Public Works Department
Irrigation
Demand No. 40
Policy Note 2009 – 2010

1.0. WATER RESOURCES DEPARTMENT

1.1. General

"நீரின் றமையா துலகெனின் யார்யார்க்கும்
வானின் றமையா தொழுக்கு"

"Even as life on earth cannot sustain without water, virtue too depends ultimately on rain"

The Public Works Department hitherto in-charge of both "Water Resources" and "Buildings" has since been reorganised into two independent departments viz. "Water Resources Department" and "Public Works Department" in the interests of functional specialisation and administrative convenience. This has come into effect from 12.02.2008.

The Water Resources Department functions in the framework of river basins and sub-basins. Conforming to this concept, the State has been divided into four regions headed by Regional Chief Engineers located in Chennai, Thiruchirappalli, Madurai and Coimbatore. The specialized functions necessary for the overall planning of irrigation projects are handled by five functional Chief Engineers heading the independent divisions of Plan Formulation (PF); Design, Research & Construction Support (DR&CS); Operation & Maintenance (O&M); State Ground & Surface Water Resources Data Centre (SG&SWRDC) and Institute

for Water Studies (IWS) with headquarters in Chennai. The Engineer-in-Chief, Water Resources Department monitors and co-ordinates the functions of all the Regional and functional Chief Engineers and assists the Government as the technical and administrative head of the department.

1.2. Irrigation Infrastructure

Water is a limiting factor in the State affecting production and productivity. Tamil Nadu covers 4% geographical area and caters to 7% population of the country whereas the available water resources is only 3%. Even though the annual average rainfall is in the order of 925 mm there are a few rain shadow regions receiving around 400 mm rainfall making them drought prone. The occasional flash floods also cause huge damages to the infrastructure besides loss of lives. The irrigation system of the State comprises 34 basins grouped into 17 major river basins, which further fall into 127 sub-basins. The surface water potential is about 853 TMC, which includes 261 TMC contributed by neighbouring States and the ground water potential estimated is about 815 TMC. The demand for water is continuously on the rise with the growth of population, industry and agriculture while there is no increase in the availability of water. Surface water resources have almost been fully harnessed by impounding the available water in 74 large dams, 7 small dams, 39,202 tanks (PWD Tanks 10,540 and Panchayat Tanks 28,662) and other water bodies. The water holding capacity of the 81 dams is 232.5 TMC and of all tanks is 178.918 TMC.

1.3. Ground Water Potential

Ground water has become a valuable resource for meeting the drinking water requirements and for

agricultural development. Tamil Nadu having almost fully utilized the surface water resource has now turned heavily to the other alternative source of Ground water for further development. Though ground water is a replenishable natural resource, its occurrence and movement is controlled by the hydro meteorological and hydro geological environs which are not uniform in Tamil Nadu. Therefore, special thrust is accorded for safeguarding, recharging and judiciously using ground water. 85% of the total ground water potential of the State has been developed for use. The serious concern is that as per the Groundwater Assessment Report 2004, out of the total 385 blocks, 142 are over exploited, 33 are critical, 57 are semi-critical, and 8 are saline. Only 145 blocks are considered to be safe. The objective is to ensure through appropriate measures and continuous monitoring that the resource does not go beyond replenishable limits and more importantly to work for a positive trend so as to bring more number of blocks under “safe” category.

1.4. Irrigation Status

The gross area irrigated rose from 21.89 lakh ha. in 1950-1951 to 36.34 lakh ha. in 1998-1999. This stood at 32.52 lakh ha. in 2007-08. In order to create and sustain irrigation potential in the water stressed State, the rational use of surface water, cautious exploitation of ground water, strengthening natural aquifers through various water harvesting and recharging means have to be effectively adopted and enforced. The river basin based model for planning of water use needs should be developed into a comprehensive strategy, statewide, within a suitable administrative and regulatory framework.

2.0. IRRIGATED AGRICULTURE MODERNISATION AND WATER BODIES RESTORATION AND MANAGEMENT (IAMWARM) PROJECT

The World Bank assisted Tamil Nadu Irrigated Agriculture Modernisation and Water Bodies Restoration and Management project (IAMWARM) was approved by the Government with an outlay of Rs.2,547 crore, over a period of six years from 2007 to benefit 6.17 lakh ha.

2.1. Objective of the Project:

The IAMWARM project aims to improve the service delivery of irrigation systems and productivity of irrigated agriculture with effective integrated water resources management in a sub-basin framework.

2.2. Specific components of the project

2.2.1. Irrigation systems modernisation in a sub basin framework :

This component seeks to improve bulk water delivery through modernisation of irrigation systems in 63 selected sub-basins with an ayacut of 6.17 lakh ha. Activities involve tank system modernisation by restoring and repairing water bodies

and improving canal irrigation system through repair and rehabilitation.

2.2.2. Agricultural Intensification and Diversification : This component builds on the improved bulk water delivery to increase the productivity of agriculture-related activities through improved agricultural intensification and diversification of crops, micro irrigation, Animal Husbandry and Fisheries.

2.2.3. Institutional Modernisation for Irrigated Agriculture : It is sought to improve the institutional capacity for irrigation service delivery through the Water Resources Department and the Water Users Associations (WUAs) with technically better designs and in a socially sustainable manner. The Water Users Associations would be utilized to implement Participatory Irrigation Management (PIM) by involving farmers.

2.2.4. Water Resources Management : The institutional arrangements and capacity for sustainable water resources management is proposed to be improved by the Water Resources Department through the creation of a State Water Resources Management Agency (SWaRMA). Apart from this, water related research would be taken up on relevant topics through the Irrigation Research Fund (IRF).

2.3. Project Implementation (2007-2009)

The project covers an area of 6.17 lakh ha. spread over 63 sub basins out of the 127 sub-basins in the State. In the first phase, implementation was initiated during 2007-08 in 9 sub basins covering an extent of 2.94 lakh ha. with an outlay of Rs.714.94 crore in respect of all departments put together. In the first year itself, works have been successfully initiated by all the Departments. During the financial year 2008-2009, 16 more sub basins with an ayacut of about 0.672 lakh ha. were taken up. DPR preparation in Phase-III for the 30 sub basins have been completed and sent to the World Bank for approval.

2.3.1. Water Resources Department : In respect of Water Resources Department, for the first year in 9 sub basins necessary bids have been finalised for 60 packages with an outlay of Rs. 366.81 crore. Works have been commenced in 60 packages. 10 packages of leftout reaches in PAP with a value of Rs.49 crore have been taken up in second phase, which have also been commenced. At the end of May 2009, the department has modernized 475 Tanks, rehabilitated 94 Anicuts and 1484 km of Supply Channels. For the 16 sub basins in phase II fixing of agencies are completed and work commenced in second year for the 29 packages out of 43 packages as per World Bank procurement guidelines. For the remaining packages, procurement is under progress. These packages have a programme to rehabilitate 762 Tanks, 162 Anicuts and 759.21 km of Supply Channels.

Under Participatory Irrigation Management, elections for 1227 Water Users Associations have been

completed in February 2009 and further 1354 WUA elections are to be held for the III-Phase sub basins before August 2009.

2.3.2. Agricultural Engineering Department : Micro Irrigation systems have been installed in 4,088 ha. 1,029 farm ponds have been constructed. Bids for Farm Mechanisation have been initiated and 643 equipments have been procured and distributed to the Water Users' Associations during 2008-2009.

2.3.3. Agriculture Department : Crop demonstrations for paddy, pulses, maize, groundnut etc., were conducted in 19906 ha. in the 25 sub basins. Significant improvement in yield upto 38% in paddy (SRI), 53% in maize and 24% in pulses was achieved. An impact area of 1,72,630 ha. has been identified and covered in 1,24,312 ha. Exceptional yields were recorded in SRI and pulses demonstrations i.e.,

- ❖ Chinnar sub basin, Ladapuram Village – Paddy 14,370 Kg per ha. as compared to 5,613 Kg per ha. in the previous year.

- ❖ Arjunanadhi sub basin, Ammankoil Patti Village – Pulses (Green gram) 1,510 Kg per ha. as compared to 694 Kg per ha. in the previous year

2.3.4. Horticulture Department : Both by way of Diversification and Transfer of Technology an additional area of 15,357 ha. has been brought under fruits, vegetables and other horticultural crops as of May 2009 covering 25 sub basins.

2.3.5. Tamil Nadu Agricultural University : The new System of Rice Intensification (SRI) demonstration was introduced in an area of 2,581 ha. with an impact area of 10,286 ha. With the SRI technique, rice yields have shown 40 to 80 percentage improvement over the conventional practice. In some areas exceptional yields have been achieved.

- ❖ In Swethanadhi sub basin Anaiyam Patti Village Hybrid Rice recorded 10.4 Tons per ha. under SRI method of cultivation as compared to 6.25 Tons per ha. during previous year.

- ❖ Thumbal Village of Upper Vellar sub basin using improved production technology of pulses recorded 810 Kg per ha. as compared to 360 Kg per ha. (69% increase in yield) during last year.

2.3.6. Agricultural Marketing : To assist the farmers to get better price, 432 Commodity Groups for diversified crops like Chillies, Maize, Groundnut, Banana etc., have been formed. Besides, Memorandum of Understanding between farmers and companies for different commercial crops like maize, mango, chillies etc., have been facilitated.

2.3.7. Animal Husbandry Department : To increase the conception rate, Infertility and total Veterinary Health Care camps were conducted. To improve milk yield, the availability of green fodder was increased and an additional area of 2,668 ha. was brought under fodder cultivation.

2.3.8. Fisheries Department : The Department has promoted Aquaculture in 228 farm ponds as

additional income generating activities. Carp seed rearing in 57 units of net cages has also been promoted. Nine ornamental fish culture units have been established to promote rural employment and income to farmers.

2.4. Water Walks, IAMWARM Days with all line Departments and Change Management Workshops are being conducted to ensure convergence and participation of officers and the farmers on their needs and solutions.

2.5. Project Implementation (2009 - 2010):

During 2009-2010, the Phase III sub basins covering an extent of 1.84 lakh ha. are proposed to be taken up. The outlay for 2009-10 is Rs.533.51 crore for all the departments put together. DPRs have been prepared and sent to the World Bank for approval. Thus, most of the works in the sub basins covering the 3 phases under the IAMWARM project will have been initiated in 2009-2010.

3.0. DAM REHABILITATION AND IMPROVEMENT PROJECT (DRIP)

There is a constant need to strengthen and maintain the Dams in view of certain general factors like ageing, maintenance and sometimes possible low compliance with Dam safety standards and practices etc., Due attention should be shown to all the Dams irrespective of their size, as even the small Dams with considerable water storage capacity if not maintained well will have the potential to cause damage to people's livelihood and environment. It is, therefore,

important to ensure that Dam structures and systems are properly maintained and are backed by regular monitoring, rehabilitation and modernization.

During the year 1991-1998, rehabilitation works were comprehensively carried out in 9 dams with the financial assistance of the World Bank at a cost of Rs.22.82 crore. After the closure of the project in the year 1998, residual works in those Dams were largely carried out with the State funds. The World Bank has now come forward to fund the Dam rehabilitation works in India under Dam Rehabilitation and Improvement Project. The Dam Rehabilitation and Improvement Project has a holistic approach to dam safety, rehabilitation and modernization and it also includes provision for general infrastructure.

The Government of Tamil Nadu in June 2008 sent a preliminary project report to the Central Water Commission for rehabilitation and improvement of 70 Dams of Water Resources Department and 38 Dams of Tamil Nadu Electricity Board at an estimated cost of Rs.479 crore seeking funding from the World Bank.

Tamil Nadu is one among the five States selected by the World Bank for participation in this project. The World Bank in their Aide Memoire requested all the participating States to review their proposals and furnish the detailed estimate cost for each dam and the total final project cost. The final detailed estimate cost for 66 dams of Water Resources Department and 38 dams of Tamil Nadu Electricity Board works out to Rs.675 crore and the same has been furnished to the World Bank and the Central Water Commission during

May 2009. This project is expected to commence during the later part of fiscal year 2009-2010.

4.0. HYDROLOGY PROJECT - II

The Hydrology Project-II (HP-II) is a vertical extension of the Hydrology Project-I (HP-I), which was earlier implemented during 1995-2003. The Hydrology Project-II is being implemented from April 2006 at a total project cost of Rs.25.27 crore with the World Bank funding assistance.

The main core of the project are :

- ❖ Development of Hydrological Design Aids for Groundwater, Surface water and Water Quality for all the river basins of the State.

- ❖ Development of Decision Support System (DSS), (Planning) in Tamiraparani, Vaippar and Agniar river basins.

- ❖ Purpose Driven Studies to address specific hydrological problems.

The Central agencies like National Institute of Hydrology (NIH), Central Water Commission (CWC) and Central Ground Water Board (CGWB) would provide consultants to aid the development of the above.

During the financial year 2009-10, it is proposed to develop the Software application for Basin Information System which will form the base for Decision Support System.

Methodology for creating Hydrological Design Aids in Surface Water would be evolved with the guidance of the International consultants for Decision Support System (Planning). Targets would be achieved through close co-ordination with Central Water Commission. Various activities like upgradation of infrastructure, trainings on domain Software and knowledge transfer in Hydrology, National level study tours will also be taken up.

5.0. CAUVERY MODERNISATION PROJECT

The irrigation infrastructure in the Cauvery Basin in this State has not been modernised in a comprehensive manner as the Cauvery Water Dispute was under adjudication for a very long time. Since the Cauvery Water Disputes Tribunal had given its final award which is yet to be notified, this Government has promptly initiated action to have a scheme formulated for “Modernisation of Cauvery Delta Zone” consisting of Cauvery Delta System, Lower Coleroon Anicut System and Grand Anicut Canal System in the first instance. The Task Force constituted to formulate a suitable modernisation scheme has submitted its report to the Government on 27.11.2008. This project contemplates reconstruction, rehabilitation and modernisation of Cauvery Delta Zone covering an extent of about 17 lakh acres in the five districts of Thanjavur, Thiruvarur, Nagapattinam, Pudukottai and Cuddalore. Broadly regulated supply of water for irrigation and improved irrigation efficiency through prevention of water wastage are aimed at in the proposed modernisation. The project is proposed to be

implemented over a period of 15 years in three blocks of five years each, taking into consideration of available non-working irrigation seasons. The estimated cost of the project is Rs.5,100 crore. This proposal has been sent to the Ministry of Water Resources, Government of India, for obtaining funding assistance from the World Bank.

