

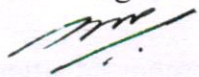
Minutes of Twenty Fifth meeting of the District Level Technical Committee- Kasaragod District (constituted as per the order of Hon'ble NGT in O.A. 673/2018) convened on 19.11.2025 in connection with Rejuvenation of Polluted River Stretches – Uppala river (Poyya to Mulinja) and Pullur

The District Level Technical Committee (DLTC) constituted as per O.A.673/2018 of Hon'ble NGT for preparation and implementation of action plan for rejuvenation of identified Polluted River Stretches. The DLTC also review the actions taken by the stakeholder departments to implement the action plan. The meeting is convened to review the status of Uppala River and also to finalize the draft action plan for newly identified polluted river location Pullur at Pullur bridge

The meeting started at 11.00 A.M.

The Superintendent Engineer, Irrigation North Circle, Kozhikode (Chairman of DLTC) and Environmental Engineer, Kerala State Pollution Control Board, Kasaragod (Convenor of DLTC) welcomed all participants to the meeting.

Participants

1. Superintendent Engineer, Irrigation North Circle, Kozhikode (Chairman of DLTC) 
2. Environmental Engineer, Kerala State Pollution Control Board, Kasaragod.(Convenor of DLTC)
3. The Executive Engineer, Major Irrigation Department Kasaragod,
4. The Executive Engineer, Minor Irrigation Department Kasaragod,
5. Secretary Ajanur Grama Panchayath,
6. Secretary Pullur periya Panchayath
7. Technical Assistant -Suchithwa mission

Absentees

1. Revenue Divisional Officer, Kasaragod
2. The Executive Engineer, KWA, Kasaragod
3. Secretary Manjeshwar Grama Panchayath

1. Monitoring the progress of Uppala River action plan.

The Environmental Engineer, Kerala State Pollution Control Board informed that the progress on action plan is not updated by local bodies such as Mangalpady, Majeswaram Grama Panchayath. Mangalpady, Majeswaram Grama Panchayath not attended the meeting. Environmental Engineer pointed that DLTC called explanation from Mangalpady Panchayath on failure to attend meeting. But, the Panchayath not replied to the letter. The Environmental Engineer informed that the matter shall be reported to the state RCC to initiate further necessary action against the Mangalpady Grama Panchayath.

The Environmental Engineer, Kerala State Pollution Control Board reviewed the status of implementation of action plan for Uppala river. The status is reported below.

Departments	Action	Status as on 11.08.2025	Present status as on 19.11.2025
Mangalpady Grama Panchayath	MCF, Operation	Status reported in MPR as on July 2024- Collecting waste through M/s.Green worms.	Not attended the meeting. No status on progress of implementation of action plan reported
	Waste Management including purchase of vehicle to collect waste	No status reported after July 2024 and also not attended the meeting	
	Installation of Camera	Status reported in MPR as on July 2024- Projects are included for camera installation. No status reported after July 2024 and also not attended the meeting	
Manjeshwar Grama Panchayath (Absent in meeting)	Electrification of material collection facility	MCF working in Temporary Building, New MCF building Construction on going (30% Completed)) Not attended the meeting.	Not attended the meeting. No status of action plan reported

		MPR September 2025).	
		Not attended the meeting	
	Installation of camera	CCTV Installed at 4 places by Keltron, connected to Police Station and Panchayath Office. Installation of 14 CCTV cameras completed.	
		Not attended the meeting	
Major Irrigation department	Tying net on both sides of the bridge	Letter been sent to the Project director, project implementation unit, NHAI Kannur for including fencing on both sides Uppala bridge.	No Reply received from NHAI. DLTC decided to seek action taken report from NHAI
Police department	Continuous vigil on waste dumping on roads	-	The committee decided to inform Police to submit
KSPCB	Water quality monitoring	Water quality monitoring ongoing.	Monitoring progressing

2. Finalization of draft action plan for rejuvenation of River Pullur

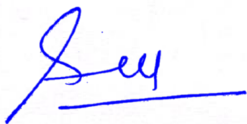
The Environmental Engineer, Kerala State Pollution Control Board presented the draft action plan prepared for rejuvenation of river Pullur.

