



## **ABSTRACT**

Water Resources Department - Announcement made by the Hon'ble Minister for Water Resources for 2022-2023- Construction of Bed Dams to restore the river bed level at four places in Trichy and Thanjavur Districts at an estimated cost of Rs.26,24,30,000/- Administrative and Financial Sanction accorded - Orders issued

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### **Water Resources (S2) Department**

**G.O (Ms) No.47**

**Dated 23.06.2022**

சுபகிருது, ஆனி 9

திருவள்ளூர் ஆண்டு 2053

Read:

From the Chief Engineer, Plan Formulation, Water Resources Department, Letter No. F2/0604/Anno 2022-2023 / Bed Dam / AE6/AEE5/2022, dated 13.04.2022.

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### **ORDER:**

During the Demand for Grants for Water Resources Department for the year 2022-2023 held on 06.04.2022, the Hon'ble Minister (Water Resources) on the floor of the Assembly has announced that "Construction of Bed Dams to restore the river bed level at four places in Trichy and Thanjavur Districts will be taken up at an estimated cost of Rs.27.40 crore".

2. Based on the above announcement, the Chief Engineer, Plan Formulation, Water Resources Department has sent a proposal for Construction of Bed Dams to restore the river bed level at four places in Trichy and Thanjavur Districts at an estimated cost of Rs.27.40 Crore. The Schemes envisage the following:

A. Construction of Bed dam across Ayyar River near Puliyancholai Village of Thuraiyur Taluk in Trichy District - Estimate amount of Rs.5.00 Crore.

- (i) Ayyar River is one of the tributaries of River Cauvery which originates from Kolli Hills in Namakkal District traverses from North to South direction in Thuraiyur, Musiri and Mannachanallur Taluks of Trichy District for a length of 48km and confluences with Cauvery River in the upstream of Upper Anicut at Vathalai

Village. It is proposed to construct a Bed Dam across River Ayyar near Puliancholai Village of Thuraiyur Taluk in Trichy District.

- (ii) It has 4 Nos. of tributaries namely Thalugai River, Gundar, Kanjanaru and Ruthrachakombaiyaru River.
- (iii) Present Condition:
- (a) At present, due to continuous flow, the river bed gets deeply eroded to such a depth that sufficient water could not be supplied to the channel that feeds Jamberi tank and other chain of tanks in Venkatachalapuram, Okkarai and Maradi villages.
- (b) The existing average bed level of Ayyar River is +200.30 m against the theoretical bed level of + 201.20 m. Hence, it is necessary to construct a bed dam to feed the channel situated on the upstream of the proposed site.
- (c) Further, the stagnated water will augment the ground water resource and improve the water potential in the wells located in the surrounding area for drinking and irrigation purpose.
- (iv) HYDRAULIC PARTICULARS :-

Designed M.F discharge	:	162.90 cumecs
Crest level	:	+201.78m
Average Bed level	:	+200.88m
U/S Level	:	+ 200.88m
D/S Level	:	+ 200.88m
M.W.L	:	+ 203.230m
T.B.L	:	+ 204.510m
Height of bed dam	:	0.90m
Length of bed dam	:	55m
No.of Bore well	:	57

- (v) By implementing the scheme, the registered Ayacut of 646.36 Ha. under Jamberi tank and other chain of tanks will get benefitted. Also, the ground water resource will also be augmented in Puliyancholai, Vairichettipalayam, Maradi, Okkarai and Venkatachalapuram villages.

**B. Construction of Tail end Bed dam across Nasuviniyar Drain from LS 22.000 Km in Karisakkadu Village of Pattukottai Taluk in Thanjavur District - Estimate amount of Rs.4.50 Crore.**

- (i) The Vedhapuriyar originates at Alathu Eri in Thennamanadu village Orathanadu Taluk in Thanjavur District and runs for a length of 26 km and after that it is renamed as Nasuviniyar Drain and runs for a length of another 26 km and finally

confluences with Bay of Bengal in Karisakadu Village of Pattukottai Taluk.

- (ii) At present, the bed level of the river gets lowered so that sufficient water could not be supplied to channels situated on both banks of the proposed site.
- (iii) Hence, it is proposed to construct a bed dam to maintain the theoretical bed level so as to supply water to the channels situated on the upstream side of the proposed site

(iv) Location :

A Tail end Bed dam is proposed to be constructed across Nasuviniyar Drain at LS 22.000 Km in Karisakkadu Village of Pattukottai Taluk in Thanjavur District at Latitude: 10° 20' 55" N and Longitude : 79° 24' 53" E

(v) Salient features of the tail end bed dam :-

Designed M.F discharge (observed in 2008)	:	24143 c/s
Water Storage (Capacity)	:	0.0139 mcft
Proposed Bed level	:	+ 3.250 m
Crest level	:	+ 4.150 m
Depth over crest	:	2.70 m
Average Bed level	:	+ 3.250 m
U/S Level	:	+ 3.250 m
D/S Level	:	+ 2.950 m
M.W.L	:	+ 6.850 m
T.B.L	:	+ 7.750 m
Height of bed dam	:	0.90 m
Length of bed dam	:	86.00m

(vi) By implementing this scheme, the benefitted ayacut will be 417.30 acres.