6.0. IRRIGATION SCHEMES

6.1. Long Pending Schemes

6.1.1. Schemes Completed during the past three years.

The special thrust given by the Government to complete the 11 long pending important schemes as detailed below by providing requisite resources and better strategies, resulted in completion of all the schemes.

Sl. No.	Name of the Scheme	Project cost (Rs. in crore)	Year of sanction	Ayacut Benefited (in Ha.)
1.	Nanganjiar Reservoir in Dindigul district	41.67	1990	2554
2.	Shenbagathope Reservoir in Thiruvannamalai District	34.00	1996	2709
3.	Reservoir across Andiappanur Odai in Vellore district	27.38	1996	810
4.	Reservoir across	35.95	1997	1157

	Varattar river in Dharmapuri district			
5.	Tank across Nayodai in Dindigul district	7.20	1998	148
6.	Reservoir across Nallathangal Odai in Erode district	42.70	1998	1920
7.	Tank across Ramakkal Odai and Anaivilundan Odai in Dindigul district	5.65	1998	107
8.	Irukkankudi Reservoir Project in Virudhunagar district across Vaippar River.	74.00	1992	4214
9.	18th Canal in Uthama-palayam Taluk in Theni district.	28.60	1999	534
10.	Tank across Sirumalaiyar in Dindigul district.	8.87	1998	128
11.	Kuppanatham Reservoir Project in Tiruvannamalai district.	43.50	1997	3108

6.1.2. Schemes proposed to be completed during current year (2009 - 2010)

The remaining 7 schemes as detailed below are proposed to be completed during the 2009-2010.

Sl. No.	Name of the Scheme	Project cost (Rs. In crore)	Year of sanction	Ayacut Benefited (in ha.)	Present status	Programme for completion
1.	Excavation of supply channels from Badathalav tank to feed Vennampalli tank in Krishnagiri district.	13.50	2001	1149	95% completed	10/2009
2.	Bathalapalli Reservoir Project across Malattar in Vellore district.	29.55	1997	1125	40% completed	Contract terminated. Re-tender to be called for.
3.	Anicut across Malattar river in Ramanatha-puram district.	42.00	1994	1914	85% completed. Reservoir completed. 2 distribu-tories completed; 4 in progress.	10/2009

4.	Reservoir across Mambazha-thuraiyar in Kanyakumari district.	14.80	1999	339	60% completed	03/2010
5.	Tank across Mathalapallam River in Dharmapuri district.	14.15	2001	445	90% completed	08/2009
6.	Irrigation Facilities to 58 Villages in Usilampatti Taluk in Madurai district.	74.60	1996	925	88% completed	10/2009
7.	New Veeranam Project in Cuddalore district.	130.00	1993	--	Works to the tune of Rs.82.76 crore completed	

6.2. State funded schemes

6.2.1. Rehabilitation of tanks identified by MLAs

As announced on the floor of the Assembly during the Public Works Grant 2007-08, the Government sanctioned rehabilitation of 365 Non-System Public Works Department tanks at an estimated cost of Rs.34.81 crore. All these tanks have been identified by the MLAs in 190 rural Assembly Constituencies. Even though, as per the original proposal the rehabilitation of

tanks was to be taken up with NABARD assistance, the Government sanctioned the required amount for taking up the works in anticipation of funding approval by NABARD. Works in all the 365 tanks have been completed.

6.2.2. Other schemes

The following 9 schemes were sanctioned in the year 2007-08 at a project cost of Rs.31.00 crore. Two works have been completed and the balance works are at various stages of implementation.

Sl. No	**Name of Scheme**	**Project Cost** (Rs.in crore)	**Present status**	**Pro-gramme for comple-tion**
1.	Construction of flood protective wall at the confluence point of Gadana with Tamiraparani river near Thirupudai Marudhur in Ambasamudram taluk of Tirunelveli district.	0.49	Completed	
2.	Improvement works in canal and tank of Mordhana Reservoir system of Rajathoppu Kanar Reservoir in Vellore district.	3.34	Completed.	

3.	Construction of vented causeway across Ponnai river in Melpadi village of Katpadi taluk of Vellore district.	1.50	65% work comple-ted.	07/2009
4.	Repairs to Puthen Dam in Kanyakumari District.	1.50	60% work comple-ted.	09/2009
5.	Renovation and Rehabilitation of Perungudi tank	0.97	50% work comple-ted.	09/2009
6.	Renovation and Rehabilitation of Velachery tank.	1.10	Work could not be taken up due to encroachment	
7.	Renovation and Rehabilitation of Pallavaram tank.	1.50		
8.	Reconstruction of bridge at mile 26/5/420 of Lower Bhavani main canal in Kurumandur village in Gobi taluk of Erode district.	0.60	Tender under finalisation	
9.	Rehabilitation and Strengthening of Wellington Reservoir in Cuddalore District.	20.00	Work commen-ced.	07/2010

6.3. NABARD assisted schemes

All the schemes and minor irrigation tank works taken up with the assistance of Rural Infrastructure Development Fund (RIDF) of NABARD upto RIDF VIII have been completed before March 2008. The

Schemes and tank works under RIDF IX, X, XI, XII and XIII are at various stages of execution as detailed below:

6.3.1. RIDF - IX

		Schemes	Tanks
• Total Number of works	:	23	157
• Total Project Cost (Rs. in crore)	:	163.98	48.43
• Number of works completed	:	21	155
• Works in progress	:	2	--
• Works under consideration	:	--	2

Schemes completed

Sl. No.	**Name of Scheme**	**Project Cost** (Rs. in crore)
1.	In Thanjavur district a) Rehabilitation of Cauvery regulator at mile 17/2 at Grand Anicut Head. b) Rehabilitation of Vennar regulator across Cauvery at mile17/2 at Grand Anicut Head. c) Rehabilitation of G.A. canal regulator across Cauvery at mile 17/2 at Grand Anicut Head. d) Rehabilitation of Cauvery regulator across Cauvery at mile 26/6 at Tirukattupalli.	17.39

	e) Rehabilitation of Kudamuruty regulator across Cauvery at mile 26/6 at Tirukattupalli.	
2.	Reservoir across Vandal odai in Tirunelveli district	6.14
3.	Reconstruction of Regulator No.2 across Pasimuthan Odai in Cuddalore district.	2.65
4.	Anicut across Kosasthaliar river in Tiruvallur district.	2.53
5.	Channel near Pothiampallam village in Dharmapuri district.	0.86
6.	Channel near Kappalvadi village in Dharmapuri district.	0.85
7.	New tank near Chinnur village in Thoothukudi district.	0.71
8.	Channel across Ayyanarkulampatti village in Thoothukudi district.	0.67
9.	Dyke across Ongur in Kanchipuram district.	0.66
10.	Anicut near Vetrialankulam village in Sivagangai district.	0.50
11.	Anicut across Sarugani river near Sekkadi village in Sivagangai district.	0.48
12.	New tank near Rajapathy village in Tirunelveli district.	0.47
13.	Construction of Bed dam near Sendanadu in Villupuram district.	0.40
14.	Anicut across Sarugani river near Vallendral village in Ramanathapuram district.	0.40
15.	New tank near Thuraiyur village in Thoothukudi district.	0.29
16.	Anicut near Agamalai Varattar village in Theni district.	0.22
17.	Anicut at Thalavaram Poondi in Kanchipuram district.	0.56

18.	Modernisation of Tirukkurunkudi Periakulam in Tirunelveli district.	1.03
19.	18th Canal in Uthamapalayam taluk in Theni district.	28.60
20.	Increasing the carrying capacity of Marudur Melakkal from Marudhur Anicut to Kalvoi Tank in Thoothukudi district.	9.53
21.	Kuppanatham Reservoir across Cheyyar River in Tiruvannamalai district.	43.50

Schemes in progress

Sl. No	**Name of the Scheme**	**Project cost** (Rs. in crore)	**Year of san-ction**	**Present status**	**Programme for comple-tion**
1.	Anicut across Malattar river in Ramana-thapuram district.	42.00	1994	85% completed Reservoir completed. 2 distribu-tories completed; 4 in progress.	10/2009
2.	New tank across Ayyanar-koil Odai in Madurai district.	3.54	2004	63% Completed	09/2009

6.3.2. RIDF - X

		Schemes	Tanks
• Total Number of works	:	35	250
• Total Project Cost (Rs.in crore)	:	93.58	68.02
• Number of works completed	:	29	248
• Works in progress	:	2	--
• Works under consideration	:	4	2

Schemes completed

Sl. No.	**Name of Scheme**	**Project cost** (Rs. in crore)
1.	Restoration works in anicuts, channels and sluices in the Old Aliyar system in the Kariapatti anicut and channel of Parambikulam Aliyar Project in Coimbatore district.	2.11
2.	Restoration works in anicuts, channels and sluices in the Old Aliyar system in the Pallivilangal anicut and channel of Parambikulam Aliyar Project in Coimbatore district.	1.39
3.	Restoration works in anicuts, channels and sluices in the Old Aliyar system in the Ariyapuram anicut and channel of Parambikulam Aliyar Project in Coimbatore district.	1.24

4.	Restoration works in anicuts, channels and sluices in the Old Aliyar system in the Vadakkalur anicut and channel of Parambikulam Aliyar Project in Coimbatore district.	1.21
5.	Anicut across Nalliuppodai to feed Nambipuram tank in Thoothukudi district.	1.14
6.	Bed dam across Vaigai river in Keelaperumkarai to feed Koothangal Kalvoy in Ramanathapuram district.	0.93
7.	Anicut across Gridhamal river in Virudhunagar district.	0.87
8.	Bed dam across Vaigai river to feed Milaganoor kalvoy in Sivagangai district.	0.75
9.	Bed dam across Vaigai river in Arasadivandal village to feed Keelanattarkal in Ramanathapuram district.	0.68
10.	Anicut across Peearu river to feed Thiruppalakkudi tank in Ramanathapuram district.	0.53
11.	Tank near Achankulam village in Thoothukudi district.	0.52
12.	Tank near Subbalapuram village in Thoothukudi district.	0.50
13.	Anicut across Nichabanadhi Mandhikulam in Tirunelveli district.	0.45
14.	Tank near Chokkalingapuram village in Thoothukudi district.	0.41
15.	Tank near Velayudhapuram village in Thoothukudi district.	0.38
16.	Tank near Kumara ettayapuram village in Thoothukudi district.	0.26

17.	Changing the Mudkondam into Masonry Anicut across the Irumbedu Eri surplus channel in Vandavasi taluk of Tiruvannamalai district.	0.26
18.	Anicut across Markandanadhi near Cigarahalli village in Krishnagiri district.	2.33
19.	Modernisation of Barur tank supply channel in Sonahalli village in Krishnagiri district.	5.15
20.	Modernisation of Penukondapuram tank supply channel and its irrigation channel in Sonahalli village in Krishnagiri district.	4.27
21.	Tank near Ayyappapuram village in Thoothukudi district.	0.23
22.	Supply channel near Poombidagai village in Virudhunagar district.	0.21
23.	Tank near Kattarankulam village in Thoothukudi district.	0.19
24.	Tank near Melapandiapuram village in Thoothukudi district.	0.18
25.	Bed Dam across Vaigai river to feed Kanur tank in Sivagangai district.	0.77
26.	Extension of Right Main Canal of Krishnagiri Reservoir Project to Bommasamudram, Kariamangalam etc., in Krishnagiri district.	7.06
27.	Anicut across Pambiar River in Villupuram district.	4.17
28.	Dhali Channel system in Coimbatore district.	4.41
29.	Restoration works in anicuts, channels and sluices in the O.A.C.M Perianai Anicut in Coimbatore district.	1.81

Schemes in progress / under consideration

Sl. No.	Name of Scheme	Project cost (Rs. in crore)	Year of sanction	Present status	Programme for Completion
1.	Excavation of supply channel from Badethalav tank to Vennampalli in Dharmapuri district.	13.50	2001	95% Completed	10/2009
2.	Modernisation of Coleroon Regulator in Thanjavur district.	13.63	2005	Out of 4 works, 2 works completed. 1 work : 96% and another work : 90% completed	06/2009
3.	Excavation of supply channel from Alathur channel to Haridharimangalam tank in Tiruvannamalai district.	0.26	2005	Under consideration	
4.	Koilmalayar Reservoir in Vellore district.	12.98	2005		

5.	New tank across Viswakudi Kallar Odai in Perambalur district.	7.23	2005	Under consideration
6.	Replacement of Mud korambu into masonry anicut across Vellar river for providing irrigation facilities to Mumbalai tank in Pudukottai district.	1.57	2005	

6.3.3. RIDF - XI

		Schemes	**Tanks**
• Total Number of works	:	18	96
• Total Project Cost (Rs.in crore)	:	72.28	20.59
• Number of works completed	:	13	95
• Works in progress	:	3	--
• Works under consideration	:	2	1

