x 20 m3 /hour x 10 Hr)		400 m3 / Day	
For 1 month (25 Working days)	25 x 960 m3	24000 m3 / month	
Total quantity of earth work	**12100+ 30700 = 42800 m3**		
Working period for earth work	6 month.		
Machineries required for earth work: 1)Tank bund Earthwork = 12100 m3			
	2) Supply channel Earthwork = 30700 m3		
1. Hydraulic excavator . + 0.90 m3/1 m3 - = 1 no			
2. Hydraulic excavator . + 0.30 m3/1 m3 - = 1			
2. Tippers / Lorries = 4 no			
3. Power roller 8- 10 T = 1 no			
4. Vibratory compactor . (1+ 0.90 m width) = 1 no			

5. Truck mounted Water lorries . . (10000 -15000 litres) = 1 no				
Mixer machine	2 m3 / Hour	For 7 hours / day		14 m3 / day
Total quantity of concrete		1760 m3		
Mixer machine required		2 no for 14 days / months		6 month

PACKAGE - VIII
1.6.9.Construction Methodology

NAM
E OF

Sl.No	Description of Item	Working Months																			
		1	2	3	4	5	6	7	8	9		10	11	12	13	14	15	16	17	18	Total
							Rainy season														
1	Earth Work Bund	2000	2000	3000	3000	3000				1275	**14275**	1500	1500	1500	1500	1600	3000	3000	2675		30550 **m3**
2	Earth Work Channel	10000	15000	15000	15000	20000				16600	**91600**	9000	9000	9000	9000	10000	10000	10000	10000	15500	183100 **m3**
3	Earth Work Foundation	400	500	500	300	400				350	**2450**	150	250	250	200	370	300	350	300	270	4890 **m3**
4	Cement Concret 1:4:8	30	25	20	30	25				50	**180**	20	15	10	15	29	25	25	20	20	359 **m3**
5	PCC 1:3:6	250	350	400	350	350				400	**2100**	200	200	300	300	300	300	300	300	284	4584 **m3**
6	PCC 1:2:4		200	210	200	190				254	**1054**	100	100	100	127	100	150	125	100	152	2108 **m3**
7	RCC 1:11/2:3		100	95	90	100				111	**496**	50	45	50	50	53	50	50	60	88	992 **m3**
8	Steel		20	30	10	10				10	**80**		5	5	15	14	10	10	10	10	159 **MT**
9	RR Masonry				30	35				20	**85**		10	10	10	12	10	10	10	13	170 **m3**
10	RSDP		280	300	250	250				235	**1315**		165	170	175	147	165	150	150	193	2630 **m2**

3830

58	58	58	58	58				58	**348**	35	35	35	35	35	43	43	43	44	696

PACKAGE NO 8
1.6.8.REQUIREMENT OF EQUIPMENTS AND MATERIALS

NAME OF THE SUB BASIN:

PACKAGE NUMBER	EQUIPMENTS REQUIRED IN NUMBERS								MATERIAL REQUIRED					
	Hydraulic excavator + 0.90 m3/1 m3 -	Hydraulic excavator + 0.30 m3/1 m3	Tippers / Lorries	Power roller 8-10 T	Vibratory compactor (1+ 0.90 m width)	Truck mounted Water lorries (10000 - 15000 litres)	Concrete mixer machine	Concrete vibrator.	Cement IN M.T.	Sand in m3	Steel in M.T.	Metel 40MM. in m3	Metel 20 MM. in m3	RR IN m3
Package - VIII	1	3	4	1	1	1	3	3	1151	1752.4	190	3285	3285	131

1.6.7.PACKAGE -8

Calculation of machineries Requirement

NAME OF THE SUB BASIN

Hydraulic excavator & 4 Tippers / Lorries for bund earthwork.	12 Hours / Day		
(2 No x 8 loads / hour x 12 Hr x 5 m3 / trip)		960 m3 / Day	
Hydraulic excavator for desilting supply channel.	12 Hours / Day		
(2 No x 20 m3 /hour x 10 Hr)		400 m3 / Day	
For 1 month (25 Working days)	25 x 960 m3	24000 m3 / month	
Total quantity of earth work	**14275+91600 = 105875 m3**		
Working period for earth work	**6 month.**		
Machineries required for earth work: 1)Tank bund Earthwork = 14275 m3			
	2) Supply channel Earthwork = 91600 m3		
1. Hydraulic excavator . + 0.90 m3/1 m3 - = 1 no			
2. Hydraulic excavator . + 0.30 m3/1 m3 - = 3 noS			
2. Tippers / Lorries = 4 nos			
3. Power roller 8- 10 T = 1 no			
4. Vibratory compactor . (1+ 0.90 m width) = 1 no			

5. Truck mounted Water lorries (10000 -15000 litres) = 1 no				
Mixer machine	2 m3 / Hour	For 7 hours / day		14 m3 / day
Total quantity of concrete		**3830 M3**		
Mixer machine required		3 nos for 14 days / months		**6 month**

PACKAGE - IX

1.6.9.Construction Methodology

NAM
E OF

Sl.No	Description of Item	Working Months																			
		1	2	3	4	5	6	7	8	9		10	11	12	13	14	15	16	17	18	Total
							Rainy season														
1	Earth Work Bund	2500	2500	2300	2000	2500				3155	**14955**	1500	1500	1400	1400	1600	2000	1800	1500	2255	29910 **m3**
2	Earth Work Channel	14000	13500	13800	13500	14500				14000	**83300**	8300	8400	8350	8300	8330	10500	10450	10300	10494	166724 **m3**
3	Earth Work Foundation	65	70	70	65	65				72	**407**	40	40	35	40	48	50	50	50	53	813 **m3**
4	Cement Concret 1:4:8		10	20	19	10				20	**79**		5	10	15	9	5	10	10	14	157 **m3**
5	PCC 1:3:6			5	10	10				10	**35**			7	5	5		5	5	8	70 **m3**
6	PCC 1:2:4			120	120	120				121	**481**		60	60	60	61	60	60	61	60	963 **m3**
7	RCC 1:11/2:3																				**m3**
8	Steel										**0**										
9	RR Masonry										**0**										
10	RSDP										**0**										

PACKAGE NO 9
1.6.8.REQUIREMENT OF EQUIPMENTS AND MATERIALS

NAME OF THE SUB BASIN: GADILAM

PACKAGE NUMBER	EQUIPMENTS REQUIRED IN NUMBERS								MATERIAL REQUIRED					
	Hydraulic excavator + 0.90 m3/1 m3 -	Hydraulic excavator + 0.30 m3/1 m3	Tippers / Lorries	Power roller 8-10 T	Vibratory compactor (1+ 0.90 m width)	Truck mounted Water lorries (10000 - 15000 litres)	Concrete mixer machine	Concrete vibrator.	Cement IN M.T.	Sand in m3	Steel in M.T.	Metel 40MM. in m3	Metel 20 MM. in m3	RR IN m3
Package - IX	1	3	4	1	1	1	3	3	128	267.75	0	71	464	0

1.6.7.PACKAGE -9

Calculation of machineries Requirement

NAME OF THE SUB BASIN

Hydraulic excavator & 4 Tippers / Lorries for bund earthwork.	12 Hours / Day		
(2 No x 8 loads / hour x 12 Hr x 5 m3 / trip)		960 m3 / Day	
Hydraulic excavator for desilting supply channel.	12 Hours / Day		
(2 No x 20 m3 /hour x 10 Hr)		400 m3 / Day	
For 1 month (25 Working days)	25 x 960 m3	24000 m3 / month	
Total quantity of earth work	**14955+83300 = 98255 m3**		
Working period for earth work	**6 month.**		
Machineries required for earth work: 1)Tank bund Earthwork = 14955 m3			
	2) Supply channel Earthwork = 83300 m3		
1. Hydraulic excavator . + 0.90 m3/1 m3 - = 1 no			
2. Hydraulic excavator . + 0.30 m3/1 m3 - = 3 noS			
2. Tippers / Lorries = 4 nos			
3. Power roller 8- 10 T = 1 no			
4. Vibratory compactor . (1+ 0.90 m width) = 1 no			

5. Truck mounted Water lorries (10000 -15000 litres) = 1 no				
Mixer machine	2 m3 / Hour	For 7 hours / day		14 m3 / day
Total quantity of concrete		**3830 M3**		
Mixer machine required		3 nos for 14 days / months		**6 month**

1.7 ENVIRONMENTAL CELL

GOVERNMENT OF TAMIL NADU
PUBLIC WORKS DEPARTMENT
WATER RESOURCES ORGANISATION

"Environmental Component in Detailed Project Report for GADILAM SUB BASIN of Pennaiyar River Basin" under TN – IAMWARM PROJECT

Ayacut Area: 9356.95 Ha
Estimate Amount: Rs 16.70 Lakhs

Environmental Cell Division
Tharamani, Chennai-113

to accompany the estimate for the work of Environmental Com

in

Detailed Project Report for GADILAM SUB BASIN of Pennaiyar River Basin" under TN – IAMWARM PROJECT

Estimate Amount: Rs 16.70 Lakhs

Under TNWRCP, with World Bank assistance, special emphasis was given for the first time to assess the Environmental Status and degradation caused for all River basins in Tamil Nadu. Soil Assessment study has been conducted by **Environment Protection Training and Research Institute (EPTRI), Hyderabad**. This institute has identified the Environmental issues, mitigatory measures and given their recommendations on the following issues.

Environmental Issues :		- Soil Erosion, Sand Mining - Water Pollution due to Industries - Encroachment of river and tank beds - Poor solid waste management
ii)	Social Issues:	- Dry Land Agriculture - Reduction in Livestock - Women empowerment-SHG's - No storing facilities. - Health problems due to industrial water pollution
iii)	Mitigatory Measures:	- Non-judicial and excessive sand mining have to be controlled and regulated. - Livestock services delivery and management -Common storage facilities may be established
iv)	Agency:	- The above measures can be improved By the combined working of Environmental Cell wing and Animal Husbandry Department.

The Environmental Cell of WRO assessed the Environmental impact on the quality of Surface and Ground water and Soil by collecting water & soil samples and testing them, preparation of Micro level Environmental Status Reports for all the River basins with the World Bank assistance for these works up to March 2004.

Also few Awareness programs & workshops were conducted to create Awareness on the Environmental issues & remedies among the public, farmers, Govt. officials and NGOs. Seminars were conducted to find out new techniques and methods developed recently to solve the Environmental problems.

Now under IAMWARM Project, focus is at each Sub Basin level to identify and prioritize the requirements for improvements to storage structures, rehabilitation, new schemes for water harvest, and diversification of crops. Any new schemes or rehabilitation of existing one, consideration of the Environmental issues pertaining to that area and remedial action to overcome the problems is must.

Accordingly, Environmental issues prevailing in the Gadilam Sub basin is taken up under IAMWARM Project.

PENNAIYAR RIVER

Pennaiyar River originates on the South Eastern slope of Chinnakesava Hills in Karnataka State. The river is called Dakshina Pinakini in Karnataka. The river enters into Tamil Nadu at Sakkarasam palli near Bagalur village of Hosur taluk. The total length of river is 432 Km and out of which 112 Km length of river is in Karnataka State and 320 Km is in Tamil Nadu, it confluences in Bay of Bengal at Cuddalore.

GADILAM SUB-BASIN

Gadilam river is a major flood carrier originating from the tank surplus of Marianur Tank and the drainage from Melaphazhengoor Reserve forest in Kallakurichi Taluk of Villupuram District. The Gadilam River sub basin is located between Latitude 79^0 10'25" - 79^0 50'30" and Longitude 11^0 43'30" - 11^0 55'45" and its surrounded by Vellar river basin on the South side, Varahanadhi basin on the North side and bay of Bengal on the East.

The Taluks covered in this Gadilam Sub basin are Sankarapuram, Thirukoilur and Ulundurpet in Villupuram district and Panruti & Cuddalore Taluks in Cuddalore District. The Gadilam Sub Basin area received an average annual rainfall of 920.79mm. The Gadilam sub basin is having 91 Nos. of non-system tanks and 14 Nos. of Anaicuts which is having a total ayacut 9356.95Ha. The river runs about 120Km and finally confluences into Bay of Bengal near Devenampattinam Village in Cuddalore District. Sesha Nadhi and Malattar are the tributaries of Gadilam River.

ENVIRONMENTAL PROBLEMS:

SOIL EROSION:

Soil erosion causes depletion of fertility through removal of valuable surface soil and lead to reduction in the effective arable soil depth and hence it is one of limiting factors for crop production.

SAND MINING:

One of the major problem in river basin related to Sand Mining as it poses major threat to River Bed. Sand quarrying for construction and other purposes is growing at an alarming rate which causes failure of Anicuts and Diversion structures, stagnation of water in the deep mined river bed causing consequent health hazards. This needs to be prevented by all means. Now the sand mining has come under the control of WRO.Sand is being collected only at the approved site and the Regular Territorial Division is closely monitoring.

INDUSTRIAL POLLUTION:

The effluent from industries located in this sub basin are let into ditches ,lands and water drains which ultimately reach the River or supply channels of tanks or lands. Special attention is needed for treating the effluent to avoid water pollution in the sub basin.

SOLID WASTE DISPOSAL:

The problem of Garbage collection and its disposal has assumed importance, in the context of rapid growth of population, urbanization, industrial growth and development. There is no organized scientific method of disposal in all the Municipalities and Panchayats in this sub basin.

AQUATIC WEEDS :

It is observed from the field officers in this basin area that the Aquatic weeds growth Ipomoea locally known as Kadal Palai is found to be in almost 80% of the tanks. According to the officials in the sub basin, the plant growth varies from 40% to 80% in various tanks. In general weeds growth restricts the water storage and loss in capacity of the tanks.

SEWAGE DISPOSAL LET INTO WATER BODIES:

More over in almost all the village no safe disposal of sewage or proper treatment method is adopted. This affect the near by water source directly or affecting the ground water potential indirectly.

So, creating awareness among the Presidents of the local bodies is essential and to motivate them to adapt Solid waste management and Sewage management, wherever required, workshop including field visits, exclusively for them is to be conducted under the IAMWARM project.

ACTIVTIES PROPOSED:

River Basin Monitoring:-

To monitor the quality of water and soil and create database regarding the environmental status for the sub basin, the following activities are proposed at the sub basin level.

Collection and testing of water and soil samples:

Water samples will be collected and tested in the sub basin at identified sampling points regularly. Continuance of collection and testing of water samples is essential, as good and long range data will enable to understand the problems more precisely.

Hence, now it is proposed to collect and test water samples for a period of **Three years** to assess the environmental impact on the quality of surface water of this sub basin more accurately.

In addition to the above identified locations, water samples will also be collected from tanks and near by wells to estimate the level of pollution in selected locations, where sewage is directly let into tanks and Channels. These samples will be tested, to assess the impact on the quality of surface and ground water. Soil samples are to be collected from selected locations to assess the impact on the quality of soil due to various Environmental problems like use of chemical fertilizer and using the polluted water. From these locations numbers of samples at regular interval have to be collected and tested to determine precisely the impact on the degradation of the quality of the soil. Therefore testing soil samples are essential.

Under this item following provisions have been made.

1 Testing charges for the water& soil samples.

2 Provision of Labour charges, purchase of materials, conveyance, driver salary and computer operator.

Transfer of technical know-how for solid waste management system including source segregation, recycle of dry waste and linkage with user agencies.

Now a new scheme for solid waste management plan is under implementation in all municipalities and Panchayats. Under this scheme, collection tank for disposal and non-disposable garbage have been constructed in most of the local bodies. But recycling the

waste and converting the solid waste into manure and production of energy from them are yet to be come up.

Hence demonstration and action programs are planned with user agencies and necessary field visits are programmed to transfer of technical know how for solid waste management system.

Conducting Awareness Programs.

Awareness Programs are necessary to create awareness among the public about environmental aspects and the action to be taken by them to remove or reduce the impacts due to the environmental problems. So far, no awareness Programs were conducted in this sub basin.Hence, to create and motivate the people, Awareness programmes are to be conducted in the villages where sewage is directly let into water bodies. It is also proposed to conduct awareness meetings in School/ Institutions during the study period of three years covering the following subjects in addition to placing Stickers, Tin sheets and Pamphlets containing messages about Environmental Awareness.

- Sanitation. Solid waste treatment.
- Sewage treatment and converting the same into Gas.
- Natural farming.
- Conversion of aquatic weeds into manure etc.

Mode of Execution:

All the works proposed are to be carried out by outsourcing through an Educational Institute.

Total Cost.

The total Proposal cost works out to **Rs.16.70 Lakhs.**
(Rupees Sixteen Lakhs and Seventy Thousand only).

Assistant Engineer, PWD,WRO
Environmental Cell Section-IV
Chepauk, Chennai-5

Asst.Exe. Engineer, PWD, WRO,
Environmental Cell Sub Division -II
Chepauk, Chennai-5.

1.8. GROUNDWATER

1.9 DESIGNS

CHANNEL DESIGN

ChANNEL I (anicut to dividing dam)

Discharge through channel = 12 Cusecs

As per Mannings formula, Velocity (V) = $1/n\ R^{2/3}\ S1/2$

n = 0.025

Bed width = 2M

Full-supply depth = 0.3M

Slope (S) = 1/800

Area (A) = ((2+2.30)/2) x0.30

= 0.645 M^2

Wetted perimeter (P) = $2+2(\sqrt{(0.30^2+(0.15)^2})$

= 2.67M

Hydraulic Mean Depth R = A/P = 0.24M

Velocity (V) = $1/0.25\ *(0.30)^{2/3}*(1/800)$

= 0.62 M/S

Discharge (Q) = A*V

= 0.645*0.62

= $0.40M^3/S$

(or) = 14.21 Cusecs >12.00 Cusecs

Hence safe

ChANNEL I (Dividing dam to direct ayacut channel end)

Discharge through channel = 8.27 Cusecs

As per Munnings formula, Velocity (V) = $1/n\ R^{2/3}\ S1/2$

n = 0.025

Bed width = 2M

Full supply depth = 0.3M

Slope (S) = 1/1000

Area (A) = ((2+2.30)/2) x0.30

= 0.645 M^2

Wetted perimeter (P) = $2+2(\sqrt{(0.30^{12}+(0.15)^2)}$

= 2.67M

Hydraulic Mean Depth R = A/P = 0.24M

Velocity (V) = $1/0.25 *(0.36)^{2/3}*(1/1000)^{1/2}$

= 0.62 M/S

Discharge (Q) = A*V

= 0.645*0.49

= $0.32M^3/S$

(or)* = 11.23 Cusecs >8.27 Cusecs

Hence safe

ChANNEL I (Dividing dam to direct ayacut channel end)

Discharge through channel = 3.44 Cusecs

As per Mannings formula, Velocity (V) = $1/n\ R^{2/3}\ S1/2$

n = 0.025

Bed width = 1.5M

Full supply depth = 0.3M

Slope (S) = 1/1200

Area (A) = ((1.5+1.830)/2) x0.30

= 0.495 M^2

Wetted perimeter (P) = $1.5+2(\sqrt{(0.30^{12}+(0.15)^2)}$

= 2.17M

Hydraulic Mean Depth R = A/P = 0.23M

Velocity (V) = $1/0.25 *(0.36)^{2/3}*(1/1200)^{1/2}$

= 0.43 M/S

Discharge (Q) = A*V

= 0.495*0.43

= $0.21M^3/S$

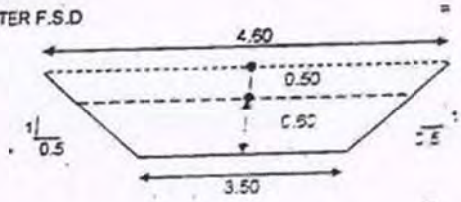
(or) = 7.41 Cusecs >3.44 Cusecs

Hence safe

Hydraulic Calculation

CHECK THE ADEQUANCY OF THE EXIXTING SUPPLY CHANNEL

Total Ayacut	=	261.50 Acres
Requirement of water	=	6 Acres/Mcft
Hence the total requirement of water is	=	43.60 Mcft
It is proposed to give supply in 7 days	=	7 days
Therefore the discharge required per second	=	$\frac{43.60 \times 10^6}{7 \times 24 \times 60 \times 60}$
	=	72 Cusecs
Add 20% for Evaporation & Transmission losses	=	14.42 Cusecs
(i.e) 72 + 14.42	=	86.51 Cusecs
	or	2.45 cumecs
BED WIDTH	=	3.50 M
SIDE SLOPE	=	1 IN 2000
MANNINGS COEFFICIENT (N)	=	0.025
FREE BOARD	=	0.50 M
DEPTH OF WATER F.S.D	=	0.60 M



Area

Perimeter

R^2/3

AREA "A"	=	4.46 Sq m
WETTED PERIMETER "P"	=	5.96 m
HYDRAULIC MEAN RADIUS R = A/P	=	0.75 m
VELOCITY "V" = $1/n \times R^{2/3} \times S^{1/2}$	=	0.74 m/sec
DISCHARGE "Q" = V x A	=	3.28 m^3/sec

carrying discharge = 115.90 cusecs

The carrying capacity of the existing supply channel is 115.90 cusecs against the required discharge of 86.51 cusecs

DIVIDING DAM DESIGN

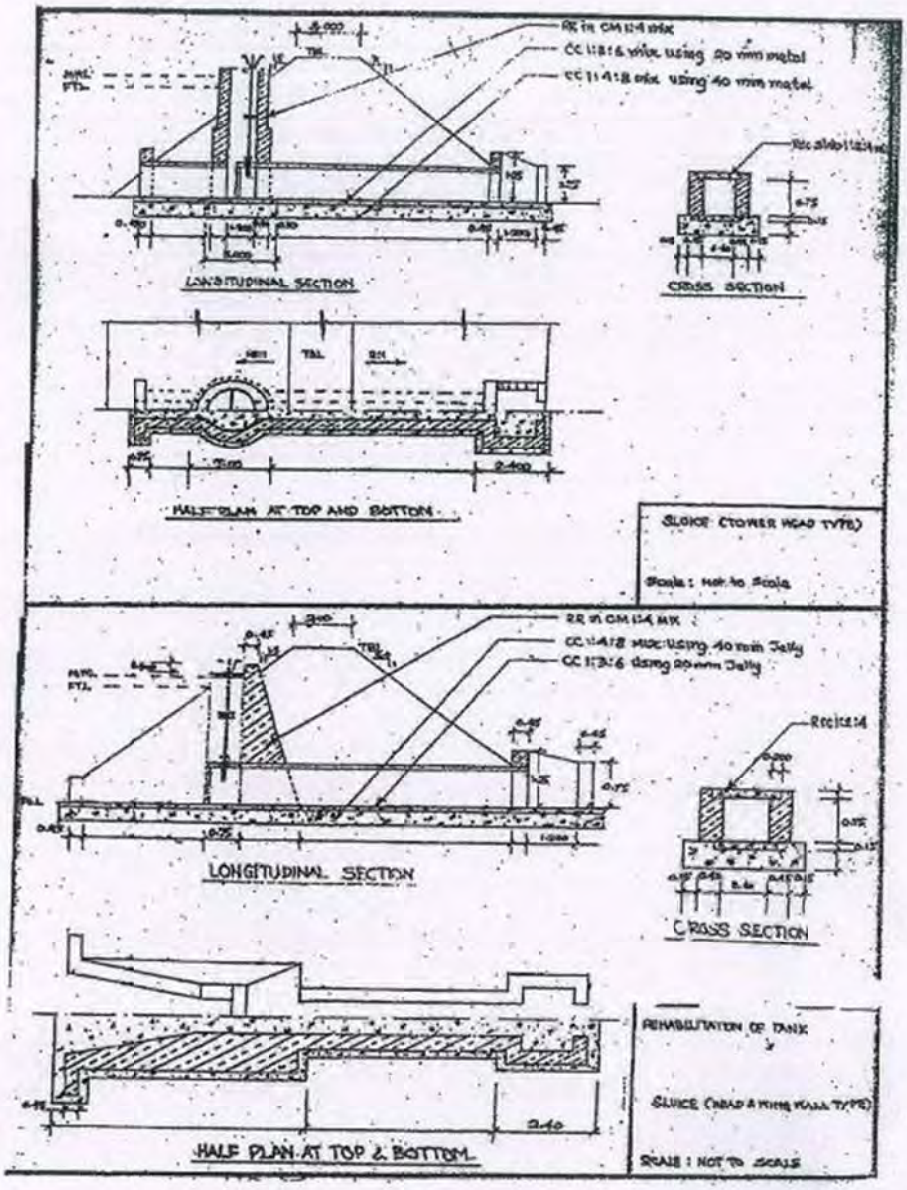
Discharge through Channel	I	=	8.27 Cusecs
	Q	=	$5A\sqrt{h}$
	A	=	Area
	h	=	Head
	8.27	=	$5 \times A \times \sqrt{0.75}$
	A	=	1.91 Square feet
		=	(or) 0.18 Square Meters
	Adopt vent size	=	0.7m x 0.3m
			0.21>0.18

