SFG2334 v2

ENVIRONMENTAL AND SOCIAL ASSESSMENT

(Draft Disclosure for Discussion)

For

Construction of

Water Supply Augmentation at Khargone

Sub project of

Madhya Project Urban Development Project

Assessment done by:

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for

Madhya Pradesh Urban Development Company Limited

(Government of Madhya Pradesh)

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ABBREVIATIONS

CPCB	Central Pollution Control Board
CPHEEO	Central Public Health Environmental Engineering Organization
CWRM	Clear Water Rising Main
D(R)BO	Design Review and Built operate
DO	Dissolved oxygen
DPR	Detailed project report
DUAD	Directorate of Urban Administration and Development
EA	Environmental assessment
EMP	Environmental management plan
GOI	Government of India
GOMP	Government of Madhya Pradesh
HFL	Highest flood level
KNP	Khargone Nagar Palika
LPCD	Liter per capita per day
MCM	Million Cubic Meter
MOEF	Ministry of Environment and Forests
MP	Madhya Pradesh
MPUDC	Madhya Pradesh Urban Development Company
MPUDP	Madhya Pradesh Urban Development Project
NOC	No Objection Certificate
NOx	Oxides of nitrogen
NVDA	Narmada Valley Development Authority
OHT	Over Head Tank
PIU	project implementation unit
PMC	Project Management Consultant
PWD	Public Works Department
ROW	Right of way
RWRM	Row Water Rising Main
SO_2	Sulphur Dioxide
SPCB	State Pollution Control Board
UDED	Urban Development and Environment Department
ULB	Urban Local Body
WTP	Water Treatment Plant

EXECUTIVE SUMMARY

1. INTRODUCTION:

Madhya Pradesh (MP) is geographically the second largest, fifth populous, and eighth most urbanized state in India. Although MP recorded a higher rate of growth for its urban compared to rural population in the last decade, its urbanization rate is still below the national average but it is projected to catch-up in the next 15 years. At present, MP's total urban population is of 20.1 million (28% of total population) concentrated in 476 urban centers.

Rapid urbanization in MP has seen sprouting of new urban settlements across the state, more often close to existing cities. The last decade (2001-2011) has seen a 20% increase in the number of urban centers, including a 50% increase in census towns, compared to a 6% increase in the previous decade (1991-2001). In the cities in MP, household access to piped water supply ranges between 48-80%, per capita; water supply ranges between 35 to 150 lpcd; access to underground sewerage range between nil to 40%; waste collection ranges between 85-90%, and 60-80% of rainwater runoff is effectively drained.

The proposed Khargone Water Supply Project is one of the subproject under the Madhya Pradesh Urban Development project (MPUDP) being prepared by the GoMP for possible financing by the World Bank. The components to be constructed under this project include: (i) construction of intake well; (ii) construction of Water Treatment Plant (WTP); (iii) raw water rising main and clear water rising main; (iv) construction of Over Head Tank (OHT); and (v) Distribution network.

This report presents an Environmental and Social Assessment (ESA) of the Khargone Water Supply subproject under MPUDP . The ESA identifies potential impacts on the natural environment and the social situation in Burhanpur region during construction and operation of the project. Where potential adverse effects are predicted, mitigation has been developed and its implementation is presented in an Environmental and Social Management Plan (ESMP) .

This project has been identified as a 'Category E_a' project, due to the environmental sensitives of constructing intake well in River Tapti and presence of number of archeological monuments in Burhanpur. In line with the requirements of ESMF for MPUDP, the project hence requires an EA study and an Environmental Management Plan. With regard to social safeguards, the project has been classified as 'Category S_b, due to limited lan acquisition impacts..

2. PROJECT DESCRIPTION

Khargone formerly known as West Nimar is located in western part of Madhya Pradesh. Khargone town is district headquarter of Khargone district. It is having population of 133400 according to 2011 census and projected to 245450 in the year 2048. The Khargone water supply scheme has been based on proposed water source NVDA lift irrigation canal, arguing that the

existing water resources is not able to fulfill the requirement of drinking water supply to Khargone town. The present rate of per capita water supply is 60 LPCD, As per CPHEEO manual and the Service Level Bench marks laid down by MoUD, GoI and notified by Khargone Municipal Council, the per capita water supply rate shall be 135 LPCD minimum. It is worth mentioning here that DPR for Waste Water (Sewerage) Treatment scheme of Khargone town is under preparation and is likely to be taken up in near future.