Schemes Completed

Sl. No.	Name of Scheme	Project cost (Rs. in crore)
1.	Lining the bed and sides of Manimuthar main canal from LS 0 to 26.845 km of Tamiraparani system in Tirunelveli district.	15.38
2.	Rehabilitation of anicuts across Karaipottanar river in Trichy district.	1.02
3.	Reaming of drainage shafts from LS 300 feet to 4540 feet of Mettur dam in Salem district.	0.84
4.	Anicut across Bargur river near Kuttur village of Krishnagiri taluk to feed G.D.Kuppam tank in Krishnagiri district.	0.31
5.	Check dam across Vachukkal odai in SF No: 44 in Modakadu village in Namakkal district.	0.24
6.	Rehabilitation of Lower Bhavani Dam in Erode district.	7.29
7.	Rehabilitation of Ayyangudi Channel in Pudukottai district.	0.73
8.	Modernisation of Kalakkamangalam Channel in Pudukottai district.	4.29
9.	Modernisation of Sirumarudhur Channel in Pudukottai district.	1.33
10.	Conversion of existing Mud Korambu into Masonry Anicut across Maharajasamudram river in Pudukottai district.	0.93
11.	Rehabilitation and Improvements to Mettur Canal system in Salem district.	11.35
12.	Anicut across Kannankottai Hissa Rajan Eri in Tiruvallur district.	1.64
13.	Rehabilitation of Sholayar Dam in Coimbatore district.	6.48

Schemes in Progress / under consideration

Sl. No.	Name of Scheme	Project cost (Rs. in crore)	Year of sanction	Present status	Programme for Completion
1.	Tank across Odai near Silanaicken-patti in Madurai district.	1.70	2005	90% Completed.	06/2009
2.	Modernisation of Kannadian Channel in Tirunelveli district.	17.79	2005	80% Completed.	07/2009
3.	Anicut across Vilangudi Odai in Perambalur district.	0.35	2005	78% Completed.	06/2009
4.	Kayamozhi kanam Channel in Thoothukudi district.	0.93	2005	Under consideration	
5.	Tank near Bommarajpet in Tiruvallur district.	0.33	2005		

6.3.4. RIDF - XII

		Schemes
• Total Number of works	:	32
• Total Project Cost (Rs.in crore)	:	23.31
• Number of works completed	:	22
• Works in progress	:	4
• Works under consideration	:	6

Schemes Completed

Sl. No.	**Name of Scheme**	**Project cost** (Rs. in crore)
1	New Pond in SF.No.498 in Muduthurai Village in Coimbatore District	0.08
2	Percolation Pond in Sorakkainatham Village in Vellore District	0.03
3	Percolation Pond in Simmikkampattu Village in Vellore District	0.13
4	Check dam across Sanganurpallam in Nanjundapuram Village in Coimbatore district.	0.35
5	Check dam across Perumpallam in Tholampalayam Village in Coimbatore district.	0.19
6	Pond in Kemmarampalayam across Parapallam in Coimbatore district.	0.34

7	Extension, Renovation and Modernisation of Vetharampatti tank in Dharmapuri district.	0.16
8	New pond across Panchanthangi Odai in Dindigul district.	0.50
9	Rehabilitation of feeder canal of tank fed by Anguti Sunai from Jawadhu hills in Krishnagiri district.	0.83
10	Rehabilitation of check dam across Kodaganar near Nagampalli village in Karur district.	0.93
11	Pond in Gudalur village in Coimbatore district.	0.32
12	Anicut across Saraswathi river near Natrampalli village in Vellore district.	0.31
13	Percolation pond in Kothur village in Vellore district.	0.06
14	Percolation pond in Kommeswaram village in Vellore district.	0.09
15	Percolation pond in Malayampattu village in Vellore district.	0.12
16	Percolation pond in Melmayal village in Vellore district.	0.02
17	Percolation pond in Dhanakondampalli Village in Vellore district.	0.13
18	Percolation pond in Ramanayakkanpet Village in Vellore district.	0.12
19	Percolation pond across Kanar near Matrukal in Vellore district.	0.09
20	Check Dam in Mathuruttu Village in Namakkal district.	0.16
21	Check dam across Kurunganpallam in Palamangalam village in Erode district.	0.47
22	Check dam across Kurunganpallam in Kulavilakku village in Erode district.	0.23

Schemes in Progress / under consideration

Sl. No.	Name of Scheme	Project cost (Rs. in crore)	Year of sanc-tion	Present status	Programme for Completion
1	Modernisation of R.S. Mangalam Big tank in Ramanatha-puram district.	6.33	2007	All works completed except field channel lining. Construction of 8 nos of vents are in progress	08/2009
2	Rehabilitation of supply channel from Reddiyapatti to Karikali - Uddandampatti and chain of anicuts in Rudraksha Kombaiyar in Trichy district.	2.41	2007	80% Completed	02/2010
3	New tank in Polivakkam village in Tiruvallur district.	0.77	2007	90% Completed	06/2009
4	Percolation Pond in Krishna-kuppam in Tiruvallur district.	0.17	2008	45% Completed	07/2009

5	New pond across Kannimar Odai (Nochi Odai) in Dindigul district.	0.12	2007	Under consideration
6	Reservoir across Vellakalkanar near Vinnamangalam village in Vellore district.	7.70	1998	
7	New pond across Lavaluthu odai in Theni district.	20.02	---	
8	Percolation pond in SF No.6 of Malayanur Chekkadi village in Tiruvannamalai district.	19.74	---	
9	New Pond in SF No 101 of Pudurmalayala-patty Village of Rasipuram Taluk in Namakkal district.	23.85	---	
10	New Pond in Kokkampalayam village in Erode district.	11.12	2008	

6.3.5. RIDF - XIII

		Schemes	Tanks
• Total Number of works	:	28	27
• Total Project Cost (Rs.in crore)	:	381.54	5.63
• Number of works completed	:	27	27
• Works in progress	:	1	--

Works in Progress

Sl. No	Name of Scheme	Project cost (Rs. in crore)	Present status	Programme for Completion
1	Modernisation of 27 tanks in Sivagangai district	5.63	Works in progress	07/2010
2	Permanent restoration of flood protection works to Sathaiyar Odai from Thirupalai tank to Vandiyur tank in Madurai district	5.81	Works in progress	03/2010
3	Permanent restoration of flood protection works to Sellur tank in Madurai district.	7.10	Works in progress	03/2010
4	Rehabilitation of Grand Anicut canal and its branch canals from 0 km to 58.68 km.	119.67	All 14 Works are in Progress	02/2011

5	Rehabilitation of GA canal from 58.68 km to 92.20 km in Orathanadu in Thanjavur district.	26.06	Works in progress	03/2011
6	Permanent protection to Cauvery, Coleroon banks to avoid inundation in Karur, Trichy and Ariyalur districts , Trichy urban limits and Srirangam town – 23 nos. (Out of 23 works 21 are in progress and 2 works are to be taken up). These 23 works were split up into 43 works vide G.O.Ms.No: 120, PW (N2),Dept, dated: 12.05.08 Out of these 43 works, one work is ineligible for NABARD assistance and hence not taken up for execution. The remaining 42 works and their present stage are given below:	211.28		
	<u>Works in Progress:</u> I Standardising and Strengthening the bank of Cauvery LB at mile 88/1 to 94/2	3.40	30% Work Completed.	
	II Standardising and Strengthening the bank of Cauvery LB at mile 94/2 to 102/1	4.10	50% Work Completed.	

	III	Standardising and Strengthening the bank of Cauvery LB at mile 102/1 to 110/4	4.43	25% Work Completed.
	IV	Standardising and Strengthening the bank of Cauvery LB at mile 110/4 to 115/0	3.50	35% Work Completed.
	V	Standardising, Strengthening and permanent protection to the bank of Cauvery LB from mile 119/1 to 123/4-5 Permanent protection to vulnerable reaches of Cauvery LB at mile 121/6-7 in Melur village.	1.18	Work is in progress
	VI	Standardising and Strengthening the bank of Cauvery LB at mile 0/0 to 3/7	2.60	40% Work Completed.
	VII	Standardising and Strengthening the bank of Cauvery RB at mile 103/7 to 111/0	9.50	35% Work Completed.
	VIII	Standardising and Strengthening the bank of Cauvery RB at mile 111/0 to 118/2	9.24	22% Work Completed.
	IX	Standardising and Strengthening the bank of Cauvery RB at mile 118/2 to 122/6	4.97	Work is in progress

	X	Standardising and Strengthening the bank of Cauvery RB at mile 122/6 to 127/6	5.80	34% Work Completed.
	XI	Standardising and Strengthening the bank of Cauvery RB at mile 123/5 to 124/0+100 and Permanent protection to vulnerable reaches of Cauvery RB in Vengur village.	1.20	35% Work Completed.
	XII	Standardising, Strengthening and permanent protection to the RB of Coleroon at mile 3/7 to 14/5	3.51	Work is in progress
	XIII	Standardising and Strengthening the bank of Coleroon LB at mile 0/0 to 11/2	6.84	32% Work Completed.
	XIV	Standardising and Strengthening the bank of Coleroon LB at mile 11/2 to 20/5	6.00	35% Work Completed.
	XV	Standardising and Strengthening the bank of Coleroon LB at mile 20/5 to 30/0	6.00	33% Work Completed.
	XVI	Permanent protection to the bank of Coleroon LB from mile 16/0 to 17/0 in Koohur village.	1.20	40% Work Completed.

	XVII	Permanent protection to the bank of Coleroon LB at Killiyanallur village.	1.52	32% Work Completed.
	XVIII	Permanent protection to Srirangam Nattu Voikkal from mile 0/0 to 2/4	15.00	Work is in progress
	XIX	Permanent protection to Srirangam Nattu Voikkal from mile 2/4 to 6/0	23.86	Work is in progress
	XX	Reconstruction of Pulivalam sand vent across Kodingal drain	1.56	38% Work Completed.
	XXI	Improvements to 6 Nos. of anicuts across Ayyar river from L.S 0m to 24000m from Kolli hills in Thuraiyur taluk in Trichy district.	1.97	25% Work Completed.
	XXII	Improvements to 6 Nos. of anicuts across Ayyar river from L.S 24001m to 44000m upto infall point in Cauvery river.	1.96	65% Work completed.
	XXIII	Improvements to Koraiyar RB from L.S 4100m to 10000m just below Kalimangalam anicut in Srirangam taluk of Trichy district.	4.91	Work is in progress

	XXIV	Protective works in Koraiyar river RB from Trichy- Madurai road bridge (Ramachandra nagar) to Uyyakondan channel confluence point of Srirangam taluk in Trichy district.	2.00	20% Work Completed.
	XXV	Improvements and strengthening the bank of Ariyar river from L.S 10000m to 14950m and protective works in L.S 18000m to 22000m in Srirangam taluk in Trichy district.	2.53	Work is in progress
	XXVI	Permanent protection to Cauvery and Coleroon river above and around upper anicut	3.12	36% Work Completed.
	XXVII	Standardising and Strengthening the bank of Coleroon LB at mile 30/0 to 47/6	8.67	35% Work Completed.
	XXVIII	Standardising and Strengthening the bank of Coleroon LB at mile 31/4 in Pudukottai village and at mile 40/4-5 in Vizhuppanankurichi village.	1.60	35% Work Completed.

	XXIX	Permanent protection to the bank of Coleroon LB from mile 47/6 to 51/6 in Ariyalur taluk of Ariyalur district.	5.00	30% Work completed.
	XXX	Permanent protection to the bank of Coleroon LB from mile 51/6 to 57/4 in Jeyankondam taluk of Ariyalur district.	3.58	60% Work completed.
	XXXI	Permanent protection to the bank of Coleroon LB from mile 57/4 to 59/2 in Jeyankondam taluk of Ariyalur district.	4.00	50% Work completed.
	XXXII	Permanent protection to the bank of Coleroon LB from mile 59/2 to 64/0 in Jeyankondam taluk of Ariyalur district.	5.50	55% Work Completed.
	XXXIII	Permanent protection to the bank of Coleroon LB from mile 64/0 to 67/3 in Jeyankondam taluk of Ariyalur district.	5.50	48% Work completed.
	XXXIV	Standardising and Strengthening the bank of Cauvery RB at mile 51/0 to 66/2	5.91	50% Work Completed.
	XXXV	Standardising and Strengthening the bank of Cauvery RB at mile 66/2 to 71/2	4.77	50% Work Completed.

	XXXVI	Standardising and Strengthening the bank of Cauvery RB at mile 71/2 to 75/5	2.64	40% Work Completed.
	XXXVII	Standardising and Strengthening the bank of Cauvery RB at mile 81/4 to 96/4	8.29	60% Work Completed.
	XXXVIII	Standardising and Strengthening the bank of Cauvery RB at mile 96/4 to 103/7	2.48	50% Work Completed.
	XXXIX	Permanent protection to the bank of Coleroon LB from mile 25/3 to 26/0 in Koolaiyar anicut and at mile 26/0 in Nandiyar.	1.40	Works in progress
	XL	Providing retaining wall in Uyyakondan channel from mile 16/7 to 17/7 and Construction of road bridge across Uyyakondan channel at mile 16/7 (Puthur weir)	7.78	
	XLI	Providing WBM and BT road in RB of Koraiyar river from Trichy-Madurai road bridge (Ramachandra nagar) to Uyyakondan channel confluence point of Srirangam taluk in Trichy district.	0.72	

	XLII	Providing regulatory arrangements with approach to operating platform at Puthur weir.	7.80	Works in progress

Work to be taken up

Sl. No.	Name of Scheme	Project Cost (Rs. in crore)	Present stage
1	Rehabilitation of Kalingarayan Channel from Mile 0/0 to 56/5.5 in Erode district.	11.62	Re-tender to be called for.

