

Report on Prevention & Control of pollution in River Chamla

An Action Plan for Rejuvenation



Regional Office
M.P. Pollution Control Board,
Ujjain (M.P.)

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Action Plan for the Rejuvenation of River Chamla

1- Introduction:-

Badnagar is situated on the bank of River Chamla. Badnagar is a town and a municipality in Ujjain district in the state of Madhya Pradesh, India. Badnagar Tehsil Headquarters is Badnagar town and it belongs to Ujjain Division. It is located 45 K.M. towards west from District headquarters Ujjain. 244 K.M. from the state capital, Bhopal, towards the east and 72 K.M. from Indore.

Badnagar Tehsil is bounded by Badnawar Tehsil towards west, Depalpur Tehsil towards the south, Khachrod Tehsil towards north, Ujjain district towards the east. Indore City, Ujjain City, Ratlam City, Dhar City nearby cities to Badnagar. Badnagar is on the border of Ujjain and Dhar Districts. Dhar District, Badnawar, is west of this place. As of 2011 India census, Badnagar Town had a population of 36,438. Badnagar is well connected by road and rail with cities like Ujjain, Indore and Ratlam. State highway 18 (dewas to badnawar). Passes through Badnagar which connects it with Ujjain, Bhopal, Dewas and Ahmedabad via Dahod. Badnagar railway station is situated on ratlam-indore section of indian railways. Nearest airport is Indore airport.

Many people from nearby cities come to Badnagar for cheap medical treatment some hospitals are:

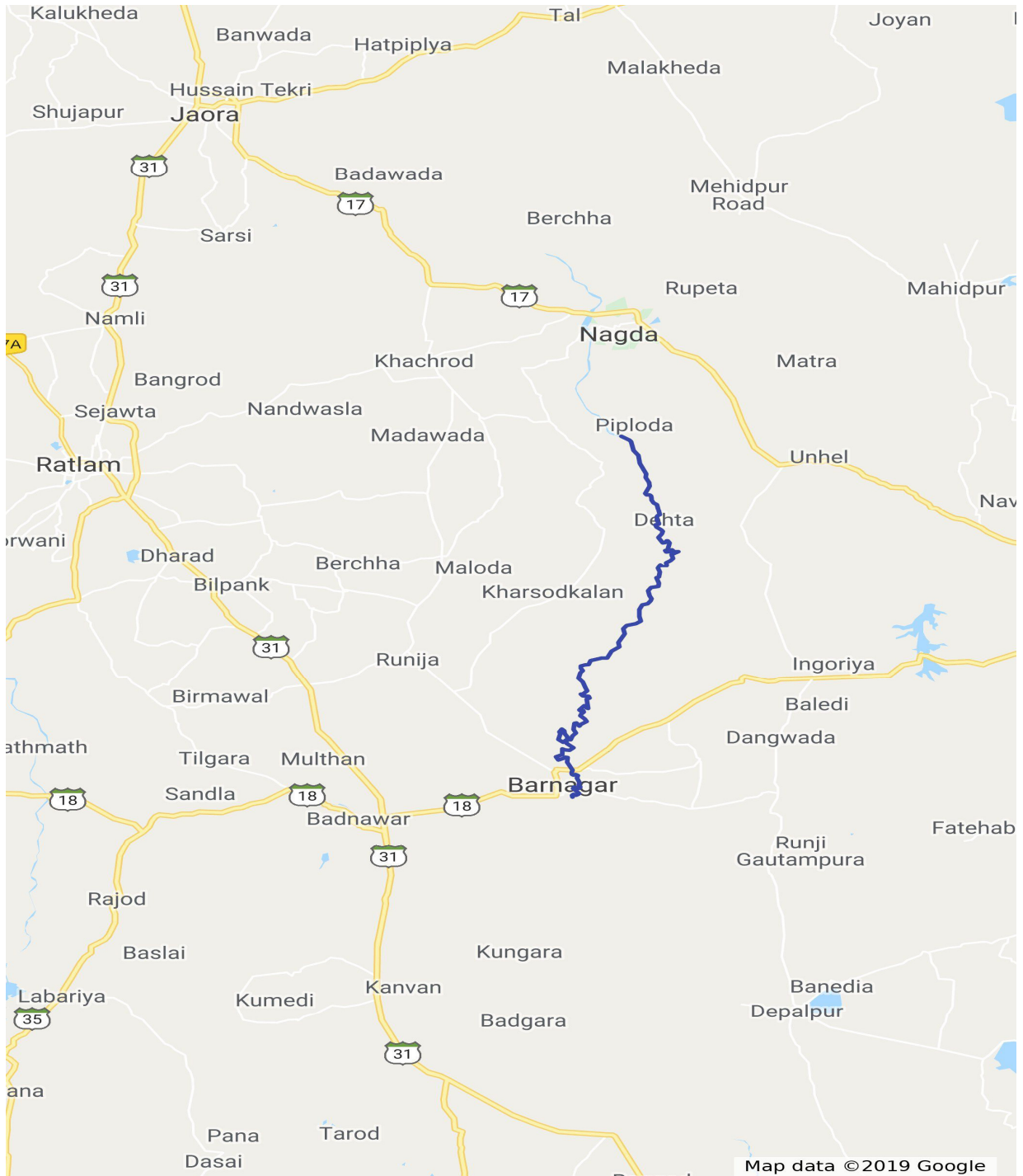
1. Geeta Hospital
2. Civil Hospital
3. City Hospital
4. Ashok hospital
5. Gupta hospital
6. Shrivastava Hospital