3. Proposed Project

Khargone town is situated on the bank of river Kunda. Thus Kunda is the main source of water supply in Khargone town.NVDA lift irrigation canal - A pipe line of 700 mm dia will be exclusively laid from pipari village to Khargone water treatment plant for supply of drinking water requirement of Khargone which is worked out to be 35 MLD up to year 2033.The intake well of dia 9m and 9m height is proposed to be constructed on river Kunda near the existing intake well .The Raw water rising mains of 1.4 m length 700 mm dia.DI K-9 pipe is proposed from Intake well to Treatment Plant.The existing WTP (10.62 MLD) is proposed to be augmented as well as repaired and renovated. The construction of new WTP(35 MLD) will be done on the other side, in the same premises in which existing WTP.Clear water rising mains-provision ,laying and jointing of 300mm-800mm,15385 m long DI K-9 length of clear water rising mains from WTP to OHTs.Four OHTs (capacity 2250 KL and 18.0 m Staging Ht each) are proposed in the DPR. The lands are in possession of the KNP, hence, acquisition is not required.The town has been divided into seven zones having three existing and four elevated service reservoirs. The total length of the proposed network is around 174064 m of diameter 110 mm to 200 mm HDPE PN 6 pipe and 300 mm-400 mm DI K-9 Pipe. The minimum size of pipeline taken is 110 mm as per CPHEEO manual for population less than 50000.

4. LEGAL, POLICY AND ADMINISTRATIVE FRAMEWORK

The National and state level environmental laws and the Operational Policies of the World Bank are applicable to MPUDP financed projects. The most important of the applicable environmental laws applicable for Burhanpur water supply project, are Water (Prevention And Control of Pollution) Act, 1974,The Water (Prevention And Control of Pollution) Act, 2012, Forest (Conservation) Act, 1980, Air (Prevention and Control of Pollution) Act 1981, etc and the World Bank OP 4.01 Environmental Assessment and OP 4.11 Physical Cultural Resources..

The applicable social development regulations are Land Acquisition Act-RTFCTLARRAct 2013, The Street Vendors(Protection of Livelihood and Regulation of Street Vending) Act, 2014, The Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act,2006 etc and the World Bank OP 4.12 Involuntary Resettlement, OP4.10 Indigenous People.

5. BASELINE ENVIRONMENT PROFILE

The present population is approximately 116150 (2011 census), of the total population of town the male are 51.44% and female are 48.56%.Scheduled Caste population comprises 7.59% whereas tribal population constitutes a mere 9.11% of the total Population.Khargone town has average literacy rates of 65.3% with male and female of 57.9% and 42.1% respectively. Khargone town has lower literacy rate as compared to other urban areas of the district. Khargone Municipal Area has been divided into 33 wards for development and administrative purposes. The total households of Khargone city are 22448.

The subproject components locations are in subproject town and their surroundings. The intake will be located close to river bank on government land, while the WTP including clear water sump will be located in the the existing WTP premises (close to the intakes where sufficient government land is available). These facilities are located outside the town, and are mostly surrounded by agricultural lands and river bed . None of the components however located on any forest land. Rest of the components – water tanks, distribution lines, connections etc., will be located within the urban areas. The raw water transmission pipes, connecting intake and WTP, will be essentially outside the town, and clear water transmission pipes, from WTP to distribution reservoirs, will be partly outside and partly within the town. Project area experience a subtropical climate, typical to north India, hot summers, cold and dry winters and monsoon rains. While there is no natural habitat left within the town area, the area near river intakes are comparatively intact though most of the lands there too converted into agricultural use. There are no protected areas, like wildlife sanctuaries, national parks, nor there are any historically, archeologically protected areas in the vicinity.

6. ASSESSMENT OF ANTICIPATED IMPACTS

This Chapter identifies and discusses both positive and negative impacts associated with the proposed project and their mitigation measures.The anticipated impacts and corresponding mitigation measures are discussed in Phases namely: design, construction, operation and decommissioning Phases. This chapter focuses on the prediction and assessment of impacts on the various ES components due to the project activities. Based on the magnitude and duration of the project activities, the nature, duration and extent of impact are assessed. Minor project impacts have also been identified and basis for their insignificance has been provided. Wherever relevant, the EMP/SMP also addresses the minor impacts and provides environmental and social mitigation / environmental enhancement measures. Possible Environmental and Social Impacts during Design Phase, Construction Phase and Operation Phase has been identified and mitigations during these phases have been suggested.