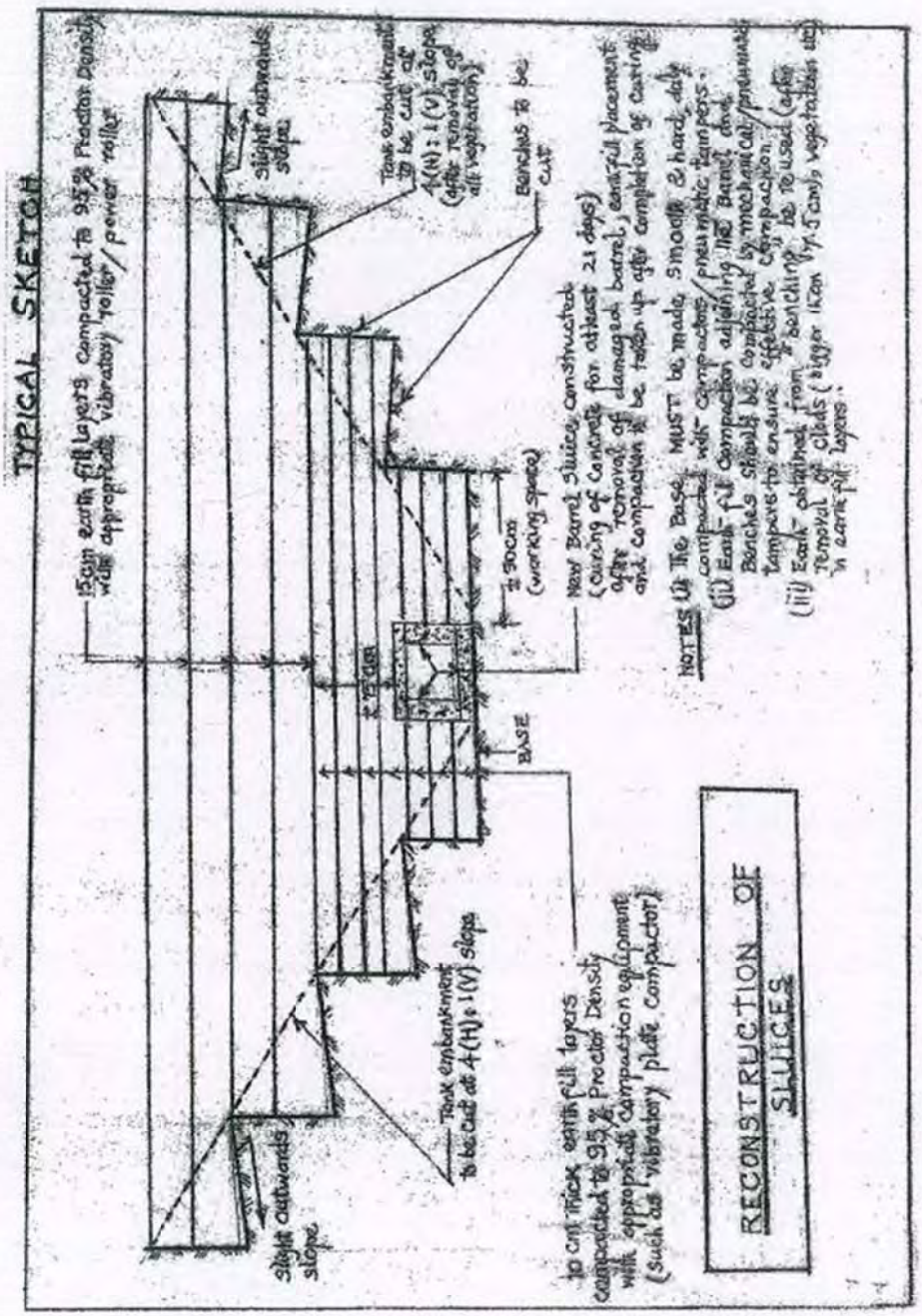
Hence safe

ROAD CULVERT DESIGN

Discharge through channel		=	12 Cusecs
Channel bed level		=	138.950m
Road level		=	139.650m
Bed Width		=	2m
Full supply depth		=	0.3m
Difference between Road level and Channel bed level		=	0.7m
Velocity	(V)	=	0.62 M/S
	Q	=	$6A\sqrt{h}$
	A	=	Area
	h	=	Head
Discharge (Q)		=	$6x[2x3.28)x(0.7x3.28)x\sqrt{0.25}]$
		=	45.18 Cusecs > 12 Cusecs
	Hence safe		
Velocity (V)		=	1.27 / (2 x 0.7)
		=	0.91 M/S > 0.62 M/S

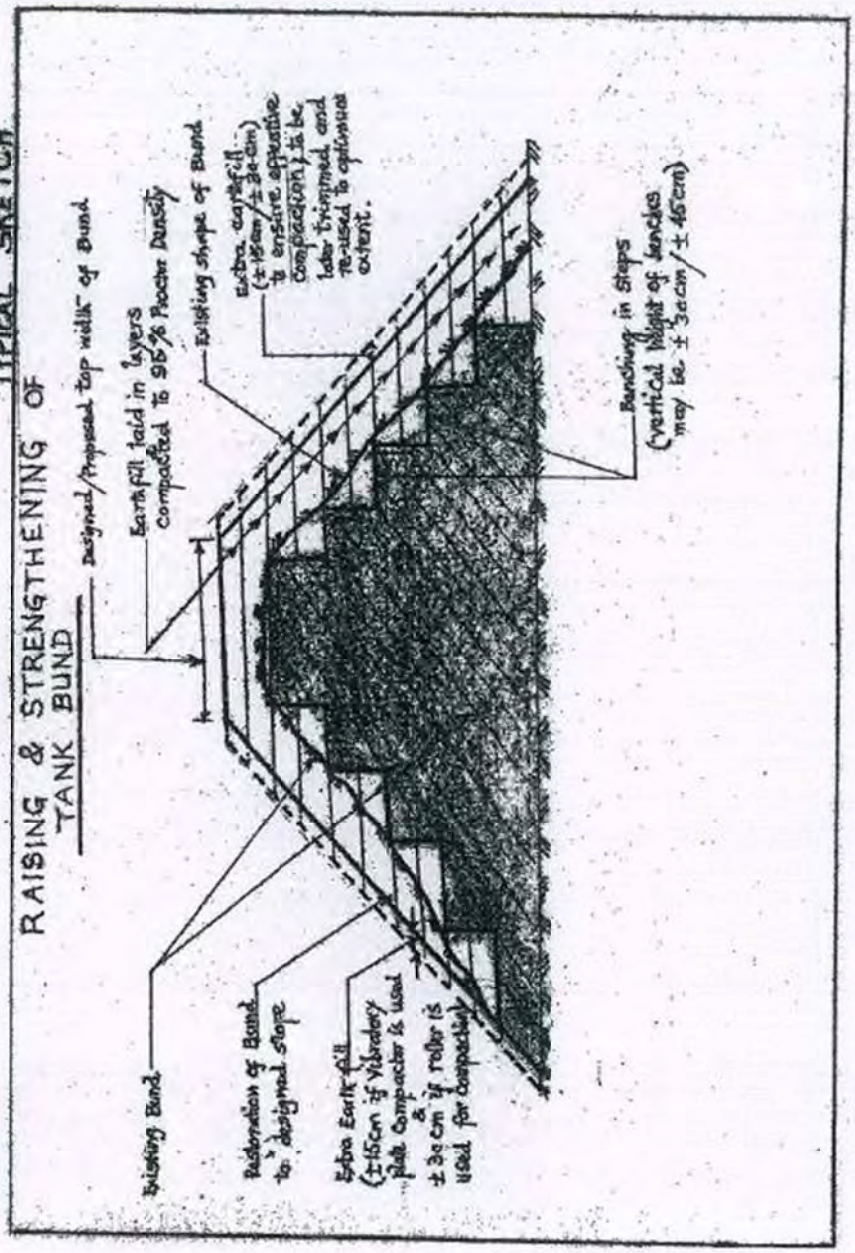
Velocity is within the permissible limit.

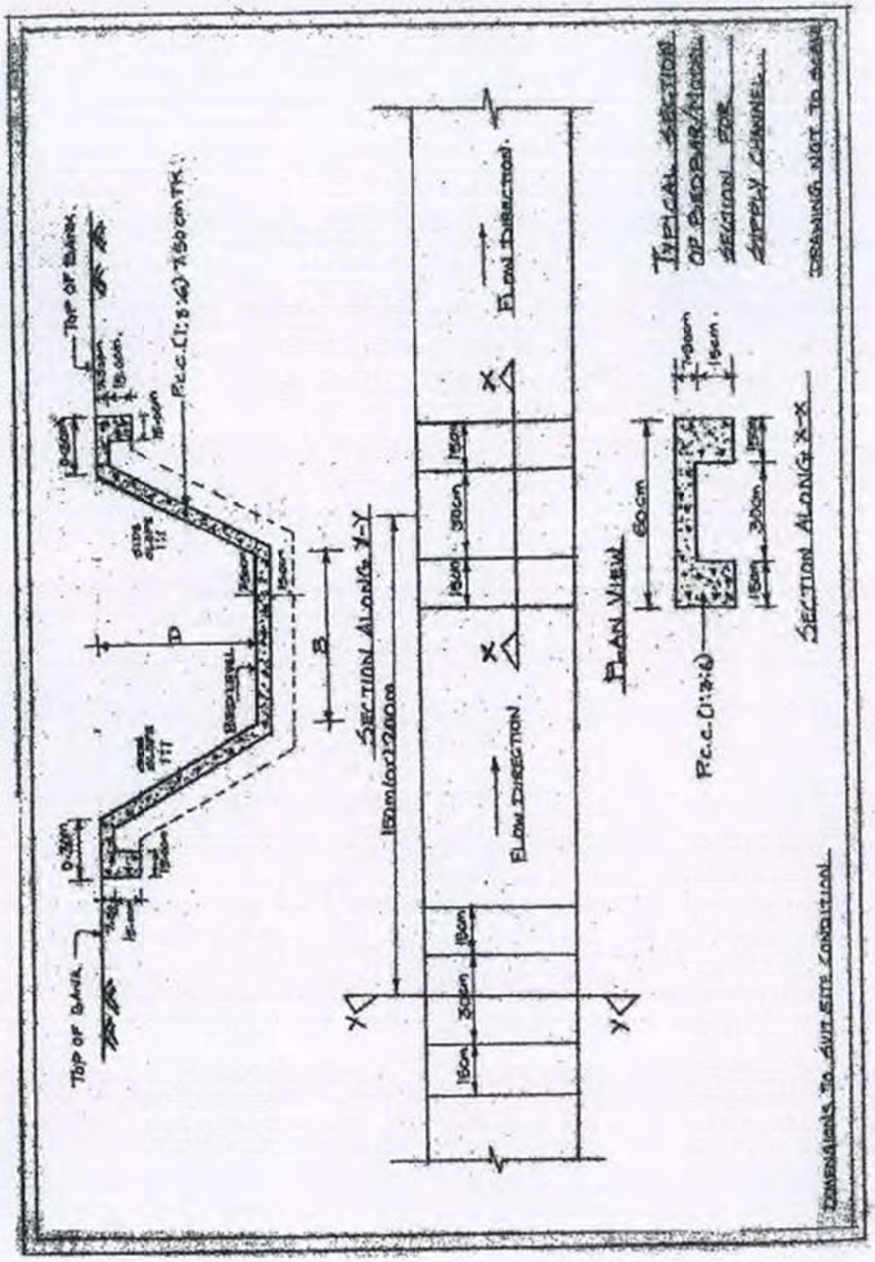

LONGITUDINAL SECTION
CROSS SECTION
HALF PLAN AT TOP AND BOTTOM
SLUICE (TOWER HEAD TYPE)
Scale : not to Scale
LONGITUDINAL SECTION
CROSS SECTION
HALF PLAN AT TOP & BOTTOM
REHABILITATION OF TANK
SCALE : NOT TO SCALE

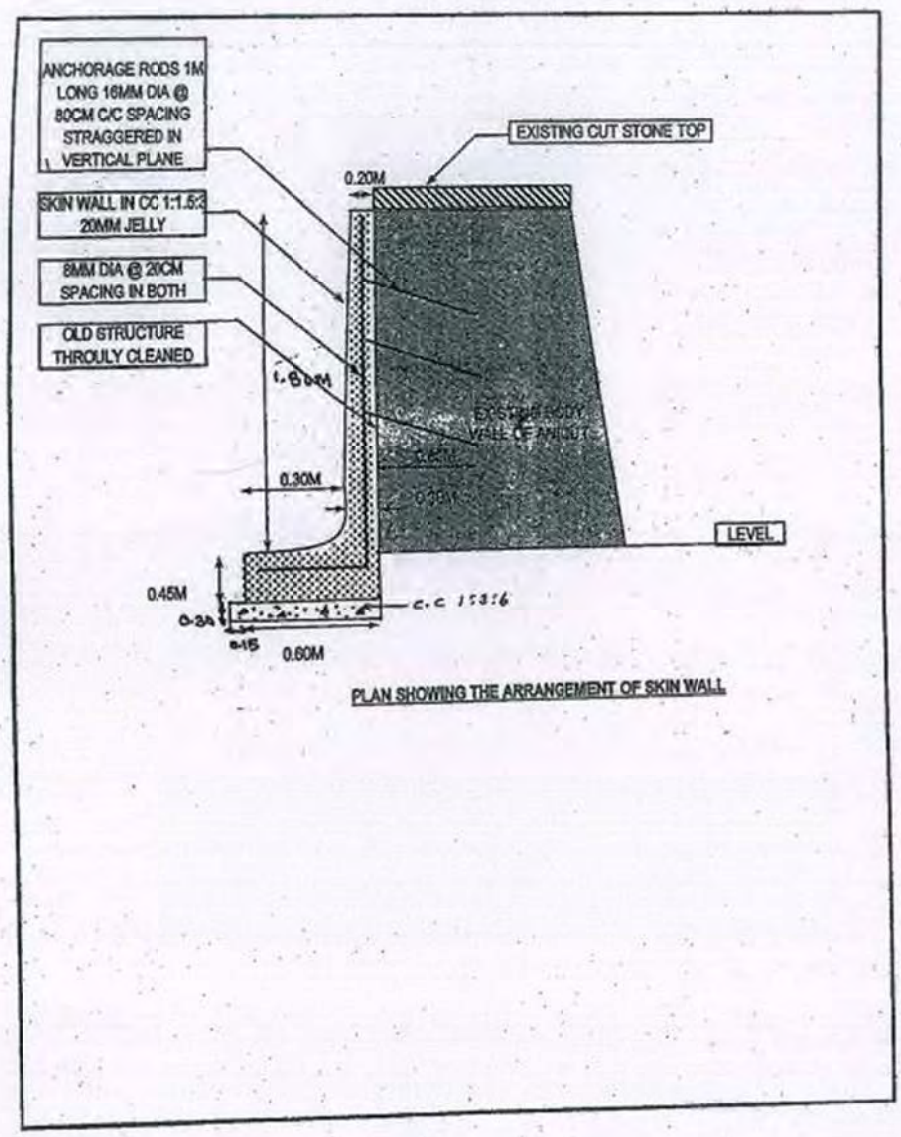

TYPICAL SKETCH
15cm earth fill layers compacted to 95% Proctor Density with appropriate vibratory roller/power roller
Slight outwards slope
Tank embankment to be cut at 4(H):1(V) slope (after removal of all vegetation)
Benches to be cut
90cm (working space)
New Barrel Sluice Construction (Curing of Concrete for atleast 21 days) after removal of damaged barrel, careful placement and compaction to be taken up after completion of curing
BASE
Slight outwards slope
Tank embankment to be cut at 4(H):1(V) slope
30 cm thick earth fill layers compacted to 95% Proctor Density with appropriate compaction equipment (such as vibratory plate compactor)
NOTES (i) The Base MUST be made Smooth & hard, duly compacted with compactors/pneumatic tampers.
(ii) Earth-fill Compaction adjoining the Barrel and Benches should be compacted by mechanical/pneumatic tampers to ensure effective compaction.
(iii) Earth obtained from benching to be reused (after removal of clods (bigger than 7.5 cms) vegetables etc) in earth fill layers.
RECONSTRUCTION OF SLUICES

TYPICAL SKETCH

RAISING & STRENGTHENING OF TANK BUND

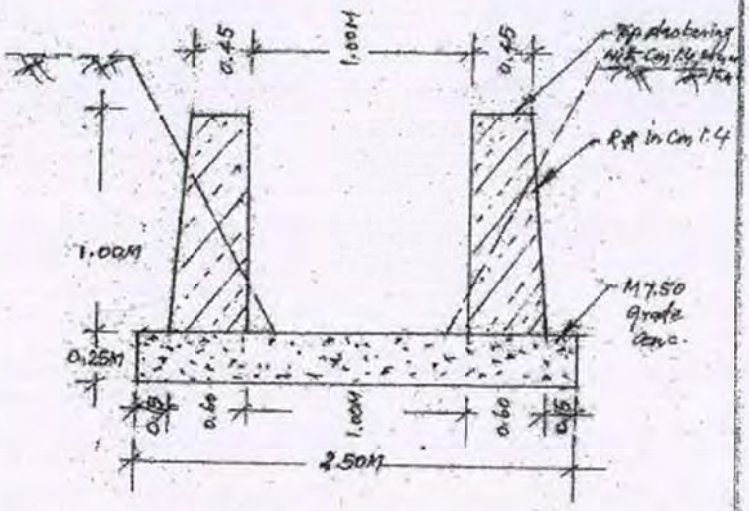



TOP OF BANK
TOP OF BANK
R.C.C. (1:3:6) 7.50cm TK.
BED LEVEL
D
B
SECTION ALONG Y-Y
150m (or) 200m
FLOW DIRECTION
FLOW DIRECTION
PLAN VIEW
60cm
R.C.C. (1:3:6)
SECTION ALONG X-X
TYPICAL SECTION OF BED BAR/MODEL SECTION FOR SUPPLY CHANNEL
DRAWING NOT TO SCALE
DIMENSIONS TO SUIT SITE CONDITION

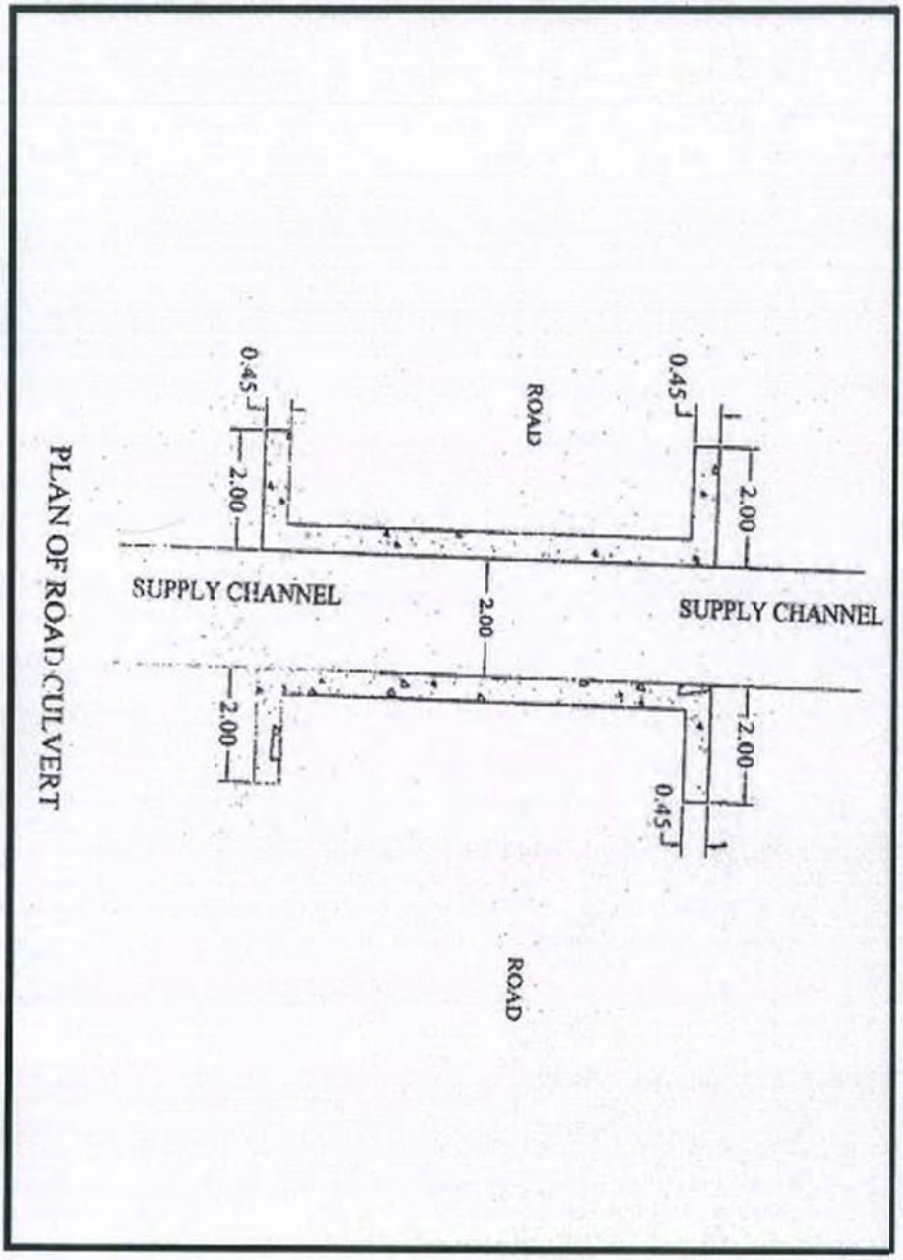


PLAN SHOWING THE ARRANGEMENT OF SKIN WALL

SELECTIVE LINING IN THE SUPPLY CHANNELS WHERE THE CANAL EMBANKMENT IS WEAKER.



CROSS SECTION OF RETAINING WALL


PLAN OF ROAD CULVERT
ROAD
0.45
2.00
0.45
2.00
SUPPLY CHANNEL
2.00
SUPPLY CHANNEL
2.00
2.00
0.45
1
ROAD

Design of ANICUT

Sub surface Condition (Khosla's Theory) for Anicut

Design Data:

Crest level of Anicut	= +	16.980	m		
Rear M.F.L	= +	20.103	m	(From RWL calculation)	
Front M.F.L	= +	20.500	m		
Crest Level	= +	16.980	m		
Maximum Discharge	=	49000	c/s	=	1387.53 cumecs
Design discharge	= 49000		c/s	=	1387.53 cumecs
Maximum Discharge thro' Anicut	=	49000.00	c/s	=	1387.51 cumecs
U/s bed level	= +	15.40	m		
D/s bed level	= +	15.40	m		
Exit gradient	1 in	5.00		=	0.2
Floor thickness at D/s end	=	0.60	m		
Floor thickness at U/s floor	=	0.60	m		
Thickness of Cut off wall	=	0.60	m		
Clear waterway thro' Anicut	=	158.53	**m**		
Discharge thro anicut	=	1387.51	m^3/	**Sec**	
Normal Scour Depth		5.70	m		

Sl.No.	Item			Discharge thro' the Anicut
1	Discharge		cumecs	1387.51
2	Clear water way		m	158.53
3	Normal Scour Depth, R		m	5.70
4	Discharge intensity (q)		m^3/s / m	8.75
5	D/s Water level		m	20.10
6	U/s Water level		m	20.50
7	U/s Scour Level	= U/s Water level - 1 R		14.80
8	D/s Scour Level	= D/s Water level - 1.25 R		12.98
9	Depth of U/s cutoff	= Max(U/s bed Lvl - U/s scour lvl,y/3+0.6)		2.30
	Provide			**2.30**
10	Depth of D/s cutoff	= Max(D/s bed Lvl - D/s scour lvl or y/2+0.6)		2.95
	Provide			**3.00**
	λ			**0.73**
	α			**0.00**
11	Exit Gradient, G_e			0.200
12	Head for exit gradient, H			1.58
13	Total Length of the floor required			0.00
13	Total Length of the floor required from surface			14.50

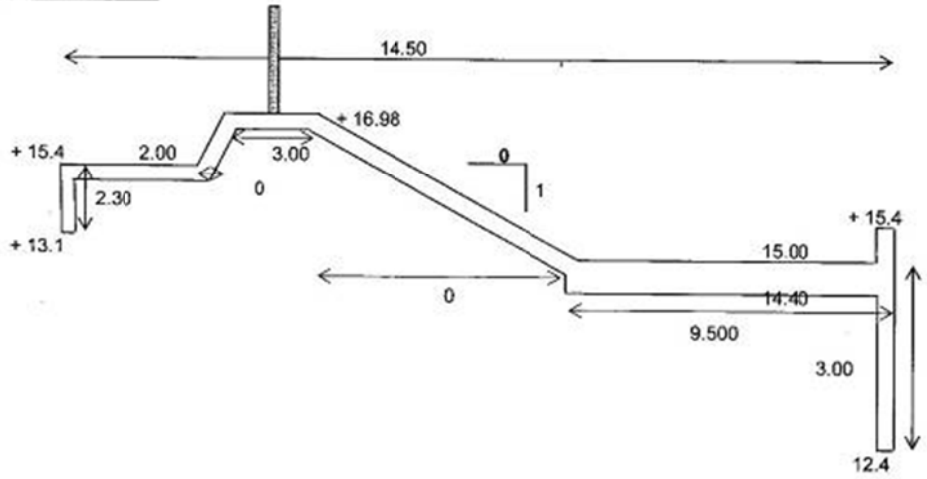
The Length of the Horizontal floor required under surface flow condition is more than the total length of horizontal floor required under Sub Surface flow condition. Hence the floor Length required under the Surface flow condition is adopted.