Departments	Remarks
Ajanur Grama Panchayath	Accepted the action plan projects. No changes suggested in the draft action plan.
Pullur-Periya Grama Panchayath	Accepted the action plan projects. No changes suggested in the draft action plan.
Minor Irrigation Department	EE, Minor Irrigation dept Submitted a DPR for rejuvenation of Pullur River. DPR included desilting, weed removal

	to Makkaramkode VCB. The DPR included in action plan as project of Minor Irrigation Department. Minor Irrigation Department verified the project and accepted the action plan.
Suchithwa Mission	Not suggested any changes in draft action plan.
KSPCB	As per the action plan, the Board will monitor the river water quality. The Board verified the action plan.

The committee, after detailed deliberation, approved the draft action plan prepared for rejuvenation of newly identified polluted stretch Pullur River. The approved action plan is enclosed as **Annexure 1**. The Environmental Engineer informed that the DLTC approved action plan will be submitted to the State RRC for further necessary action. The DLTC Chairman, Superintending Engineer, Irrigation dept directed the stakeholder departments to initiate action to implement the action plan for Pullur River.

The meeting ended at 12.00 PM


**Convenor (DLTC) &
Environmental Engineer,
KSPCB
Kozhikode**


**Chairman (DLTC) &
Superintending Engineer,
Irrigation North Circle,**

ACTION PLAN FOR RESTORATION OF PULLUR RIVER
(Prepared by KSPCB as per Hon'ble NGT order in OA-673/2018)



DISTRICT LEVEL TECHNICAL COMMITTEE (DLTC),

KASARAGOD



November 2025

ACTION PLAN FOR RESTORATION OF PULLUR RIVER
(Prepared by KSPCB as per Hon'ble NGT order in OA-673/2018)