Environmental and Social impacts as being due to the project design or location are not significant. The proposed water supply schemes include design of new water sources nearest surface water bodies, that include construction of Intake well at river Kunda. Considering good water availability and demand, it is assessed to be unlikely to have any significant issue of source sustainability. Water quality is good and there are no potential pollution sources in the vicinity that could affect the water quality. Although none of the

components are located within the forest, conduct of construction works and presence of workers, vehicles may damage /disturb the sensitive areas. Necessary precautionary measures are suggested to avoid any impacts.

During construction, potential negative impacts mainly arise from disturbance of residents, businesses, increase in traffic, increase in noise level and dusts, and the need to dispose moderate quantities of waste soil during construction phase and generation of sludge from the WTP during operation and maintenance phase. However, there are well-developed methods for mitigation, minimization to acceptable levels. Operation phase impacts are likely to be insignificant.

7. STAKEHOLDER AND PUBLIC CONSULTATION

Stakeholder and Public consultation is useful for gathering environmental data, understanding likely impacts, determining community and individual preferences, selecting project alternatives and designing viable and sustainable mitigation and compensation plans. Extensive public consultation meetings for the Khargone Water Supply Project took place while undertaking this ESIA study. The main objective for the consultation process was to involve the community at the very early stages so as to identify likely negative impacts and find ways to minimize negative impacts and enhance positive impacts of the project.

Public sensitization and inclusion meetings were held within the wards of the project area from 18th April' 2016 to 20th April' 2016 with the help of respective local administration and the elected representatives. A total of 9 meetings were held the key outputs of consultations have been taken into consideration and suggested changes in the design and implementation activities.

Key out comes of Public Consultations conducted:

- All participants welcomed the project and agreed to take mitigation measures will be suggested during implementation.
- Concerns regarding Environment and social issues related to implementation and operations were welcomed by the public.
- Peoples also demanded for proper traffic signage for speed limits for minimising the accident.
- Participants (primary stakeholders)were happy to know about the project. They confirmed there will be no adverse impact on livelihood and agreed to mitigation measures during implementation.
- The community who can afford the hiked water tariff gave consent ,but those are from low income group reacted on this issue and demanded subsidy.
- For Safety of Local traffic and pedestrian in Built-up Zone, footpath should be provided.
- The perceived problem of adverse impact of the project on the livelihood of a section of the population was again brought out during the public consultation where all the doubts of the people were cleared.

- Scheduled castes, woman headed households and other vulnerable social groups affected by the project needed to be identified. They require special consideration for water supply connections on priority basis.

8. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The ESMP presented in this Chapter summarizes the key impact elements identified and the remedial measures, the actions to be taken by various parties and the monitoring activities. An indication of the time scale for implementation and cost involved is also provided. The ESMP can be further expanded during implementation with documented procedures and guidelines for work practices so as to be as responsive to the situations that various Contract Parties will encounter.

The effectiveness of the ESMP shall be monitored and assessed during spot checks, formal inspections and at the end of the Project when an overall audit of the works shall be carried out.

Monitoring and Evaluation

Monitoring and evaluation process will involve the assessment of the following benchmarks

- The implementation process of guidelines stipulated in the ESMP
- Evaluate impact of the project to the environment and social setting of Khargone Town
- Monitoring of the involvement of the community through public consultations in decision makings and the implementation of the project

Urban Development and Environment Department (UDED) of Government of Madhya Pradesh (GoMP) will be the Executing Agency for the Program, responsible for management, coordination and execution of all investment program activities. Implementing Agency will be the Madhya Pradesh Urban Development Company (MPUDC) of GoMP, which will implement this program via a Project Management Unit (PMU) at Bhopal, and Project Implementation Units (PIUs) at project towns. PMU will appoint contractors to build infrastructure and PIUs will coordinate the construction. PMU and PIUs will be assisted by Program Management Consultants (PMC).