(vii) Besides, fresh water can be stored on the upstream side of bed dam and salinity of the soil in the agricultural land will be reduced.

C. Construction of Bed dam across Vennar river at L.S.75.250 km to maintain the theoretical bed level and to feed Pillaivoikkal channel in Kovathakudi village of Papanasam Taluk in Thanjavur District - Estimate amount of Rs.9.90 Crore

(i) The Cauvery River system irrigates 692817 Ha of land in Salem, Trichy, Thanjavur, Thiruvarur, Nagappattinam and Pudukkottai

Districts through the River system of Cauvery, Vennar and Grand Anicut Canal system.

- (ii) The Vennar river originates from Cauvery River at Grand Anicut Canal and branches out into numerous branch channels and gives adequate water to its ayacut upto tail end. The soil nature of this entire river course is sandy mixed with clay. Naturally this system is suitable for recharging the water. Also, it has aquifer to hold the recharged water for a very long period.
- (iii) Present Condition:
- (a) At present the river bed gets deeply eroded to such a depth that no head sluice in this reach gets sufficient water for irrigation. It is proposed to construct a Bed dam across Vennar river at L.S.75 4.250 km to maintain the theoretical bed level and to feed Pillaivoikkal channel in Kovathakudi Village of Papanasam Taluk in Thanjavur District
- (b) The existing average bed level of Vennar River at L.S.75.250 Km is +30.595 m against the theoretical bed level of + 31.240 m as per the component register.
- (c) Due to scouring in the river bed, the banks also get eroded and shoal formation occurred in the other side.
- (d) Due to deep scouring, the bed slope also changes to steep. It leads to abrupt change in the flow parameters such as discharge, sectional area and uniform flow condition in this reach and will finally result in damage to the banks and adjacent area. So it is proposed to construct a bed dam across Vennar river to maintain the theoretical bed level so as to supply water to the channels situated on the upstream side of the proposed site.
- (iv) Hydraulic Particulars of bed dam:

Maximum Flood Discharge	:	17993 Cusecs
F.M.F.L	:	+33.295 m
R.W.L	:	+32.995 m
Crest level of bed dam	:	+31.545 m
TBL	:	LB : + 34.295 m & RB : +34.295 m
Theoretical Bed Level	:	+31.240 m
U/s Bed Level	:	+30.595 m
D/s Bed Level	:	+30.595 m
Length of bed dam	:	160.00m
Height of bed dam	:	0.95 m

- (v) Hydraulic Particulars of Pillaivoikkal Channel:
- (a) Pillaivoikkal Channel Sill Level : +31.545 m
  - (b) Normal supply level : +32.340 m
  - (c) Maximum supply level : +32.970 m
  - (d) Pillaivoikkal Channel Discharge : 11.88 Cusecs
  - (e) Pillaivoikkal Channel Ayacut : 213 hectares
- (vi) Necessity of the scheme:
- (a) Objective of this scheme is to ensure adequate commandability to the channels situated in the upstream side of the proposed bed dam.
  - (b) Also, the water stagnated in the upstream side of bed dam will percolate and recharge the ground water. The area in the vicinity of site will also get recharged since the soil nature of the bed is best suitable for percolation.
  - (c) By implementing this scheme, 213 Ha. direct ayacut from Pillaivoikkal Channel and 773 Ha indirect ayacut from Kalanjeri Channel will get benefited.

D. Construction of Bed dam across Vettar river at L.S. 70.930 km to maintain the theoretical bed level in Kondavittanthidal Village of Papanasam Taluk in Thanjavur District - Estimate amount of Rs. 8.00 crore

- (i) The Vettar river originates from Vennar river at Vennar - Vettar Head Regulator at L.S. 55.510Km in Thenperambur Village of Thiruvaiyaru Taluk, Thanjavur District. It traverses through Thanjavur, Thiruvarur, Nagapattinam Districts for a distance of 103.00Km and providing irrigation cum drainage facilities to the total ayacut of 40828.00 Ha. with a Normal supply of 1919 Cusecs at its Head.
- (ii) At present, the river bed gets deeply eroded and sufficient water could not be supplied to the channels namely Kavalur channel, Mangudi and Melattur Channels.
- (iii) Hence, a bed dam is proposed across Vettar river at L.S 70.930 Km in Kondavittanthidal village of Papanasam Taluk in Thanjavur District.

(iv) Hydraulic Particulars

Maximum Flood Discharge	:	17993 Cusecs
F.M.F.L	:	+35.08 m
R.W.L	:	+34.81 m
Crest level of bed dam	:	+33.22 m
TBL	:	LB : + 36.08 m & RB : +36.08 m
U/s Bed Level	:	+32.22 m
D/s Bed Level	:	+32.22 m
Length of bed dam	:	96 m
Height of bed dam	:	1 m

(v) By construction of this bed dam, 14,159 Ha. will get benefited.