Fig 1: pullur river including NWMP Station Pullur Bridge

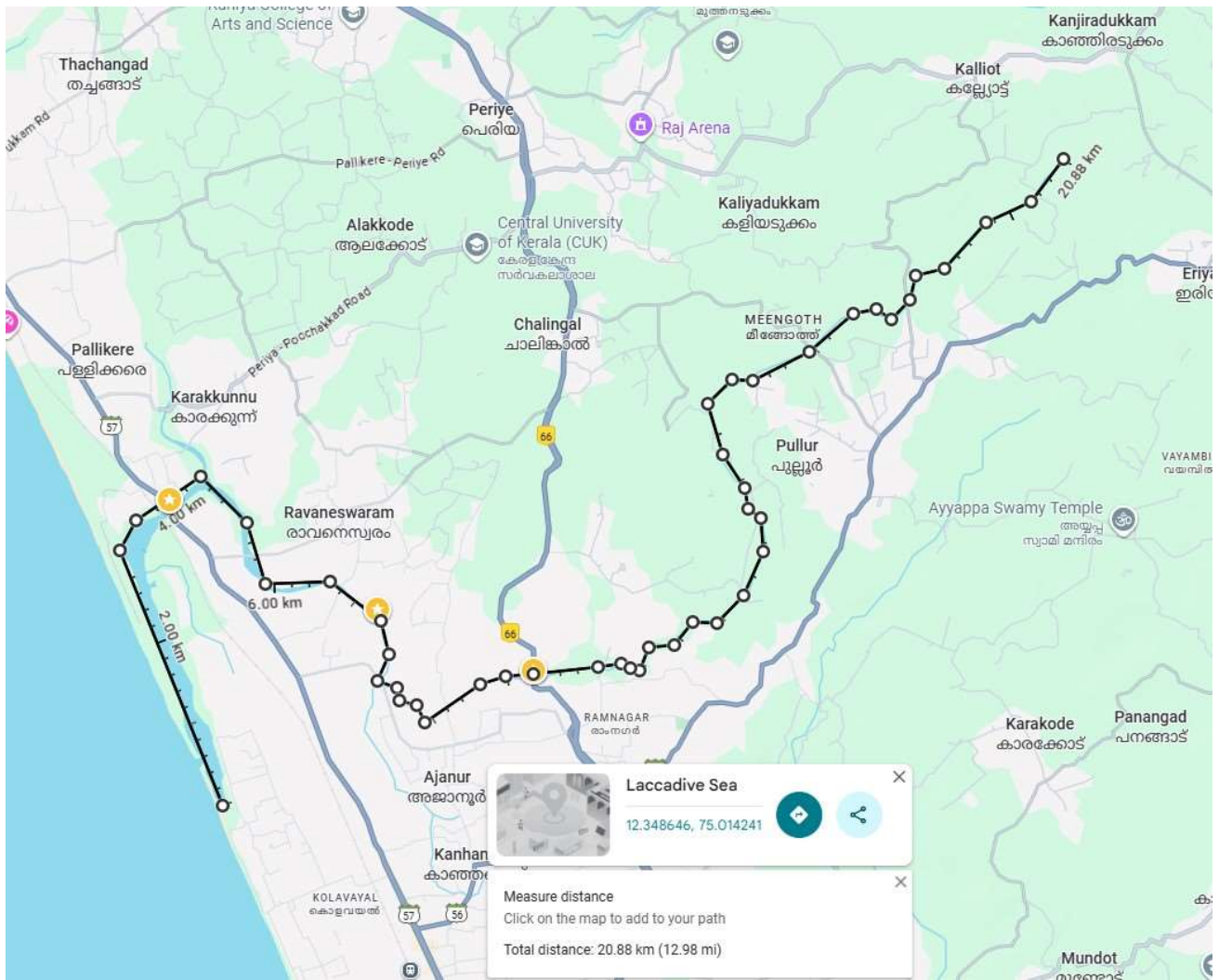


Fig 2: Directions and length of pullur river

The Pullur River is a tributary of the Chithari River in Kasaragod, Kerala. It flows through the [Pullur Periya panchayat](#) and Ajanur Panchayath. Chittari River is a small river that flows through the village of Chithari near Kanhangad in Kasaragod district of Kerala. The Chittaripuzha is 20.2 km long and originates from Iriya Pond. The river is formed by the confluence of the Kannikulangara Todu and Pullur rivers (12.9 Km long upto Adot) at Adot in Ajanur Panchayath. The river flows northwards from the Chetkundu area for more than four kms and joins the sea at the mouth of the Ajanur Estuary. Prior to this, river divides in to two and surrounds the

village Chittari. The NWMP sampling station is at Pullur Bridge (Station code: 2303) in River Pullur.

Pullur River Identified as Polluted River Location

In compliance to the The Central Pollution Control Board in report “POLLUTED RIVER STRETCHES FOR RESTORATION OF WATER QUALITY- 2022” published on November 2022, identified Pullur as polluted river location (along Pullur). The Polluted River Stretches are categorized into five priorities based on the Bio-Chemical Oxygen Demand (BOD) values.

Table 1: Priority for restoration of water quality

Criteria for priority	Priority for restoration of water quality
BOD value more than 30 mg/L	Priority - I
BOD value between 20 - 30 mg/L	Priority - II
BOD value between 10 - 20 mg/L	Priority – III
BOD value between 6 - 10 mg/L	Priority - IV
BOD value between 3 - 6 mg/L	Priority - V

The Pullur river classified under polluted river location due to exceedance of parameter Biochemical Oxygen Demand (BOD) value 3.8 mg/lit in January 2019. As there is no continuous source of water, the Pullur river is not perennial and water level is very low during lean period. The water flow is almost stagnant during the summer season which effects the environment flow and considered to be the major reason for exceedance of BOD. The analysis data shows the parameters including BOD is well within limit during all other months. Since,

CPCB had included the location under polluted location under Priority V, the action plan need to be framed for the rejuvenation of the river to improve the water quality at the identified location- Pullur.