9. Vulnerable Group(SC/ST) in Khargone

The tribal population of Madhya Pradesh increased to 15,316,784 in 2011 from 12,233,474 in 2001. The decadal growth rate during this period is 25.20 percent.The trends in the population of the Scheduled Tribes by residence (total, Rural and Urban) for Census Years 1961- 2011 shows that the percentage of Scheduled Tribes Population in the Rural Areas (11.3 percent) much higher that Urban Population (2.8 percent). In Madhya Pradesh certain

areas have been declared as scheduled area as Specified by the Scheduled Areas under the Sixth Schedule of Indian Constitutions.

As Khargone district is declared scheduled area in Schedule V by Government of Madhya Pradesh. Social Impact screening done on different aspects no negative impact of project on Indigenous people .project is coming under category Sc . IPDP plan required for IPs for the active participation of Indigenous people.

10. CONCLUSION AND RECOMMENDATIONS

The Environmental and Social Impact Assessment (ESIA) Study was carried out based on field assessments and public consultations with the community who are likely to benefit or to be affected by the proposed Project and the Proponent in compliance with the World Bank environmental policies.

There are no environmentally sensitive areas (like forest, sanctuaries etc) in or near sub-project area. Also there are no archeological and historical protected areas/ sites within or near the town. Hence the impact identified are mostly related to construction and operation phase.There is no land acquisition nor any involuntary resettlement required in the project. During implementation only temporary disruption(damage to public utilities/temporary structure etc) is assumed this can be avoided. No negative impact on vulnerable group.

CHAPTER 1

INTRODUCTION

1.1 Project Background

Madhya Pradesh (MP) is geographically the second largest, fifth populous, and eighth most urbanized state in India. Although MP recorded a higher rate of growth for its urban compared to rural population in the last decade, its urbanization rate is still below the national average but it is projected to catch-up in the next 15 years. At present, MP's total urban population is of 20.1 million (28% of total population) concentrated in 476 urban centers as follows: 378 municipal bodies of which 16 are Municipal Corporations (Nagar Palika Nigams), 100 are Municipal Councils (Nagar palika Parishad), and 262 are Nagar Panchayats, and 98 Census Towns - identified as areas with urban characteristics, but not formally notified as urban. Of the 16 municipal corporations, four (Indore, Bhopal, Jabalpur, and Gwalior) are million-plus cities.

Rapid urbanization in MP has seen sprouting of new urban settlements across the state, more often close to existing cities. The last decade (2001-2011) has seen a 20% increase in the number of urban centers, including a 50% increase in census towns, compared to a 6% increase in the previous decade (1991-2001). The last decade also saw more than a quarter-fold increase in population of the four largest urban agglomerations including Bhopal and Indore. In the cities in MP, household access to piped water supply ranges between 48-80%, per capita; water supply ranges between 35 to 150 lpcd; access to underground sewerage range between nil to 40%; waste collection ranges between 85-90%, and 60-80% of rainwater runoff is effectively drained.

The development objective of the proposed Madhya Pradesh Urban Development Project (MPUDP) supported by the World Bank, is to enhance the capacity of the relevant State-level institutions to support ULBs in developing and financing urban infrastructure. To achieve the above, the project envisages the following three components,Institutional Development Component, Urban Investment Component, Bhopal-Indore Super Corridor.The proposed Khargone Water Supply Project is one of the subproject under the Madhya Pradesh Urban Development project (MPUDP) funded by the GoMP and the World Bank. The components to be constructed under this project include:-

- Construction of an intake well
- Laying the raw water line (1400 m approx. length) from intake well to the proposed Water Treatment Plant.
- Construction of 35 MLD Water Treatment plant for filtration of water.
- Construction of 855 KL capacity clear water sump well near plant.
- Laying the clear water line (15385 m approx. length) from proposed WTP to the existing and proposed overhead tank.
- Pumping the clear water. (Pump house).
- Construction of OHT and water distribution network of clear water around the city.