Exit gradient, $G_e = \frac{H}{d} \times \frac{1}{\pi\sqrt{\lambda}}$

where, $\lambda = \frac{1+\sqrt{(1+\alpha^2)}}{2}$

$\alpha = \frac{b}{d}$

Hydraulic Gradient Line



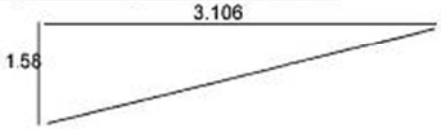
For static condition the U/s water level has been taken as FRL = 16.98

For dynamic condition the U/s water level has been taken as FMFL = 20.50

Sl.No.	Item		Pile 1	Pile 2
1	Total length of the floor	b	**14.50**	**14.50**
2	Depth of the pile	d	2.30	3.00
3	Thickness of the floor		0.60	0.60
4		α = b / d	6.30	4.83
5		$\lambda = (1+\sqrt{1+\alpha^2})/2$	3.69	2.97
6		$\phi_E = 1/\pi \cos{-1}((\lambda-2)/\lambda)$	34.85	39.43
7		$\phi_D = 1/\pi \cos{-1}((\lambda-1)/\lambda)$	23.99	26.93
8		$\phi_{C1} = 100-\phi E$ (ϕ_{C2} = 0%)	65.16	0.00
9		$\phi_{D1} = 100-\phi_D$ ($\phi_{D2} = \phi_D$)	76.01	26.93
10		ϕ_{E1} = 100% ($\phi_{E2} = \phi_E$)	100.00	39.43

TVI 2

3.Reservoir at FRL, no tailwater, with uplift condition



SLNO	DESCRIPTION				FORCE		L.A	MOMENT	
	Coefficient	length	depth	Unit wt.	V	H		+	-
Weight of masonry									
1	0.5	0.158	1.580	2.4	0.299568		3.000667	0.898904	
2	1	2	1.580	2.4	7.584		1.948	14.77363	
3	0.5	0.948	1.580	2.4	1.797408		0.632	1.135962	
weight of water									
a	0.5	0.158	1.58	1	0.12482		3.053333	0.381117	
Water Pressure									
i	0.5	1.58	1.58	1		1.2482	0.526667		0.657385
uplift pressure									
	0.5	3.106	1.58	1	-2.45374		2.070667		5.080878
				ΣV=	**7.35206**		ΣM=	**17.1896**	**5.73826**

Base width= 3.106

$\bar{X}$= ΣM /ΣV = 1.557571

$\bar{e}$ = b/2-$\bar{X}$ 0.004571

6e/b= 0.008831

Maximum stress = ΣV/b*(1+6e/b)

= **2.38795** T/m^2

Minimum stress = ΣV/b*(1-6e/b)

= **2.34615** T/m^2

STRESS		Maximum	Minimum
Condition I	Empty condition	4.220 T/m^2	2.014 T/m^2
Condition II	MWL condition	-0.781 T/m^2	-0.083 T/m^2
Condition III	FRL condition	2.388 T/m^2	2.346 T/m^2

flow condition	U/s water level in m	D/s water Level in m	Head in m	Height of Sub soil Hydraulic gradient line above the datum					
				Sheet pile 1			Sheet pile 2		
				ϕ_{C1}	ϕ_{D1}	ϕ_{E1}	ϕ_{E2}	ϕ_{D2}	ϕ_{C2}
				100	76.01	70.27	33.34	26.93	0
Static	16.98	15.40	1.58	1.58 16.98	1.20 16.60	1.11 16.51	0.53 15.93	0.43 15.83	0 15.40
Dynamic	20.50	20.10	0.40	0.40 20.50	0.30 20.40	0.28 20.38	0.13 20.24	0.11 20.21	0 20.10

FLOOR THICKNESS

Static Condition

Distance from centre of D/s pile	2.3	4.3	8.3	9.200
Unbalanced head	1.02	1.11	1.28	1.31
Thickness of the floor required	0.8	0.8	1.0	1.0

Max thickness at Toe for static condition **1.0** **m**

Dynamic Condition

Level at jump formation	= 16.84	m	
Distance at jump form (from mid d/s cut-off)	= 9.5 - 0.3 + ((16.84 - 15) x 0)		9.5
	= 9.2	m	9.2
Dynamic Head at jump formation	= 2.25	m	-81.2
Head considered for Dynamic flow	= 1.500		
	= 1.5004	m	
Thickness of the floor required	= 1.07171	m	

Thickness provided at toe 1.1 m

Design of Anicut

Surface flow condition

Design Data:

Crest of Anicut	= + 16.980 m			
Rear M.F.L	= + 20.103 m	(From RWL calculation)		
Front M.F.L	= + 20.500 m			
Pond Level	= + 16.980 m			
Maximum Discharge	= 49000 c/s	=	1387.53	cumecs
Design discharge	= 49000 c/s	=	1387.53	cumecs
U/s bed level	= + 15.40 m			
D/s bed level	= + 15.40 m			
Width of the River	= 160.00 m			
Exit gradient	1 in 5	= 0.2		
Floor thickness at D/s end	= 0.6 m			
Floor thickness at U/s floor	= 0.6 m			
Thickness of Cut off wall	= 0.6 m			
Discharge thro anicut	= 1387.51	m^3/ **Sec**		From FMFL

Design for surface flow condition:

Clear waterway

Clear waterway thro' Anicut = **158.53 m** FROM MFL CALCULATION

Total width of the barrage = **160.00 m**

Scour depth and looseness factor

Total width of weir = 160.00

Discharge intensity/Unit discharge = q = 8.6721 $m^3/s/m$

Regime width, R = $4.83\sqrt{Q}$

= 4.83 sqrt (1387.53)

= 179.92 m

Looseness Factor = $\frac{\text{Existing overall length}}{\text{Regime width}} = \frac{160.00}{179.92}$

= 0.89 < 1

Normal Scour Depth

Scour Depth = **1.35 x (q^2 / f) 1/3**

= 5.6983 **m**

Silt factor, f = 1.00

2.Fixing Stilling basin level:

The flood of 1387.53 m^3/sec is being taken as the flood with concentration

hence Design Scour depth = 5.6983 m

Height of water in the upstream = 5.100 m

Hydraulic jump calculations:

Sl.No.	Item			Discharge thro' the Anicut
1	Discharge		cumecs	1387.51
2	Clear water way		m	158.53
6	Discharge intensity (q)		m^2/s	8.75
3	D/s Water level (RWL)		m	20.10
4	U/s Water level (FMFL)		m	20.500
5	Velocity of approach, V_a	= Q / A		1.52
6	Velocity head, h_{va}	= $V_a^2 / 2g$		0.12
7	U/s Total Energy Line, U/s T.E.L	= FMFL + h_{va}		20.62
8	D/s velocity, V_d			1.77
9	Velocity head, h_{vd}	= $V_d^2 / 2g$		0.16
10	D/s Total Energy Line, D/s T.E.L	= RWL + h_{vd}		20.26
11	Head loss, H_L	= U/s T.E.L - D/s T.E.L		0.36
12	Postjump Depth, D_2			2.98
13	D/s specific energy, E_{f2}	= $D_2 + V_2^2 / 2g$		3.42
14	Froude's Number F_2	= $V_2 / \sqrt{(g \times D_2)}$		0.54
15	Prejump Depth corres to D_2 (D_1)	= $D_2 / 2 \times (-1 + \sqrt{(1+8F_2^2)})$		1.24
16	Velocity (V_1)	= q / D1		7.05
17	Froude's Number, F_1	= $V_1 / \sqrt{(g \times D_1)}$		2.02
18	D/s specific energy, E_{f1}	= $D_1 + V_1^2 / 2g$		3.78
19	$E_{f1} - E_{f2} - H_L = 0$			0.00
20	Level at which jump formation	= D/s T.E.L - E_{f2}		16.84
21	Length of the stilling basin	= 5 x (D_2 - D_1)		8.70

Total horizontal floor length required under surface flow condition:

Existing D/s Bed Level		=	15.40
Jump Formation level		=	16.84
Stilling Basindepth		=	Depth is not reqd
Depth provided			0.40
Stilling Basin level			15.00
1.D/S floor length (hydraulic criteria)(Basin length+cutoff)			9.3036 m
Body width	**3** Rear slope 1: 0		
Width of body wall (from Stability calculation at basin level)			3.00 m
3. Length of U/S floor (Assumed)		=	2.00 m
			14.304 m
However provide a length of	14.500		
Revised length of Basin	9.500		

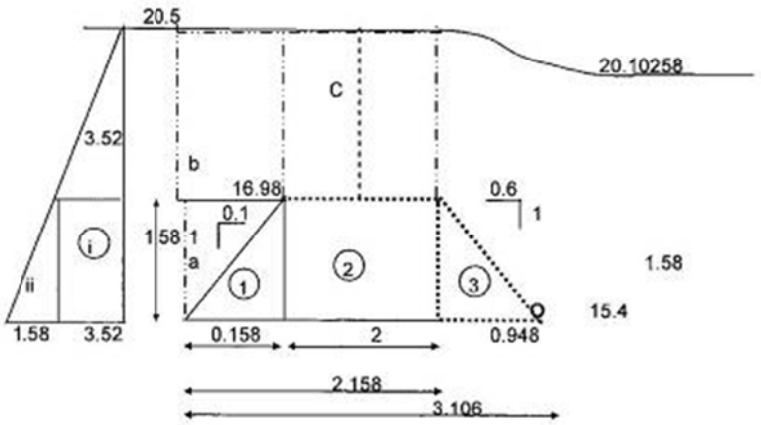
TU 1 (5)

Stability Analysis of Check Dam
HYDRAULIC PARTICULARS

Maximum flood discharge		1387.512 m3/sec	49000 c/s
Top of crest	+	16.980 m	
FMFL	+	20.500 m	
RWL	+	20.103 m	
Upstream bed level	+	15.40 m	
Downstream Bed level	+	15.40	
Head over Crest		3.52	
Down stream side slope		0.6 H to 1 V	
Upstream side slope		0.1 H to 1 V	
Top width		2 m	
1.5times width of weir		3	

The stabiiity of body wall of the anicut was checked for the following conditions

1 Reservoir empty withoutEQ
2 Reservoir at MWL,with tailwater with uplift
3 Reservoir at FRL, no tail water with uplift



Stability analysis: 1.Reservoir empty without EQ

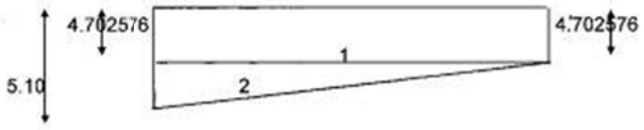
SLNO	DESCRIPTION				FORCE		L.A	MOMENT	
	Coefficient	iength	depth	Unit wt.	V	H	+	+	-
Weight of masonry									
1	0.5	0.158	1.580	2.4	0.299568		3.000667	0.898904	
2	1	2	1.580	2.4	7.584		1.948	14.77363	
3	0.5	0.948	1.580	2.4	1.797408		0.632	1.135962	
				ΣV=	**9.68098**		ΣM=	**16.8085**	

Base width=		3.106	
$\overline{X}$=	ΣM / ΣV =	1.73624	
e = b/2-$\overline{X}$		0.18324	0.517667
6e/b=		0.353973	

Maximum stress = ΣV/b*(1+6e/b)
= **4.22015** T/m^2

Minimum stress = ΣV/b*(1-6e/b)
= **2.01358** T/m^2

2.Reservoir at MWL, with tailwater, weir with uplift



SLNO	DESCRIPTION				FORCE		L.A	MOMENT	
	Coefficient	length	depth	Unit wt.	V	H		+	-
Weight of masonry									
1	0.5	0.158	1.580	2.4	0.299568		3.000667	0.898904	
2	1	2	1.580	2.4	7.584		1.948	14.77363	
3	0.5	0.948	1.580	2.4	1.797408		0.632	1.135962	
weight of water									
a	0.5	0.158	1.58	1	0.12482		3.053333	0.381117	
b	1	0.158	3.520	1	0.55616		3.027	1.683496	
c	1	1.000	3.520	1	3.52		2.448	8.61696	
Water Pressure									
i	1	3.52	1.58	1		5.5616	0.79		4.393664
ii	0.5	1.58	1.58	1		1.2482	0.526667		0.657385
Uplift Pressure									
1	1	3.106	4.702576	1	-14.6062		1.553		22.68343
2	0.5	3.106	0.40	1	-0.6172		2.070667		1.278016
				ΣV=	**-1.3414**		ΣM=	**27.4901**	**29.0125**

Base width=		3.106
$\overline{X}$=	ΣM /ΣV =	1.134913
$\overline{e}$ = b/2-$\overline{X}$		0.418087
6e/b=		0.807637

Maximum stress = ΣV/b*(1+6e/b)
= **-0.7807** T/m^2

Minimum stress = ΣV/b*(1-6e/b)
= **-0.0831** T/m^2

Design of Flexible Protection

Design Data:

Rear M.F.L	= + 20.103 m	(From RWL calculation)		
Maximum Discharge	= 49000.462 c/s	=	1387.53 cumecs	
D/s bed level	= + 15.40 m			
Scour Depth, R	= 5.70 **m**			

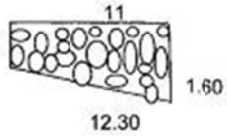
Downstream Block Protection: (As per clause 20.2. of IS 6966(part I) - 1989)

The likely extent of scour for D/s flexible protection	= 1.75 x R			
Design Depth of scour below the floor level, D	= 5.270			
Length of downstream block protection 1.5 x D	= 7.90			

Hence Provide **5** Nos of CC Blocks of size 1.5 x 1.5 x 0.9 m

Downstream Launching Apron: (As per clause 20.3 of IS 6966(part I) - 1989)

Length of launching apron	= 1.5	to	2.5	x D	
	= 7.90428	to	13.17		
Provide a length of	= 11 m				
Slope of the River	= 1	in	450		
River Slope in m/km	= 2.22222	(Restricted to 0.4)			
Thickness of pitching (τ)	= 850	mm	(clause 20.3.4)		
Thickness of pitching reqd for covering the launched slo	= 1.25 x τ				
	= 1062.5	mm			
	= 1.1	m			



Qty of stone required 12.2984*1.1	13.53	m^3		
Provide a slope of	= 2	in	1	
Length of launched portion	12.298	m		

Tk of stone at the inner edge shall corresponds to the quantity required for a tk of τ

0.85 *12.2984	10.45	m3	
Inner Tk	1.000	m	
Remaining Qty	3.07	m^3	
Quantity to be provided in the sloped portion	3.0745	m^3	
Thickness required at the edge	0.559	m	
	0.60	m	
Provide an outer Thickness of	**1.60**	m	
Quantity provided at the Launched section	14.3	m3	> 13.53

Hence the Quantity of Pitching provided is more than the Required Quantity of Pitching.

Upstream Protection

M.F.L	= + 20.50 m	(From RWL calculation)		
Maximum Discharge	= 49000 c/s	=	1387.51 cumecs	

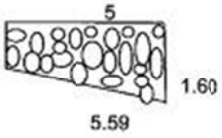
U/s bed level	= +	15.40	m			
Scour Depth, R	=	5.70	**m**			

Upstream Block Protection: (As per clause 20.2. of IS 6966(part I) - 1989)

The likely extent of scour for D/s flexible protection	=	1.25 x R				
Design Depth of scour below the floor level, D	=	2.0				

Upstream Launching Apron: (As per clause 20.3 of IS 6966(part I) - 1989)

Length of launching apron	=	1.5	to	2.5	x	D
	=	3.03439	to	5.06		
Provide a length of	=	5	m			
Slope of the River	=	1	in	450		
River Slope in m/km	=	2.22222	(Restricted to 0.4)			
Thickness of pitching (τ)	=	850	mm	(clause 20.3.4)		
Thickness of pitching reqd for covering the launched slo	=	1.25 x τ				
	=	1062.5	mm			
	=	1.065	m			



Qty of stone required 5.5902*1.065	5.95	m^3			
Provide a slope of	=	2	in	1	
Length of launched portion	5.590	m			

Tk of stone at the inner edge shall corresponds to the quantity required for a tk of τ

0.85 *5.5902	4.75	m3			
Inner Tk	1.000	m			
Remaining Qty	1.20	m^3			
Quantity to be provided in the sloped portion	1.20185	m^3			
Thickness required at the edge	0.481	m			
	0.60	m			
Provide an outer Thickness of	**1.60**	m			
Quantity provided at the Launched section	6.5	m3	>	5.95	

Hence the Quantity of Pitching provided is more than the Required Quantity of Pitching.

TVI 7

THIRUVATHIGAI ANICUT

Fixing the FMFL

Design Discharge		:	**1387.51** m^3/sec	49000 c/s	
Crest Level		:	16.980 m	1387.51	
Us Bed level		:	15.400 m	1388	
Assume FMFL		:	**20.500** m		
RWL		:	20.103 m		
Height of weir	=(16.98-15.4)	:	1.58		
Head over crest		:	**3.52** m		
1.33 times of design head			4.68 m		
Va=Q/A	1387.51238850347/(160*(1.58+3.52))	:	1.7 m/s		
hv=head due to vellocity of approach	$Va^2/2g$	:	**0.15**		
Effective head =	$He = Ho + Va^2/2g$	:	**3.67**		
Total length of structure between abutments			160 m		
Length of anicut portion			160 m		
Effective Length	Le=L-2(kp*n+Ka)he		158.53308 m		
	Ka =	0.2			
Width of the weir			2 m	from stability	
			3 m	**Sharp crest**	

Discharge over the check dam - The check dam functions as a BC Weir

$Q = Q_1 + Q_2$ where

$Q_1 = 2/3 * C_{d1} * (2g)^{(0.5)} * B * \{(h+hv)^{(3/2)} - hv^{(3/2)}\}$ free weir equation

$Q_1 = C_{d2} * (2g(h+hv))^{(0.5)} * B * h_1$ drowned weir equation

Cd_1	0.577	
Cd_2	0.8	
h = FMFL - RMFL	0.39742446	m
hv=	0.15	m
B = Clear water way	158.533081	m
Effective width B	158.533081	m
h_1 = depth of d/s water level above crest	3.12	m
Q_1 = 2/3* 0.577 * (2*9.81)^(0.5) * 158.533080530071* {(0.4+0.15)^(3/2) -0.15^(3/2)}=	93.3265013	m^3/sec
Q_{2*} 0.8 *(2*9.81 * (0.4+0.15))^(0.5) *158.53 * 3.12 =	1294.67348	m^3/sec
Total discharge over check dam	1387.99998	m^3/sec

Total Discharge through over check dam	1388.00
Design Discharge	1387.51

Design of ANICUT

Sub surface Condition (Khosla's Theory) for Anicut

Design Data:

Crest level of Anicut	= +	5.465	m		
Rear M.F.L	= +	6.303	m	(From RWL calculation)	
Front M.F.L	= +	8.400	m		
Crest Level	= +	5.465	m		
Maximum Discharge	=	49000	c/s	=	1387.53 cumecs
Design discharge	= 49000		c/s	=	1387.53 cumecs
Maximum Discharge thro' Anicut	=	49000.00	c/s	=	1387.51 cumecs
U/s bed level	= +	3.53	m		
D/s bed level	= +	3.53	m		
Exit gradient	1 in	5.00		=	0.2
Floor thickness at D/s end	=	0.60	m		
Floor thickness at U/s floor	=	0.60	m		
Thickness of Cut off wall	=	0.60	m		
Clear waterway thro' Anicut	=	133.74	**m**		
Discharge thro anicut	=	1387.51	m^3/	**Sec**	
Normal Scour Depth		6.38	m		

Sl.No.	Item			Discharge thro' the Anicut
1	Discharge		cumecs	1387.51
2	Clear water way		m	133.74
3	Normal Scour Depth, R		m	6.38
4	Discharge intensity (q)		m^3/s / m	10.38
5	D/s Water level		m	6.30
6	U/s Water level		m	8.40
7	U/s Scour Level	= U/s Water level - 1 R		2.02
8	D/s Scour Level	= D/s Water level - 1.25 R		-1.67
9	Depth of U/s cutoff	= Max(U/s bed Lvl - U/s scour lvl,y/3+0.6)		2.22
	Provide			**2.20**
10	Depth of D/s cutoff	= Max(D/s bed Lvl - D/s scour lvl or y/2+0.6)		5.20
	Provide			**5.20**
	λ			**0.35**
	α			**0.00**
11	Exit Gradient, G_e			0.200
12	Head for exit gradient, H			1.94
13	Total Length of the floor required			0.00
13	Total Length of the floor required from surface			21.00

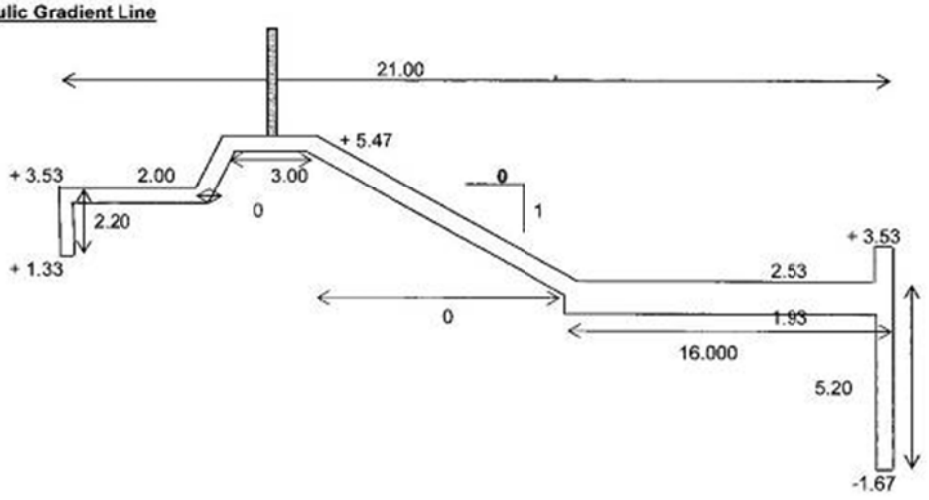
The Length of the Horizontal floor required under surface flow condition is more than the total length of horizontal floor required under Sub Surface flow condition. Hence the floor Length required under the Surface flow condition is adopted.

Exit gradient, $G_e = \frac{H}{d} \times \frac{1}{\pi\sqrt{\lambda}}$

where, $\lambda = \frac{1+\sqrt{(1+\alpha^2)}}{2}$

$\alpha = \frac{b}{d}$

Hydraulic Gradient Line



For static condition the U/s water level has been taken as FRL = 5.47

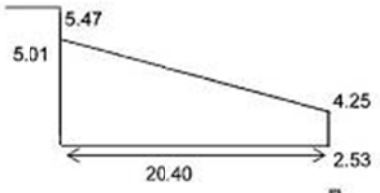
For dynamic condition the U/s water level has been taken as FMFL = 8.40

Sl.No.	Item		Pile 1	Pile 2
1	Total length of the floor	b	**21.00**	**21.00**
2	Depth of the pile	d	2.20	5.20
3	Thickness of the floor		0.60	0.60
4		α = b / d	9.55	4.04
5		$\lambda = (1+\sqrt{1+\alpha^2})/2$	5.30	2.58
6		$\phi_E = 1/\pi \cos{-1}((\lambda-2)/\lambda)$	28.61	42.78
7		$\phi_D = 1/\pi \cos{-1}((\lambda-1)/\lambda)$	19.88	29.02
8		$\phi_{C1} = 100-\phi_E$ (ϕ_{C2} = 0%)	71.40	0.00
9		$\phi_{D1} = 100-\phi_D$ ($\phi_{D2} = \phi_D$)	80.13	29.02
10		ϕ_{E1} = 100% ($\phi_{E2} = \phi_E$)	100.00	42.78

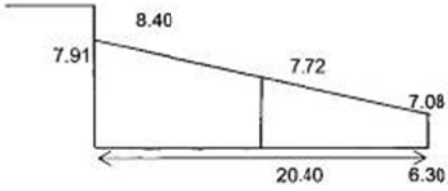
TVM 2

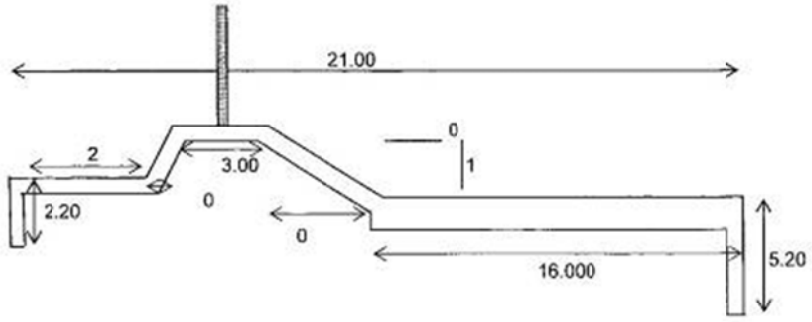
Sl.No.	Item		Pile 1	Pile 2
11	**(a) Correction at C for mutual interference with pile**			
	Correction factor	$= 19\sqrt{(D/b')}\,[(d+D)/b]$	2.70 (+)%	1.59 (-)
	where,	D = Depth of interfering pile	4.60	1.60
		d = Depth of the pile	1.60	4.60
		b' = Distance between pile	19.80	19.80
		b = Total length of the floor	21.00	21.00
12	**(b) Correction due to floor thickness**			
	Correction factor	$= \frac{\phi_{D1} - \phi_{C1}}{\text{Depth of pile}} \times$ Thickness of the floor	2.38 (+)%	4.23 (-)
	Pile 1	(80.125-71.395)/2.2*0.6)		
	Pile 2	(80.125-71.395)/2.2*0.6)		
13	**(c) Correction due to slope**			
	The point is neither situated at the start nor end of the slope, hence		Nil	Nil
	Pressure at the points	$\phi_{E1,2}$	100 %	36.95 %
		$\phi_{D1,2}$	80.13 %	29.02 %
		$\phi_{C1,2}$	76.48 %	0 %

H.G.L for Static condition



H.G.L for dynamic condition





flow condition	U/s water level in m	D/s water Level in m	Head in m	Height of Sub soil Hydraulic gradient line above the datum					
				Sheet pile 1			Sheet pile 2		
				ϕ_{C1}	ϕ_{D1}	ϕ_{E1}	ϕ_{E2}	ϕ_{D2}	ϕ_{C2}
				100	80.13	76.48	36.95	29.02	0
Static	5.47	3.53	1.94	1.935	1.55	1.48	0.72	0.56	0
				5.47	5.08	5.01	4.25	4.09	3.53
Dynamic	8.40	6.30	2.10	2.10	1.68	1.60	0.77	0.61	0
				8.40	7.98	7.91	7.08	6.91	6.30

FLOOR THICKNESS

Dynamic Head

Distance from centre of D/s pile	2.3	4.3	8.3	15.700
Unbalanced head	1.80	1.88	2.03	2.30
Thickness of the floor required	1.3	1.4	1.5	1.7

Max thickness at Toe for static condition **1.7 m**

Dynamic Condition

Level at jump formation	= 2.57 m		
Distance at jump form (from mid d/s cut-off)	= 16 - 0.3 + ((2.57 - 2.53) x 0)		16.0
	= 15.7 m		15.7
Dynamic Head at jump formation	= 4.09 m		-95.4
Head considered for Dynamic flow	= 2.724		
	= 2.7239 m		
Thickness of the floor required	= 1.94566 m		

Thickness provided at toe 1.95 m

TVM 3

Design of Anicut

Surface flow condition

Design Data:

Crest of Anicut	= +	5.465 m			
Rear M.F.L	= +	6.303 m	(From RWL calculation)		
Front M.F.L	= +	8.400 m			
Pond Level	= +	5.465 m			
Maximum Discharge	=	49000 c/s	=	1387.53	cumecs
Design discharge	=	49000 c/s	=	1387.53	cumecs
U/s bed level	= +	3.53 m			
D/s bed level	= +	3.53 m			
Width of the River	=	135.00 m			
Exit gradient	1 in	5	=	0.2	
Floor thickness at D/s end	=	0.6 m			
Floor thickness at U/s floor	=	0.6 m			
Thickness of Cut off wall	=	0.6 m			
Discharge thro anicut	=	1387.51	m^3/ **Sec**		From FMFL

Design for surface flow condition:

Clear waterway

Clear waterway thro' Anicut = **133.74 m** FROM MFL CALCULATION

Total width of the barrage = **135.00 m**

Scour depth and looseness factor

Total width of weir = 135.00

Discharge intensity/Unit discharge = q = 10.278 $m^3/s/m$

Regime width, R = $4.83\sqrt{Q}$

= 4.83 sqrt (1387.53)

= 179.92 m

Looseness Factor = $\frac{\text{Existing overall length}}{\text{Regime width}} = \frac{135.00}{179.92}$

= 0.75 < 1

Normal Scour Depth

Scour Depth = **1.35 x (q^2 / f) 1/3**

= 6.3818 **m**

Silt factor, f = 1.00

2.Fixing Stilling basin level:

The flood of 1387.53 m^3/sec is being taken as the flood with concentration

hence Design Scour depth = 6.3818 m

Height of water in the upstream = 4.870 m

Hydraulic jump calculations:

Sl.No.	Item			Discharge thro' the Anicut
1	Discharge		cumecs	1387.51
2	Clear water way		m	133.74
6	Discharge intensity (q)		m^2/s	10.38
3	D/s Water level (RWL)		m	6.30
4	U/s Water level (FMFL)		m	8.400
5	Velocity of approach, V_a	= Q / A		1.61
6	Velocity head, h_{va}	= $V_a^2 / 2g$		0.13
7	U/s Total Energy Line, U/s T.E.L	= FMFL + h_{va}		8.53
8	D/s velocity, V_d			3.60
9	Velocity head, h_{vd}	= $V_d^2 / 2g$		0.66
10	D/s Total Energy Line, D/s T.E.L	= RWL + h_{vd}		6.96
11	Head loss, H_L	= U/s T.E.L - D/s T.E.L		1.57
12	Postjump Depth, D_2			4.06
13	D/s specific energy, E_{f2}	= $D_2 + V_2^2 / 2g$		4.39
14	Froude's Number F_2	= $V_2 / \sqrt{(g \times D_2)}$		0.41
15	Prejump Depth corres to D_2 (D_1)	= $D_2 / 2 \times (-1 + \sqrt{(1+8F_2^2)})$		1.06
16	Velocity (V_1)	= q / D1		9.81
17	Froude's Number, F_1	= $V_1 / \sqrt{(g \times D_1)}$		3.04
18	D/s specific energy, E_{f1}	= $D_1 + V_1^2 / 2g$		5.96
19	$E_{f1} - E_{f2} - H_L = 0$			0.00
20	Level at which jump formation	= D/s T.E.L - E_{f2}		2.57
21	Length of the stilling basin	= 5 x (D_2 - D_1)		14.99

Total horizontal floor length required under surface flow condition:

Existing D/s Bed Level		=	3.53
Jump Formation level		=	2.57
Stilling Basindepth		=	0.958059004
Depth provided			1.00
Stilling Basin level			2.53
1.D/S floor length (hydraulic criteria)(Basin length+cutoff)			15.5920 m
Body width	**3** Rear slope 1: 0		
Width of body wall (from Stability calculation at basin level)			3.00 m
3. Length of U/S floor (Assumed)		=	2.00 m
			20.592 m
However provide a length of	21.000		
Revised length of Basin	16.000		

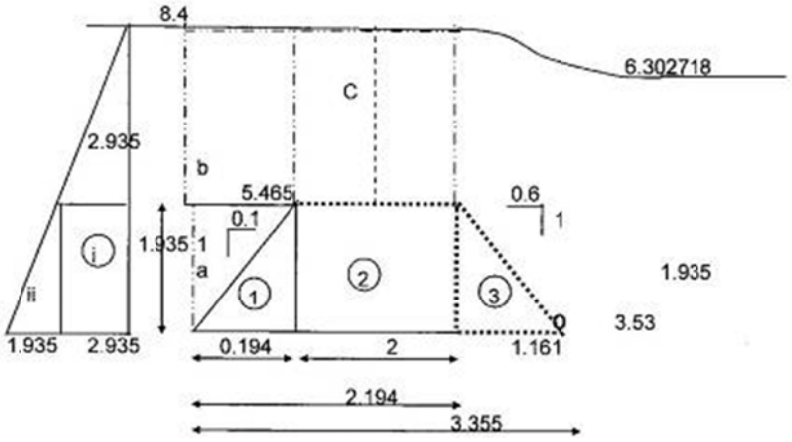
TVM 4

Stability Analysis of Check Dam
HYDRAULIC PARTICULARS

Maximum flood discharge		1387.512 m3/sec	49000 c/s
Top of crest	+	5.465 m	
FMFL	+	8.400 m	
RWL	+	6.303 m	
Upstream bed level	+	3.53 m	
Downstream Bed level	+	3.53	
Head over Crest		2.935	
Down stream side slope		0.6 H to 1 V	
Upstream side slope		0.1 H to 1 V	
Top width		2 m	
1.5times width of weir		3	

The stability of body wall of the anicut was checked for the following conditions

1 Reservoir empty withoutEQ
2 Reservoir at MWL,with tailwater with uplift
3 Reservoir at FRL, no tail water with uplift



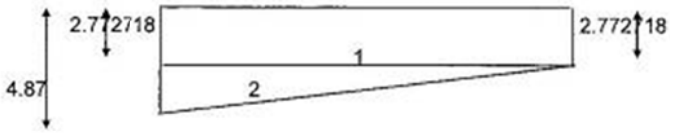
Stability analysis: **1.Reservoir empty without EQ**

SLNO	DESCRIPTION				FORCE		L.A	MOMENT	
	Coefficient	length	depth	Unit wt.	V	H	+	+	-
Weight of masonry									
1	0.5	0.194	1.935	2.4	0.449307		3.2255	1.44924	
2	1	2	1.935	2.4	9.288		2.161	20.07137	
3	0.5	1.161	1.935	2.4	2.695842		0.774	2.086582	
				ΣV=	**12.4331**		ΣM=	**23.6072**	

Base width=		3.355	
$\overline{X}$=	ΣM / ΣV =	1.89873	
e = b/2-$\overline{X}$		0.22148	0.559083
6e/b=		0.396148	

Maximum stress = ΣV/b*(1+6e/b)
= **5.1747** T/m²
Minimum stress = ΣV/b*(1-6e/b)
= **2.23812** T/m²

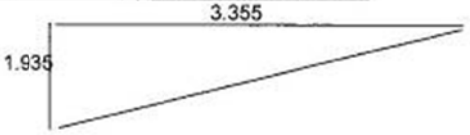
2.Reservoir at MWL, with tailwater, weir with uplift



SLNO	DESCRIPTION					FORCE		L.A	MOMENT	
	Coefficient	length	depth	Unit wt.		V	H		+	-
Weight of masonry										
1	0.5	0.194	1.935	2.4		0.449307		3.2255	1.44924	
2	1	2	1.935	2.4		9.288		2.161	20.07137	
3	0.5	1.161	1.935	2.4		2.695842		0.774	2.086582	
weight of water										
a	0.5	0.194	1.935	1		0.187211		3.29	0.615925	
b	1	0.194	2.935	1		0.567923		3.25775	1.85015	
c	1	1.000	2.935	1		2.935		2.661	7.810035	
Water Pressure										
i	1	2.935	1.935	1			5.679225	0.9675		5.49465
ii	0.5	1.935	1.935	1			1.872113	0.645		1.207513
Uplift Pressure										
1	1	3.355	2.772718	1		-9.30108		1.67725		15.60024
2	0.5	3.355	2.10	1		-3.51767		2.236333		7.866675
					ΣV=	**3.30453**		ΣM=	**33.8833**	**30.1691**

Base width= 3.355
$\overline{X}$= ΣM /ΣV = 1.123977
$\overline{e}$ = b/2-$\overline{X}$ 0.553273
6e/b= 0.989607
Maximum stress = ΣV/b*(1+6e/b)
= **1.95997** T/m²
Minimum stress = ΣV/b*(1-6e/b)
= **0.01024** T/m²

3.Reservoir at FRL, no tailwater, with uplift condition



SLNO	DESCRIPTION	FORCE	L.A	MOMENT

TVMS

	Coefficient	length	depth	Unit wt.	V	H		+	-
Weight of masonry									
1	0.5	0.194	1.935	2.4	0.449307		3.2255	1.44924	
2	1	2	1.935	2.4	9.288		2.161	20.07137	
3	0.5	1.161	1.935	2.4	2.695842		0.774	2.086582	
weight of water									
a	0.5	0.194	1.935	1	0.187211		3.29	0.615925	
Water Pressure									
i	0.5	1.935	1.935	1		1.872113	0.645		1.207513
uplift pressure									
	0.5	3.355	1.935	1	-3.24548		2.236333		7.257972
				ΣV=	**9.37488**		ΣM=	**24.2231**	**8.46548**

Base width= 3.355

$\overline{X}$= ΣM /ΣV = 1.680835

$\overline{e}$ = b/2-$\overline{X}$ 0.003585

6e/b= 0.006412

Maximum stress = ΣV/b*(1+6e/b)

= **2.81264** T/m^2

Minimum stress = ΣV/b*(1-6e/b)

= **2.7768** T/m^2

STRESS		Maximum	Minimum
Condition I	Empty condition	5.175 T/m^2	2.238 T/m^2
Condition II	MWL condition	1.960 T/m^2	0.010 T/m^2
Condition III	FRL condition	2.813 T/m^2	2.777 T/m^2

Design of Flexible Protection

Design Data:

Rear M.F.L	= +	6.303 m	(From RWL calculation)		
Maximum Discharge	=	49000.462 c/s	=	1387.53 cumecs	
D/s bed level	= +	3.53 m			
Scour Depth, R	=	6.38 **m**			

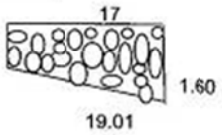
Downstream Block Protection: (As per clause 20.2. of IS 6966(part I) - 1989)

The likely extent of scour for D/s flexible protection	=	1.75 x R			
Design Depth of scour below the floor level, D	=	8.395			
Length of downstream block protection 1.5 x D	=	12.59			

Hence Provide **8** Nos of CC Blocks of size 1.5 x 1.5 x 0.9 m

Downstream Launching Apron: (As per clause 20.3 of IS 6966(part I) - 1989)

Length of launching apron	=	1.5	to	2.5	x D	
	=	12.593	to	20.99		
Provide a length of	=	17 m				
Slope of the River	=	1	in	450		
River Slope in m/km	=	2.22222	(Restricted to 0.4)			
Thickness of pitching (τ)	=	850	mm	(clause 20.3.4)		
Thickness of pitching reqd for covering the launched slo	=	1.25 x τ				
	=	1062.5	mm			
	=	1.1	m			



Qty of stone required 19.0066*1.1		20.91	m^3	
Provide a slope of	=	2	in	1
Length of launched portion		19.007	m	

Tk of stone at the inner edge shall corresponds to the quantity required for a tk of τ

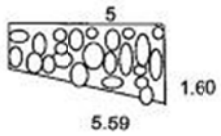
0.85 *19.0066	16.16	m3	
Inner Tk	1.000	m	
Remaining Qty	4.75	m^3	
Quantity to be provided in the sloped portion	4.75175	m^3	
Thickness required at the edge	0.559	m	
	0.60	m	
Provide an outer Thickness of	**1.60**	m	
Quantity provided at the Launched section	22.1	m3	> 20.91

Hence the Quantity of Pitching provided is more than the Required Quantity of Pitching.

Upstream Protection

M.F.L	= +	8.40 m	(From RWL calculation)		
Maximum Discharge	=	49000 c/s	=	1387.51 cumecs	
U/s bed level	= +	3.53 m			

Scour Depth, R	=	6.38	m			
Upstream Block Protection: (As per clause 20.2. of IS 6966(part I) - 1989)						
The likely extent of scour for D/s flexible protection	=	1.25 x R				
Design Depth of scour below the floor level, D	=	3.1				
Upstream Launching Apron: (As per clause 20.3 of IS 6966(part I) - 1989)						
Length of launching apron	=	1.5	to	2.5	x D	
	=	4.66078	to	7.77		
Provide a length of	=	5 m				
Slope of the River	=	1	in	450		
River Slope in m/km	=	2.22222	(Restricted to 0.4)			
Thickness of pitching (τ)	=	850	mm		(clause 20.3.4)	
Thickness of pitching reqd for covering the launched slo	=	1.25 x τ				
	=	1062.5	mm			
	=	1.065	m			



Qty of stone required 5.5902*1.065		5.95	m^3		
Provide a slope of	=	2	in	1	
Length of launched portion		5.590	m		

Tk of stone at the inner edge shall corresponds to the quantity required for a tk of τ

0.85 *5.5902	4.75	m3	
Inner Tk	1.000	m	
Remaining Qty	1.20	m^3	
Quantity to be provided in the sloped portion	1.20185	m^3	
Thickness required at the edge	0.481	m	
	0.60	m	
Provide an outer Thickness of	**1.60**	m	
Quantity provided at the Launched section	6.5	m3	> 5.95

Hence the Quantity of Pitching provided is more than the Required Quantity of Pitching.

TVM 7

THIRUVANTHIPURAM ANICUT

Fixing the FMFL

Design Discharge		:	**1387.51** m^3/sec	49000 c/s
Crest Level		:	5.465 m	1387.51
Us Bed level		:	3.530 m	1388
Assume FMFL		:	**8.400** m	
RWL		:	6.303 m	
Height of weir	=(5.465-3.53)	:	1.94	
Head over crest		:	**2.94** m	
1.33 times of design head			3.90 m	
Va=(1387.51238850347/(135*(1.94+2.94))		:	2.11 m/s	
hv=head due to vellocity of approach $Va^2/2g$		:	**0.23**	
Effective head =	$He = Ho + Va^2/2g$	:	**3.16**	
Total length of structure between abutments			135 m	
Length of anicut portion			135 m	
Effective Length	Le=L-2(kp*n+Ka)he		133.73523 m	
	Ka =	0.2		
Width of the weir			2 m	from stability
			3 m	**Broad crest**

Discharge over the check dam - The check dam functions as a BC Weir

$Q = Q_1 + Q_2$ where

$Q_1 = 2/3*C_{d1}*(2g)^{(0.5)}* B*\{(h+hv)^{(3/2)}-hv(3/2)^{}\}$ free weir equation

$Q_1 = C_{d2}*(2g(h+hv))^{(0.5)}* B*h_1$ drowned weir equation

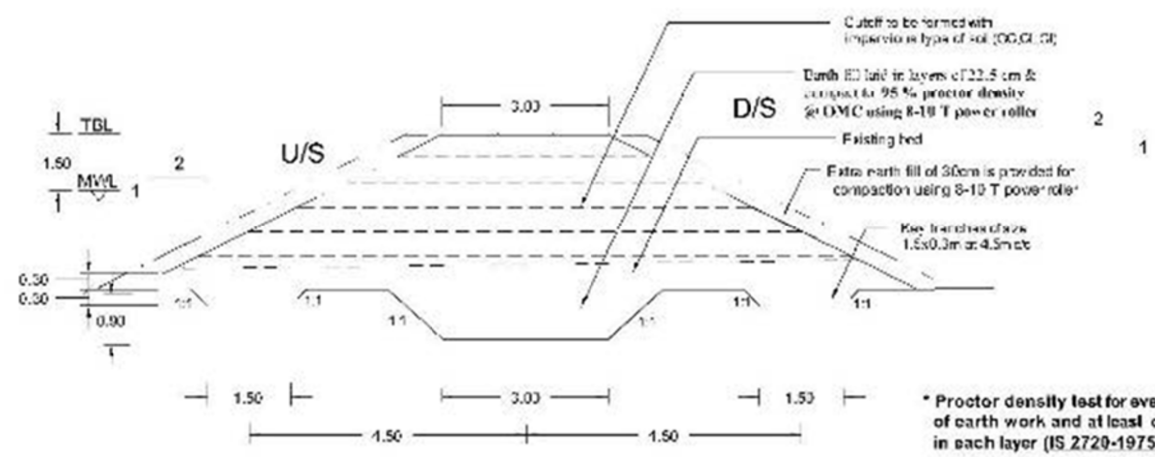
Cd_1		0.577	
Cd_2		0.8	
h =	FMFL - RMFL	2.09728211	m
hv=		0.23	m
B =	Clear water way	133.735233	m
Effective width B		133.735233	m
h_1 =	depth of d/s water level above crest	0.84	m
Q_1 =	2/3* 0.577 * (2*9.81)^(0.5) * 133.73523343527* {(2.1+0.23)^(3/2) -0.23^(3/2)}=	782.771013	m^3/sec
Q_{2}=	0.8 *(2*9.81 * (2.1+0.23))^(0.5) *133.74 * 0.84 =	605.228998	m^3/sec
Total discharge over check dam		1388.00001	m^3/sec

Total Discharge through over check dam	1388.00
Design Discharge	1387.51

TYPICAL CROSS SECTION OF FORMATION OF FLOOD BANK

(Homogenous Section)

(DRCS) vide Lr. No. 251 CE/SE (D) / AEE-IX/EE(D)
*/ This drawing has been prepared as per the guidelines of C.E / TAMWARM / Dt. 18.11.2009



* Proctor density test for every 300m3 of earth work and at least one test in each layer (IS 2720-1975(Part -XXIX))

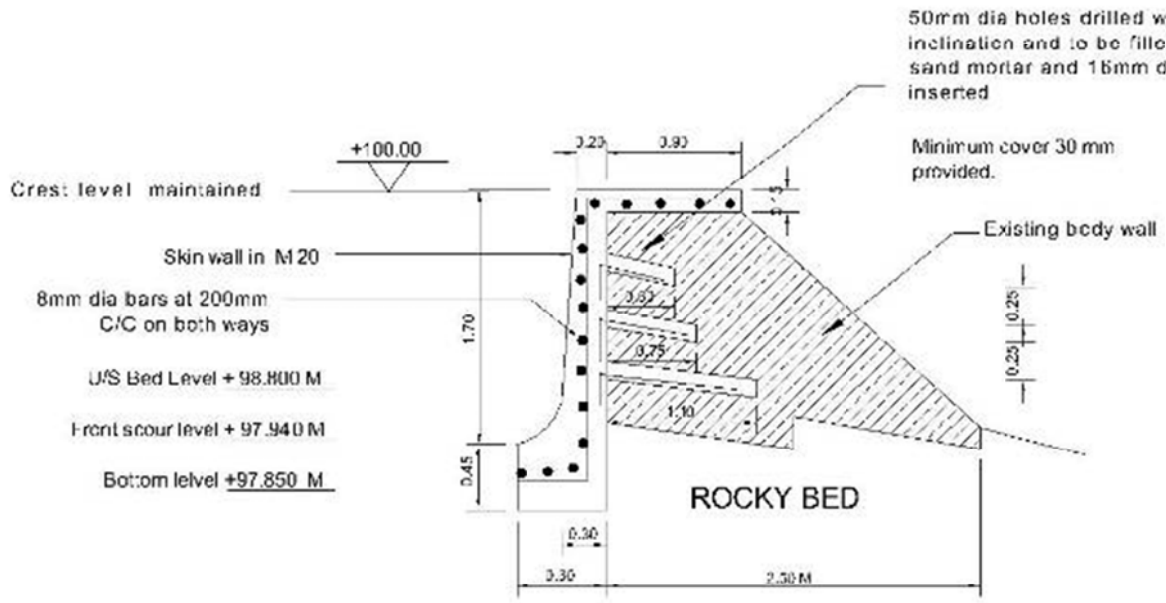
GADILAM SUB BASIN

Note: Suitability of barrow earth shall be ascertained perior to its placement.

* All Dimensions and Levels are in Meters

Scale 1:100

KATTUEDAIYAR ANICUT

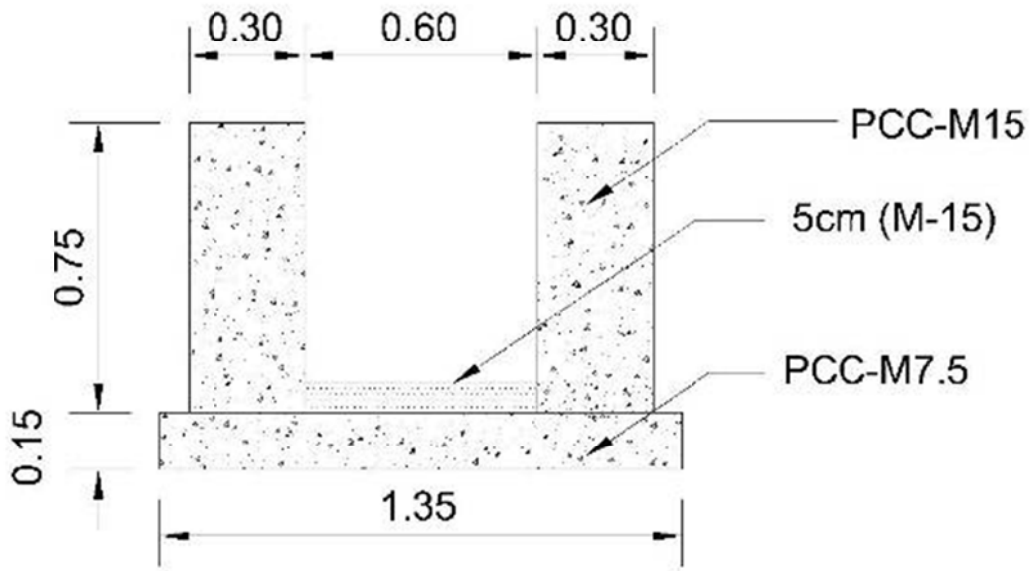


DETAILS OF SKIN WALL AND BODY WALL

* All Dimensions are in Meters

Scale 1:100

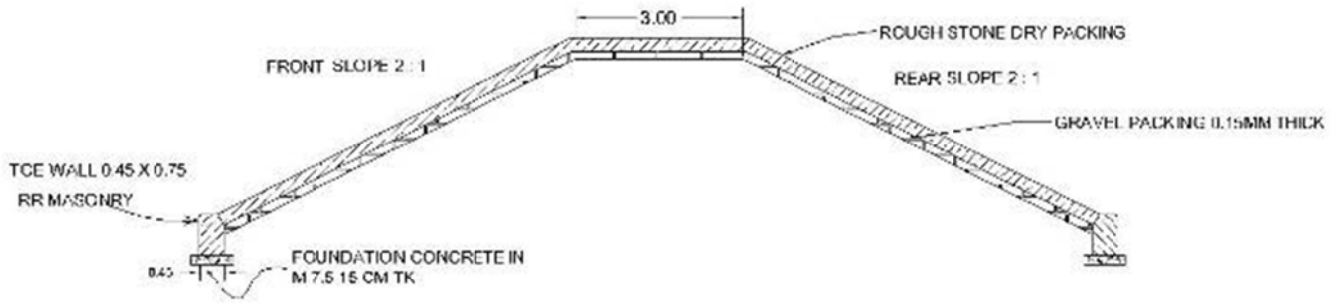
CROSS SECTION OF FIELD CHANNEL LINING FROM SLUICES



* All Dimensions are in Meters

Scale 1:10

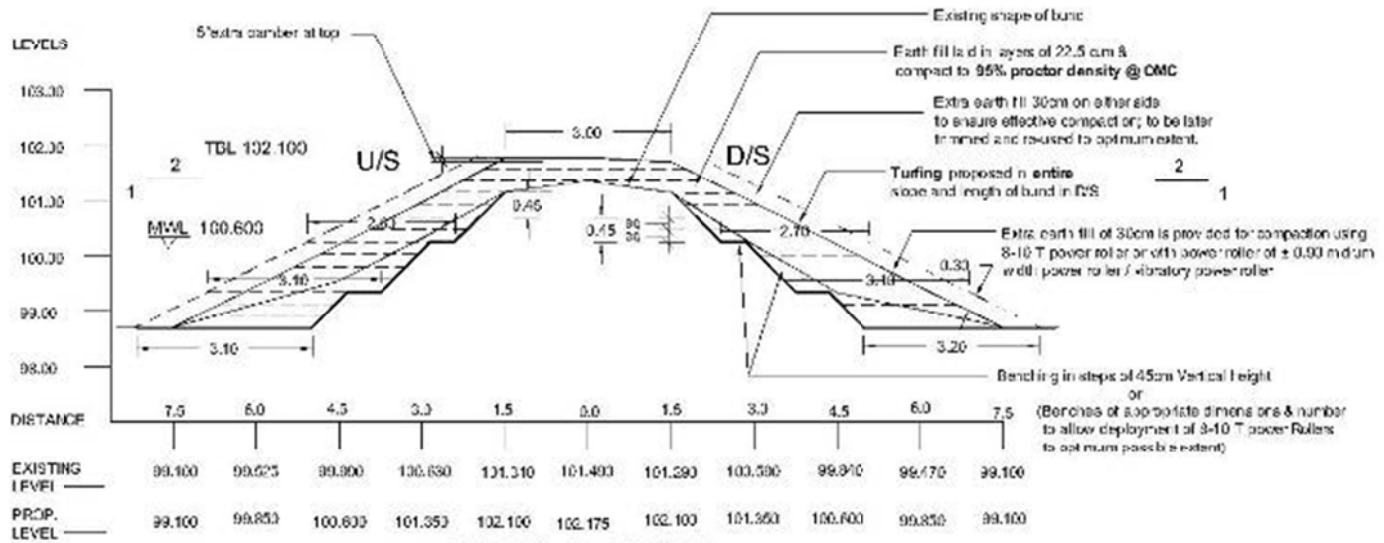
CONSTRUCTION OF MODEL SECTION IN KOO.KALLAKURICHI TANK



* All Dimensions are in Meters

Scale 1:100

METHODOLOGY OF RAISING & STRENGTHENING OF PERIYA KURUKKAI TANK BUND



C.S@L.S - 800 M

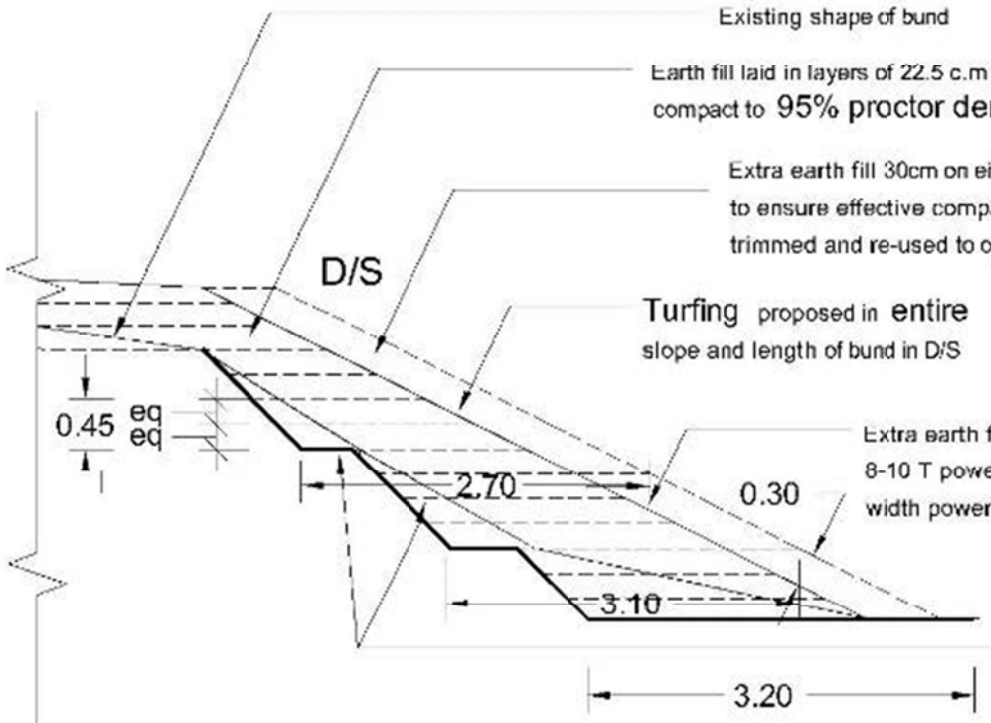
GADILAM SUB BASIN, PACKAGE NO.1

* Proctor density test for every 300m3 of earth work and at least one test in each layer (IS 2720-1975(Part-XXIX))