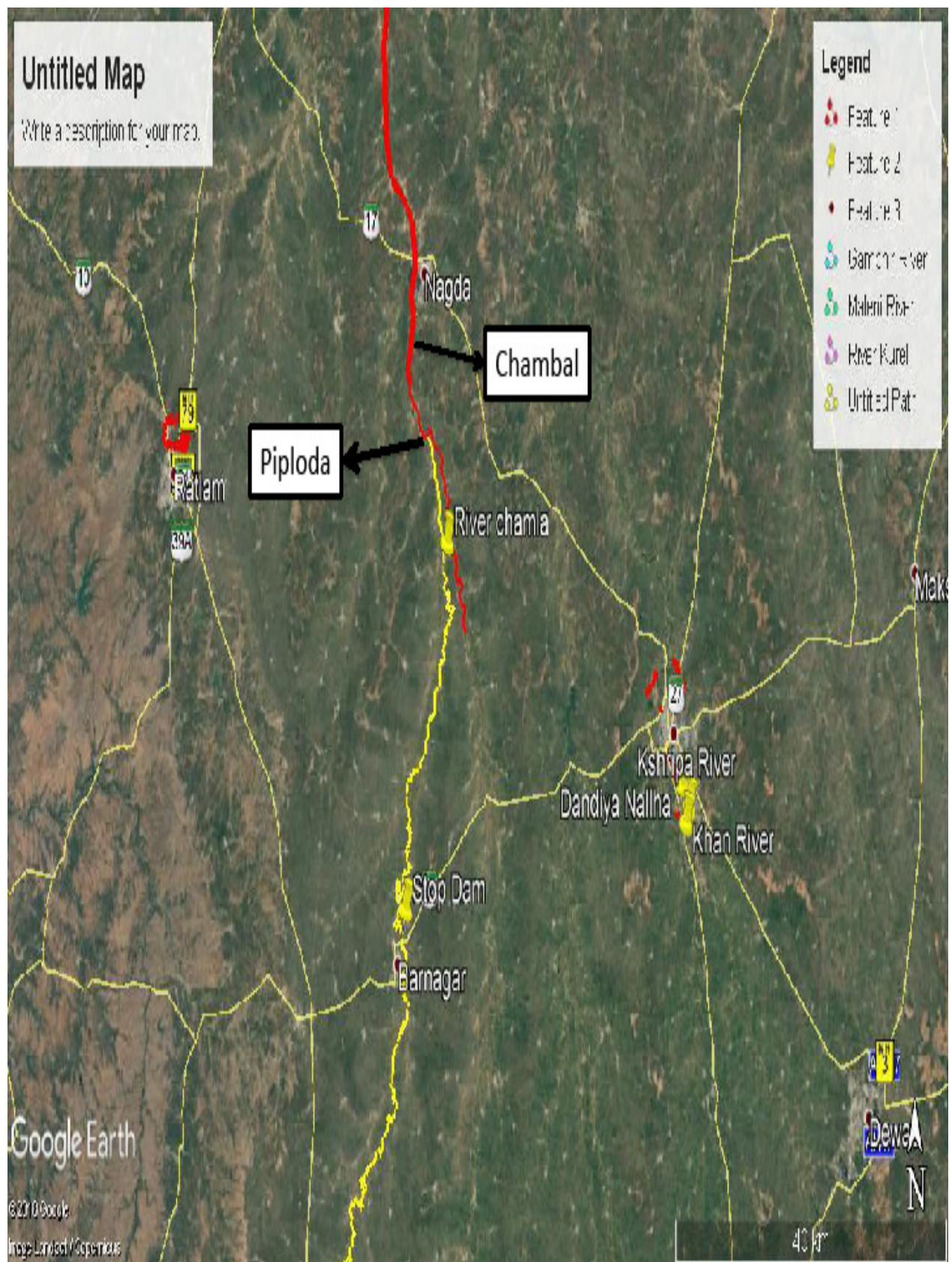
The Average annual rainfall of the region is 690 mm & nearly 90 percentage total rainfalls is received during south west monsoon seasons.