1.2 Context of ESA

This report presents an Environmental and Social Assessment (ESA) of the Khargone Water Supply subproject under MPUDP project. The ESA identifies potential impacts on the natural environment and the social situation in Khargone region during construction and operation of the project. Where potential adverse effects are predicted, mitigation has been developed and its implementation is presented in an Environmental and Social Management Plan (ESMP)
This project has been identified as a 'Category E_a' project, due to the environmental sensitives of constructing intake well in River Kunda. In line with the requirements of ESMF for MPUDP, the project hence requires an EA study and an Environmental Management Plan. With regard to social safeguards, the project has been classified as 'Category S_b, due to limited land acquisition impacts

1.3 Scope of ESA study

The Environmental and SocialAssessment to be carried out at the planningstages of the proposed undertaking to ensure that significant impacts on theenvironment are taken into consideration during the design, construction, operationand decommissioning of the Project. The scope of this ESA study covered:

- Description of the proposed Project;
- The baseline environmental conditions of the ESA study area;
- Provisions of the relevant environmental legislations;
- Public consultation through public meetings, interviews and administration of questionnaires;
- Prediction of any adverse impacts to the environment arising from the proposed Project;
- Appropriate mitigation measures; and
- Provision of an Environmental and Social Management Plan.

The output of this work led to this comprehensive Environmental and Social Assessment of the subproject.

1.4 Objectives of ESA Study

The objectives of the ESA study are:

- To fulfill the legal requirements as outlined in EIA Notification 2006 and World Bank Safeguard requirements.
- To obtain background Environmental information of the sites and legal and regulatory issues associated with the proposed Khargone water supply project;
- To assess and predict the potential impacts during site preparation, construction and operational phases of the proposed Project;
- To make suggestions of possible alterations to the proposed design, based on the assessment findings;
- To propose mitigation measures for the potential adverse environmental impacts and safety risks;
- To allow for public participation; and
- To prepare an ESA Report including an Environmental and Social Managementand Monitoring Plan.

1.5.Methodology

The ESA study was carried out based on desk review, field assessments and public consultations with the community who are likely to benefit from the project, theproject affected persons and relevant Government institutions.In the course of the assignment potential impacts of all stages of the project from pre- construction, through construction and installation to operation in each region are evaluated against applicable environmental standards, regulations and guidelines, the existing environmental conditions, and issues and concerns raised by all project stakeholders. The assessment process incorporates the following key stages:

1.5.1. Desk review

A desktop study was conducted to review available published and unpublished reports, development plans and maps in order to compile relevant baseline biophysical and socio-economic information about the study area. The biophysical information was compiled on environmental aspects such as Topography, Climate, Soils, Water Resources, land use and flora and wildlife resources. On the socio-economic environment, the study compiled information on aspects such as population, education, labour force, poverty analysis and health.

1.5.2. Field visits

Field visits were conducted in the study area in order to collect site-specific information on the biophysical and socio-economic environment and to crosscheck the secondary data. While at the site, environmental data were recorded and potential impacts identified. In addition, environmental features relevant to the study were noted and photographs taken as record of key features.

1.5.3 Socioeconomic Survey

A socioeconomic survey was undertaken in all the locations that will beaffected/benefit from the project.. The team consulted the area Corporators/Councillors, and ULB officials to identifythe wards and households in the primary project's primary zone of influence and tointroduce the enumerators to the households identified. The enumerators were soughtwithin the project area.

The resultant data was coded uniformly for data entry purposes. Quantitative data analyses were carriedout using simple and relevant statistical methods such as average, percentage and frequency distribution.

1.5.4. Public consultation

Public consultations were undertaken through publicmeetings .The consultations were meant to give an indication of whether theproposed Project is welcome and the immediate perceptions that the affected partiesassociate with it.

i. Public meetings

The consultation process is focused on, seeking comment on key issues and concerns, sourcing accurate information, identifying potential impacts and offering the opportunity for alternatives or objections to be raised by the potentially affected parties; non-governmental organizations, members of the public and other stakeholders. Consultation helps to develop a sense of stakeholder ownership of the project and the realization that their concerns are taken seriously, that the issues they raise, if relevant, will be addressed in the ESA process. Consultation with all project stakeholders started during the Scoping stage and continued throughout the ESA process. All relevant stakeholders have been identified using the most recent and accurate information available and the consultation results including:

i. a list of stakeholders consultation ; and
ii. a summary of the issues and concerns raised.

Consultations with the communities were conducted in the project area with the helpof the local administration especially the councillors and ULB officials. The discussionsduring these public meetings were centered on key emerging issues relating to theproject as well as thecommunities. Given the large size of the project area, a total ofnine (9) meetings were held at location levels within the project area.

ii. Interviews of key stakeholder agencies

One-on-one interviews with government agencies and institutionsin the project area were undertaken .These interviews were conducted to augment andconfirm data and information obtained using the other tools and methodologies.