6.3.6. NABARD - Schemes under consideration

Twenty Five schemes at a project cost Rs.135.85 crore are at an advanced stage of consideration by NABARD. These are:

Sl. No.	Name of Scheme	Project Cost (Rs. in crore)
1	Flood Protection work to avoid inundation of Trichy city by strengthening the banks of Kudamuruti and Korayaru channel.	37.00
2	Diversion of surplus water of Ramanadhi reservoir to command area of Jambu nadhi system in Tenkasi and Ambasamudram in Tirunelveli district.	3.96

3	Rehabilitation of Neenjal Maduvu anicut and P.V.Kalathur tank in Kanchipuram district.	1.50
4	Formation of a percolation pond near Veerappa Ayyanar Koil in Allinagaram Village in Theni district.	0.23
5	Rehabilitation of Ayyacholai Kattuvari Anicut and its feeding tanks in Pudukkottai district.	0.61
6	Construction of checkdam across Varattar in Vada Veerappanaikan patti in Theni district.	0.13
7	Rehabilitation of the Chitrakudi Vari and providing field inlets to provide submersion relief of the adjoining fields in Thanjavur district.	0.34
8	Rehabilitation of Arakkankottai and Thadapalli channels in Gobi taluk of Erode District.	15.70
9	Rehabilitation and Modernisation of Pandian Maduvu Channel in Katpadi taluk of Vellore district.	2.25
10	Rehabilitation of Thovalai channel and Radhapuram Channel including tanks in Kanyakurmari district	25.00
11	Improvements to Malattar Channel from LS 0m to LS 24000m offtaking from Thirukovilur anicut in Ulundurpettai and Thirukovilur taluk of Villupuram district.	0.98
12	Construction of a Bye-pass channel to feed Chunnambur Distributory from the 10th BC and modernisation of connected 12 tanks in Madurai district.	3.40

13	Modernisation of Ramnad big tank in Ramanathapuram district	9.82
14	Rehabilitation and improvement to 16 Anicuts in Kallar River of Vaniar Minor Basin of Dharmapuri.	1.94
15	Construction of grade wall across Vellar river to feed Athiyur tank and other tanks in Kunnam taluk of Perambalur district.	2.05
16	Rehabilitation and Improvements to Neikkarapatti tank supply channel in Kondalampatti village of Veerapandi Constituency in Salem taluk and district.	2.86
17	Modernisation of Irrigation channel from Poolavari anicut across Thirumanimuthar to Sittaneri in Poolavari village of Salem district	0.78
18	Modernisation and Participatory Irrigation Management of Anicut Manickkuppam tank in Cheyyur taluk	0.88
19	Increasing the carrying capacity of Palayamparavoo channel and P.T.Rajan Channel in Cumbum Valley in Theni district	9.02
20	Construction of Grade Wall across Kudamuruty river to feed Serumakkanallur and Chakkrapalli channel in Chakkarapalli village, Papanasam Taluk of Thanjavur district.	3.90

21	Formation of a new Reservoir in Periyaveppathur village of Minjur union of Ponneri taluk of Tiruvallur district.	3.03
22	Permanent Restoration of breached Thali Big tank in Denkanikottai Taluk of Dharmapuri district	1.94
23	Strengthening of banks and Concrete lining of direct irrigation channels from Muthalaimuthurvari tank scheme in Chennampatti village of Thanjavur district	1.00
24	Protecting the side bank of Chungam Odai and Improvements to Erappaiyar to feed Poigai Dam in Thovalai taluk of Kanyakumari district	1.53
25	Formation of Reservoir across Kanar near Kasam village of Vellore district	6.00

6.3.7. Proposals seeking NABARD assistance under consideration of the Government

Sl. No.	**Name of Scheme**	**Project Cost** (Rs. in crore)
1	Construction of an anicut across Kosasthalaiyar river near Bandikavanoor village to feed Gnayiru Eri in Tiruvallur district	23.50

6.4. Part II Schemes

6.4.1. Year 2006 - 2007

- Total Number of Schemes : 19
- Works Completed : 13
- Works in Progress : 4
- Dropped / Proposed for Dropping : 2

Schemes completed:

Sl. No	Name of Scheme	Project Cost (Rs. in crore)
1	Check dam across Karimalaipallam in Krishnagiri district.	0.12
2	Pond across jungle stream near Baleguli Village in Krishnagiri district.	0.10
3	New Pond across Ottupallam odai in Vellore district.	0.20
4	Check dam for Udayendram tank in Vellore district.	0.61
5	Supply Channel to feed Errakuttai tank in Vellore district.	0.49
6	Improvements to the existing check dam at Melmittalam Village in Vellore district.	0.15
7	Conversion of first checkdam across Kattaipuliodai into percolation pond in Tirunelveli district.	0.08
8	Groyne in Idinthakarai in Tirunelveli district.	6.20
9	New pond in D.Perumapalayam Village in Salem district.	0.16

10	Anicut across Vellar in Pudukkottai district.	0.25
11	New pond across Karadi odai in Dindigul district.	0.17
12	New pond in Kasilingapalayam in Erode district.	0.27
13	Two Groynes at Theresapuram in Thoothukudi district.	7.10

Schemes in Progress

Sl. No.	Name of Scheme	Project cost (Rs. in crore)	Present status	Programme for completion
1	Construction of Masonry Kondam across the surplus course of Dusimamandoor tank in Tiruvannamalai district.	0.47	Main Work Completed. Balance works are in progress.	08/2009
2	Construction of Bed Dam and Dividing Wall across Palar near Kavasampattu in Vellore district.	6.50	Total sub works –7 Completed – 6 In progress – 1	07/2009
3	Providing dividing wall and construction of anicut across Koundanyanadhi near Chitthathur in Vellore district.	4.50	Sub works – 2 Completed – 1 In progress – 1	10/2009

4	Excavation of Supply Channel from Jerthalav canal in Dharmapuri district.	6.29	25% work completed and balance works in progress	02/2010
5	Formation of New Pond in Chatrapatti in Dindigul district.	0.15	Proposed for dropping	
6	Formation of a New tank across Karuppukoil odai in Dindigul District.	2.72	Dropped	

6.4.2. Year 2007 - 2008

- Total Number of Schemes : 20
- Works Completed : 20

Schemes completed

Sl. No.	**Name of Scheme**	**Project Cost** (Rs. in crore)
1	Anicut across Mattankulam vari of Tiruchirapalli district.	0.15
2	Check Dam / Recharge Shaft at Vannikonendal in Tirunelveli district.	0.03
3	Check Dam / Recharge shaft at Kulasekharanallur in Thoothukudi district.	0.04
4	Check dam / Recharge Shaft at Ammapalayam village in Salem district.	0.17

5	Study of Ground Water Assessment based on Mini Water Shed in Tiruvannamalai, Krishnagiri and Namakkal districts.	0.60
6	Renovation of Inspection Bungalow at Sriperumbudur in Kanchipuram district.	0.10
7	Checkdam across Pukkathurai Odai in Kanchipuram district.	0.45
8	Anicut across Mukthanadhi in Karadi Chithur in Villupuram district.	0.26
9	Improvements to Nelvoy Maduvu in Kanchipuram district.	0.70
10	Additional suites in the Inspection Bungalow at Baluchetty Chatram in Kanchipuram district.	0.15
11	Dividing wall across Gridhamal River to feed Ambalathadi, Mangudi in Sivagangai district.	0.41
12	Anicut cum check dam across Valliyar in Eraniel village in Kanyakumari district	0.60
13	Retaining wall across Valliyar river near Kalpady yela in Kanyakumari district.	0.22
14	Grade wall across Vennar to feed Ragunatha Cauvery Channel in Thanjavur district	1.75
15	Checkdam across Muthalaimuthuvari in Thanjavur district.	0.14
16	Checkdam across Cholagampattivari in Thanjavur district.	0.20
17	Grade wall across Veeracholan River in Nagapattinam District.	0.40
18	Checkdam across Perumpallam in Thekampatti village in Coimbatore district	0.22
19	Renovation of project House at Upper Nirar in Coimbatore district.	0.20
20	Providing infrastructure facilities and improvements to the Park Areas in the Dam sites of Sathanur, Krishnagiri, Bhavanisagar, Mettur and Kelavarapalli.	2.50

6.4.3. Year 2008 - 2009

- Total Number of Schemes : 28
- Works Completed : 27
- Work to be commenced : 1

Schemes completed

Sl. No	**Name of Scheme**	**Project Cost** (Rs. in crore)
1.	Construction of a Check dam across Karumeniyar river near Pallakurichi village in Thoothukudi district.	0.58
2	Construction of Head sluice and protection wall in Alanda anicut near Alanda Village in Thoothukudi district.	0.20
3.	Construction of Checkdam across Uppar odai in Erukkandurai Village in Tirunelveli district.	0.15
4.	Construction of Garage and providing Water supply arrangements to Pattinamkal Inspection Bungalow at Vadaseri in Kanyakumari district.	0.05
5.	Construction of Toilet block in Manimuthar Dam for the benefit of tourists in Tirunelveli district.	0.02
6	Construction of Checkdam across tributary of Thalugai river near Kanuvoi village in Trichy district.	0.10
7	Construction of an anicut across Narasimmapallam in Patta Gurubarahalli village in Krishnagiri district.	0.23

8	Construction of Compound Wall for IB at Palar Anicut to protect from encroachment in Thirumalaicheri village in Vellore district.	0.04
9	Construction of new Luscar Quarters in Poiney anicut in Vellore district.	0.04
10	Purchase of vehicles to the Chief Engineers of Public Works Department on replacement basis.	0.55
11	Provision of Recharge model structure in Thanjavur Ground Water Circle campus	0.01
12	Construction of Kallanai Canal Sub Division office building at Pattukottai	0.10
13	Construction of Flood Control Room with communication arrangements in Left Flank of Stanley Reservoir at Mettur Dam in Salem district.	0.10
14	Construction of a Check dam across Pulikuthi Odai in Sangolikuppam village in Cuddalore district.	0.29
15	Conversion of Mudkondam into Masonry kondom in Panapadi Village in Villupuram district.	0.52
16	Renovation of Existing Quarters at Adyar North lock and South lock campus in Buckingham canal section in Chennai	0.14
17	Renovation of Inspection Bungalow in Kaveripakkam tank in Vellore district.	0.09
18	Construction of Compound Wall, Watchman shed and renovation of existing Conference Hall in PWD Office complex in Vellore.	0.25
19	Purchase of Computers and other necessary peripherals for Secretariat, Public Works Department	0.35
20	Construction of check dam across Kannuthu Odai in K.Pudupatti village in Theni district.	0.24

21	Construction of Gradewall across Ragunatha Cauvery Channel near Alangulam offtake point in Mudukulathur in Ramanathapuram district.	0.17
22	Study of Ground Water Assessment based on Mini watershed in Trichy, Madurai, Erode, Karur, Tirunelveli and Virudhunagar districts.	0.82
23	Construction of a Check dam across Koranganpallam in Elumathur Village in Erode district.	0.17
24	Construction of Checkdam across Deviyar River in Perumalpatti Village in Tirunelveli district.	0.38
25	Formation of a new pond across Bolipallam in SF No 18 of Pudupeerkadavu village in Erode district.	1.20
26	Purchase of Computers, peripherals and furniture, for the Offices of Engineer-in-Chief, WRD, Chief Engineer, Plan Formulation and Superintending Engineer , Designs Circle.	0.05
27	Purchase of Computers and accessories for Chief Engineer, Pollachi Region and Chief Engineer, Operation & Maintenance.	0.05

Work to be taken up

Sl. No.	**Name of Scheme**	**Project cost** (Rs. In crore)	**Present status**
1	Construction of New Inspection Bungalow with 4 suites in Mamallapuram.	0.45	Work will commence shortly.

6.4.4. Year 2009 - 2010

- Estimate : Rs.7.34 crore
- No. of Works : 43

Details of Works

Sl. No.	**Name of Works**	**Project cost** (Rs. in crore)
1	Grouting Hillock portion in left flank of Stanley Reservoir at Mettur	0.60
2	Construction of Assistant Executive Engineer's Quarters at Dharmapuri in Dharmapuri taluk and District	0.11
3	Construction of Luscars quarters (Twin type) in Palar anicut section with protection wall in Vellore taluk and District	0.075
4	Construction of Section Office Building at Kalavai in Arcot taluk of Vellore District	0.06
5	Construction of Section Office Building at Arakkonam in Arakkonam taluk of Vellore District.	0.06
6	Renovation of Maduranthagam High Level Canal Project Home at Karunguzhi in Maduranthagam taluk of Kanchipuram District	0.075
7	Construction of Section Office Building cum rest shed at Poiney anicut in Wallajah taluk of Vellore District.	0.09
8	Reconstruction of Section Office Building at Ambur in Vaniyambadi taluk of Vellore District	0.06
9	Improvements to Goddar Rest House at Natrampalli in Vaniyambadi taluk of Vellore District	0.05

10	Construction of Masonry wall across Vinnamangalam Eri surplus course in Cheyyar taluk of Tiruvannamalai District	0.15
11	Rehabilitation of Sempoondi anicut near Kiliyanagar village in Maduranthagam taluk of Kanchipuram District	1.00
12	Rehabilitation of Pootai anicut in Sankarapuram taluk of Villupuram District	0.44
13	Conversion of Staff Quarters into field Level laboratory (Quality Control Lab) at LBP Colony at Erode in Erode taluk of Erode District	0.07
14	Construction of compound wall for PAP Inspection Bungalow at Kangeyam in Kangeyam taluk of Tiruppur District.	0.07
15	Improvements to the LBP Inspection Bungalow at Kangeyam in Kangeyam taluk of Tiruppur District.	0.055
16	Construction of the toilet block for gents and ladies at Aliyar Dam park site at Aliyar Nagar in Pollachi taluk of Coimbatore District	0.07
17	Conversion of AC sheet roofing into RCC roof in Bhavanisagar Dam Division, Sub Division and Section Offices at Bhavanisagar in Sathiyamangalam taluk of Erode District.	0.225
18	Conversion of AC sheet roofing into RCC roof for Section Office building in PAP colony at Udumalpet in Udumalpet taluk of Tiruppur District.	0.06
19	Conversion of Mangalore tiled roof into RCC Roof for Project House at Pongalur in Palladam taluk of Tiruppur District.	0.15