Table 2: Consolidated water quality dara- Pullur river from 2019 onwards

PULLUR RIVER CONSOLIDATED DATA OF GIVEN PARAMETERS FOR THE YEARS JANUARY 2019 TO JUNE 2025													
Month	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	Years
PH	5.72	8.3	RIVER DRY	RIVER DRY	RIVER DRY	6.28	6.4	7.06	7.1	6.8	6.8	6.4	2019
BOD	3.8	2.13				2.93	1.93	1	1.06	2.66	1.6	1.13	
DO	4.9	6				7.8	7.5	7.06	7.26	7.66	9.13	7.13	
FC	390	380				28	80	64	80	76	60	64	
PH	6.6	6.8	RIVER DRY	RIVER DRY	RIVER DRY	7.8	6.23	6.51	6.68	6.65	7.13	6.9	2020
BOD	2.2	1.26				1.2	2	1.34	0.803	1.13	1.2	2.46	
DO	6.33	5.4				7.66	8.8	7.6	7.47	7.2	7.46	6.86	
FC	80	60				28	24	36	40	88	96	96	
PH	7.29	7.85	RIVER DRY	RIVER DRY	LOCK DOWN	7.16	6.27	6.88	6.43	6.86	5.76	5.52	2021
BOD	0.86	1.67				0.93	1.47	1.73	0.3	1.8	1.4	1.1	
DO	6.66	5.33				7.8	7.6	7.06	7.2	7.2	7.7	7.5	
FC	108	120				24	24	64	36	96	84	56	
PH	6.4	6.3	7.73	RIVER DRY		7.66	6.62	5.54	6.88	7.16	7.33	7.32	2022
BOD	2	2.2	1			1.9	2.3	1	1.2	1.5	0.2	0.8	
DO	6.3	7.3	4.4			7.4	7.9	7.4	7.4	7.7	7.2	6.9	
FC	104	320	20			124	116	10	140	16	64	132	
PH	Stagnant water, sampling not done	RIVER DRY	RIVER DRY	RIVER DRY	RIVER DRY	RIVER DRY	6.92	7.77	7	6.76	6.74	7.2	2023
BOD							0.7	1	0.6	1.2	0.9	0.6	
DO							7	7.4	7.8	7.3	8	7	
FC							96	112	0	116	310	300	
pH	7.2	7.1	7.1	RIVER DRY	RIVER DRY	6.38	6.53	6.5	7.78	6.63	6.6	6.1	2024
BOD	1.5	1.6	1.9			2.7	1.3	2.3	1.2	0.67	1	1	
DO	6.3	6.2	6.3			8.5	7.3	7.5	7.6	7.34	7.8	7.7	
FC	66	108	250			0	550	210	0	0	1000	200	
pH	River Dry/Stagnant	River Dry/Stagnant	River Dry/Stagnant	River Dry/Stagnant	River Dry/Stagnant	8.2							2025
BOD						1							
DO						6.8							
FC						2100							

CLASSIFICATION OF RIVER

The Central Board classified the inland surface waters into five categories (A to E) on the basis of designated-best-use. The principal concern here is the end use to which the water may be put to by man. The classification has been made in such a way that the water quality requirement becomes progressively lower from A to E. Besides, the

water quality of any one of the five categories also satisfies the requirements of categories lower than the chosen one. An area or stretch of a body may be subjected to a number of uses. The area or the stretch is designated by that particular use which demands the highest/purest quality is the best possible way the Designated-best-use can be defined.

Table 3: Categorisation of inland water bodies

Designated Best Use	Class of Water	Criteria
Drinking Water source without conventional treatment but after disinfection	A	Total coliform organisms MPN/100 ml shall be 50 or less. Note : If MPN count is noticed to be more than fifty then regular Tests should be carried out. The criteria would be satisfied if during a period of time not more than 5% of the samples show greater than 200 MPN/ 100 ml and not more than 20% of samples show more than 50 MPN 100 ml. 2. pH: between 6.5 and 8.5 3. Dissolved Oxygen 6 mg/l or more. Biochemical Oxygen Demand (5-day at 200C):2 mg/l or less. Note : There shall be no visible discharge of domestic and industrial wastes into class A.
Outdoor bathing, Organized)	B	Total coliform organisms (MPN/100 ml shall be 500 or less. Note : If MPN count is noticed to be more than 500 MPN/100 ml then regular tests should be carried out. The criteria would be satisfied if during a period of time not more than 5% of the samples show greater than 2000 MPN/100 ml and not more than 20% of samples show greater than 500 MPN/100 ml 2. pH: between 6.5 and 8.5 3. Dissolved Oxygen: 5 mg/l or more. Biochemical Oxygen Demand (5-day at 200C):3 mg/l or less. Note : All domestic and industrial wastewater discharge upstream of bathing places shall be so regulated that the stream standards are maintained and that there is no visible floating matter including oils at the bathing places

Drinking water source with conventional treatment	C	Total coliform organisms (MPN/100 ml shall be 5000 or less. Note : If MPN count is noticed to be more than 5000 MPN/100 ml then regular tests should be carried out. The criteria would be satisfied if during a period of time not more than 5% of the samples show greater than 20,000 MPN/100 ml and not more than 20% of samples show greater than 5000 MPN/100 ml 2. pH: between 6 and 9 3. Dissolved Oxygen: 4 mg/l or more. Biochemical Oxygen Demand (5-day at 200C):3 mg/l or less. Note : All domestic and industrial wastewater discharge into Class C waters shall necessarily be treated to ensure maintenance of stream standards are and the discharge points shall be kept sufficiently away
Propagation of wild life, fisheries	D	1. pH: between 6.5 and 8.5 2. Dissolved oxygen: 4mg/l or more. 3. Free Ammonia (as N): 1.2 mg/l or less
Irrigation, industrial cooling and controlled waste disposal	E	1. pH: between 6.0 to 8.5 2. Electrical conductivity at 200C/mho/cm:Max 2250 3. Sodium Absorption Ratio: Max 26. 4. Boron : Max 2 mg/l.