1.5.5. Impact assessment and analysis

Following the identification of all project environmental aspects and potential impacts, the level of impact that may result from each of the activity-receptor interactions was assessed The assessment and analyses methodologies for ESA studies are based on multidisciplinary approaches and structured to allow for holistic study and assessment of the following key components of the environment in relation to the proposed Project:

- Physical/chemical component;
- Biological/ecological component;
- Sociological/cultural component; and
- Economic/operational component.

1.6. Mitigation and Monitoring

- **Mitigation:** Mitigation measures were taken into consideration and defined during the impactassessment process. Impacts that are identified as having a significance ranking of “high” or“critical” were analyzed in more detail to identify additional mitigation measures that arepotentially available to eliminate or reduce the predicted level of impact. Potential mitigation measures considered included: engineering design solutions; alternative approaches and methods to achieving an activity's objective; operational control procedures, and management systems. The results of the mitigation analysis and the mitigation measures included in Mitigation Plan of theEnvironmental & Social Management Plan.

- **Monitoring:** It will be necessary to monitor and audit the implementation of the projectdevelopment and operation. Monitoring will provide the information necessary for feedbackinto the environmental& social management process and will assist in identifying where additionalmitigation effort or where alteration to the adopted management approach may be required. Themonitoring plan will be included in Monitoring Plan of the Environmental & Social Management Plan.

CHAPTER 2

PROJECT DESCRIPTION

2.1 Introduction

Khargone formerly known as West Nimar is located in western part of Madhya Pradesh. Khargone town is district headquarter of Khargone district. It is having population of 133400 according to 2011 census and projected to 245450 in the year 2048. The Khargone water supply scheme has been based on proposed water source NVDA lift irrigation canal, arguing that the existing water resources is not able to fulfill the requirement of drinking water supply to Khargone town. The present rate of per capita water supply is 60 LPCD, As per CPHEEO manual and the Service Level Bench marks laid down by MoUD, GoI and notified by Khargone Municipal Council, the per capita water supply rate shall be 135 LPCD minimum. It is worth mentioning here that DPR for Waste Water (Sewerage) Treatment scheme of Khargone town is under preparation and is likely to be taken up in near future.

Figure 2.1: Location of Khargone

2.2 Existing Water Supply Arrangements

The existing water supply system consists of the following:

1. Intake-Well: One intake well of 6.0 m internal dia. and approx. 16.0 m height. is constructed to lift water from the bed of Kunda River near pickup weir. This intake well was built in the year 1976 and is not being considered for the following reasons:

    i. This intake well which is already redundant, is insufficient, on its own, to meet the present demand of raw water and additional well is required in any case;

ii. Even if it is repaired and accommodated somehow in the new scheme, this will not serve for next 30 years and a new intake well will have to be constructed, thus defeating the purpose and basic objective of the scheme;

iii. New set of pumps will have to be installed at this intake well as well as the new Intake well which will not only increase the Capital Cost but also add to the Operational Cost.

2. Raw Water Pumps: The raw water pump house has 2 nos. of vertical turbine pumps and motors of 60 HP 2 100 HP – 147 lps and discharge 180 lps with a duty of 24 m Head. 100HP – 02, 60 HP – 147 lps. These pumps will have to be replaced.

3. Raw Water Rising Main: A raw water rising main of Cl class LA pipe of dia. 450 mm and a length 50 M is laid between Intake Well and Water Treatment Plant.

4. Filtration Plant: A filtration plant of capacity 10.62 MLD is constructed in the year 1976 . It has 4 nos. centrifugal pumps. This WTP is of Stone Masonary and constructed in the year1976, it is redundant in present scenario. However. It can be used for 5MLD capacity only.

5. Clear water Pumping Main: Clear water pumping mains are laid for conveyance of clear water from clear water sump well to OHT's. However, the CWRM are bad in condition and it had laid in the year 1978 and will not be used in the present proposal.