20	Construction of Section Officer Quarters at Chitode in Erode taluk of Erode District.	0.09
21	Conversion of AC sheet roof into RCC roof for Permanent Assistant Engineer Quarters in PAP colony at Udumalpet in Udumalpet taluk of Tiruppur District.	0.09
22	Conversion of AC sheet roof into RCC roof for Temporary Assistant Engineer Quarters in PAP Colony at Udumalpet in Udumalpet taluk of Tiruppur District.	0.09
23	Conversion of AC sheet roof into RCC roof for Twin type Section Officer Quarters in PAP Colony at Udumalpet in Udumalpet taluk of Tiruppur District.	0.14
24	Conversion of AC sheet roof into RCC for Permanent Junior Engineer Quarters in PAP colony at Udumalpet in Udumalpet taluk of Tiruppur District.	0.07
25	Repairs to the Mangalore tiled roof in the Engineers Quarters (2 Nos) in PWD campus at Aliyar Nagar in Pollachi taluk of Coimbatore District.	0.10
26	Construction of two driver's quarters in PWD Quarters campus at Palayamkottai in Palayamkottai taluk of Tirunelveli District	0.07
27	Construction of Garage, Drivers Rest room and Store shed for Poigai Project Home in Agastheeswaram taluk in Kanyakumari District.	0.05
28	Construction of Chittar Basin Section office Building at Pavoorchatram in Alangulam taluk of Tirunelveli District	0.06

29	Extension of Pattanamkal Sub Division office and section offices at Kuzhithurai in Nagerkoil taluk of Kanyakumari District	0.03
30	Construction of flood control room at Perunchani Dam in Villavankode taluk of Kanyakumari District	0.03
31	Construction of flood control room of Gadana Reservoir in Ambasamudram taluk of Tirunelveli District	0.05
32	Construction of dividing arrangements to Karuppur and Sunnambiruppu tank in Palar river in Karuppur village of Thiruppathur taluk of Sivagangai District	0.30
33	Construction of two suites at Paramakudi Inspection Bungalow in Paramakudi taluk of Ramanathapuram District.	0.25
34	Construction of grade wall across Veeracholan river at LS 101.40km to feed A3 Maruthuvakudi channel and Sathanur channel in Thiruvidaimarudur village and taluk of Thanjavur District.	0.77
35	Construction of Sub Division Office Building at Peralam in (Cauvery-Thanjavur) Nannilam taluk of Tiruvarur District	0.12
36	Construction of R.C. Sub Division office at Musiri in Musiri taluk of Trichy District	0.12
37	Conversion of Drop into Regulator across South Bank canal at mile16/2+340 feet in Marudur village of Kulithalai taluk in Karur District	0.27
38	Construction of Division office Building for Executive Engineer PWD, WRD, Sarabanga Basin Division in Namakkal of Namakkal taluk and District.	0.42
39	Construction of Sub Division Office Thiruthuraipoondi in Thiruthuraipoondi taluk of Tiruvarur District	0.15

40	Construction of Office Building for Irrigation Section at Nachiarkoil in Kumbakonam taluk of Thanjavur District.	0.06
41	Improvements to Plan Formulation Circle Office Building at Trichy in Trichy taluk and District.	0.09
42	Improvements to Planning and Designs Division Office at Trichy in Trichy taluk and District.	0.10
43	Construction of Syphon Aqueduct across Uyyakondan Channel at Mile 24/3 for providing drainage facilities to Pappakkurichi village in Trichy taluk and District	0.35

6.5. National Agriculture Development Programme (NADP)

Under the Irrigation component of the NADP, 11 works at a cost of Rs.12.08 crore were taken up for execution during 2008-2009. Out of this, 10 works have been completed and 1 work is in progress. The works involved are rehabilitation of anicuts and supply channels, partial lining of canal , flood bank protection works, improvement works to tanks etc.,

Works Completed:

Sl. No	**Name of Scheme**	**Project Cost** (Rs. in crore)
1	Improvements and Rehabiltation of 15 anicuts across Markendeya nadhi, Mathur river and Bargur River in Krishnagiri district.	0.75
2	Rehabilitation and improvements to 6 anicuts across Chinnar River in Krishnagiri district.	1.23

3	Improvements and Rehabilitation of 3 anicuts in Pennagaram taluk in Dharmapuri district.	0.50
4	Rehabilitation and Modernisation of Kalinjur River Channel in Vellore district.	1.60
5	Rehabilitation and Modernisation of Goddar Reservoir near Velakalnatham village in Vellore district.	0.50
6	Rehabilitation and Modernisation of tanks in Kaniyambadi block in Vellore district.	1.00
7	Improvements to the Tamaraikulam tank and supply channel in Sindhalagundu village in Dindigul district.	0.67
8	Improvements to the Kadhirayan kulam supply channel in Kasavanampatti and Palayakannivadi village in Dindigul district.	0.75
9	Restoration of anicuts and supply channels in Santhanavardhini River in Dindigul district.	3.25
10	Rehabilitation of Right side Main Canal of Chennampatti anicut in Virudhunagar district.	0.85

Work in Progress:

Sl. No	**Name of Scheme**	**Project Cost** (Rs. in crore)	**Present status**	**Programme for completion**
1	Improvements and Rehabilitation of PWD anicuts in Chinnar Minor Basin in Dharmapuri district.	0.98	60% Completed	09/2009

In addition, the Government sanctioned Rs.539.46 lakh for the work of Rehabilitation of Shieldkal and its 40 tanks in Sivagangai District under this Programme.

By implementing the project, it is proposed to reduce the flow discharge to 10 days from 21 days by increasing the supply from 47 cusecs to 100 cusecs from Periyar Main Canal System. A gap of 94.265 ha. will be bridged resulting in improved food production of 2971 MT. This work is programmed to be taken up during this year.

7.0. FLOOD MITIGATION SCHEMES

7.1. Works sanctioned under NABARD RIDF - XIII

25 Flood Protection Works comprising 2 works in Madurai District and 23 works for Permanent Flood Protection to Cauvery and Coleroon banks to avoid inundation in Karur, Trichy and Ariyalur districts , Trichy urban limits and Srirangam town were sanctioned by NABARD for Rs.224.19 crore under RIDF XIII.

Details of works are given below:

Sl. No	**Name of Scheme**	**Project cost** (Rs. in crore)	**Present status**	**Programme for Completion**
1	Permanent restoration of flood protection works to Sathaiyar Odai from Thirupalai tank to Vandiyur tank in Madurai district	5.81	Works in progress	03/2010

2	Permanent restoration of flood protection works to Sellur tank in Madurai district.	7.10	Works in progress	06/2010
3	Permanent protection to Cauvery, Coleroon banks to avoid inundation in Karur, Trichy and Ariyalur districts, Trichy urban limits and Srirangam town – 23 nos. These 23 works were split up into 43 works vide G.O.Ms.No: 120, PW (N2),Dept, dated: 12.05.08 Out of these 43 works, one work is ineligible for NABARD assistance and hence not taken up for execution.	211.28	All works are in progress	

7.2. Works Sanctioned by State

The following 7 works were sanctioned for Rs. 45.60 crore by Government for flood protection in anticipation of NABARD assistance . Out of 7 works,

one work has been entrusted to Highways department, 5 works are in progress and 1 work is to be started.

Sl. No.	**Name of Scheme**	**Project cost** (Rs. in crore)	**Present status**
1	Protection works to Uyyakondan channel from mile 17/7 to 18/1 and providing bituminous road from mile 16/7 to 18/1	1.80	45% Work Completed.
2	Protection works to Uyyakondan channel from mile 18/1 to 18/7 and providing bituminous road from mile 18/1 to 18/7	4.90	40% Work Completed.
3	Protection works and providing bituminous road to Uyyakondan channel from mile 18/7 to 21/0	4.90	Work is in progress.
4	Protection works to Kudamuruti river from Puthur weir to Pandamangalam Bridge in RB and required places in LB, Providing bituminous road to Kudamuruti river RB from Puthur weir to Pandamangalm drain (0m to 2500m)	4.40	Work is in progress.
5	Protection works to Kudamuruti river from Puthur weir to Pandamangalam Bridge in RB and required places in LB Providing bituminous road to Kudamuruti river RB from Puthur weir to Pandamangalm drain (2500m to 5000 m)	4.20	Work is in progress.

6	Land Acquisition and widening the Kudamuruti river	23.90	Tender to be called for
7	Providing additional vents in the bridge at Vayalur road across Kudamuruti river	1.50	Entrusted to Highways Dept.

7.3. Flood Management Programme (FMP)

Under the Flood Management Programme of the National Perspective Plan (NPP), 12 schemes were identified. Based on the guidelines of Government of India, 10 Schemes were sent to the Ministry of Water Resources, Government of India in July 2008 for consideration.

As per the decisions taken by the CWC in the meeting held on 9.03.09, out of 10 schemes, 9 schemes have been integrated into 7 schemes and 1 scheme has been suggested under AIBP. The State Technical Advisory Committee on Flood Control and Protection works cleared these 7 schemes for an amount of Rs. 692.44 crore.

The status of the schemes cleared by the State Technical Advisory Committee on Flood Control and Protection works under the Flood Management Programme is detailed below :

Sl. No	Name of Proposal	Estimate Amount (Rs.in crore)	Remarks
1.	Flood Protection to Araniyar river at upstream and downstream of A.N.Kuppam Anicut and downstream of Lakshmipuram Anicut to Pulicat creek in Tiruvallur district,	12.41	Techno Economic clearance given by CWC and the proposal sent to the Union Planning Commission for obtaining Investment clearance.
2.	Flood Protection Works in Khan Sahib Drainage Channel to protect Chidambaram town of Cuddalore district	7.50	Proposals under consideration of Central Water Commission.
3.	Flood Protection to Kosasthalaiyar river from Napalayam to sea mouth in Tiruvallur district	14.50	Under examination in the Regional office of Central Water Commission, Coimbatore.

4.	Flood Protection Works on Kollidam (Coleroon) River in Thanjavur, Nagapattinam and Cuddalore districts a) Improvement to Right Bank of Kollidam River from Grand Anicut head to Lower Anicut in Thanjavur district - LS 25.74 km to LS 108.21 km (From mile 16/5 to mile 67/2) -**Rs.100 crore** b)Permanent flood protection works of Right Bank of Kollidam River by Standardisation and Strengthening from Lower Anicut to infall into sea in Cuddalore district LS 108.21 km to LS 168.21 km (from mile 67/2 to mile 100/2) -**Rs. 182 crore** c)Permanent flood protection works of Left Bank of Kollidam River by Standardisation and Strengthening from Lower Anicut to infall into sea in Cuddalore district LS 108.21 km to LS 168.21 km (from mile 67/2 to mile 100/2) -**Rs. 114 crore**	396.00	Proposals under consideration of Central Water Commission.

5.	Flood Protection works to Vellar Basin in Cuddalore and Villupuram districts of Tamil Nadu a) Comprehensive Flood Management works to Vellar River in Cuddalore distrct b) Comprehensive Flood Management works to Manimuktha Sub basin of Vellar Basin in Villupuram and Cuddalore districts	 90.00 87.00	Proposals under consideration of Central Water Commission.
6.	Flood Protection to Panruti and Cuddalore Towns from Rivers Pennaiyar, Gadilam, Uppanar, Paravanar and South Malattar in Cuddalore district	70.91	Proposals under consideration of Central Water Commission.
7.	Flood Protection works in Adyar river near NH4 (Road connecting Kathipara Junction and Poonamalee Road) near Nandambakkam bridge between LS 12200 to 12700 m in Kanchipuram district	14.12	Proposals under consideration of Central Water Commission.
	Total	**692.44**	

7.4. Jawaharlal Nehru National Urban Renewal Mission Works (JNNURM)

A comprehensive Master Plan for Storm Water disposal through Micro and Macro Drainage System has been approved by the Government of India at a cost of Rs.1447.91 crore for improving the drainage system of Chennai City by dividing the city into 4 watershed basins with the funding under JNNURM. The work for the micro drainage system will be carried out by Corporation of Chennai and the work for the macro drainage system will be carried out by Water Resources Department at a cost of Rs.633.02 crore.

8.0. ANTI SEA EROSION WORKS

Under the Grant-in-Aid Programme recommended by the 12th Finance Commission, the State received Rs.50 crore towards 33 Anti sea erosion works. Out of these, 31 works have been completed. The remaining 2 works are in progress. Apart from this, 3 works sanctioned by the State Government for Rs.1.98 crore have been completed. The details of schemes sanctioned and their present status are:

8.1. Grant-In-Aid Programme - 12th Finance Commission

Works completed

Sl. No	Name of Work	**Project Cost** (Rs. in crore)
1	Anti Sea Erosion and coastal protection works in Ratchagar street of Agastheeswaram taluk in Kanyakumari district.	4.80
2	Construction of RMS Wall at Marthandamthurai in Kanyakumari district.	0.80
3	Construction of RMS Wall at Chinnathurai in Kanyakumari district.	0.30
4	Construction of RMS Wall at Eraviputhenthurai in Kanyakumari district.	0.30
5	Construction of RMS Wall at Thoothur in Kanyakumari district.	0.23
6	Construction of RMS Wall at Poothurai in Kanyakumari district.	0.33
7	Construction of RMS Wall at Erayamanthurai in Kanyakumari district.	0.22
8	Construction of RMS Wall at Thengapattinam and Mullorthurai in Kanyakumari district.	0.60
9	Construction of RMS Wall at Kodimunai for a length of 200m in Kanyakumari district.	0.33
10	Construction of RMS Wall at Periyavilaithurai in Kanyakumari district.	0.27
11	Construction of RMS Wall at Periakadu in Kanyakumari district.	0.32
12	Construction of RMS Wall at Kovalam in Kanyakumari district.	0.20