WATER QUALITY OF THE RIVER.

The Kerala State Pollution Control Board has been monitoring the water quality of the river at the NWMP Station Pullur Bridge (Station code: 2303) in River Pullur, and it has been observed that since January 2019 the BOD values have consistently remained within the limit, without exceeding 3 mg/L, thereby indicating compliance from the period onwards.

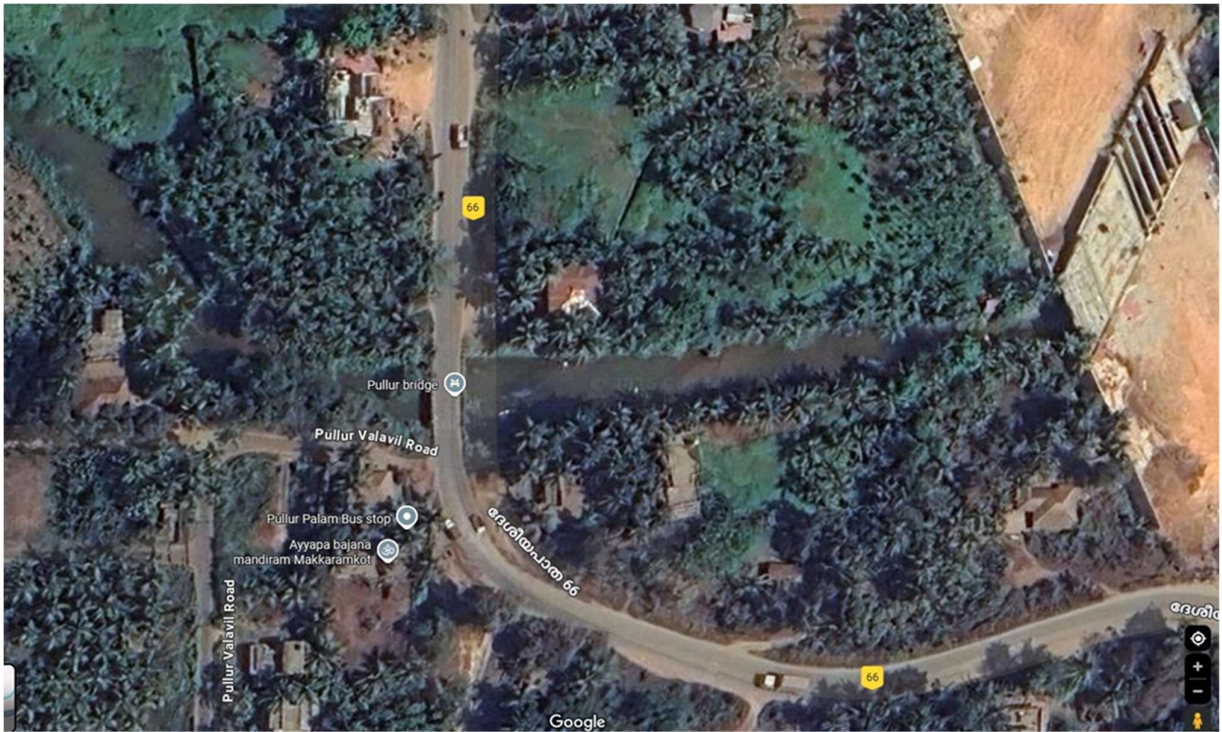


Fig 3: Satellite View of Sampling point of Pullur Bridge

Water Quality Data of samples collected from the Pullur Bridge (Station code: 2303)
in the Year 2024

Station Name		RIVER PULLUR AT PULLUR BRIDGE			
Type of Water body		RIVER			
Agency		KERALA STATE POLLUTION CONTROL BOARD			
Station Code		2303			
Location details		D/s of town or industrial area			
Latitude, Longitude		12.350078, 75.096852			
Sl.No	Determinants	Values in the year 2024			
		Minimum Value	Maximum Value	Limit ¹	Remarks
1	Temperature, 0C	27	31		
2	Dissolved Oxygen, mg/L	6.2	8.5	4 to 6 [#]	DBU classification