6. Over Head Tanks: There are 5 nos. of overhead tanks in Khargone city as tabulated under:-

Table 2.1: Details of existing OHTs

S.No.	Location	Nos. of OHT.	Capacity	Staging	Construction year
1	Sanjay Nagar	1	2250 KL	15 m	2007-08
2	PHE	1	2250 KL	15 m	2014-15
3	Talabchauk (Tawadi)	2	750 KL	20 m	2007-08
4	Gayatri mandir	1	1400 KL(950KL+450KL)	18 m	1978
	TOTAL	5	5000 KL		

Out of the above, two OHT at S.No.4 were built in the year1978 and are redundant in present scenario.

7. Distribution System: The existing distribution system is laid of pipes diameter ranging from 300 mm to 80 mm and of CI, AC pressure pipes and GI pipes. The network has been augmented from time to time on as and when needed basis without any proper network designs and therefore

the actual residual pressure is low and is not meeting desired pressure as per manuals or standards.

8. Water Connections: There are total 16898 no. of connections at present. Evidently the number of connections is very less compared to the present population size. The present proposal envisages increasing connections to 100% coverage of households (including deprived families) through individual or bulk connections.

2.3. Need of the project:

The population of Khargone town has increased tremendously. In 1971 Khargone town was having a population of 41316 souls. This population further increased to 52749 in 1981, 84443 as per 2001, finally 133400 as per 2011 provisional census records.

Presently daily average supply arrangements for Khargone town from existing water works is only 10.62 MLD. The scheme has been framed to cover the population of 2048 of the town and adjoining areas. It is desired to augment water supply facilities based on norms by CPHEEO manual considering contemplated sewerage system in Khargone town because recently Nagar PalikaParishad has resolved to lay complete sewerage system in the township. Looking to the above facts per capita requirement at the rate of (135% +15% UFW) has been provided. Thus the total requirement of water for the year 2033 (intermediate design period) there is a need of augmentation of 35 MLD and at ultimate capacity 43 MLD for the year 2048 in Khargone for filtration plant and accordingly the raw water requirement is to be augmented for which a new barrage is under construction in upstream of the existing one by NVDA.

2.4. Proposed Project

Source Selection

Khargone town is situated on the bank of river Kunda. Thus Kunda is the main source of water supply in Khargone town. Narmada River is approximately 55km from Khargone and presently there is no provision to supply water from it.

Existing Source of Water:

Primary and Secondary Source of Water Supply

- Khargone municipal council is supplying water to Khargone town by drawing raw water from Kunda River. A 100 m length and 4m high pick up weir is constructed across river Kunda with a storage capacity 0.22MCM.Here 10.62 MLD WTP is constructed as per the present established capacity of 10.62 MLD of water works, the stored raw water cater to 20 days demand of the town. For future point of view it is insufficient, hence it is not considered for water source.

- Another source of raw water is by gravity flow from Dejladewada dam which is constructed on Kundariver29 km away from the town. The gross capacity of the dam is 56.55 MCM with live storage capacity as 50.44 MCM. It is far away from town and capital cost will be high and if it is transported through channels, theft and losses will be

very high, defeating the purpose of the scheme. Due to this reason it is not suitable for selection of water source.

- Other than that water is also being supplied by 18 wells and 26 tube wells to number of areas in Khargone town. In addition to that water is being distributed through 3 tankers of 5000 litre each available with the municipality. As reported these tankers have to take 256 rounds per month showing scarcity of water and huge supply of water is through tankers.

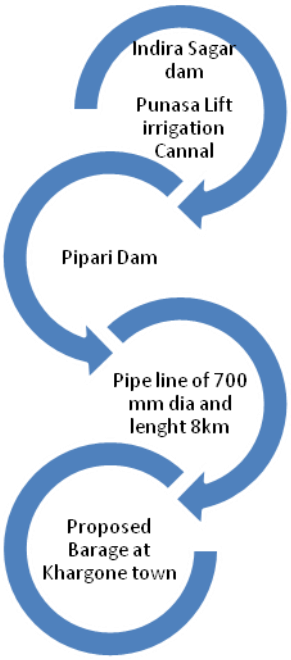
Alternative Source Analysis

i. **Ground Water Sources**: The Khargone block comes under semi critical safe category as assessed by Central Ground Water survey Board conducted on all India bases hence, any scheme dependent on ground water sources is not advisable. Therefore, the ground water sources do not found to be reliable as source of water supply for the scheme area of Khargone town.

ii. **Surface Water Sources**: Rivers And Nallahs

River Narmada: Narmada is the largest west flowing river and seventh largest river in India. River Narmada which flows approx. 55 km away from town is a perennial river and for the long term water supply, this river source has got more than enough potential of supplying to projected demand of water to Khargone. But due to far away it cannot be considered as selection of source of water.