13	Construction of Groyne at Manakudi in Kanyakumari district.	6.00
14	Construction of RMS Wall from Thalankuppam to Nettukuppam in North Chennai.	2.30
15	Construction of Bell mouth from LS.126 to 946 m in Kottakuppam of Vanur Taluk in Villupuram district.	0.99
16	Construction of Groyne in Thanthrian kuppam of Vanur Taluk in Villupuram district.	2.61
17	Construction of RMS Wall from Annai Sivagami Nagar Kuppam to Indira Gandhi Nagar Kuppam in North Chennai.	0.99
18	Construction of RMS Wall from Thalanguda to Devanampattinam in Cuddalore district.	3.00
19	Construction of RMS wall at Poompuhar in Sirkali Taluk of Nagapattinam district.	1.78
20	Construction of RMS wall at Tharangampadi Village in Tharangampadi Taluk of Nagapattinam district.	3.05
21	Construction of Groyne on the northern side of existing sand jetty for the sustained opening of Cooum River Mouth upto +4.200m.	1.32
22	Raising the south Groyne from (+) 2.500 m to (+) 4.200 m for preventing sand bypassing into the Cooum river mouth.	0.90
23	Removing sand shoals in the Cooum River mouth and at Bridge points upto Munroe Bridge for easy passage of flood flow and tidal exchange of seawater.	0.60
24	Reformation of RMS wall at Ramanthurai in Vilavancode Taluk of Kanyakumari district.	0.33
25	Construction of RMS Wall at Neerodithurai in Kanyakumari district.	1.50
26	Construction of RMS wall in Vallavilaithurai in Kanyakumari district.	0.80

27	Construction of RMS wall at Ariyanattutheru in Nagapattinam district.	1.44
28	Construction of RMS wall at Serunthur village (Velankanni) in Nagapattinam district.	0.53
29	Extension of Groyne at Periyakadu in Agastheeswaram taluk in Kanyakumari district.	4.75

Works in Progress

Sl. No	Name of Work	Project Cost (Rs. in crore)	Status	Programme for completion
30	Construction of Groyne at Enayamputhanthurai in Kanyakumari district.	3.50	69% completed.	12/2009
31	Construction of RMS wall at Kaduvaiyar and Kallar river in Nagapattinam district.	3.20	95% completed	06/2009

Schemes sanctioned under 12th Finance Commission and State Fund (Part - II 2006-2007)

Works Completed

Sl. No	Name of Scheme	Project Cost (Rs. in crore)
32	Construction of Groyne at Idinthakarai in Tirunelveli district.	6.20
33	Construction of Groyne at Theresapuram in Thoothukudi district.	7.10

8.2. State Funded Schemes

Works Completed

Sl. No	Name of Scheme	Project Cost (Rs. in crore)
1	Construction of RMS wall at Rajakkamangalamthurai in Kanyakumari district.	1.42
2	Construction of RMS wall at Kodimunai for a length of 175m in Kanyakumari district.	0.23
3	Construction of RMS wall at Vaniyakudi in Kanyakumari district.	0.33

8.3. Proposal on Coastal Protection

A proposal on Coastal Protection Works of Tamil Nadu Coast was sent to Ministry of Water Resources, Government of India in July 2008. The State Technical Advisory Committee on Flood Control and Protection works cleared the Coastal Protection works for an amount of Rs.666.26 crore, to be executed in a span of four years. This proposal has also been suggested for consideration under 13th Finance Commission. The detailed proposals for the scheme will be sent to the Government of India for availing funds.

9.0. EMERGENCY TSUNAMI RECONSTRUCTION PROJECT (ETRP)

Under this World Bank assisted project, 10 works at a cost of Rs.22.23 crore were sanctioned for the re-construction of Water Resources infrastructure

affected by Tsunami in Nagapattinam district. The components of works are desilting, widening and strengthening of banks of canals, drains, straight-cuts and reconstruction of drainage regulators. Out of this 9 works have been completed and 1 work is in progress.

Works completed

Sl. No	**Name of Scheme**	**Project Cost** (Rs. in crore)
1.	Desilting and strengthening the banks of South Buckingham Canal, Manjalar drain, Strengthening the banks of Veeracholan drain, Nandalar Right Bank drains and straight cut of Mahimalaiyar river.	2.44
2.	Strengthening Tsunami affected Coleroon diversion banks at Koraithittu, Pandianthittu and Kattur.	1.23
3.	Desilting and strengthening Nattukkanni Manniar drain and strengthening Vellapallam Uppanar drain.	1.81
4	Desilting, widening and strengthening the banks of Vedaranyam canal L.S. 0 to 14.80km.	1.82
5.	Strengthening and widening the North Buckingham canal and reconstruction of Muduvanar drainage regulator.	2.63
6.	Desilting, widening and strengthening the banks of Vedaranyam canal L.S.14.80 km to 31.200 km.	2.02
7.	Desilting, widening and strengthening the banks of Vedaranyam canal L.S. from 31.200 km to 56.800 km.	3.15

8.	Desilting and strengthening the Vellaiyar straight cut, Chakkaliyan voikal straight cut, Lawford straight cut, Nallar straight cut from Adappar straight cut, Muthiyar straight cut and Valavanar straight cut.	2.45
9.	Widening and strengthening the bank of Kaduvayar drain.	1.73

Work in progress

Sl. No.	**Name of Scheme**	**Project Cost** (Rs. in crore)	**Present status**	**Programme for completion**
1.	Desilting the Buckingham Canal for a length of 4.50km in Thennampattinam, Perunthottam and Keelaiyur village of Nagapattinam district	1.74	75% completed	06/2009

10.0. CHENNAI CITY WATERWAYS

In order to keep the City Waterways clean and free from pollution, the Government approved a multi disciplinary project, viz., Chennai City River Conservation Project at a total cost of Rs. 300 crore in 1998. The Tamil Nadu Slum Clearance Board and Corporation of Chennai are partnering with Water Resources Department in this work. The status of the

packages handled by Water Resources Department are given below :

Name of Package	**Revised cost** (Rs. in crore)	**Present Stage**
Improvements to Buckingham Canal	30.81	Completed.
Improvements to Virugambakkam - Arumbakkam drain, Otteri Nallah	11.31	Completed.
Cooum River (a) From Sea Mouth to Periyar Bridge (b) From Periyar Bridge to Koyambedu	 2.20 17.45	 Completed. The improvement to Cooum river has to be taken up after making detailed study under Cooum Sub Basin Restoration and Management (CSRM) unit. Hence, the work is not taken up under Chennai City Waterways.

Improvements to Adyar, Adyar Corridor and Kosasthalaiyar	46.06	Work Completed.
Flood defences and resectioning of other major drains in Chennai Metropolitan area (Ambattur, Korattur, Madhavaram, Red Hills, Chembarambakkam, Pallikaranai) and Land Acquisition charges.	56.21	96% Completed and the balance work will be completed by 07/2009.
Velachery drain and Land Acquisition charges	6.30	95% Completed

11.0. ARTIFICIAL RECHARGE SCHEMES

11.1. Artificial Recharge of Ground Water through Check Dams

As announced in the Governor's Address in the Assembly on 23.1.2008 that a major scheme will be implemented in the water deficit areas of our State, for storing the unutilized waters in rivers, rivulets and streams by means of check dams, a Master plan has been evolved for implementation of Artificial Recharge to groundwater through check dams, ground water shafts, percolation ponds, etc, at a cost of Rs.550.00 crore over a period of 3 years from 2008 – 2009. The scheme is being implemented by 5 agencies of the State namely Water Resources Department (WRD), State Ground and Surface Water

Resources Data Centre (SG&SWRDC), Agricultural Engineering Department (AED), Tamil Nadu Water Supply and Drainage Board (TWAD) and Forest Department.

The SG&SWRDC is the nodal agency for the implementation of this project.

For the year 2008-2009, Rs.100.00 crore was allocated to the implementing Departments, out of which Rs 48.00 crore was for the Water Resources Department and Rs.2.00 crore was for the SG&SWRDC. So far, a sum of Rs.42.91 crore has been sanctioned for 103 works in Water Resources Department. Out of this, 88 works have been completed, 9 are in progress and the balance 6 works are proposed to be dropped. The SG&SWRDC which took up 15 works during 2008-2009 from the amount of Rs.2.00 crore sanctioned, has since completed 14 works. The remaining one work is proposed to be dropped.

The ultimate objective of this scheme is to improve and sustain the ground water potential in the State.

The District Level Committee under the Chairmanship of Collectors concerned will monitor effective and timely execution of works. The Committee will meet at least once in three months to review the progress and quality of the works.

The SG &SWRDC is the nodal Agency to collect the details of works carried out by various departments so as to create a reliable data base for planning in future.

11.2. Artificial Recharge to Ground Water through Dug Wells

Keeping in view the concerns of the problem of over exploitation of ground water resources in the country as well as to ensure sustainable water resources management and assured irrigation facilities in the more affected areas, the Ministry of Water Resources, Government of India formulated the scheme “Artificial Recharge to Groundwater through Dug Wells” for implementation over a period of 3 years from 2008 to 2010. Tamil Nadu is one of the 7 States in which the scheme is being implemented.

The objective of the scheme is to recharge the existing dug wells using rainfall run-off from the agricultural fields to facilitate improvement in ground water situation in the affected areas, which in turn will improve the over all irrigated agricultural productivity and help in improving the quality of ground water in Tamil Nadu. The scheme will cover 232 blocks categorized as over exploited, critical and semi-critical that fall in 28 districts except Chennai, Nilgris, Kanyakumari and Ariyalur with a total allocation of Rs.509 crore.

Salient Features

- Under this scheme, the small and marginal farmers who have Agricultural land holding upto 5 acres will be entitled for 100% subsidy of Rs.4000/- and the other farmers will be entitled for 50% subsidy.

- For effective monitoring and implementation of the scheme, State Level Steering Committee (SLSC)

and District Level Implementation and Monitoring Committees (DLIMC) have been constituted.

- The identification of beneficiaries and the preparation of the list of beneficiaries are the prime tasks in this scheme.

- After the preparation of these preliminary lists village wise, the district level reports are to be prepared for getting them approved in the District Level Implementation and Monitoring Committee (DLIMC).

- The list of beneficiaries approved by the DLIMC will have to be placed in the State Level Steering Committee (SLSC) meeting.

- So far, 3,38,002 wells were approved in 5 SLSC meetings.

- So far, 11,452 Artificial Recharge Structures have been constructed by the beneficiaries.

- Pre and post project impact assessment studies will be carried out through reputed agencies / organizations.

12.0. KRISHNA WATER SUPPLY PROJECT (KWSP)

As per the Agreement entered into between the Governments of Tamil Nadu and Andhra Pradesh in 1983 for drawal of water from river Krishna for Chennai City drinking water supply, the Andhra Pradesh Government has to release and reach at zero point a quantity of 12 TMC of water annually. This is

programmed to reach in two installments i.e., 8 TMC of water from July to October and 4 TMC of water from January to April every year.

The Andhra Pradesh Government has released 39.006 TMC of water upto 02.04.2009 since its inception in the year 1996. With the assistance of Sri Sathya Sai Central Trust, the renovation work in the Kandaleru-Poondi canal, Link canal and feeder canal was executed at a cost of Rs 50 crore. The work was commenced on 14.5.2007 and completed on 19.09.2008.

After completion of the renovation work by Sri Sathya Sai Central Trust, a total quantity of 6.882 TMC of water has been received at “Zero Point” of Tamil Nadu Border from 29.09.2008 to 02.04.09.

13.0. PARTICIPATORY IRRIGATION MANAGEMENT (PIM)

The Government is implementing the Participatory Irrigation Management (PIM) programme as envisaged in the Tamil Nadu Farmers' Management of Irrigation Systems Act, 2000 (TN Act 7 of 2001). Under this Act, command area covering about 6.00 lakhs ha. in 20 Districts, 1566 Water Users' Associations were delineated and 1550 Water Users' Associations have been constituted during 2004 under the World Bank assisted Water Resources Consolidation Project (WRCP).

To facilitate the constitution of Distributory Committees (DC) (Secondary level of Farmers' Organisation) and Project Committees (PC) (Project level of Farmers' Organisation) the Government delineated and declared the command area for the 161 Distributory Committees and 9 Project Committees under WRCP commands.

The Government sanctioned a sum of Rs.20 lakh for conducting the elections to left out / vacancies posts in Water Users' Associations, 161 Distributory Committees and 9 Project Committees. Accordingly, the elections were conducted in 20 Districts through the District Collectors during May 2008 to September 2008. 46 Presidents and 152 Territorial Constituency Members for the left out posts of Water Users' Associations, 158 Presidents of Distributory Committees and 9 Chairmen of Project Committees were elected.

The first five-year term of office of Presidents and members of managing committees of WUAs' expired in January 2009. New election to the Water Users Associations, Distributory Committees and Project Committees could not be conducted during January 2009 due to insufficient time. Hence the term of office of the existing Presidents and members of WUAs, DC and PC was extended for a further period of 6 months, by notifying an Amendment Act viz., Tamil Nadu Farmers' of Irrigation Systems (Amendment) Act, 2009 (Act No.1/2009) on 29.1.2009. Election is scheduled to be conducted on 27.06.2009.

Further, the following steps will be taken for facilitating the participation of the Farmers' organisations in the Operation and Maintenance of the Irrigation systems as envisaged in the Tamil Nadu Farmers' Management of Irrigation Systems Act, 2000.

- ❖ Apportioning a portion of the additional water cess being collected, to the three levels of the Farmers' Organisation.
- ❖ Allotting a portion of the income from the properties attached to the irrigation systems to the respective Farmers' Organisations.

14.0. TAMIL NADU PROTECTION OF TANKS AND EVICTION OF ENCROACHMENT ACT, 2007

It has become imperative to protect the water bodies from encroachments and disuse. The tanks and their components, if not protected and restored to their original capacity, may cause reduction in the area of cultivation and thereby reduction in production of food grains, depletion of ground water and environmental degradation.

In order to protect the tanks in the State, an Act entitled "Tamil Nadu Protection of Tanks and Eviction of Encroachment Act 2007 (TN Act: 8 of 2007)" was legislated and the Act and rules have since come into force from 1.10.2007.

The Act is being implemented by creating awareness among the general public especially at village level about the provisions of the Act and Rules

and the need to keep the tanks in original shape through hand bills, wall posters, print media and tom-tom. Works such as delineation of tank boundaries, eviction of encroachments and planting of RCC poles along the tank boundaries are being executed for preventing encroachments.

In the year 2007-08, boundary delineation works, eviction of encroachments and planting RCC poles along the boundaries were completed in 316 tanks. In the year 2008-09, 1779 tanks have been fully protected.