* All Dimensions and Levels are in Meters

Scale 1:100

METHODOLOGY OF RAISING & STRENGTHENING OF PERIYA KURUKKAI TANK BUND

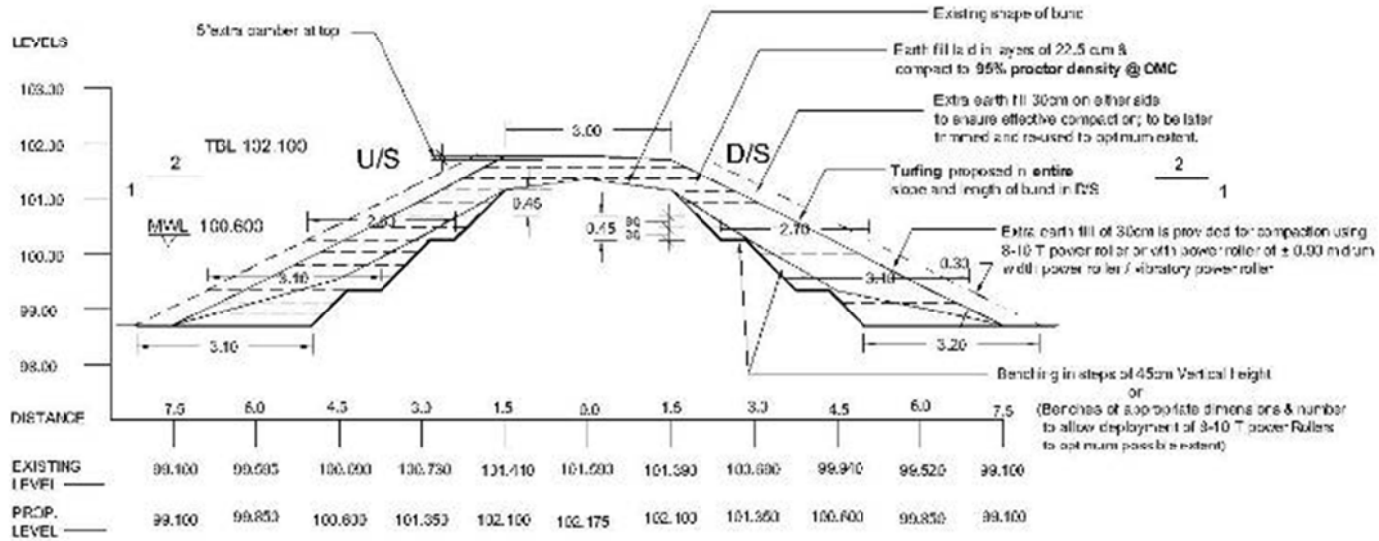


ENLARGED (PART SECTION)

GADILAM SUB BASIN, PACKAGE NO.1

Scale 1:50

METHODOLOGY OF RAISING & STRENGTHENING OF ARUNKURKKAI TANK BUND



C.S@L.S - 800 M

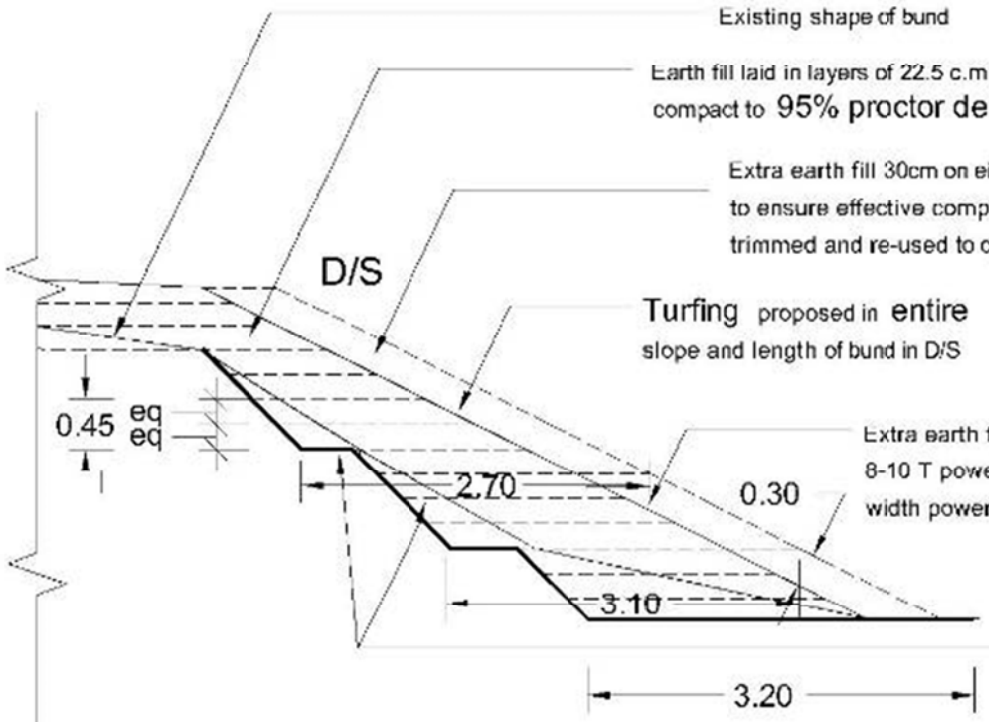
GADILAM SUB BASIN, PACKAGE NO.2

* Proctor density test for every 300m3 of earth work and at least one test in each layer (IS 2720-1975(Part-XXIX))

* All Dimensions and Levels are in Meters

Scale 1:100

METHODOLOGY OF RAISING & STRENGTHENING OF ARUNKURKKAI TANK BUND



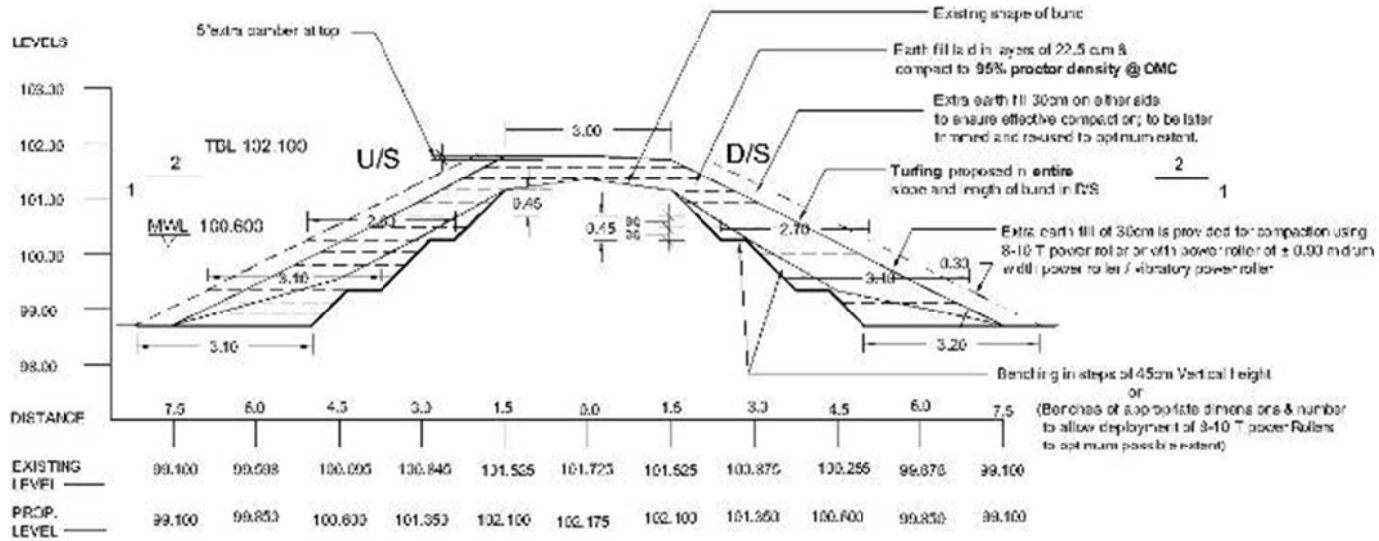
* All Dimensions and Levels are in Meters

ENLARGED (PART SECTION)

GADILAM SUB BASIN, PACKAGE NO.2

Scale 1:50

METHODOLOGY OF RAISING & STRENGTHENING OF KOO.KALLAKURICHI TANK BUND



C.S@L.S - 600 M

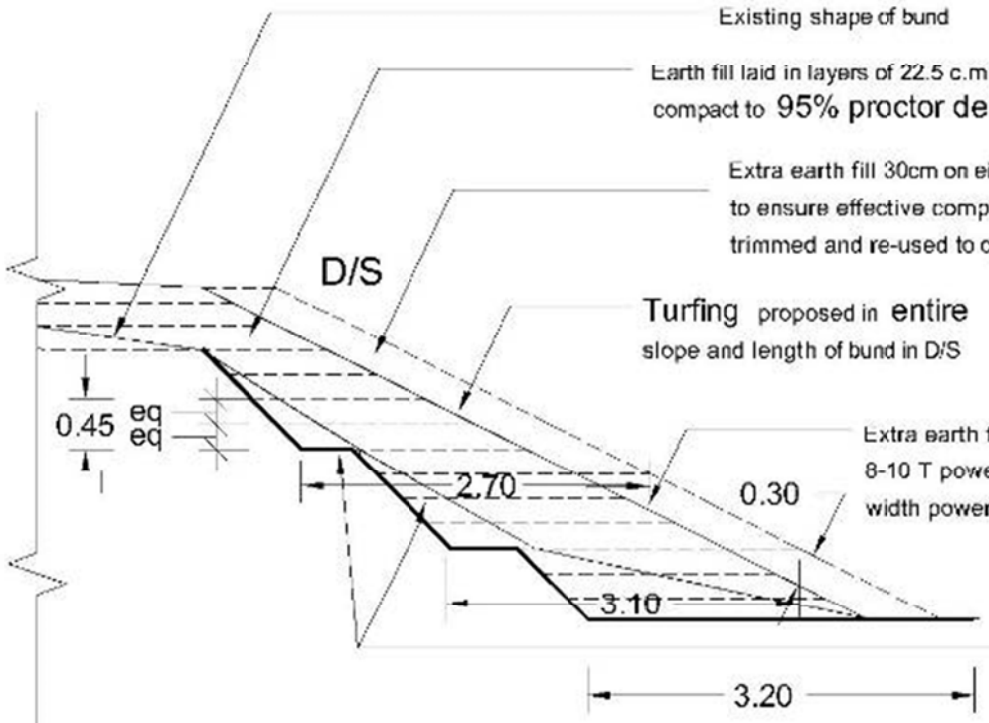
GADILAM SUB BASIN, PACKAGE NO.3

* Proctor density test for every 300m3 of earth work and at least one test in each layer (IS 2720-1975(Part-XXIX))

* All Dimensions and Levels are in Meters

Scale 1:100

METHODOLOGY OF RAISING & STRENGTHENING OF KOO.KALLAKURICHI TANK BUND



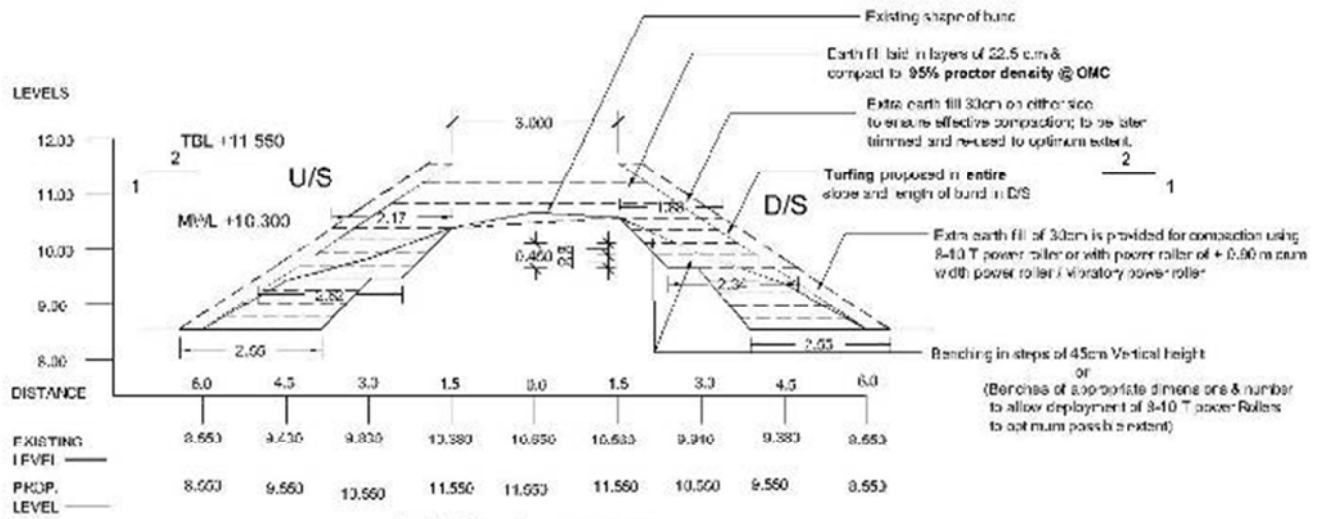
* All Dimensions and Levels are in Meters

ENLARGED (PART SECTION)

GADILAM SUB BASIN, PACKAGE NO.3

Scale 1:50

METHODOLOGY OF RAISING & STRENGTHENING
MANAMTHAVIZHNDHAPUTHUR TANK BUND



C.S@L.S - 400 M

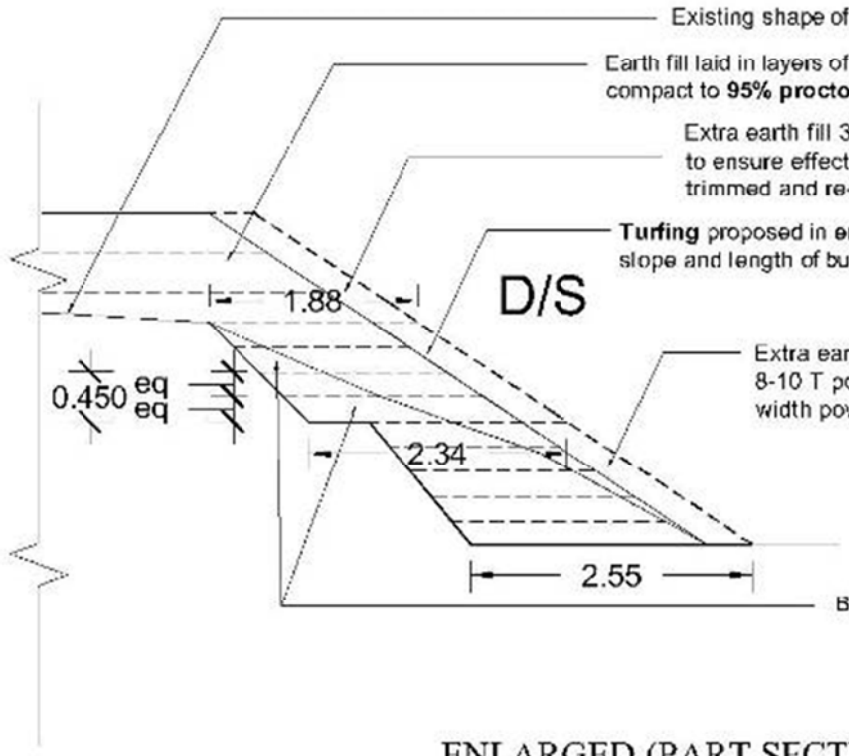
GADILAM SUB BASIN, PACKAGE NO.4

* Proctor density test for every 300m3 of earth work and at least one test in each layer (IS 2720-1975(Part-XXIX))

* All Dimensions and Levels are in Meters

Scale 1:100

METHODOLOGY OF RAISING & STRENGTHENING
MANAMTHAVIZHNDHAPUTHUR TANK BUND



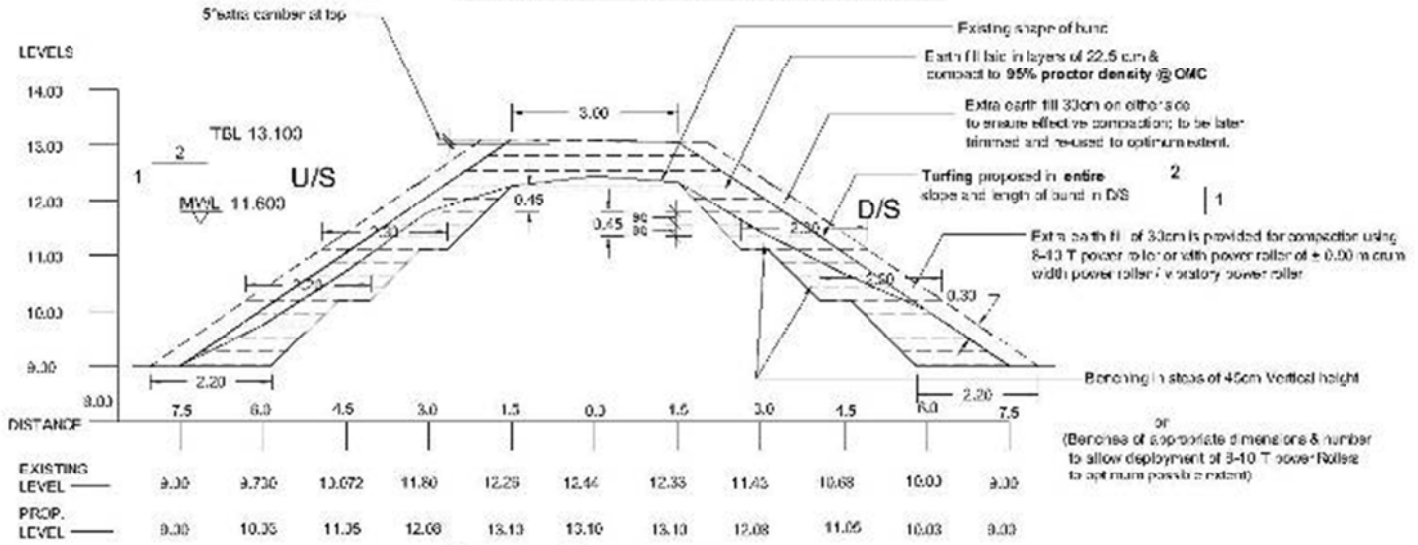
* All Dimensions and Levels are in Meters

ENLARGED (PART SECTION)

GADILAM SUB BASIN, PACKAGE NO.4

Scale 1:50

METHODOLOGY OF RAISING & STRENGTHENING
SIRUVATHUR TANK BUND



C.S@L.S - 1600 M

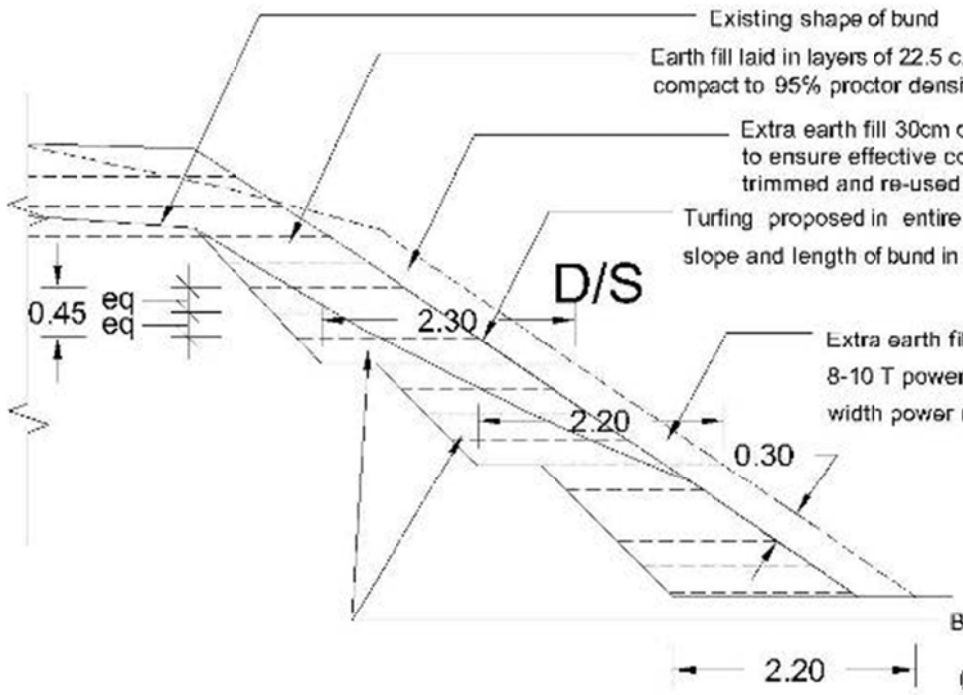
GADILAM SUB BASIN, PACKAGE NO.5

* Proctor density test for every 300m3 of earth work and at least one test in each layer (IS 2720-1975(Part-XXIX))

* All Dimensions and Levels are in Meters

Scale 1:100

METHODOLOGY OF RAISING & STRENGTHENING
SIRUVATHUR TANK BUND



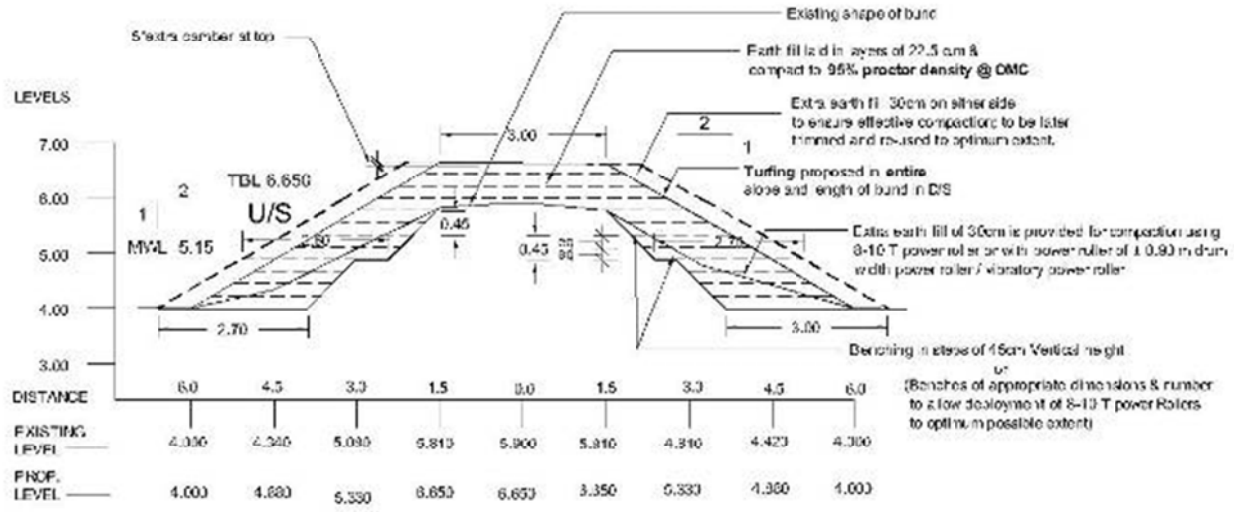
* All Dimensions and Levels are in Meters

ENLARGED (PART SECTION)