3	pH	6.1	7.8	5.5 to 9.0	6.0 to 9.0 as per DBU classes
4	Conductivity, $\mu\text{mhos/cm}$	45	256		
5	BOD, mg/L	1.0	2.7	$2 \leq$ to $3 \leq^{\#}$	DBU classification
6	Nitrate-N, mg/L	0.3	3.5		
7	Turbidity, NTU	1.0	22.5		
8	Total Alkalinity, mg/L	20	29		
9	Chloride, mg/L	10.0	81.0		
10	COD, mg/L	5	11.2		
11	Ammoniacal-N, mg/L	BDL	0.4		
12	Total Hardness as CaCO_3 , mg/L	10	33		
13	Calcium as CaCO_3 , mg/L	6	20		
14	Magnesium as CaCO_3 , mg/l	6	22		
15	Sulphate, mg/L	5	11.8		
16	Sodium, mg/L	6.0	49.0		
17	Total Dissolved Solids, mg/L	38	156		
18	Total Suspended Solids, mg/L	10	36		
19	Phosphate, mg/L	BDL	0.2		
20	Boron, mg/L	BDL	1.6		
21	Potassium, mg/L	1	3.1		
22	Fluoride, mg/L	0.2	1.9		
23	Total Coliform, MPN/100 mL	300	3160	50 to 5000 [#]	DBU classification
24	Fecal Coliform, MPN/100 mL	(BDL)	1000		
25	Fecal Streptococcus, MPN/100 mL	(BDL)	170		
26	% SODIUM	33	78		
27	SAR	0.53	4.2		
1 Surface water quality (screening levels), E(P) Rules, 1986, general discharge standards (Inland surface water). * Long-term freshwater screening level: Canadian water quality guidelines for the protection of aquatic life. # Based on the designated best use (DBU) classification.					

Water Quality Data of samples collected from the Pullur Bridge (Station code: 2303)
in the month June 2025 (River Staganant/Dry from January 2025 to May 2025)

Station Name		RIVER PULLUR AT PULLUR BRIDGE		
Type of Water body		RIVER		
Agency		KERALA STATE POLLUTION CONTROL BOARD		
Station Code		2303		
Location details		D/s of town or industrial area		
Latitude, Longitude		12.350078, 75.096852		
Sl.No	Determinants	Values in the month June 2025	Limit ¹	Remarks
1	Temperature, 0C	26		
2	Dissolved Oxygen, mg/L	6.8	4 to 6 $\geq^{\#}$	DBU classification
3	pH	8.2	5.5 to 9.0	6.0 to 9.0 as per DBU classes
4	Conductivity, μ mhos/cm	78		
5	BOD, mg/L	1.0	2 $\leq$ to 3 $\leq^{\#}$	DBU classification
6	Nitrate-N, mg/L	4.6		
7	Turbidity, NTU	4.5		
8	Total Alkalinity, mg/L	24		
9	Chloride, mg/L	9		
10	COD, mg/L	5		
11	Ammoniacal-N, mg/L	0.4		
12	Total Hardness as CaCO3, mg/L	31		
13	Calcium as CaCO3, mg/L	20		
14	Magnesium as CaCO3, mg/l	11		
15	Sulphate, mg/L	5		
16	Sodium, mg/L	6		
17	Total Dissolved Solids, mg/L	57		
18	Total Suspended Solids, mg/L	494		
19	Phosphate, mg/L	0.2		
20	Boron, mg/L	0.5		
21	Potassium, mg/L	1.0		

22	Fluoride, mg/L	0.87		
23	Total Coliform, MPN/100 mL	7100	50 to 5000 [#]	DBU classification
24	Fecal Coliform, MPN/100 mL	2100		
25	Fecal Streptococcus, MPN/100 mL	90		
26	% SODIUM	43.0		
27	SAR	0.65		
1 Surface water quality (screening levels), E(P) Rules, 1986, general discharge standards (Inland surface water). * Long-term freshwater screening level: Canadian water quality guidelines for the protection of aquatic life. # Based on the designated best use (DBU) classification.				

OBSERVATIONS OF KSPCB BASED ON THE MONTHLY MONITORING RESULTS

The analysis reports of the water samples show that Biochemical Oxygen Demand (BOD) of water samples collected from Pullur river which is the basis of classification of rivers into the polluted river stretches, is complying since January 2019 and never exceeded 3 mg/L after that. The high BOD value of 3.8 in January 2019 is presumed to have resulted from collection of water samples a stagnated pool rather than from the actively flowing segment of the river as the river doesn't have continuous fresh flow in dry months (more seasonal in nature). The elevated BOD level of stagnated water pool in turn may be attributed to organic enrichment of water resulting from the decomposition of agricultural residues in the adjoining paddy fields, which function as major natural drainage systems and contribute significantly to the river's flow.