15.0. LINKING OF RIVERS WITHIN THE STATE

The Government of India has come forward to extend funding for inter linking of rivers within the State under Accelerated Irrigation Benefit Programme (AIBP) as resolved in the 53rd National Development Council meeting. In the meanwhile, this Government has taken the initiative to link the rivers within the State to primarily serve as flood carriers and to divert the flood flows to reach the drought prone areas. In this direction, the following 3 links have been investigated into : –

i) Cauvery-Agniar-South Vellar- Manimuthar-Vaigai-Gundar
ii) Tamiraparani-Karumeniar-Nambiar
iii) Pennaiyar-Cheyyar

This Government sanctioned Rs.369 crore for Tamiraparani-Karumeniar-Nambiar link project and

Rs.189 crore for construction of Kattalai Barrage across Cauvery as part of Cauvery-Gundar link during 2008-09 in anticipation of funds from the Government of India under the Accelerated Irrigation Benefit Programme. These two schemes have been sent Government of India for financial assistance and they are under consideration. The proposal for interlinking of Pennaiyar River with Cheyyar River at a cost of Rs.174 crore has been sent to Government of India seeking financial assistance under Accelerated Irrigation Benefit Programme.

Detailed Project Report for the following works are under the consideration of Government for seeking assistance from the Government of India under Accelerated Irrigation Benefit Programme.

1. Excavation of new link canal from Kattalai Barrage to Manimuthar river in Sivagangai District. Estimate Rs.2,375 crore
2. Excavation of new link canal from Manimuthar river to Gundar river. Estimate Rs.915 crore.

16.0. INTER STATE RIVER ISSUES

16.1. Cauvery Water Issue

The Cauvery Water Disputes Tribunal after examining all the aspects of the case and hearing the arguments putforth by the party States, pronounced its decision on 05.02.2007. The Tribunal has considered the yield in the basin at 50% dependability based on the Report of the Cauvery Fact Finding Committee and allocated 419 TMC to Tamil Nadu for irrigation and

another 10 TMC for environmental protection and 4 TMC for inevitable surplus. The order has also stipulated that Karnataka Government shall deliver 192 TMC annually as per the monthly schedule prescribed Billigundulu or any other contact point between Karnataka and Tamil Nadu.

According to this order, the flow expected at Mettur will be 217 TMC. This is more than the 205 TMC ordered in the Interim Order of the Tribunal including 6 TMC for Karaikkal region of Puducherry by about 18 TMC. Apart from this, the Tribunal has also ordered that out of 30 TMC allocated to Kerala, the unutilized water from the Kerala's share shall be used by Tamil Nadu till such time Kerala uses its share. It has also clearly mentioned, that the use of Ground Water by any State shall not be reckoned as use of water of the river Cauvery. This is a rejection of Karnataka’s arguments before the Tribunal that Tamil Nadu has lot of ground water in the Delta which should not be taken into account.

The Tribunal has also suggested for the constitution of a Cauvery Management Board and Cauvery Water Regulation Committee to effectively implement the order. The composition of the Board and the Committee and the guidelines for implementation machinery have also been suggested.

All the Party States and the Government of India have filed petitions in the Tribunal under section 5(3) of the ISRWD Act, 1956 seeking explanation or guidance to the Tribunal's final order in respect of certain clauses.

The States of Karnataka and Kerala have filed Special Leave Petitions in the Supreme Court against the order of the Tribunal. Tamil Nadu also has filed an SLP against certain aspects of the orders of the Tribunal. These SLPs (Civil Appeals) are still pending in the Supreme Court. The Tribunal in July 2007 has held that the petitions under section 5(3) before them can be considered only after the SLPs are disposed of by the Supreme Court. The final order will become effective and binding on the party States only after it is published in the Official Gazette of the Government of India, after the Tribunal gives its further report on the reference petitions filed before them. The Interim order of the Tribunal will be in force till then.

Tamil Nadu has also filed an I.A. in the Supreme Court to restrain Karnataka from proceeding with lift irrigation scheme, renovation of tanks and construction of check dams in the guise of minor hydel projects.

Tamil Nadu has further filed another I.A. in the Supreme Court in November 2008 against the unilateral action contemplated by Karnataka in proceeding with the execution of the Sivasamudram Seasonal Power Scheme and the Mekedatu Hydro Electric Scheme and praying for directions to the Central Government to take up all the Hydel Schemes in Cauvery between KRS and Mettur by the NHPC, a Central Government Agency, as already contemplated by them and also restrain Karnataka Government from proceeding in any manner with the projects in the Cauvery basin. The Hon'ble Chief Minister has also written on this to the Hon'ble Prime Minister on 4.2.2009 seeking his personal intervention in this matter.

Since, the Civil Appeals were not taken up for further hearing, this Government mentioned the matter on 12.5.2009 for hearing of the Civil Appeals immediately after vacation i.e., in July – August 2009. The Supreme Court of India has now fixed 10.11.2009 for hearing these Civil Appeals.

This Government will take all necessary steps to safeguard the interests of the farmers of Tamil Nadu in the Cauvery Basin.

16.2. Palar Issue

The Government of Tamil Nadu filed a Civil Suit on 10.02.2006 in the Supreme Court to restrain the Government of Andhra Pradesh from constructing a reservoir across Palar at Ganeshapuram, Kuppam Taluk, Chitoor District, Andhra Pradesh.

After hearing the case, the Supreme Court in its order dated 07.01.2008 opined that the Government of India may, after hearing the Andhra Pradesh Government, settle the dispute between the two States.

Following this, a meeting at official level was held by the Chairman, Central Water Commission (CWC) in New Delhi on 11.03.2008. After deliberations, it was decided that the Andhra Pradesh may not to go ahead with the project before the issue is settled and both the States have been asked to provide technical information called for. Tamil Nadu furnished the data and information in time by the end of April, 2008.

Another meeting at official level was conducted by the CWC in New Delhi on 26.08.2008. In that, it was

decided that Andhra Pradesh will provide the desired information over and above which it has furnished earlier, and the CWC will carryout studies on water availability jointly with both the States. The out come of the study will form the basis for further discussion. The study is yet to be commenced by the CWC. In the meanwhile, Tamil Nadu Engineers visited site on 31.12.2008 and found that no work is in progress at Ganesapuram.

Government of Tamil Nadu is taking all necessary steps to protect the interests of the people of Palar river.

16.3. Mullai Periyar Dam

The Supreme Court pronounced its judgement on 27.2.2006 permitting Tamil Nadu Government to raise the water level initially from 136 ft to 142 ft and also to carry out further strengthening measures as suggested by the CWC, to the Baby dam and Earth dam, the Government of Kerala and its officers shall extend their co-operation to Tamil Nadu for executing the works. The Supreme Court in its order has also observed that after the strengthening works are completed to the satisfaction of the CWC, independent Experts would examine the safety angle before the water level is permitted to be raised to 152 ft, the Full Reservoir Level (FRL). However, Kerala Government insisted that the water level in the Dam should be kept only at 136 ft. at all times.

Soon after the Supreme Court pronounced its judgement, Kerala Government passed "The Kerala

Irrigation and Water Conservation (Amendment) Act 2006" on 18.03.2006 in order to nullify the Supreme Court Order and fixed the FRL of Mullai Periyar Dam as 136 ft.

Tamil Nadu Government filed a Civil Suit (O.S.3 of 2006) on 31.3.2006 in the Supreme Court praying to declare "The Kerala Irrigation and Water Conservation (Amendment) Act 2006" in its application to Mullai Periyar Dam as unconstitutional.

As per the directions of the Supreme Court on 25.9.2006 and the decision of all party meeting on 23.10.2006, a meeting of the Hon'ble Chief Ministers of both the States held discussions in New Delhi in the presence of the Hon'ble Minister for Water Resources, Government of India, on 29.11.2006. In continuation, a Ministers' level meeting was held on 18.12.2006 in the presence of Hon'ble Union Minister for Water Resources. No consensus was reached in these meetings. The failure of talks was reported to the Supreme Court.

The Supreme Court in its order dated 13.12.2007 framed 11 issues for arguments and directed both the State Governments to file relevant documents and list of witnesses within 6 weeks.

Thereafter, the Supreme Court by its order dated 21.7.2008 appointed Justice Anil Dev Singh, Retired Chief Justice of Rajasthan High Court to record the evidence of the parties. Accordingly from 13.8.2008 to 17.9.2008, the witnesses of both the States were cross examined and their deposition recorded.

The final hearing of the Suit came up for hearing before a Special Bench of the Supreme Court on 31.3.2009 and after hearing the arguments of both States, the hearing has been adjourned to July 2009.

Government of Tamil Nadu is taking all the necessary efforts to protect the interests of the State.

16.4. Parambikulam Aliyar Project - Review of Agreement

The Parambikulam Aliyar Project, a multi-valley project, was planned, designed and executed by the Government of Tamil Nadu as one of the Second Five Year Plan Projects, with the consent and co-operation of the Government of Kerala for sharing benefits through the utilization of flows in the rivers of Anamalayar, Nirar, Sholayar, Parambikulam, Palar and Aliyar and the streams flowing into them, for generation of Hydro Electric Power, irrigation, drinking water supply and industrial use in both the States. An agreement therefor between the Government of Tamil Nadu and Kerala was entered into on 29.05.1970 with retrospective effect from 09.11.1958. This Agreement was due for review on 09.11.1988. Accordingly, both the Governments exchanged the documents for review on 21.09.1989 and since then held several Inter State level discussions to complete the review.

In the Minister level meeting held between Governments of Kerala and Tamil Nadu on 10.06.2002 in Chennai, a decision was taken to constitute a Technical Committee comprising of Engineers from

both the States to first identify the areas where amendments may be required in the Agreement and to facilitate the review at the Government level. The Technical Committee submitted its Report in May 2003. The Report was discussed in the meeting held on 10.11.2003 in Chennai and later on 4th January 2004, 27th November 2004 and 18th December 2004. Followed by that, a meeting at the Chief Secretaries level was held on 30.05.2008 in Thiruvananthapuram. In that it was decided to exchange more information and data pertaining to the review of the Agreement and to have the next meeting in Chennai. Accordingly, the Chief Secretaries level meeting was held on 27.2.2009. Pursuant to the decision taken in the meeting held in Chennai on 27.2.2009, a meeting between Principal Secretary, Public Works Department, Tamil Nadu and Additional Chief Secretary supported by officers from each side was held in Thiruvananthapuram on 8.4.2009 and followed by another meeting in Chennai on 24.4.2009 and 25.4.2009, to enable both the Governments to hold further talks at higher levels to complete the first review of Parambikulam Aliyar Project Agreement.

The Government of Tamil Nadu will continue to press the Government of Kerala to extend its positive support so as to complete the first review of Parambikulam Aliyar Project Agreement.

16.5. Pandiyar - Punnampuzha Project

The West flowing Pandiar-Punnampuzha, an interstate river, originates in the high peaks of Nilgiris in Tamil Nadu, flows west and finally drains into Arabian Sea.

In 1965, an understanding was reached between Tamil Nadu and Kerala permitting Government of Tamil Nadu to execute the Pandiar - Punnampuzha Hydro Electric Project utilising the west flowing waters of Pandiar and Punnampuzha rivers within Tamil Nadu in 171.38 sq. km. (66.20 Sq. miles) with an average annual yield of 14 TMC with an installed capacity of 100 MW (2x50 MW) for the first stage and 150 MW in the next stage. The Union Planning Commission also approved the proposal in 1968.

But on representation from the ryots of Coimbatore district, the possibility of diverting the waters of Pandiar - Punnampuzha lying within Tamil Nadu to Moyar arm of Bhavani River for use by Tamil Nadu for irrigation in dry areas of Avinashi taluk was investigated and this was also found feasible.

Tamil Nadu wanted diversion of at least 7 TMC of water eastward.

The Tamil Nadu Electricity Board on 29.11.2006 forwarded a modified proposal of the Pandiar - Punnampuzha Hydro Electric Project to the Kerala State Electricity Board for its concurrence. So far, there has been no positive response from the Kerala Government.

The Government will pursue with the Government of Kerala for implementation of the Pandiar - Punnampuzha scheme.

16.6. Peninsular Rivers Link

The National Water Development Agency (NWDA) which was created in 1982 has done extensive work of feasibility studies on many of the inter-links for inter - basin water transfer proposals both in the Himalayan Rivers and also the Peninsular Rivers. As per its assessment, the overall surplus from Mahanadhi and Godavari is 925 TMC after allowing for all future in-basin requirements. It is proposed to utilize this surplus for various purposes like irrigation, drinking water, industrial use etc., under the Peninsular Component. National Water Development Agency also assessed the benefits that will accrue as about 3 Million hectares of additional irrigation and substantial additional Hydro Power besides several other intangible benefits. Under this scheme, Tamil Nadu is expected to get about 214 TMC at the border and the additional area that is expected to benefit by irrigation is estimated as 7.90 lakh hectares.

Tamil Nadu suggested for enhancing the quantum of water proposed to be transferred at least by another 100 TMC. Tamil Nadu also suggested an alternative alignment for the Pennar - Palar - Cauvery link taking along a higher contour, a little west of the present alignment, so as to spread the benefits within the State equitably to the most needed areas, which has been accepted in principle by the NWDA.

The Hon'ble Chief Minister in the 52nd Meeting of the National Development Council held in New Delhi on 09.12.2006, and in the discussion with the Vice - Chairman, Planning Commission in New Delhi on 05.02.2007, emphasized the urgency to start the linking of the Peninsular Rivers in order to augment the water

resources, so as to re-vitalize the agricultural sector by providing funds for the interlinking of rivers project during the XI Five Year Plan starting from the year 2007 - 2008. This need to inter-link major rivers particularly the Peninsular rivers was reiterated in the subsequent 53rd and 54th National Development Council, New Delhi.

Tamil Nadu suggested to the Government of India that the Parliament can make a law, by virtue of the powers conferred under the Article 248(1) read with Entry 97 of List 1 (Union List) of the Seventh Schedule of the Constitution, for implementing the interlinking of major rivers in the Country, which would facilitate early execution of Interlinking Rivers Project (ILR) which is badly delayed since concurrence from the respective Governments is not forthcoming.