GADILAM SUB BASIN, PACKAGE NO.5

Scale 1:50

METHODOLOGY OF RAISING & STRENGTHENING
C.N.PALAYAM TANK BUND



C.S@L.S - 800 M

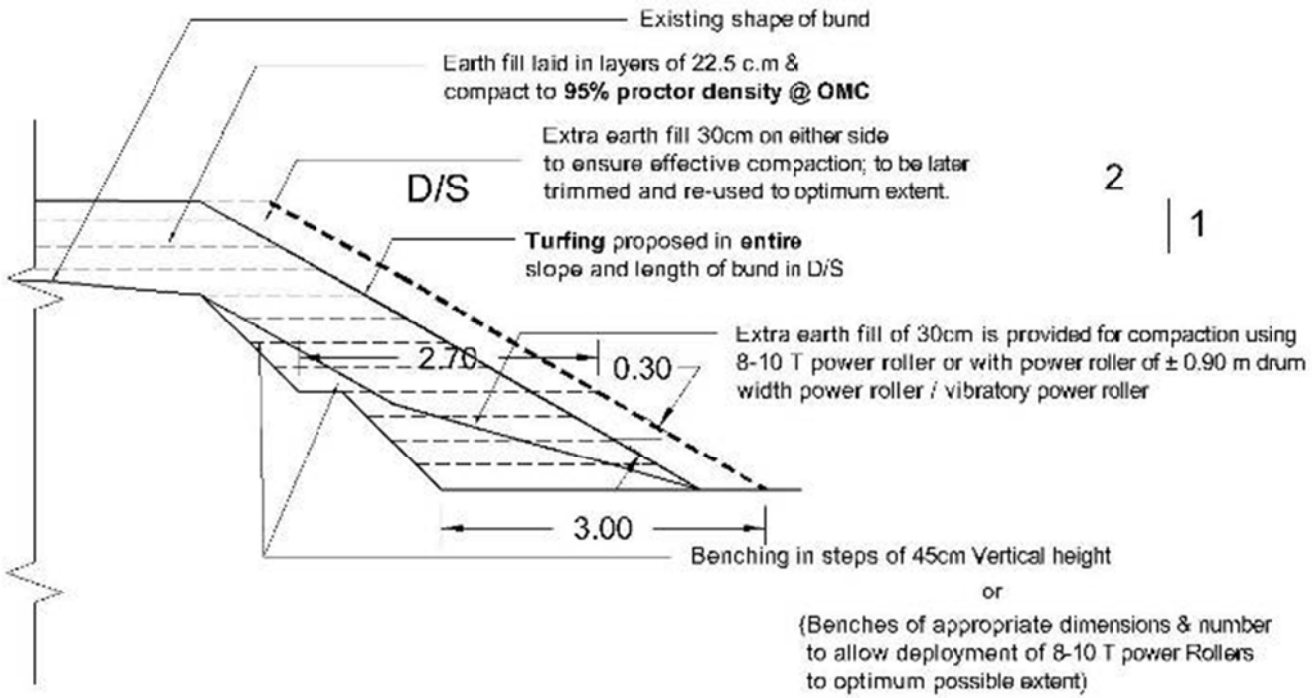
GADILAM SUB BASIN, PACKAGE NO.6

* Proctor density test for every 300m3 of earth work and at least one test in each layer (IS 2720-1975(Part-XXIX))

* All Dimensions and Levels are in Meters

Scale 1:100

METHODOLOGY OF RAISING & STRENGTHENING
C.N.PALAYAM TANK BUND



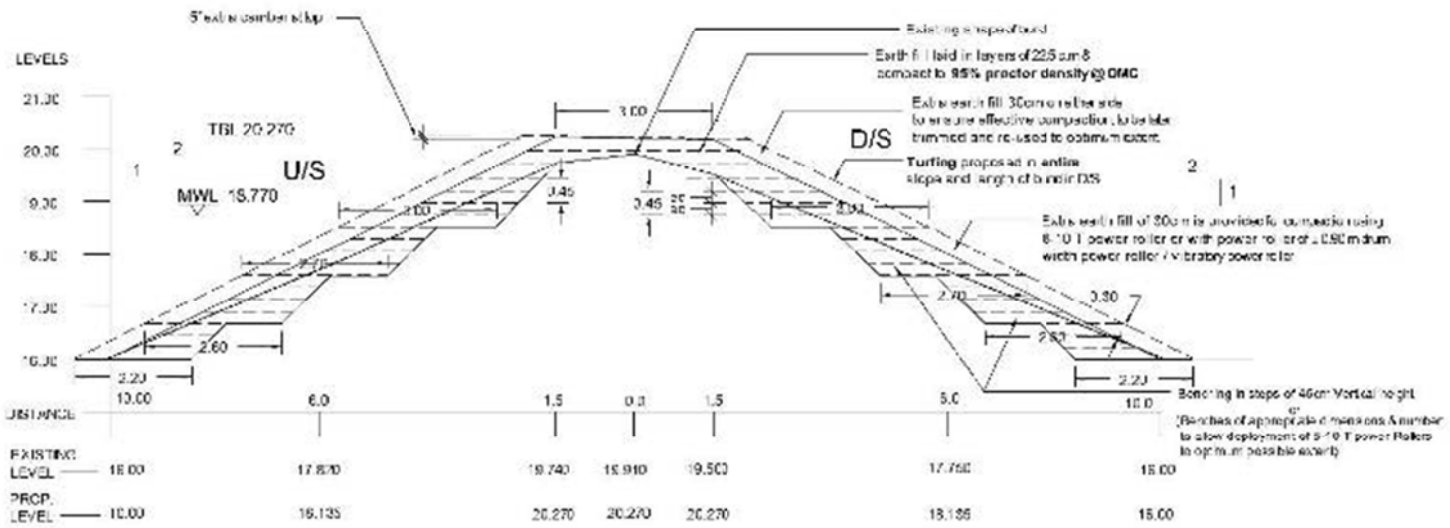
ENLARGED (PART SECTION)

GADILAM SUB BASIN, PACKAGE NO.6

* All Dimensions and Levels are in Meters

Scale 1:50

METHODOLOGY OF RAISING & STRENGTHENING
NADUVEERAPATTU OLD TANK BUND



C.S@L.S - 720 M

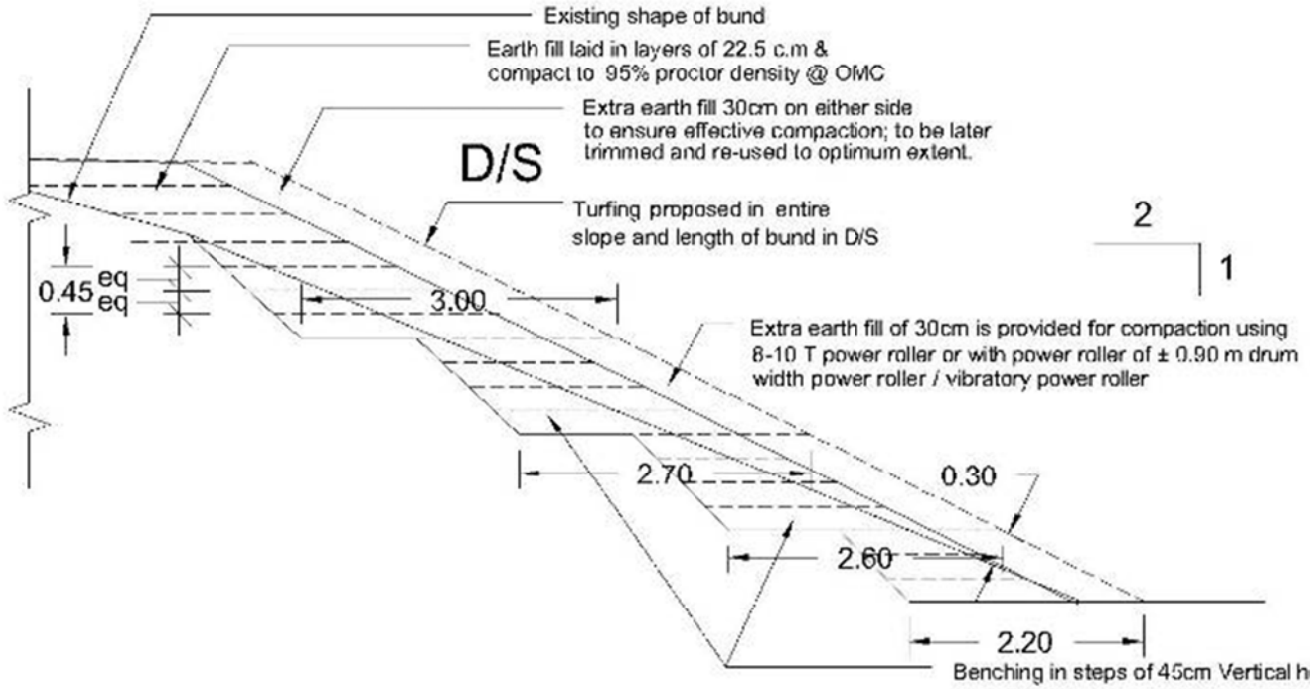
GADILAM SUB BASIN, PACKAGE NO.7

* Proctor density test for every 300m3 of earth work and at least one test in each layer (IS 2720-1975(Part -XXIX))

* All Dimensions and Levels are in Meters

Scale 1:100

METHODOLOGY OF RAISING & STRENGTHENING
NADUVEERAPATTU OLD TANK BUND



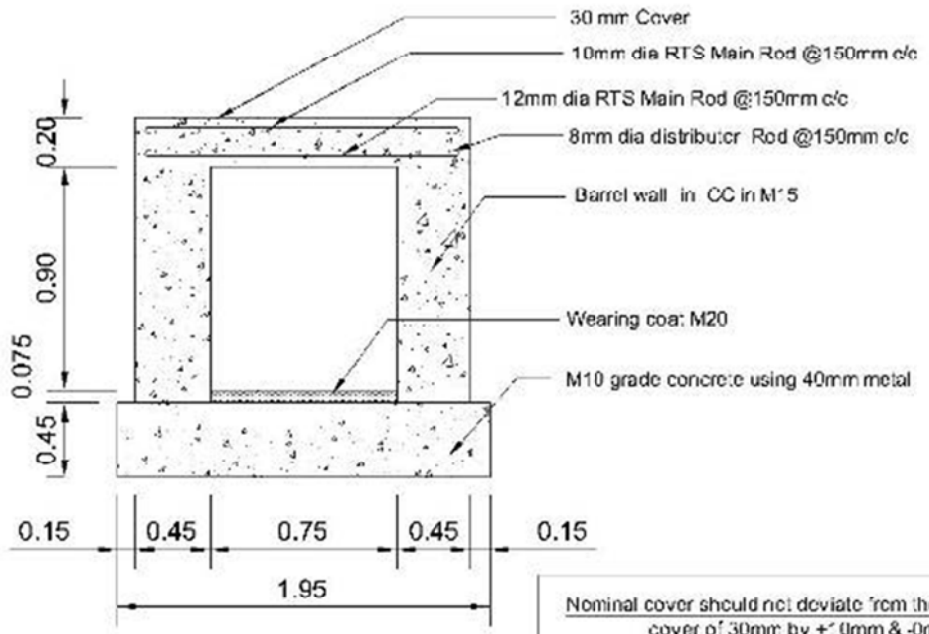
ENLARGED (PART SECTION)

GADILAM SUB BASIN PACKAGE NO 7

* All Dimensions and Levels are in Meters

Scale 1:50

TYPICAL CROSS SECTION OF SLUICE BARREL



Nominal cover should not deviate from the specific cover of 30mm by +0mm & -0mm

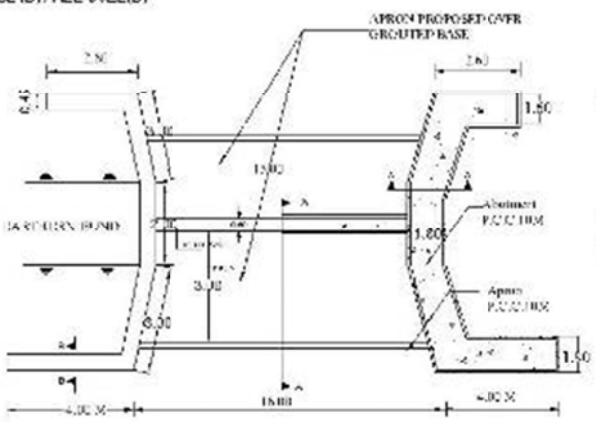
Nominal cover to steel rod= 30mm

* All Dimensions are in Meters

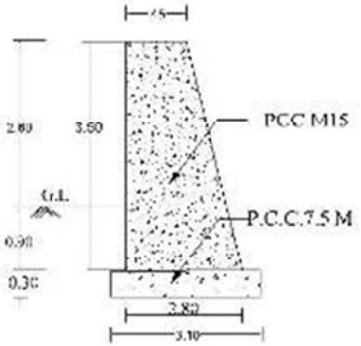
Scale 1:100

DHAMAL TANK SURPLUS WEIR

* This drawing has been prepared as per the guidelines of CE (DRCS) vide Lr. No. 251 CE/SE (D) / AEE-I/EE(D) / TAMWARM / Dt. 18.11.2009

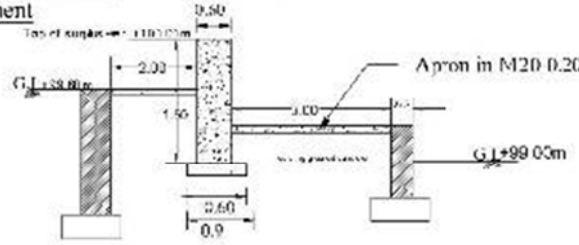


Weir Half plan at top and bottom

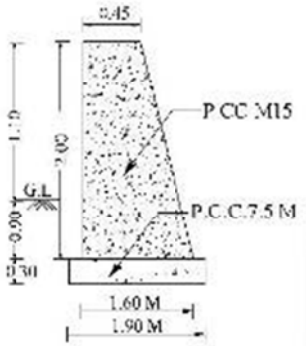


Abutment C/S at "AA"

Longitudinal section of abutment



Cross section of weir at "XX"



Cross section "BB"

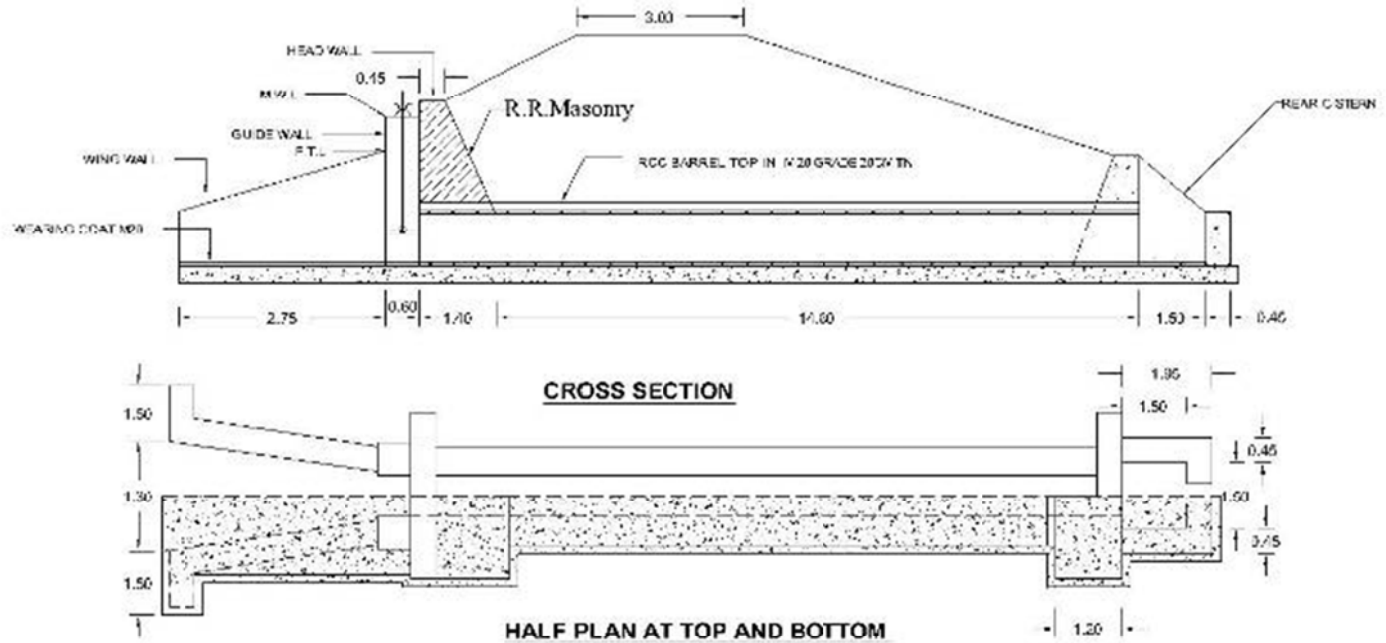
HYDRAULIC PARTICULARS

CREST LEVEL	+100.03 M
HIGH FLOOD LEVEL	+101.303 M
LENGTH OF WEIR	15.00 M
FLOOD DISCHARGE	29.20 CUMECS

* All Dimensions are in Meters

Scale 1:10

RECONSTRUCTION OF WING WALL SLUICE IN KOO.KALLAKURICHI TANK

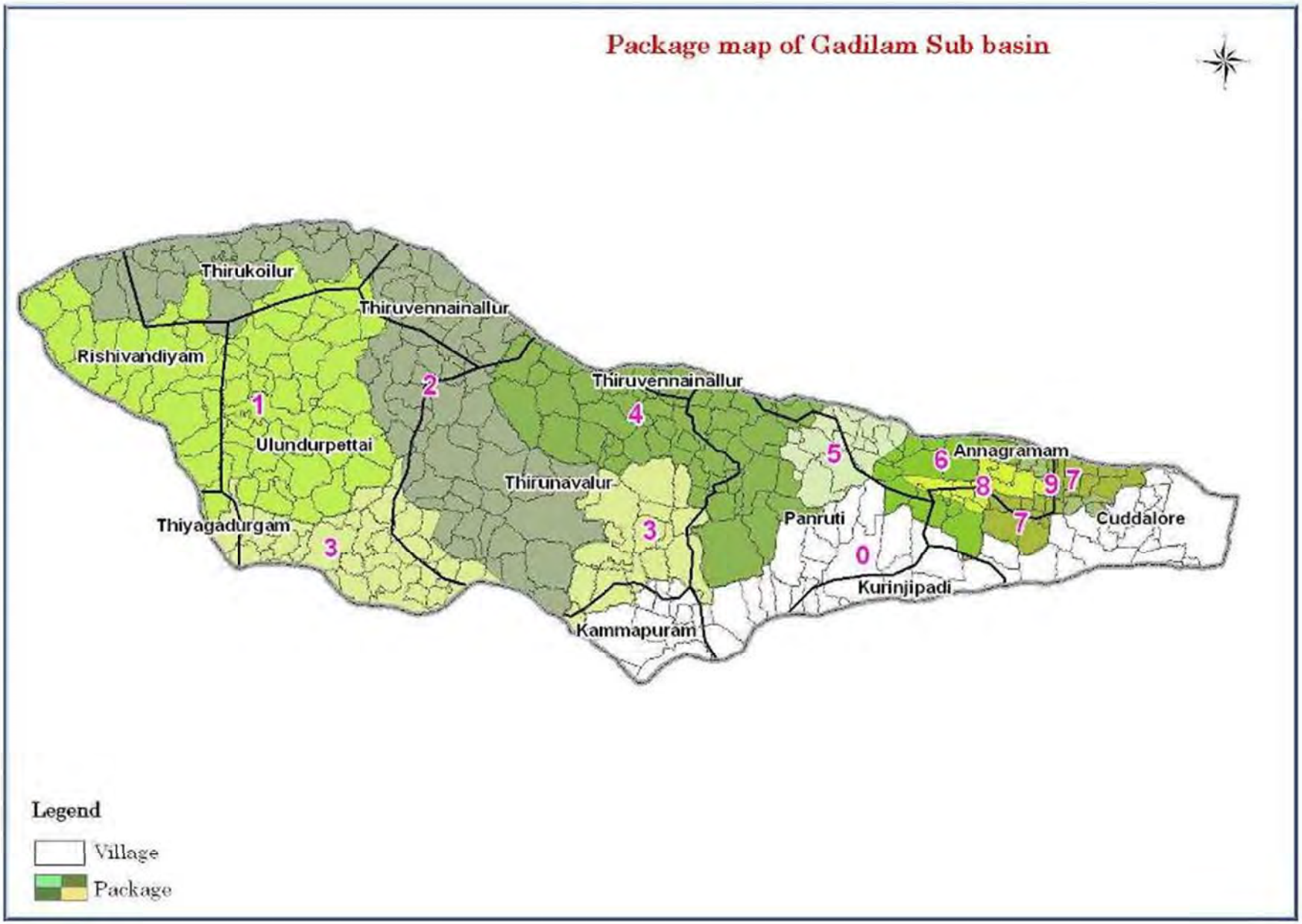


Certified that the reconstruction work is done as per the existing hydraulic particulars.

* All Dimensions are in Meters

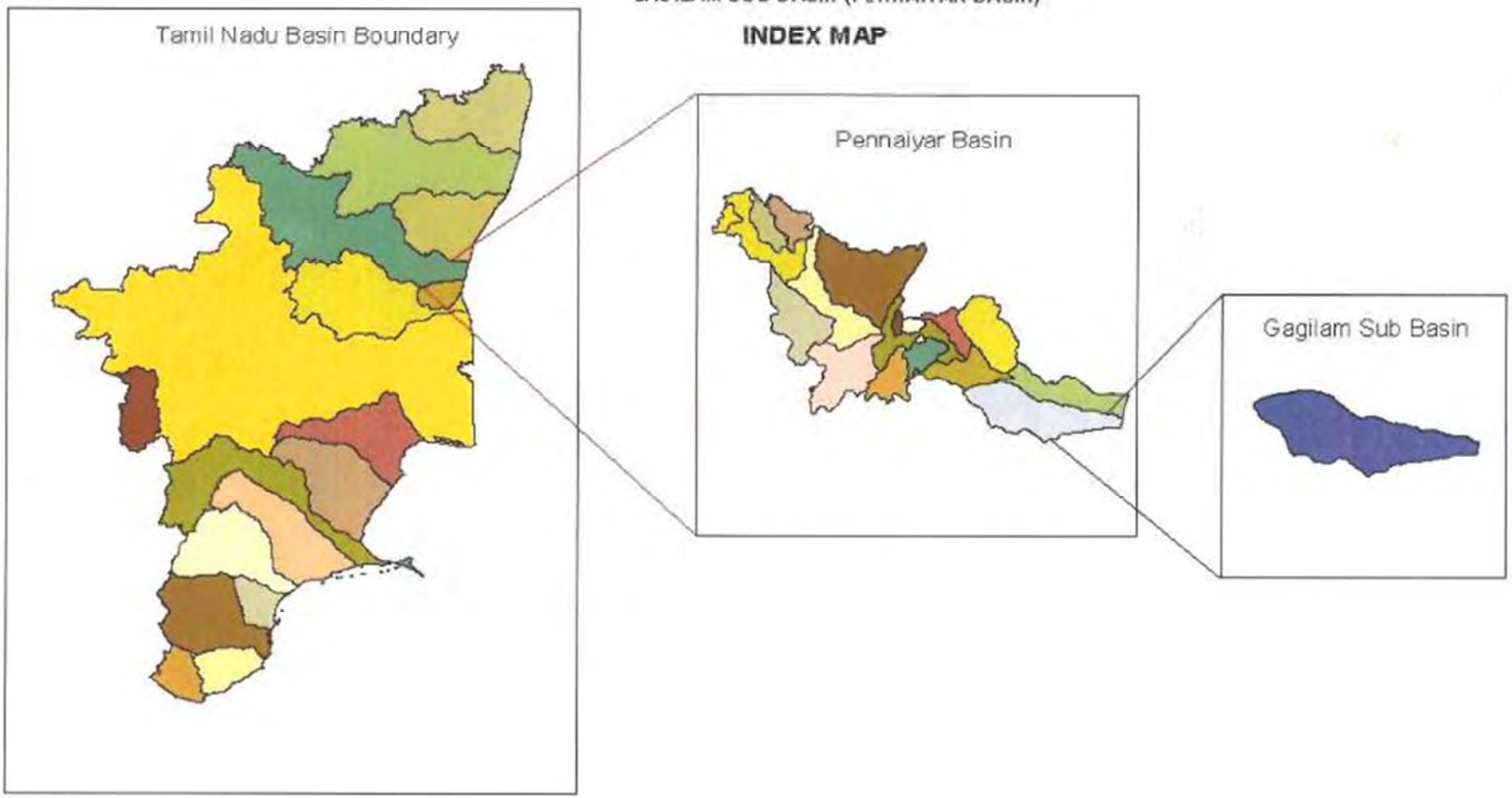
Scale 1:100

Package map of Gadilam Sub basin



GADILAM SUB BASIN (PENNAIYAR BASIN)