Water Supply Intake well, River Chamla

River Chamla one of the major tributary of river Chambal originates from Dasai in Dhar District flows along the eastern boundary of the town from south to north direction & after travelling about 95 K.M. mix with River Chambal at Piploda. River Chamla is Non- Perennial River & therefore water is to be stored for water supply in Badnagar Town.





1.1 Measure taken by government agency to control pollution in River Chamla :-

River Chamla is Non- Perennial River there are three storage structure constructed on the river existing barrage (Constructed in year 1952) of capacity 17 MFCT is an existing intake well along with water treatment plant of capacity 3.90 MLD. Likhoda Barrage constructed in year 2005, it is situated 7 K.M. on the upstream of existing Barrage having capacity of 50 MFCT. The newly constructed barrage at village Kajlana is situated 4.7 K.M. away in the downstream site of existing old Dam. The capacity of structure 38 MFCT.

In the upstream of 4 k.m. Badnagar town the nalla joining River Chamla & in the catchment of River Chamla there is distillery unit in Dhar district namely M/S Oasis distillery Borali, Badnawar, District- Dhar (M.P.). In past 8 year ago when unit was used sugar cane molasses as raw material & due to molasses based & major water polluting ,the waste water of distillery particularly during monsoon mix in River Chamla & affect water supply of Badnagar town. But now distillery switch into Grain based with less water polluting & having ETP with RO, MEE & maintain ZLD condition. The latest status of M/s Oasis distillery Borali, Badnawar, District- Dhar is enclosed as per **Annexure - 1**

In the absence of sewerage system domestic waste of the Badnagar town mainly from three Nallahs.ie Mirchi Nallah, Shivghat Nallah, & Nooriya Khal Nallah mix with river Chamla in between existing old barrage & newly constructed barrage at village Kajlana & eventually cause pollution in river. Therefore to improve quality for River Chamla scheme is proposed to intercept and pump Nallah water through pipe line & divert in the downstream of newly constructed barrage at village Kajlana. The

Municipal Council Badnagar vide their letter no. 612 Dated 29-04-2019 informed that proposed project of cost 197.49 Lakh has been sent to chief Engineer Urban administration & Development Bhopal for sanction. The details of proposed project are enclosed as per **Annexure – 2**. The letter is also written to CMO Badnagar for submission of proposal for STP as the proposed scheme not include treatment of domestic waste water after diversion is enclosed as per **Annexure - 3**

Regional Office, Ujjain has issued letter to concerned government department in reference to NGT Case No. OA 673/2018 is enclosed as per **Annexure – 4** & reply from the different stake holders Forest Department & Public Health Engineering Department is enclosed as per **Annexure - 5**

1.2 River stretch, major drains & flow :-

The River Chamla stretch Badnagar declared by CPCB as polluted river stretches. Chamla River is Non- Perennial River its flows only in rainy season & generally river found dry during summer season. In the absence of sewerage system domestic waste of the Badnagar town mainly from three Nallahs. Mirchi Nallah, Shivghat Nallah, & Nooriya Khal Nallah mix with river Chamla in between existing old barrage & newly constructed barrage at village Kajlana & eventually cause pollution. The 3 major nallahs have total flow about 2 MLD in the city which carries sewage water. Flow observed in Chamla River only in rainy season. Flow in river Chamla is normally 1 cumec.