The recent increase in Turbidity, Suspended-particulate matter, and coliform counts as evident from above analysis report, may be accounted to the ongoing National Highway construction activities in close proximity to the monitoring station at Pullur bridge. The construction works are likely contributing to enhanced soil erosion, siltation and surface runoff carrying particulate matter into the river, while disturbances to drainage patterns and temporary stagnation of water may have created favorable conditions for coliform proliferation.

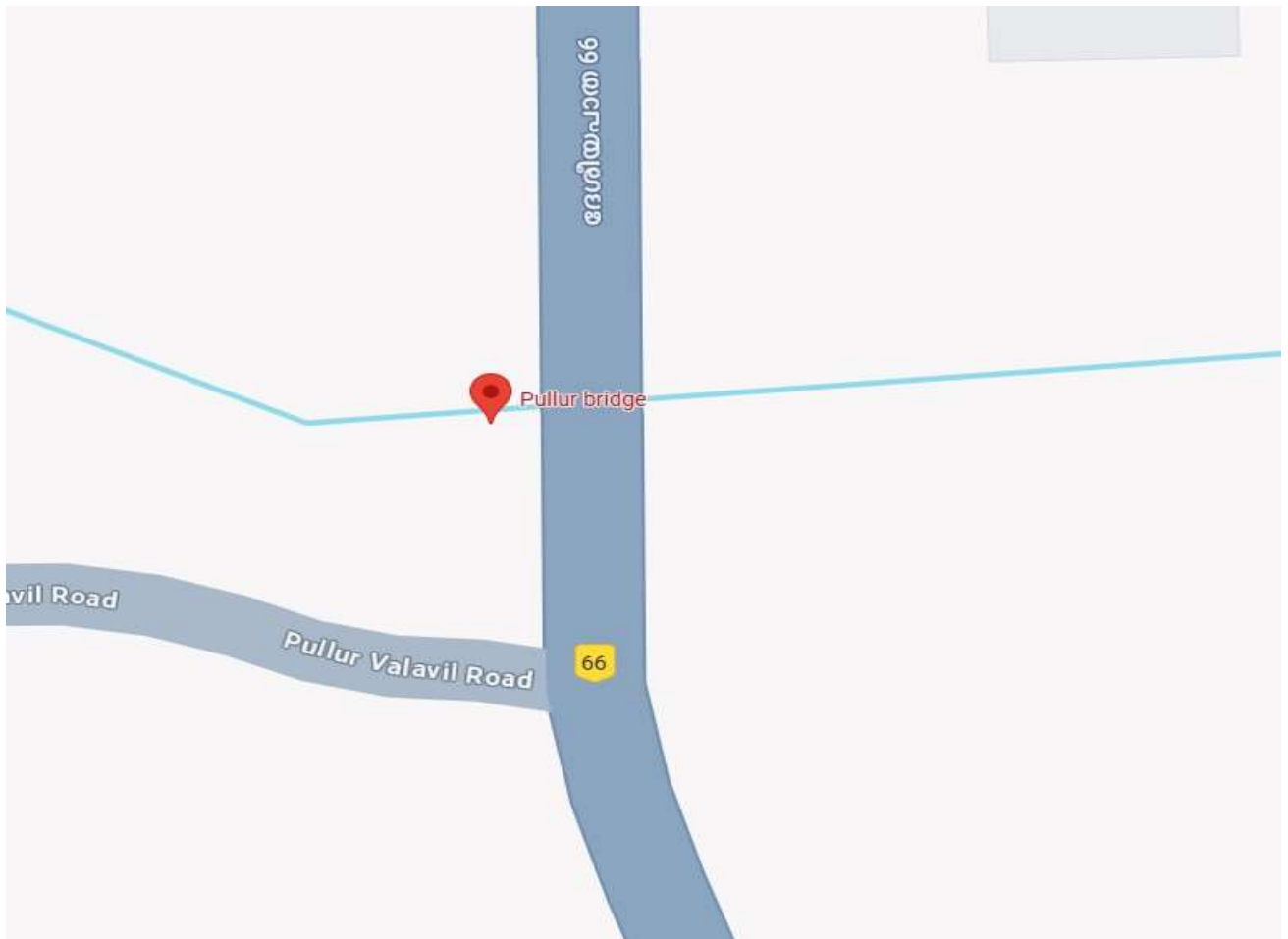


Fig 4: Ongoing National Highway Construction near Sampling Station Pullur bridge

ACTION PLAN

SL No	Action	Department	Expected Outcome	Amount	Timeline
1	inspection to restrict the sale and usage of banned plastic items in shops, markets etc	LOCAL BODY Pullur Periya Grama panchayath, Ajanur Grama Panchayath	i.To restrict the usage of banned plastics and which help to reduce the quantity of plastics and prevent the plastic disposal in drainages. River etc	Rs. 15000 /- Rs. 25000 /-	6 months 6 months
2	To penalize the establishments having unauthorized outlet into the river and on the dumping solid wastes.	LOCAL BODY Pullur Periya Grama panchayath, Ajanur Grama Panchayath	i. Can restrict the disposal untreated waste to storm water drains and rivers and can take action against the defaulters.	Rs. 10000 /- Rs. 25000 /-	6 months 6 months
3	The main problems in the river is due to the restriction of flow of water effecting the environmental flow which results in stagnation and the growth of weeds (Eutrphication). The Irrigation department has to ensure the minimum flow in the river during lean period. The following remedial works are proposed a) Desilting work to be carried out over a total length of 410 meters comprising of 310 meters between Pullur Bridge and Makkaramkode VCB and an additional 100 meters downstream of the VCB	Irrigation department (Minor Irrigation)	i. Ensuring minimum flow will improve the self purification capacity of river. ii. restrict stagnation and improve dissolved oxygen level in water which helps to sustain aquatic life	Rs. 2 Crore only	18 months

	b) Sidewall collapse protection works along the upstream left side for 280 meters, the right side for 310 meters, and both sides downstream for 85 meters each, making a total of 760 meters. The protection wall will have a height of 3.5 meters with an intermediate belt of 15 cm and a top belt of 10 cm				