INDEX MAP



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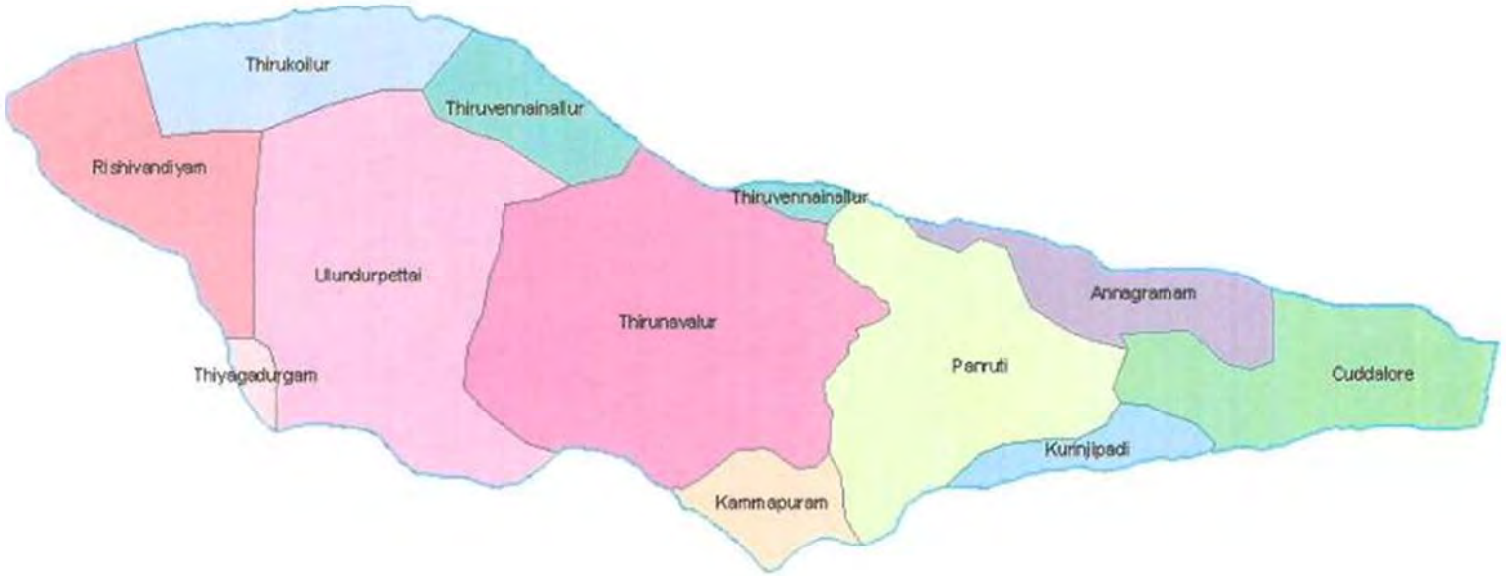
THARAMANI, CHENNAI - 113

GADILUM SUB BASIN (PENNAIAR BASIN)
ADMINISTRATIVE MAP



N

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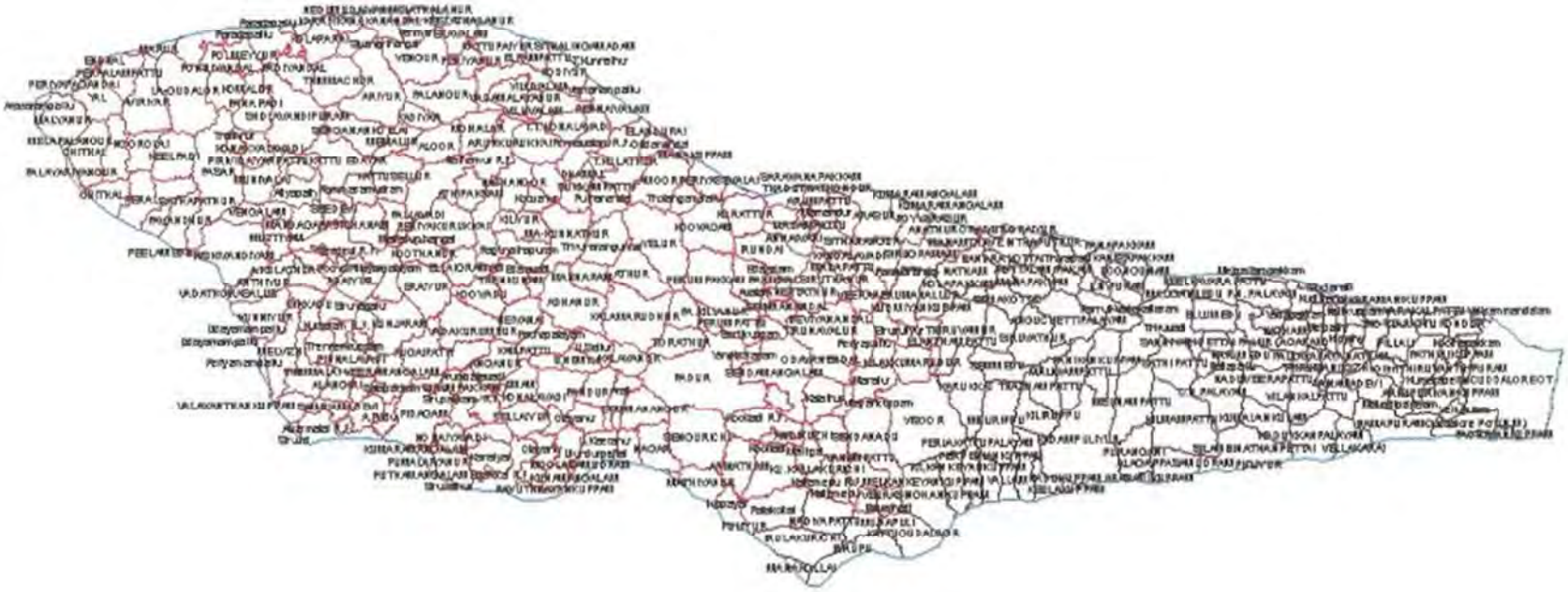
0 4 8 16 24 32 Kilometers

Legend

- Gadilum Sub Basin Boundary
- Block Boundary

GADILAM SUB BASIN (PENNAIAR BASIN)
VILLAGE MAP



N

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SCALE

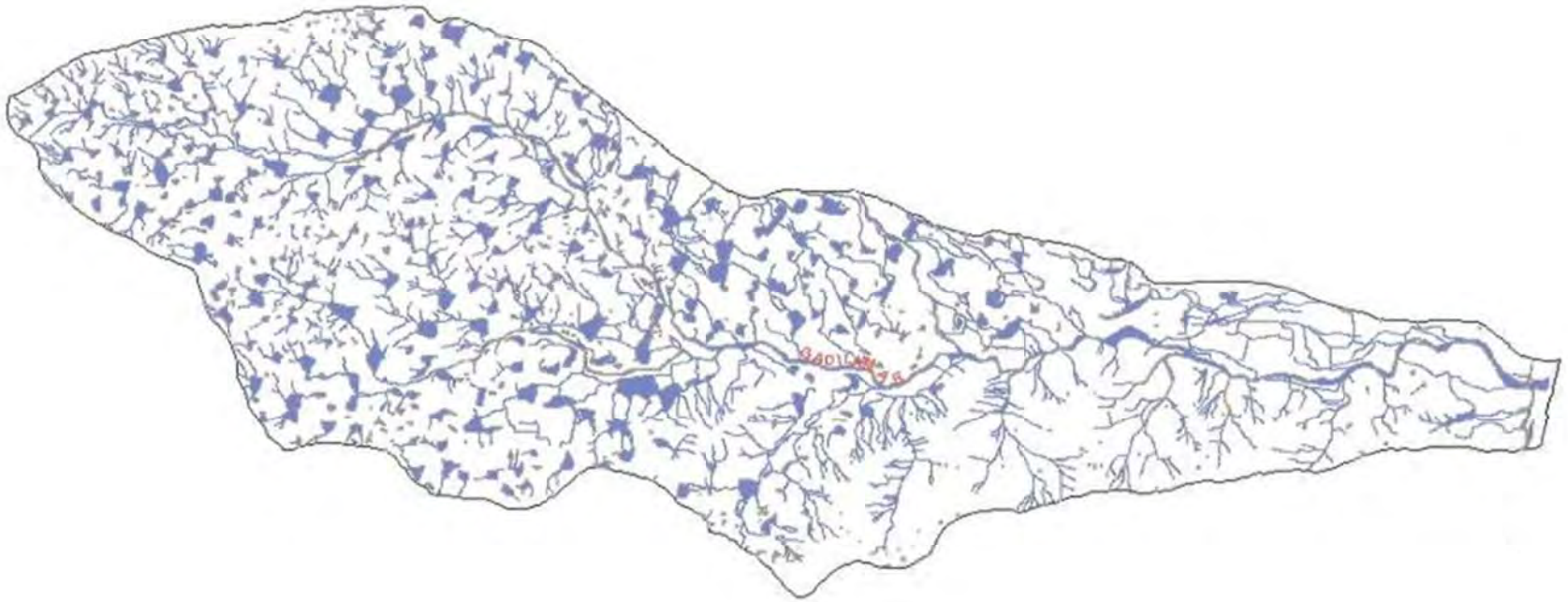
0 2 4 8 12 16

Kilometers

LEGEND

- Gadilam Sub Basin Boundary
- Village Boundary of Villupuram District
- Village Boundary of Cuddalore District

GADILAM SUB BASIN (PENNAIAR BASIN)
DRAINAGE MAP



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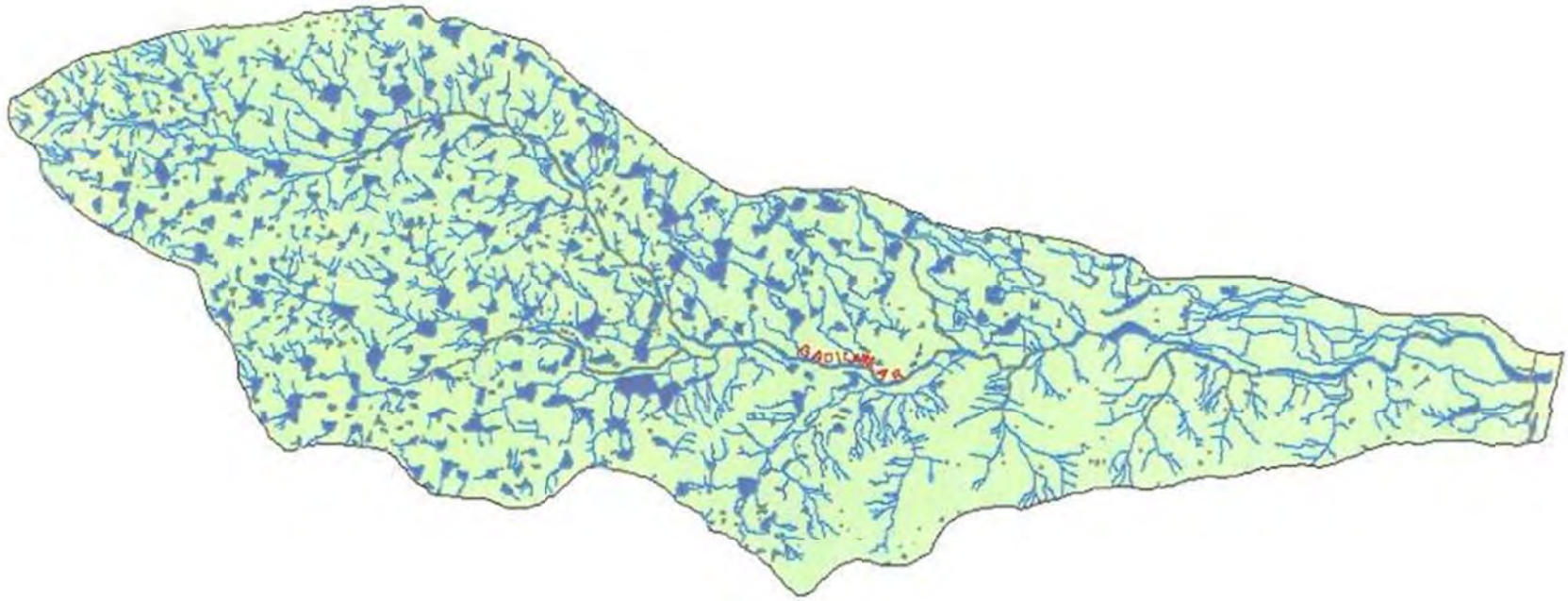
Scale

0 3.75 7.5 15 22.5 30 Kilometers

Legend

- Streams
- Tanks
- Sub Basin Boundary

GADILAM SUB BASIN (PENNAIAR BASIN)
IRRIGATION SYSTEM MAP



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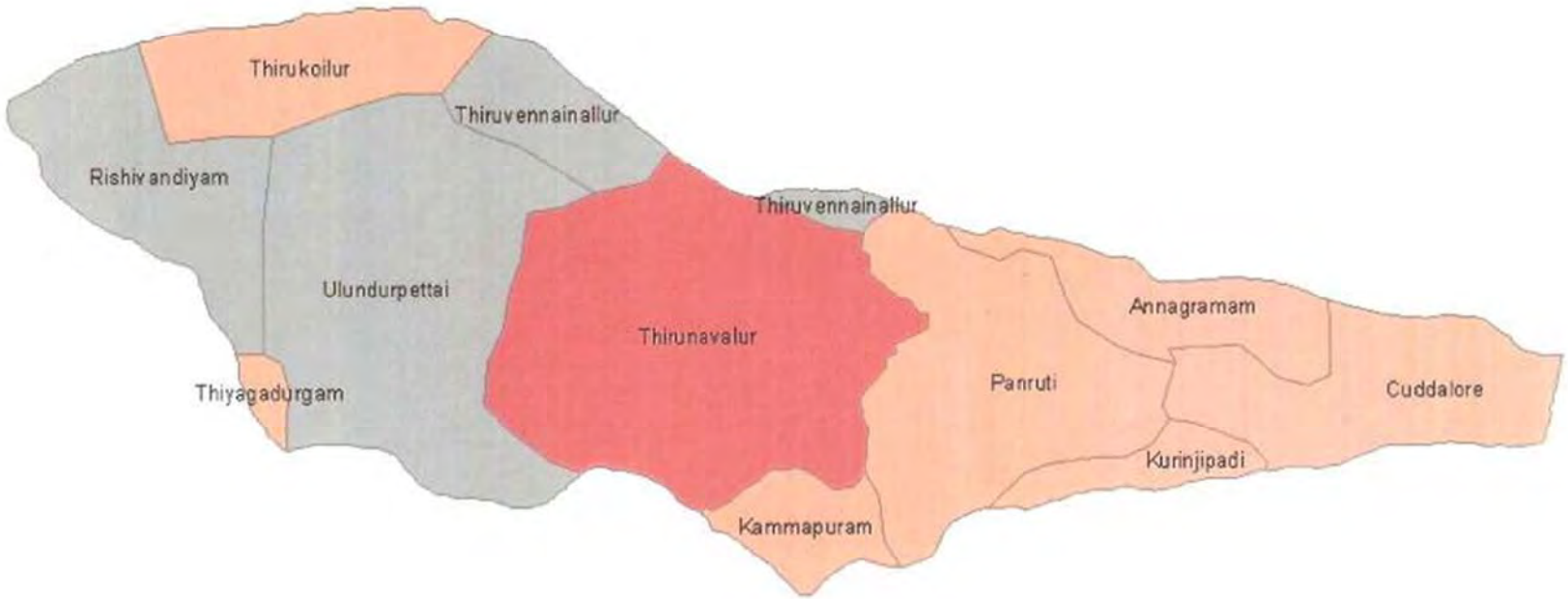
Scale

0 3.75 7.5 15 22.5 30 Kilometers

Legend

- Streams
- Tanks
- Sub Basin Boundary

GADILUM SUB BASIN (PENNAIAR BASIN)
CATEGORIZATION OF BLOCK MAP



N

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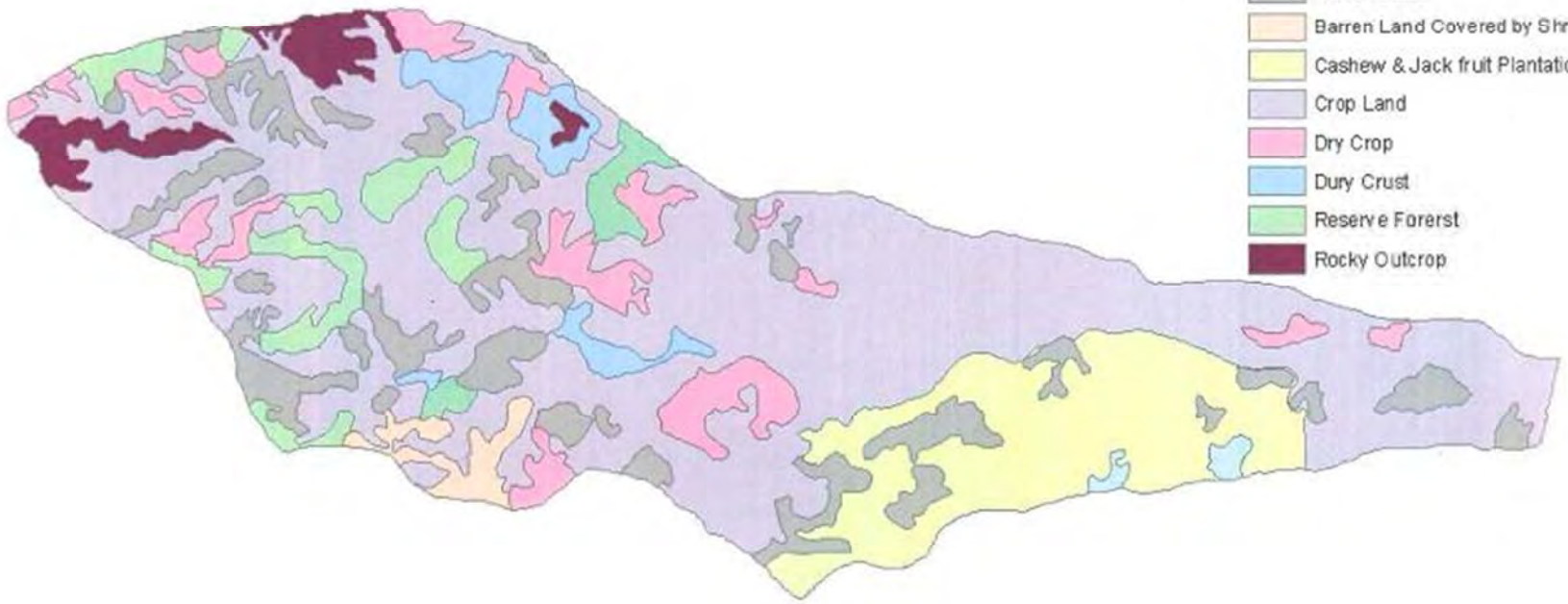
Scale

0 3.75 7.5 15 22.5 30 Kilometers

Legend

- Critical
- Semi Critical
- Over Exploited

GADILAM SUB BASIN (PENNAIAR BASIN)
LANDUSE MAP



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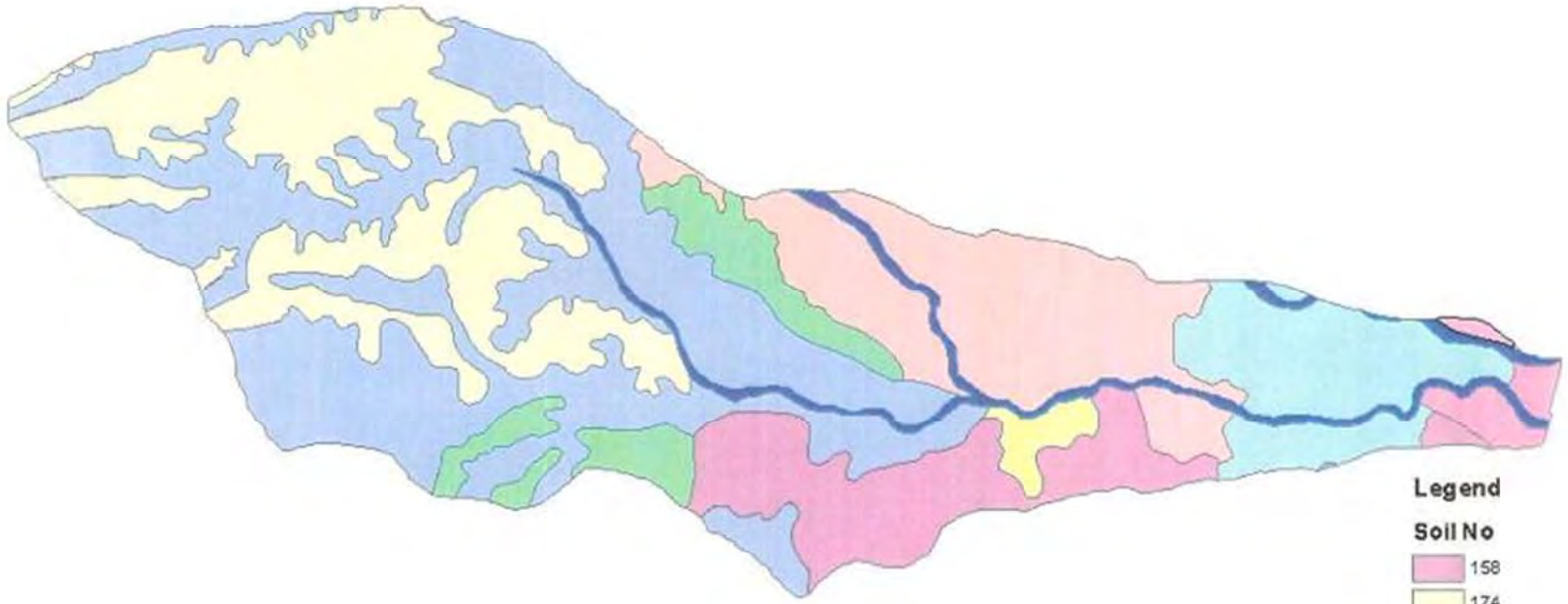
GADILAM SUB BASIN (PENNAIAR BASIN)
SOIL MAP



N

Legend

Soil No

158
174
183
199
213
229
251
258
267
River

Scale

0 3.75 7.5 15 22.5 30

Kilometers

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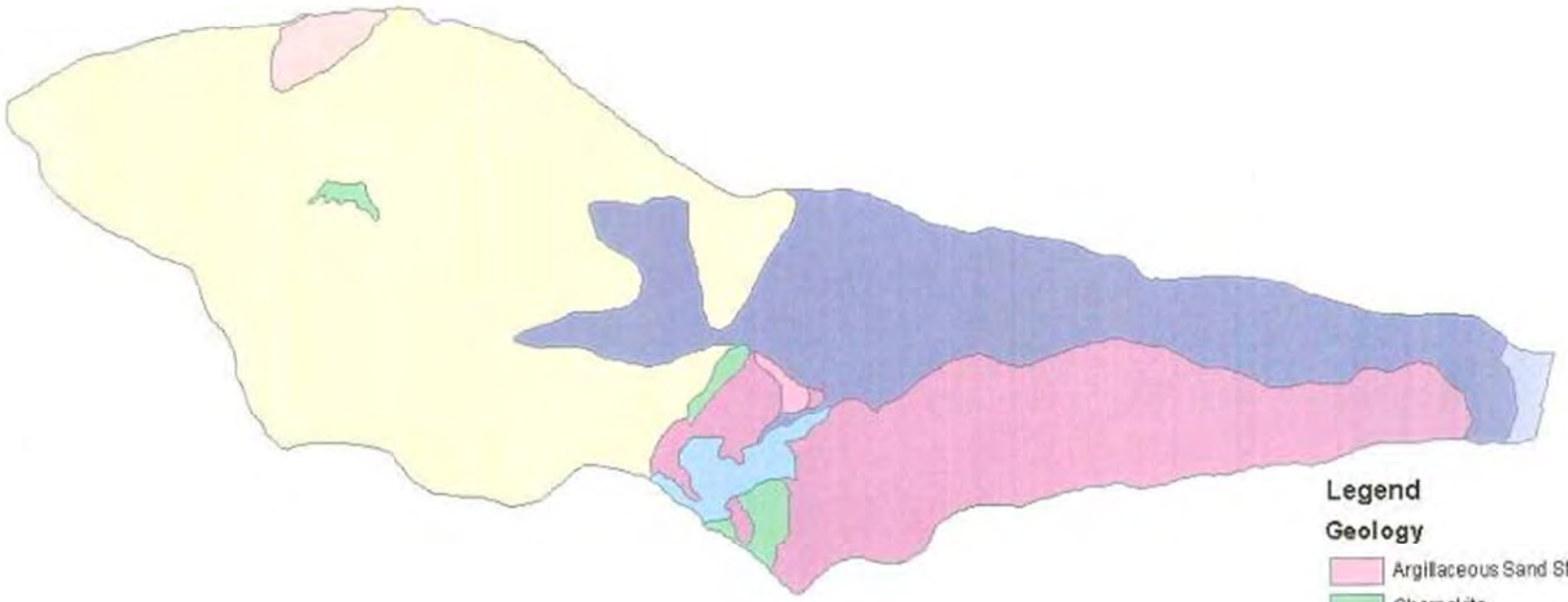
GADILAM SUB BASIN (PENNAIAR BASIN)
GEOLOGY MAP



N

Legend

Geology

- Argillaceous Sand Stone
- Charnokite
- Clay With Limestone
- Flood Plain
- Granite
- Hornblende Biotite Gneiss
- Pyroxenite
- Sand Stones
- Tidal Flat

SCALE

0 3.75 7.5 15 22.5 30 Kilometers

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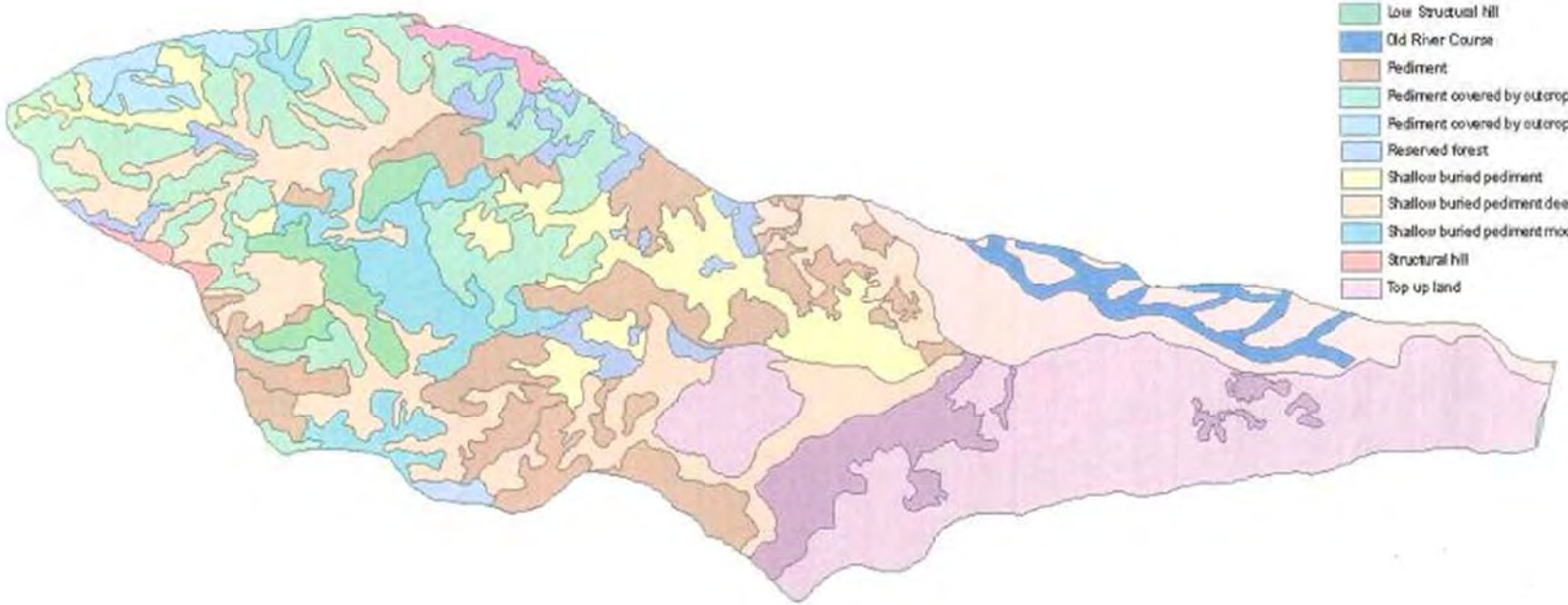
GADILAM SUB BASIN (PENNAIAR BASIN)
GEOMORPHOLOGY MAP