1.3 Water usage:-

The water of Chamla River in upstream is used for drinking & irrigation. While in the downstream of river it's mainly used in irrigation purpose.

1.4 Characteristics at the river, ground water & major drain:-

Mostly the river Chamla quality is of IS 2296- 1982 Class 'B' Category. Result of Chamla River at water supply intake point is enclosed as per **Annexure -6**. Result of major drain in Badnagar town is enclosed as per **Annexure - 7** similarly ground water sample were also collected in Badnagar town. The results of ground water sample from different location are enclosed as per **Annexure – 8**.

1.5 Sewerage generation & treatment details :-

In the absence of sewerage system domestic waste of the Badnagar town mainly from three Nallahs. Mirchi Nallah, Shivghat Nallah, & Nooriya Khal Nallah mix with river Chamla in between existing old barrage & newly constructed barrage at village Kajlana & eventually cause pollution. Therefore to improve quality for River Chamla scheme is proposed to intercept and pump Nallah water through pipe line & divert in the downstream of newly constructed barrage at village Kajlana. The Municipal Council Badnagar vide their letter no. 612 Dated 29-04-2019 informed that proposed project of cost 197.49Lakh has been sent to chief Engineer Urban administration & Development Bhopal for sanction. The details of proposed project are enclosed as per **Annexure – 2**. The letter is also written to CMO Badnagar for submission of proposal for STP as the proposed scheme not include treatment of domestic waste water after diversion is enclosed as per **Annexure – 3**. But CMO Badnagar verbally informed that at present there is no proposal for STP.

1.6 Health Status of the public in the catchment of the polluted river

Stretch:-

Municipal Council Badnagar is presently supplying about 4 MLD surface drinking water taken from river Chamla during storage of water after proper treatment to the citizen of Badnagar & during summer season water is supply through tube/dug wells Hence the problem of water born disease cannot be co-related with the polluted river stretch. In River Chamla. Municipal Council has already issued public appeals & displayed the board in such identified tube wells & hand pumps whose water is not suitable for drinking.

No health impact issue reported from Health Department although regular health check up camp organized by Health Department at different places in and around Badnagar Town.

1.7 Waste Management Status :

A. Industrial waste management – The town at present closed to nothing in terms of water polluting industry. In the upstream about 8 Km. of Badnagar town & in the catchment of River Chamla there is distillery unit in Dhar district namely M/S Oasis distillery Borali, Badnawar, District- Dhar (M.P.) But now distillery switch into Grain based with less water polluting & having ETP with RO, MEE & maintaining ZLD condition. The latest status of M/s Oasis distillery Borali, Badnawar, District- Dhar (M.P.) is enclosed as per **Annexure - 1**

B. Biomedical waste management- The total amount of biomedical waste generated from Badnagar town is about 0.5 MT /day. All hospital, Nursing Home & Pathology Lab of Badnagar town taken membership from M/s Hoswin Incinerator Ltd. Indore (Which is authorized by M.P.P.C.B.) For the disposal of Biomedical Waste.

C. Solid Waste Management- The total amount of Solid Waste generated from Badnagar town is 2.7 Metric Ton /day & after Collection & Segregation is taken to trenching ground for further disposal.