In the 24th Annual General meeting of National Water Development Agency held in New Delhi on 9th July 2008, Tamil Nadu urged that under the scheme of interlinking of Peninsular Rivers Development, no link shall be taken up either on priority basis or in isolation, but the project as proposed should be executed as a whole. However, creation of storages which is of paramount importance in the Interlinking programme, could be taken up ahead of other components of the scheme.

Tamil Nadu continues to take all the efforts to get the Peninsular Rivers Link Project started quickly.

16.7. Pamba - Achankoil - Vaippar Link

NWDA formulated the Pamba - Achankoil - Vaippar Link Project, which envisages diversion of 22 TMC which is only 20 % of the available surplus water of Pamba and Achankoil rivers of Kerala to Tamil Nadu to irrigate an ayacut of 91,400 hectares in Sankarankoil, Kovilpatti, Sivagiri, Srivilliputhur, Rajapalayam, Sathur and Tenkasi taluks of Tamil Nadu and will also help to generate peak power of 500 MW.

The Government of Tamil Nadu conveyed its acceptance to the proposal, whereas the Government of Kerala is not in favour and keeps saying that they do not have surplus to spare.

The Hon'ble Chief Minister on 05.09.2006 addressed the Hon'ble Prime Minister with a request to prevail upon the Government of Kerala for giving its concurrence, so that the Pamba - Achankoil - Vaippar Link project, which is beneficial to both the States, could be taken up for implementation.

The Government of Tamil Nadu again addressed the Government of India, Ministry of Water Resources, on 25.09.2007, requesting them to treat Pamba - Achankoil - Vaippar link as a priority link under the Peninsular River linkage and also direct the NWDA to conduct a joint study with the Government of Kerala as proposed earlier, if necessary, to convince the Government of Kerala to see that there is heavy surplus.

The Government of Tamil Nadu is still pursuing the matter with the Government of India for implementation of this project.

16.8. Neyyar

The Neyyar Irrigation Project was planned and executed by the State of Kerala in two stages. Due to the States' Reorganisation in 1956, a portion of the ayacut localized to be served by this project to an extent of 9200 acres lying in the Vilavancode taluk got transferred to Madras State (Tamil Nadu) and formed part of Kanyakumari District. The canal works required to feed this ayacut were executed by the State of Tamil Nadu with the approval of the Government of India and the State of Kerala under the Second Five Year Plan. The project is in operation from the year 1965.

Initially the State of Kerala was supplying water to this area of Tamil Nadu through the left bank canal of the project, even though the supply made was very much below the designed discharge of 150 cusecs. The supply was made upto February 2004 and after that the State of Kerala stopped the supply of water.

After the Reorganization of States, the State of Kerala wanted the concurrence of the Madras Government for sharing of the cost of the project as proposed by it in 1957. The amount to be shared by Tamil Nadu was also settled by the Kerala Government in February, 1965. Accepting the Kerala claim, Tamil Nadu Government suggested in April 1971 that an agreement may be entered into with Kerala Government regarding the sharing of capital and maintenance cost and supply of water to the Tamil Nadu ayacut and this has been in correspondence since then. Even though the State of Kerala agreed on the sharing of cost etc., it did not concede to the

request of Tamil Nadu for entering into an agreement on the lines suggested by Tamil Nadu. In 1999, Kerala took the stand that "since Neyyar is not an inter State river, it would not be necessary to conclude an inter State agreement regarding the sharing of waters of this river". This is the first occasion when Kerala raised the issue that Neyyar is not an inter State river.

In 2007, Kerala Government informed Tamil Nadu Government stating that as per the Resolution passed in the Kerala Legislative Assembly on 18.10.2006, water will be supplied to Tamil Nadu from the Neyyar dam after realizing the value of the water so given. Tamil Nadu took the stand that since Neyyar is an inter State river, as per Section 7 of the Inter State River Water Disputes Act 1956, the question of paying "any seigniorage or additional rate or fee (by whatever name called) in respect of the use of such water by any other State or the inhabitants thereof" will not arise.

The State of Kerala again reiterated its stand that Neyyar is not an inter State river, even though Tamil Nadu has already established that Neyyar is an Inter-State river.

The Kerala Government sent a draft agreement on 26th June 2008 which was marginally revised and sent to Kerala Government on 31.10.2008. The Kerala Government has again come up with the statement in December 2008 that Neyyar is not an inter-State river.

The Tamil Nadu Government, in order to utilize the Neyyar water for irrigation, without prejudice to the stand that Neyyar is an inter-state river, has again sent

a fresh draft agreement on 19.5.2009 for consideration and consent of the Kerala Government.

Tamil Nadu Government is genuinely interested to have the Neyyar river issue settled amicably and an agreement acceptable to both the States signed at the earliest. In this direction, this Government is taking all its efforts to get its due share from Neyyar river.

17.0. STATE GROUND AND SURFACE WATER RESOURCES DATA CENTRE (SG&SWRDC)

In Tamil Nadu nearly 85 % of ground water resources are being utilized to meet the irrigation, drinking and industrial water demand. The balance ground water potential is concentrated only in the command areas of reservoirs, tanks, in the coastal sedimentary areas and in the fractured and jointed zones of hard rocks. There is a phenomenal rise in the number of ground water extraction structures in the last five decades resulting in the declining of water levels in certain areas and also over extraction in certain other parts. This causes concern and effective attention is needed to preserve this commodity for future utilization through efficient management.

Even though groundwater is a replenishable natural resource, the declining water table is alarming mainly because of the vagaries of monsoons. The urgent need of present day is to adopt suitable management strategies to atleast safeguard the present quantity and quality of groundwater.

Another menace of the over exploitation in the coastal areas is the salination of inland waters, making it extremely difficult to reverse the situation once the sea water intrudes. Maintenance of groundwater quality at an acceptable level is a major requirement of successful management of groundwater.

Hence, the SG&SWRDC of WRD is currently engaged in the following tasks :

- Continuous monitoring of groundwater, surface water and water quality, through its wide network spread all over the State.

- Periodical assessment of groundwater resources of the State based on the voluminous data generated as per the National and State water polices.

- Providing necessary consultancy services to the general public, farmers, public undertakings, other Government departments etc., in locating favourable area for ground water exploration on scientific basis for development of groundwater.

- Such activities also have generated a wealth of scientific data on ground water, which are being disseminated to various user agencies like academics, research scholars, NGOs and other departments connected with water resources.

18.0. INSTITUTE FOR WATER STUDIES (IWS)

The Institute for Water Studies was established in 1974 to plan, assess and manage the water resources scientifically in each river basin of Tamil Nadu.

The 34 river basins in Tamil Nadu are grouped into 17 major river basins and sub divided into 127 sub basins. Micro level studies are conducted on water demands for agriculture, domestic and industrial needs in each basin. Out of the 17 river basins, studies in respect of 16 river basins have been completed so far. Micro level studies of Cauvery basin consisting of 18 sub basins is proposed to be taken up during 2009 - 2010. The findings of the studies are disseminated to the Regional Water Resources Department Engineers and water user departments for further planning and finalizing schemes related to agriculture and management of water resources.

Under the IAMWARM project, suggestions are given for changing the cropping pattern wherever necessary. Optimal water management techniques such as ‘sprinkler’ and ‘drip irrigation’ methods are suggested for adoption in low rain fall areas.

The thematic maps derived in each river basin will be utilized in the selection of sites for check dams, ponds etc.,

The other important activities are:

- **Water Resources Research Fund (WRRF) and Research Studies**

Under the Water Resources Consolidation Project (WRCP), utilizing WRRF, 38 Research Studies were completed through various Institutions and Universities in the field of Irrigation, Water Management, Environment, Pollution control, Groundwater, etc., and the results of the studies are utilized for preparing the irrigation schemes.

Now, two research studies have been taken up under WRRF.

1. Estimation of transmission loss in Sathanur system through Anna University.
2. Flood as hazard, disaster proneness, vulnerability in North Chennai through University of Madras.

- **Special studies**

"Managing floods in Tamil Nadu river basins by arresting run off, ground water recharging as inter basin transfer". This study has been completed.

"A comparative study of ayacut(catchment) using the available P VI resource Satellite data 2004 and 1980 Aerial Photographs, by adopting Remote Sensing techniques to identify the present command area position and understand whether there is an increase or decrease in command area between 1980 and 2004". The study will be taken up during 2009-2010.

- **River Basin Management and Development Board**

  The River Basin Management and Development Boards have been established for Palar and Tamiraparani river basins. It is supported by a Technical Secretariat in the Institute for Water Studies, Taramani, Chennai.

- **Remote sensing and GIS activities**

  The remote sensing unit of this institute is recognized as the TamilNadu State Centre for remote sensing applications.

  The main function of this unit is to prepare various thematic maps derived from the satellite data and aerial photographs on different scales through overlay analysis for surface and ground water potential assessment, land use studies, crop pattern studies, soil classification, three dimensional maps etc.,

19.0. IRRIGATION MANAGEMENT TRAINING INSTITUTE (IMTI)

The Irrigation Management Training Institute functioning at Tiruchirapalli was established in the year 1984 to strengthen institutional capabilities of Water Resources and other related Organizations, by imparting training to all those involved in irrigated agriculture including farmers, exposing them to modern techniques in irrigation management and also to conduct action research in irrigation systems. Regular

training programmes are conducted on various aspects of irrigation management including Participatory Irrigation Management (PIM), application of computer software in irrigation management like Geographic Information System (GIS), remote sensing, Auto CAD and human resources development etc.,

The major topics of training covered under irrigation management are modern irrigation methods, on- farm water budgeting, flow measurement, operation and maintenance of irrigation systems, flood and drought management, crop water requirement and operation plan, efficient agricultural practices like System of Rice Intensification (SRI), precision farming, organic farming and integrated water resources planning and management.

Training programmes are organized for the field staff of Water Resources Department, Agriculture and Agricultural Engineering Departments on irrigation management to familiarize them with the water management practices and PIM systems. Special training programmes under the World Bank assisted Irrigated Agriculture Modernization and Water Bodies Restoration and Management project (IAMWARM) are also conducted by the Institute.

Training programmes are also undertaken on the specific requests from other organizations on specialized topics. With the budget provision of Rs.2.62 crore, 48 training programmes and 144 courses were conducted during the year 2008-09 for the Engineers, farmers, field staff and officials of other departments. For the year 2009-10, it is proposed to conduct 175 training programmes that would cover about 2300 officials of various departments and 2800 farmers.

20.0. DIRECTORATE OF BOILERS

The Directorate of Boilers, Tamil Nadu is the enforcing authority of the Indian Boilers Act, 1923, a Central Act administered by the State for the safe operation of the boilers and to ensure the safety of public life and property. This Directorate plays a crucial role in the phenomenal development of Boilers and Boiler Ancillary industries in the State which is a pioneer in the field of Boiler manufacturing and Boiler Ancillary Units, like Foundries, Forge Shops, Tubes and Pipes manufacturing units, etc., Further, it is incharge of implementing the provisions of the Tamil Nadu Boiler Attendants' Rules, 1964 and Tamil Nadu Boiler Operation Engineers' Rules, 1965 to ensure that the Boilers used in the user industries are operated by certified Boiler Attendants or Boiler Operation Engineers.

The Directorate of Boilers, conducts Tamil Nadu Boiler Attendants Examination for I-Class, II-Class & III-Class certificate of competency and the Tamil Nadu Boiler Operation Engineers' Examination certificate of proficiency. It also conducts tests to high pressure welders employed in Boiler manufacturing units and Boiler Ancillary units, Boiler Erectors and Repairers organisations and issues competency certificates to the successful candidates. This Directorate is responsible for detecting and curbing the operation of the unregistered and uncertified Boilers.

The Directorate of Boilers ensures that the Boiler and Boiler components, Piping and its fittings, viz., Valves, Tees, Reducers, Elbows, etc., are designed and manufactured as per the provisions of the Indian

Boiler Regulations, 1950 by approving the design for the various components and by carrying out inspections at various stages of manufacturing from approving the basic raw materials to the final product for quality. By its efficient functioning, this Directorate plays a pivotal role in the industrial growth in the Boilers and Boiler related field of the State.

21.0. SAND QUARRY

The Government constituted a six member High Level Committee, consisting of Geologists, Environmentalists and Scientists to study the rivers and river beds in the State with reference to the impact of sand quarrying. Based on the Committee's report, orders were issued amending the Tamil Nadu Minor Minerals Concession Rules, 1959 by introducing a new Rule 38-A whereby all existing leases for quarrying sand in Government land and permissions / leases granted in ryotwari ceased to exist with effect from 2.10.2003 and entrusting the sand quarry operations to the Government through a single Department viz., the Water Resources Department. Accordingly, the Water Resources Department started operating sand quarries.

During October 2003, Government sanctioned 239 sand quarries and sand was sold at the rate of Rs.1000/- per lorry load (2 units) ex-depot. Subsequently, Government reduced the sale price of sand from Rs.1000/- to Rs.600 /- per lorry load during June 2004.

On 26.05.2008, an All Party meeting on the policy to be followed in sand quarrying operation was convened by the Hon'ble Chief Minister and it was decided that sand quarrying operation will be continued by the Government. The Government enhanced the lorry load from 2 units to 3 units and the amount has been fixed as Rs 900 by adopting Rs 300 per unit with effect from 01.06.2008. The Government brought an amendment to the Rule 38 of the Tamil Nadu Minerals and Mines concession Rules, 1959 so as to prevent the transportation of the river sand to other States with effect from 25.8.2008.

At present, sand is being quarried and sold by the Water Resources Department directly from about 130 quarries approved by the District Collectors. During the year 2008-2009, the revenue generated is Rs.129.58 crore and the revenue generated from inception upto 31.05.2009 is Rs.720.75 crore.

DURAI MURUGAN
MINISTER FOR PUBLIC WORKS AND LAW