N

Legend

Geomorphology

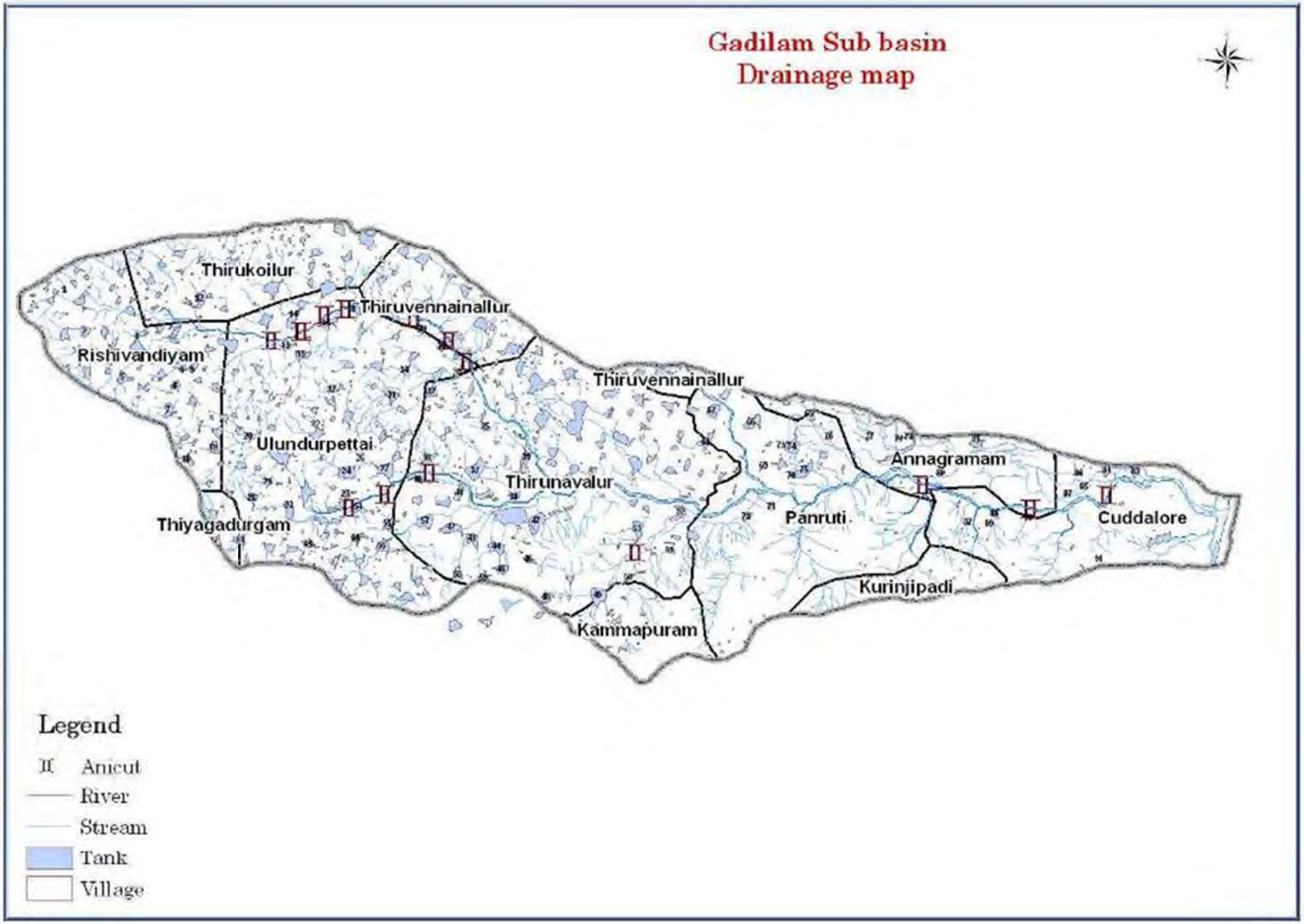
- Alluvium
- Backwater
- Beach
- Deep buried pediment
- Duri crust
- Gullies and Raviance
- Low Structural hill
- Old River Course
- Pediment
- Pediment covered by outcrop
- Pediment covered by outcrop/Rf
- Reserved forest
- Shallow buried pediment
- Shallow buried pediment deep
- Shallow buried pediment moderate
- Structural hill
- Top up land

SCALE

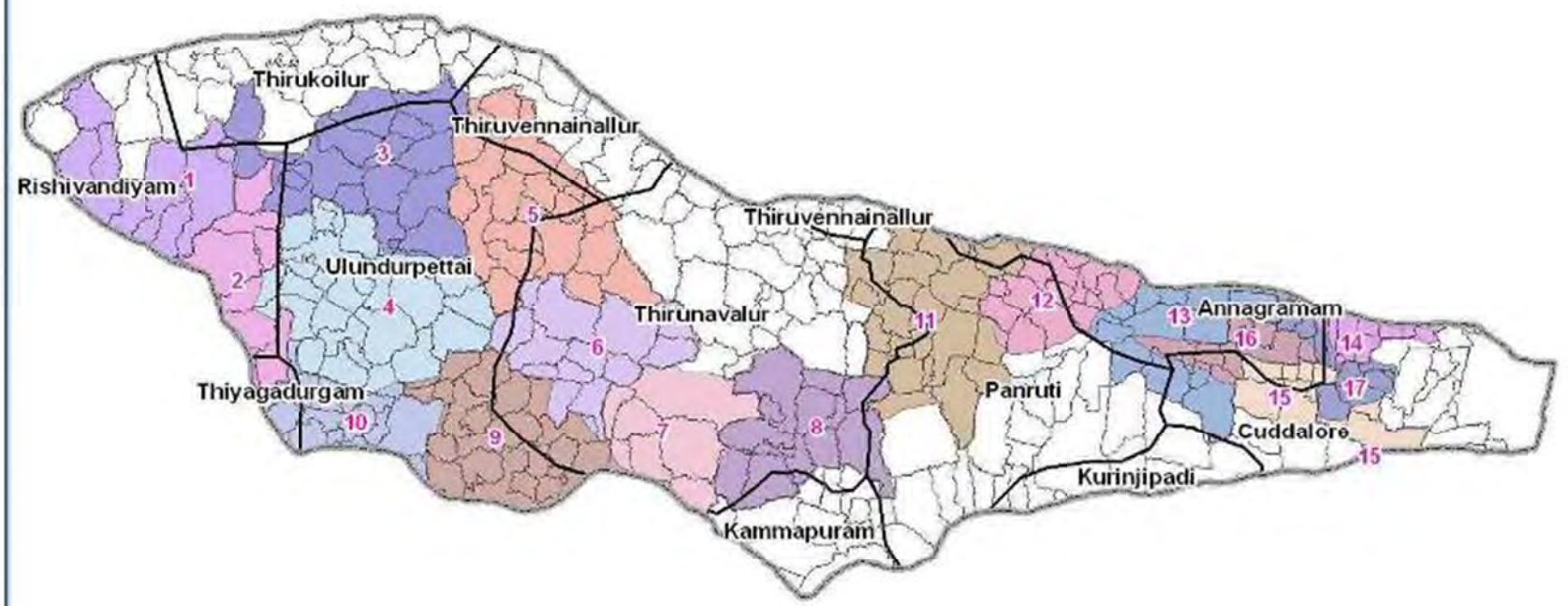
0 4 8 16 24 32

Kilometers

GOVERNMENT OF TAMIL NADU
WATER RESOURCES ORGANISATION, PWD
INSTITUTE FOR WATER STUDIES
TAMIL NADU CENTRE FOR REMOTE SENSING APPLICATION
THARAMANI, CHENNAI - 113


Gadilam Sub basin
Drainage map
Thirukoilur
Thiruvennainallur
Rishivandiyam
Thiruvennainallur
Ulundurpettai
Annagramam
Thirunavalur
Panruti
Cuddalore
Thiyagadurgam
Kurinjipadi
Kammapuram
Legend
Anicut
River
Stream
Tank
Village

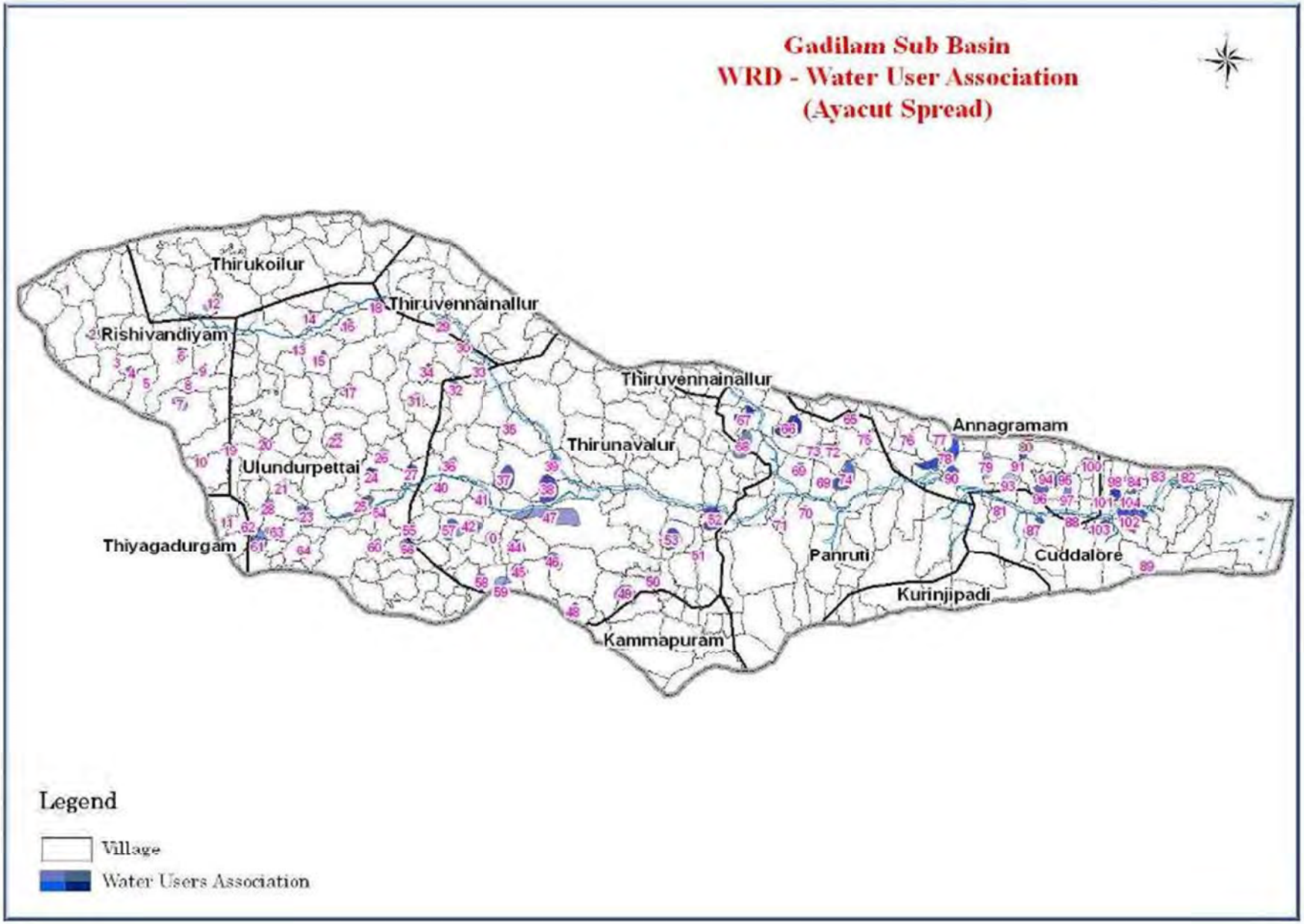
Cluster map of Gadilam Sub basin



Legend

Village

Cluster


Gadilam Sub Basin
WRD - Water User Association
(Ayacut Spread)
Thirukoilur
Thiruvennainallur
Rishivandiyam
Thiruvennainallur
Annagramam
Thirunavalur
Ulundurpettai
Thiyagadurgam
Panruti
Cuddalore
Kurinjipadi
Kammapuram
Legend
Village
Water Users Association

Walk through survey at Thottapattu village on 16.12.08

Walk through survey at Thottapattu village on 16.12.08

Stakeholders meeting held at Cuddalore on 29.10.08

Stakeholders meeting held at Cuddalore on 29.10.08

Stakehodlers meeting held at Vridhachalam on 22.10.08

Stakeholders meeting held at Vridhachalam on 22.10.08

Sub committe meeting conducted by Executive Engineer on 21.1.09

Sub Committe meeting conducted by Assistant Executive Engineer on 16.12.08

Walk through survey at Vengalam village on 8.11.08

Walk through survey at Munivazhai village on 8.11.08

Walk through survey at Kattuedaiyar village on 17.12.08

Walk through survey at Eraiyur village on 17.12.08

Walk through survey at Nathamoor village on 11.11.08

Walk through survey at Kiliyur village on 11.11.08

Walk through survey at Kalamarudur villag on 14.11.08

Walk through survey at Semmangur village on 14.11.08

Walk through survey at Vanpakkam village on 15.11.08

Walk through survey at Vanpakkam village on 15.11.08

Walk through survey at Sirugramam village on 18.12.08

Walk through survey at Sirugramam village on 18.12.08

Walk through survey at Ramapuram village on 16.12.08

Walk through survey at Vilangalpattu village on 16.12.08

Walk through survey at Naduveerapattu village on 19.12.08

Walk through survey at Naduveerapattu village on 19.12.08

DETAILED SPECIFICATIONS

Sl. No.	Description of Items
1	C learing Scrub jungle complete as per standard specifications.
2	Dismantling, with out damaging the near by structures if any clearing away and carefully stacking material useful for reuse for any thickness of brick or stone masonry in Cement Mortar walls under 3 (Three) meters high complying with standard specification and as directed by the Engineer..
3	Dismantling with out damaging the near by structures if any ,clearing away plain cement concrete as directed by the Engineer in charge of the works as per technical Specification and as directed by the Engineer..
4	Earth work excavation in all kind of soils except rock requiring blasting for open excavation and depositing the earth in places shown by the engineer with all leads and lifts including dewatering by baling , pumping, diverting water wherever necessary and spreading the earth at site in layers not exceeding 250 mm thickness breaking clods neat sectioning etc. including watering as desired by the engineer in charge based on the work for cut open the bund
5	Earthwork excavation for foundation in all soils and depositing on bank inclusive of shoring, strutting and bailing out water wherever necessary, well rammed, consolidated and depositing the surplus earth in places as shown by the departmental officers with an initial lead of 10 (Ten) metres and initial lift of 2 (Two) metres and clearing, leveling the site complete as per standard specifications.
6	Earthwork in all soils except hard rock requiring blasting and conveying for formation of bund with lead of **0 to 300 metre** deploying earth moving machinery and tippers for formation of bund in layers of suitable thickness, depending upon type of compaction equipment deployed, and not exceeding 23 cm thickness, benching of slopes prior to placement of earth fill, breaking clods, watering to OMC (optimum moisture content) and compaction of each layer to 95% Proctor density through deployment of appropriate compaction equipment (8-10 T power roller / vibratory deployment of appropriate width (+ 0.90 m width drum) power roller or vibratory power roller / fuel-operated or elect – operated vibratory plate compactors, ensuring compaction of designed bund section including side slopes, complete as per specification.
7	Earthwork deploying earth moving machinery for de-silting channels, depositing earth on banks for forming bund , well consolidated and dressed, including sectioning and jungle clearance etc. complete. (**having width upto 3 m)** complying with the standard specification
8	Turfing in slopes of bund including watering and fixing with a lead of up to 3 KMCT complete as per standard specifications.
9	Providing and placing in Position of Cement concrete M7.5 grade with well graded aggregates and the nominal maximum size of coarse aggregate of 40 mm mixing by mixer machine including dewatering by bailing/pumping wherever necessary laying the concrete in layers and in bays with all leads and lifts , compacting and finishing the surface watering curing, so as to attain the profile and strength specified in the drawings for various depths below ground level and various heights above ground level as per the direction of the Engineer and complying with standard specification
10	Reinforced Cement concrete M20 grade for Cement Concrete works with well graded hard aggregates and the nominal maximum of coarse aggregate of 20 mm gauge weigh batching the ingredients and mixing in approved mixers/batching plant (to produce concrete of the specified characteristic strength of $20N/mm^2$ at 28days) including dewatering of placement site by bailing/pumping and by diverting wherever necessary

	laying the concrete in layers and in bays, compacting and finishing the surface water curing so as to attain the profile and strength specified in the approved drawing and specification and including the cost component of providing rigid and smooth centering and shuttering wherever necessary but excluding cost component of providing fabrication of reinforcements for various depths below ground level and various heights above ground level as per the direction of the Engineer complete in all respect but excluding the cost and placing of reinforced grill in position complying with standard specification
11	Supplying, fabricating & placing in position of ribbed tor steel grills for Reinforcement of RCC works including cost of steel and binding wire and labour charges for de-coiling, cutting, bending and tying the grills complete as per standard specifications.
12	Providing cut stone roughly dressed and set in cement mortar 1:3 (one cement and three sand) including fixing in position etc complete as directed by the Engineer in charge of work complying with the standard specification
13	Random rubble masonry in cement mortar 1:4 (one cement and four sand)mixed using mixer machine using new hard rough stone bond stones for various depth and height below and above ground level with all leads and lifts including simultaneous flush pointing the exposed surface with same mortar and withal incidental charges such as scaffolding and dewatering by baling pumping and diverting water wherever required water wherever required finishing curing complete so as to attain the profile and strength in the drawing and specification including providing shrinkage ,construction joint for closing the days work at intervals specified wherever required and as directed by the Engineer complete complying with specification
14	Plastering with Cement Mortar 1:4 (One cement and four sand) 20mm thick including all incidental chares such as scaffolding finishing curing for various depth and height below and above ground level etc complete as directed by the Engineer in charge of work complying with the standard specification
15	Refilling with excavated earth (other than sand) available at site with all leads and lifts for filling the cut open portion wherever necessary including breaking clods sectioning etc. including extra watering and compaction of Earth Fill layers earth fill layers to specified density of 95% of proctor density through deployment of appropriate compaction equipment as directed by the Engineers and complying with standard specification
16	Rough stone dry packing for apron and revetment using new hard granite stone including stacking the stones for Pre-measurements complying with standard specification.
17	Supplying demarcation R.C.C. pre cast post in Cement concrete M15 grade with well graded aggregates and the nominal maximum size of coarse aggregate of size 20 mm of size 0.20 x 0.20 x 1.30 M and fixing the post 40 Cm depth below ground level, the post includes using 4 numbers of 8 mm RTS main rod to a length of 1.325 M, using 6 mm MS 9 numbers as strips with steel centering and painting the post with enamel paint to a height of 0.80 M around the post etc. complete and conveying the post to the site of demarcation boundary such as tank bund and foreshore including earth work excavation for foundation in HSC, and the post embedded by using Cement concrete M7.5 grade with well graded aggregates and the nominal maximum size of coarse aggregate of 40 mm, as per the direction of the Engineers and complying with standard specification
18	Supplying and fixing of 'V' notch made up of steel plate of 6 mm thick and fixing it in concrete of grade M-10 using 20 mm grade metal to IS specified to the profile specified in the drawing including the cost of earthwork and all materials etc. complete as per the direction of the Engineers and complying with standard specification for Measuring device.

19	Fabricating, supplying and fixing of steel screw gearing shutters of following sizes made out of 75 x 40 mm M.S. Medium Channel for outer frame with same section of vertical stiffeners 3 Nos. with 10mm skin plate. The grooves 2 Nos. to a required height made out of 100 x 50 mm M.S. Channel with hold fast arrangements. The Top Beam to be made out of 200 x 100mm R.S. joists 2 Nos. to a width of shutter plus 0.60mm to a width of shutter plus 0.30M for bearing. Screw Gearing arrangements to be made using 80mm dia M.S. shaft to a required height duly threaded with capstain head arrangements [heavy type] with ball bearing arrangements suitable to operate the screw gearing rod with operating key. Necessary bed bolts and fish plates to be provided for anchorage arrangements to place the R.S.Joist in position. All the components to be painted with two coats of A.C. Black paint over one coat of quality red oxide (for Weir and Sluices) for the size of shutter 1.00 m X 1.00m.
20	Providing and placing in Position of Cement concrete of grade M10 using well graded aggregates and with maximum nominal size of 20mm to I.S. specified grading mixing in mixer machine (to produce concrete of the specified characteristic strength of 10N/mm2 at 28 days) including dewatering the placement site laying Vibrating, compacting and finishing the surface with all leads and lifts watering, curing complete so as to attain the profile and strength specified in the drawing and specification for various height above ground level complete as directed by the Engineer complying with standard specification..
21	Cement concrete M15 grade with well graded aggregates and the nominal maximum size of coarse aggregate of size 20mm weigh batching the ingredients and mixing in approved mixers/batching plant (to produce concrete of the specified characteristic strength of 15N/mm^2 at 28days) including dewatering the placement site by bailing/pumping and by diverting wherever necessary laying the concrete in layers and in bays vibrating, compacting and finishing the surface water curing so as to attain the profile and strength specified in the approved drawing and specification and including the cost component of providing rigid and smooth centering and shuttering wherever necessary various heights above and below ground level and as per the direction of the Engineers complying with standard specification.
22	Earthwork in all soils except hard rock requiring blasting and conveying for formation of bund with lead of **0 to 100 metre** deploying earth moving machinery and tippers for formation of bund in layers of suitable thickness, depending upon type of compaction equipment deployed, and not exceeding 23 cm thickness, benching of slopes prior to placement of earth fill, breaking clods, watering to OMC (optimum moisture content) and compaction of each layer to 95% Proctor density through deployment of appropriate compaction equipment (8-10 T power roller / vibratory deployment of appropriate width (+ 0.90 m width drum) power roller or vibratory power roller / fuel-operated or elect – operated vibratory plate compactors, ensuring compaction of designed bund section including side slopes, complete as per specification for forming foreshore bund.
23	Earth work excavating and depositing on bank with a lead of 10 m & initial lift of 2 m in Hard stiff clay, stiff black cotton, hard red earth, shales, murram, gravel, stoney earth and earth mixed with small size of boulders hard gravelly soil with a lead of 0 to 3 KM CT, complying with standard specification and as directed by the departmental officers, complete including extra watering and compaction of earth fill layers to specified density of 95% of proctor density @ OMC through deployment of appropriate compaction equipment including trimming the side slope for side compaction t (standard 8-10 ton power roller; short width drum vibratory power roller; vibratory power roller; fuel-operated vibratory plate compactor of adequate capacity, as per space available for compaction) for forming flood bank.
24	Cement concrete M20 grade with well graded aggregates and the nominal maximum size of coarse aggregate of size 20mm weigh batching the ingredients and mixing in approved mixers/batching plant (to produce concrete of the specified characteristic strength of 15N/mm^2 at 28days) including dewatering the placement site by

	bailing/pumping and by diverting wherever necessary laying the concrete in layers and in bays vibrating, compacting and finishing the surface water curing so as to attain the profile and strength specified in the approved drawing and specification and including the cost component of providing rigid and smooth centering and shuttering wherever necessary various heights above and below ground level and as per the direction of the Engineers complying with standard specification.
25	Pointing with cement mortar 1:3(one cement and three sand) for flush pointing in Random rubble masonry using mixer machine for mixing water complying with standard specification.
26	Fabricating and supply of Teak wood plug size of 60 cm height . The plug rod with 63 mm mild steel rod size of 5 m height.The plug rod top side , middle, center and bottom side covered iron stap – 3 nos. Plate thickness size 3mm steel plate . The plug hold size 12 cm to 15 cm Dia. The plug rod fittings top side 2 numbers 200 X 100 mm channel total length of 1.80 metre -2 nos. and anchor bolt with plate 2 sets and the headset with thrust bearing type with Hexagonal nuts one set, with locking arrangements key one number the plug painted and conveyance to the work site including loading, unloading . (The rates should be inclusive of all taxes and duties and including fixing charges etc., complete complying specification and ad directed by the Engineer.)
27	Centering and sofitts of Reinforced concrete slabs plain surface including structing upto 3m height M.S sheet of size 90 cm x 60cm and B.G 10 Gauge screws with welding M.S Angle of size 25mm x 25mm lide over silver oad (country wood) joist of size 6.5cm spaced at about 90cm c/c and supported casurnia poles of 10cm to 13cm dia. Complying with standard specification.
28	Supplying and fixing of TBL stones and B.M. stones the exposed surface neatly dressed to a height of 15 cm including cutting letters 10x10x25 cm.as directed by the departmental officers.
29	Clean removal of lime plaster from walls and racking out joints 20 mm deep and Plastering with cement Mortar 1:4 (One cement and four sand) 20 mm thickness etc., complete complying with standard specification.