2- Proposed Short Term and Long Term Action plan for Rejuvenation of River Chamla:-

Sl.	Action plan for rejuvenation of river Chamla	Organisation/ Agency Responsible for Execution of the Action plan	Time Target	Present Status
1.	Industrial Pollution Control			
	(a) Inventorisation of the industries in the catchment area of River Chamla covering assessment on aspects relating to status of consents under water & Air Acts and Authorization, Effluent Generation, ETP capacities and final mode of effluent discharges	MPPCB	---	No water polluting industries are Situated in the catchment area of river Chamla in Ujjain district. Although M/s Oasis distillery Borali situated in upstream 8 km. of Badnagar town in Dhar district is having ETP with RO, MEE & maintaining ZLD condition. The latest status of M/s Oasis distillery Borali, Badnawar, District- Dhar (M.P.) is enclosed as per Annexure - 1
	(b) Action against the identified industries	MPPCB	---	No water polluting industry is Situated in the catchment area of river Chamla.

	in operation without consents under water & Air Acts/Authorization under the H & OW (M& TM) Rules, 2016 as amended.			
	(c) Action against the industries not install ETP or ETPs exist but not operating or ETP outlet or treated effluent is not complying to the effluent discharge standards or norms	MPPCB	---	No water polluting industry is Situated in the catchment area of river Chamla.
	(d) Action against the red cat. Industry for installation of OCEMS and not transferring data to CPCB and MPPCB	MPPCB	Within three month	In Badnagar there is no such type of industry is situated which require OCEMS installation so it is not applicable.
	(e) Small scale/tiny and service providing	MPPCB	Within three	Notice served to different auto service station & asked to install minimum

	unit located in urban or semi urban limits like Auto service stations to have a minimum provision of O & G traps		month	provision of O & G traps
	(f) Prohibition of Burning of any kind of waste including agro residues	State Gov. / District/ local Authorities	Within three month	Action already taken by local Administration for burning of waste.
	(g) Direction to all the industries which are observed to be not in operation or closed or temporarily closed to remain close till further order from MPPCB.	MPPCB	---	Action not required
	(h) Estimation of Industrial effluent generation and the existing CETP capacity and to arrive gap between	MPPCB	---	No water polluting industry are Situated in the catchment area of River Chamla in Regional Office Ujjain jurisdiction

	the industrial effluent generation and the existing treatment capacity			
	(i) Channelization of industrial effluent to CETPs for ensuring treatment to comply with the discharge standard	MPPCB /District Collector /DIC/Municipal Council Badnagar	---	CETP not required
	(j) Identification of suitable site within Industrial estates, Execution and Commissioning of Adequate Capacity CETPs	State Government/ MPPCB /District Collector /DIC/Municipal Council Badnagar	---	CETP not required
II	Sewage Treatment And Disposal Plant			
	(a) District wise estimation of total sewage generation existing treatment capacities, quantum of	Municipal Council Badnagar	Two years after sanction	In the absence of sewerage system domestic waste of the Badnagar town mainly from three Nallahs. Mirchi Nallah, Shivghat Nallah, Nooriya & Khal Nallah mix with river Chamla in between existing old barrage & newly constructed barrage at

	disposal of sewage presently through drains and the gaps in sewage treatment capacity			village Kajlana & eventually cause pollution. Therefore to improve quality for River Chamla scheme is proposed to intercept and pump Nallah water through pipe line & divert in the downstream of newly constructed barrage at village Kajlana. The Municipal Council Badnagar vide their letter no. 612 Dated 29-04-2019 informed that proposed project of cost 197.49 Lakh has been sent to chief Engineer Urban administration & Development Bhopal for sanction. The detail of proposed project is as per Annexure – 2 . The letter is also written to CMO Badnagar for submission of proposal for STP as the proposed scheme not include treatment of domestic waste water after diversion is enclosed as per Annexure - 3
	(b) To undertake measurement of flow of all the drains presently contributing pollution load in	Municipal Council Badnagar.	Two years after sanction	The 03 major nallha with total flow about 2 MLD in the town which carries sewage water. In the absence of sewerage system domestic waste of the Badnagar town mainly from four Nallahs. Mirchi Nallah, Shivghat Nallah & Nooriya Khal Nallah