(vi) In addition to stabilization of the above ayacuts, the ground water table in the vicinity of the site will also rise satisfactorily.

3. The Chief Engineer, Plan Formulation, Water Resources Department, has stated that no land acquisition is involved in these Schemes and the estimates have been prepared based on the Schedule of Rates for 2021-2022 with escalation for the year 2022-2023 and mandatory lump sum provisions have been made in all the detailed estimates and requested to accord Administrative Sanction for construction of Bed Dams to restore the river bed level at four places in Trichy and Thanjavur Districts at an estimated cost of Rs.27.40 Crore

4. The Government, after careful examination, have decided to accept the above proposal of the Chief Engineer, Plan Formulation, Water Resources Department by restricting the cost of the works to Rs.26,24,30,000/-. Accordingly, Administrative and Financial sanction is accorded for construction of Bed Dams to restore the river bed level at four places in Trichy and Thanjavur Districts at an estimated cost of Rs.26,24,30,000/- (Rupees Twenty six crore twenty four lakh and thirty thousand only) as detailed below :

Sl. No	Name of work	Sanctioned amount (in Rupees)
1	Construction of Bed dam across Ayyar River near Puliyancholai Village of Thuraiyur Taluk in Trichy District	4,92,68,000
2	Construction of Tail End Bed dam across Nasuviniyar Drain at LS 22.000 Km in Karisakkadu Village of Pattukkottai Taluk in Thanjavur District.	4,36,84,000

3	Construction of Bed dam across Vennar river at L.S.75.250 km to maintain the theoretical bed level and to feed Pillaivoikkal channel in Kovathakudi village of Papanasam Taluk in Thanjavur District	9,44,34,000
4	Construction of Bed dam across Vettar river at L.S. 70.930 km to maintain the theoretical bed level Kondavittanthidal village of Papanasam Taluk in Thanjavur District	7,50,44,000
	<b>Total</b>	<b>26,24,30,000</b>

5. The expenditure sanctioned in para 4 above shall be debited to the following head of account:- (40-01)

4700 Capital Outlay on Major Irrigation -  
01 Cauvery Basin - 800 Other Expenditure -  
State's Expenditure - DA Weir -  
416 Major Works - 01 Major Works.  
(IFHRMS DPC 4700 - 01 - 800 - DA - 416 01)

6. The expenditure sanctioned in para 4 above shall constitute an item of "New Instrument of Services" and the approval of the Legislature will be obtained in due course. Pending approval of the legislature, the expenditure initially will be met by drawal of an advance from the Contingency Fund Orders regarding which will be issued by Finance (BG-I) Department separately. The Engineer-in-Chief and Chief Engineer (General), Water Resources Department, Chennai is directed to send necessary proposal to Government in Finance (BG-I) Department directly in Form "A" appended to the Tamil Nadu Contingency Fund Rules, 1963 along with a copy of this order for sanction of an advance from the Contingency Fund. He is also directed to send necessary Explanatory Notes for inclusion of the above expenditure in the Supplementary Estimate 2022-2023 to Finance (PW-II / BG-I) Department at an appropriate time without fail.

7. It is also directed that the details of works executed must be uploaded in the Tamil Nadu Water Resources Information and Management Systems Portal under the Control of Chief Engineer, Institute of Water Studies, Hydrology and Quality Control to ensure effective data base in the Water Resources Department.

8. This order issues with the concurrence of Finance Department vide its U.O. No.28784/PW-II/2022, dated. 22.06.2022 and Additional Sanction Ledger No.442 (Four hundred and forty two)

**(BY ORDER OF THE GOVERNOR)**

**SANDEEP SAXENA,  
ADDITIONAL CHIEF SECRETARY TO GOVERNMENT.**

**To**

The Engineer-in-Chief and Chief Engineer (General), Water Resources Department, Chennai-5.

The Chief Engineer, Plan Formulation, Water Resources Department, Chennai-5.

The Chief Engineer, Water Resources Department, Trichy Region, Trichy.

The Chief Engineer, Institute of Water Studies, Hydrology and Quality Control, Taramani, Chennai-113.

The District Collectors, Thanjavur / Trichy.

The Treasury Officers, Thanjavur / Trichy.

The Pay and Accounts Officer (East) Chennai-8.

The Principal Accountant General (A&E), Chennai-18.

The Principal Accountant General, O/o. The Principal Accountant General (Economic and Revenue Sector Audit), Chennai-18.

The Resident Audit Officer, Secretariat, Chennai-9.

**Copy to**

The Principal Secretary-II to the Hon'ble Chief Minister, Secretariat, Chennai-9.

The Special Personal Assistant to Hon'ble Minister (Water Resources), Chennai-9.

The Finance (P.W.II / B.G.I / BG II / W&M-I) Department, Secretariat, Chennai-9.

The Water Resources (OP-II / ISpl.I) Department, Secretariat, Chennai-9.

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**// Forwarded by Order //**

*S. N. Anil Kumar*  
93/06/2022  
**Section Officer**