4	To identify all pollution sources and stop the discharge of sewage into river. Also ensure that no septage generated is being dumped in the water body	LOCAL BODY Pullur Periya Grama panchayath, Ajanur Grama Panchayath	Help to identify all polluting sources and can verify whether treatment facility is adequate or not and take necessary action against the violators.	Rs. 15000 /- Rs. 50000 /-	1 year 6 Months
5	Install surveillance camera on major points of waste disposal and also fix net on both sides of bridge wherever it is necessary	LOCAL BODY Pullur Periya Grama panchayath, Ajanur Grama Panchayath	i. Can restrict the dumping of solid wastes in river and take action against the defaulters. ii. Can find out illegal discharges of Septage in river	Rs. 125000 /- Rs. 10 Lakhs	1 year 1 year
6	Setting up of MCF for non bio degradable wastes such as plastics, paper, e waste etc	LOCAL BODY Pullur Periya Grama panchayath, Ajanur Grama Panchayath	i. Ensure proper Solid Waste Management (SWM) reduce the river pollution due to solid waste dumping. Helps to channelize the wastes to authorized recyclers.	Already have MCF Already have MCF	- -

7	Awareness has to be given to the public regarding the dumping of waste into the river.	LOCAL BODY Pullur Periya Grama panchayath,	Restrict the dumping of solid wastes	Rs. 15000 /-	6 months
		Ajanur Grama Panchayath		Rs. 25000 /-	6 months
8	Solid waste management system 1. Door to door collection 2. Improve Segregation Set up of solid waste management plant	LOCAL BODY Pullur Periya Grama panchayath,	Practising proper solid waste management system restricts the illegal dumping, ensure safe disposal of wastes etc.	Rs. 20000 /-	6 months
		Ajanur Grama Panchayath SUCHITWA MISSION		Rs. 50000 /-	6 months
9	To bring all flats/industries/hotels/hospitals etc under the consent purview of Board which have not obtained the consent	KSPCB	i. Help to identify all polluting sources and can implement pollution control measures in the unit		6 months
10	Ensure proper functioning of Sewage Treatment Plants/Effluent Treatment Plants of Industries/Apartments/Hospitals/Hotels etc	KSPCB	i. Help to identify all non complying units and action can be taken against the violators.		6 months
11	The Periodical monitoring of River water and to check whether improvement in water quality	KSPCB	i.To assess whether the quality of water is improved and locate the polluting stretches.		monthly