	river Chamla and to formulate detailed project report (DPR) for each drain and corresponding town			mix with river Chamla in between existing old barrage & newly constructed barrage at village Kajlana & eventually cause pollution. Therefore to improve quality for River Chamla scheme is proposed to intercept and pump Nallah water through pipe line & divert in the downstream of newly constructed barrage at village Kajlana. The Municipal Council Badnagar vide their letter no.612 Dated 29-04-2019 informed that proposed project of cost 197.49 Lakh has been sent to chief Enginner Urban administration & Development Bhopal for sanction. The details of proposed project is enclosed as per Annexure – 2 . The letter is also written to CMO Badnagar for submission of proposal for STP as the proposed scheme not include treatment of domestic waste water after diversion is enclosed as per Annexure - 3
	(c) Proper design, execution of STPs with full	Municipal Council Badnagar.	Two years after sanction.	The letter is also written to CMO Badnagar for submission of proposal for STP as the proposed scheme not include treatment of

	utilisation capacity			domestic waste water after diversion is enclosed as per Annexure - 3
	(d) Channelization including diversion of sewage generated from household/town ship/villages to sewer lines/ interception of all the drains presently carrying sewage and for ensuring proper treatment through the upcoming STPs	Municipal Council Badnagar.	Two years after sanction	The letter is also written to CMO Badnagar for submission of proposal for STP as the proposed scheme not include treatment of domestic waste water after diversion is enclosed as per Annexure - 3
	(e) Ensuring automobiles service station and Hotels/Restaurants particularly located on road	MPPCB and Local Authorities	Within three month	Notice issued for installation of control measures.

	side should have a treatment system and levy of fine case found violations.			
II I	Ground Water Quality			
	(a) Sealing of contaminated hand pumps and found to be unfit for drinking purpose by the public	State Government/PH ED/ Municipal Council Badnagar.	---	Action not required
	(b) Supply of potable water to the affected communities in the identified critical blocks	State Government/PH ED/ CGWA	---	Action not required
	(c) Carrying assessment of ground water survey for quality and to identify over exploited	CGWB/ State Government/PH ED	---	Action not required
	(d) To conduct periodic surprise inspection of	MPPCB	---	Action not required

	the industry to rule out any forceful injection of industrial effluents into groundwater resources			
	(e) All the industry should be directed to obtain NOC from the CGWB and action against the unit in operation without obtaining of NOC from CGWA	MPPCB/ CGWA/ CGWB/PHED	---	Action not required
	(f) To ensure rain water harvesting by the industrial, commercial and other institutions and groundwater recharging with only clean water be encouraged by CGWA/ CGWB	CGWA/ CGWB/ CGWA/ PHED/Municipal Council Badnagar.	Within three months	Condition of Rain water Harvesting is being incorporated in building permission issued by Municipal Council Badnagar.

IV	Flood Plan Zone (FPZ)			
	(a) Plantation in Flood Plain Zone (FPZ)	State Forest Department	Within three years	In this monsoon season about 100 tree were planted in the Bank of Chamla River.
	(b) Checking encroachments in the FPZ of river Chamla	District/Local administration	Within two years	All the encroachments in the FPZ of river Chamla has been already removed by local administration
	(c) Prohibition of disposal of municipal plastic and biomedical waste particularly in drains	Local administration	Within three months	<p>1. Biomedical waste management- The total amount of biomedical waste generated from Badnagar Town is about 0.5 MT. All hospital, Nursing Home & Pathology Lab of Badnagar town taken membership from M/s Hoswin Incinerator Ltd. Indore (Which is authorized by M.P.P.C.B.) For the disposal of Biomedical Waste.</p> <p>2. Solid Waste Management- The total amount of Solid Waste generated from Badnagar Town is 2.7 Metric Ton /day & after Collection & Segregation is taken to trenching ground.</p> <p>3. Polythene carry bags has been already</p>

				Prohibited by the Local Administration
	(d) Notification of Flood Plain Zone FPZ	State Government	Within three months	Detailed of Notification of Flood plain zone FPZ are desired from concerning agency
V	Environmental Flow (E-Flow) and Irrigation Practices			
	(a) Measurement of flow of river Chamla and records maintained	Water resource Department	With in three months	River Chamla is at present dry.
	(b) To conserve water and good irrigation practices to be adopted by the farmers by organizing mass awareness programmers and through media in vernacular language	M.P. Water resource Department and Agriculture Departments.	Regularly	To conserve water and good irrigation practices to be adopted by the farmers already organizing by concerning department for awareness

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