Figure 2.2: Proposed Water Source details



Final water Source Selection: Out of all source analysis the Narmada Valley Development Authority (NVDA) lift irrigation canal is most appropriate source for water supply to Khargone. NVDA is constructing a reservoir at Pipari village of 9 MCM capacity 8 KM away from Khargone, which will be filled by lifting water from a main canal (known as Punasa Lift Canal) of Indira Sarovar dam (also known as Punasa Dam), at village Ahirkheda, at a distance of 80 km from Punasa Dam. The Indira Sarovar is an already existing dam.

The purpose of NVDA to construct reservoir at Pipari Village and infrastructure is to irrigate approximately 12551 hectare land in surrounding and fulfil drinking water requirement of 62 villages and Khargone town. The construction of reservoir at Pipari is already in progress and is nearing completion. The NVDA has already reserved water for Khargone town in this reservoir.

Under this scheme, NVDA has also proposed constructing an anicut near the Existing Water Treatent Plant and to lay a gravity pipe line of 700 mm dia from Pipari village to this anicut. Construction of this anicut has also started and is likely to be completed before the commissioning of the Water Supply Scheme of Khargone Town under MPUDP. Provision of pipeline, instead of open channel, will save water losses due to evaporation during transmission. Thus, this is an asured and safe water source for Khargone to meet its drinking water requirement which is worked out to be 35 MLD up to year 2033.

Table 2.2: Sub- Project Description

Per capita demand	135 lpcd+15% UFW
Water requirement -	
In year 2018	25.76 MLD
In year 2033	33.34 MLD (35 MLD)
In year 2048	42.23 MLD (45 MLD)
Intake well-cum-pump house	RCC – 9.00 m dia. 9 m height
Lowest water level	253.00 m
Pump floor level	262.00 m
Motor floor level	266.00 m
Roof top level	271.00m
Raw water pumps	Vertical turbine pumps 3 , each 44 KW
Duty intermediate stage	Discharge 402.66lps at 14.08m
Duty ultimate stage	Discharge510.02lps at 15.23 m
Hours of pumping per day	23hrs
Power requirement at intake well	170 KVA
Power requirement at WTP	500 KVA
Raw water pumping main	D.I. Class K-9
Diameter	700 mm dia
Length	Total: 1400m
Static Head	7.00 m

Clear water sump	855 KL capacity
Size	25.0 m x 25.0 m x 4.0 m water depth
Disinfection	
Chemical	Liquid chlorine
Chlorinator	Vacuum type, 22 nos.
Overhead Tanks	Four nos. each of 2250 KL capacity, 18 m staging respectively
Clear water feeder mains	D.I. K-9
	550 m : 300mm dia 7315 m: 450 mm dia 3420 m: 600 mm dia 210 m: 750 mm dia 3890 m: 800 mm dia

Sub project components Details:

1. Intake: In the bank of weir which is constructed by NVDA on NVDA lift irrigation canal, there is proposed R.C.C. intake well of 9.0 m diameter and 9 m height. Detailed survey was conducted for selection of site. The selected site is nearest, and will have required quantity of water.

2. **Raw Water Rising Main:** 1400 m long 700 mm diameter DI K-9 pipe is proposed from intake-well to the Treatment Plant to carry 42.23mld water from Intake well to the proposed Treatment Plant is proposed.

3. Raw Water Pump: Three nos. vertical turbine type pump with 50% as standby is proposed. The discharge of each pump is 402.66 LPS and head is 14.08meter. The rating of each pump is 43.38KW (say 44 KW). One pump will be as a standby. This will be replaced by 42.23mld or 510.02lps discharging capacity at 15.23 m head pumps in year 2048. The pumping is proposed for 23 hours.

4. Treatment Plant: Construction of 35mld capacity (Design demand for 2033)Rapid Gravity Filter based Treatment Plant with Clear Water Sump is proposed instead of ultimate year i.e.2048. There is much difference of water demand between intermediate year and ultimate year. Hence water treatment plant is designed at intermediate year. The provision is made on the basis of prevailing rates in the Department of similar work.

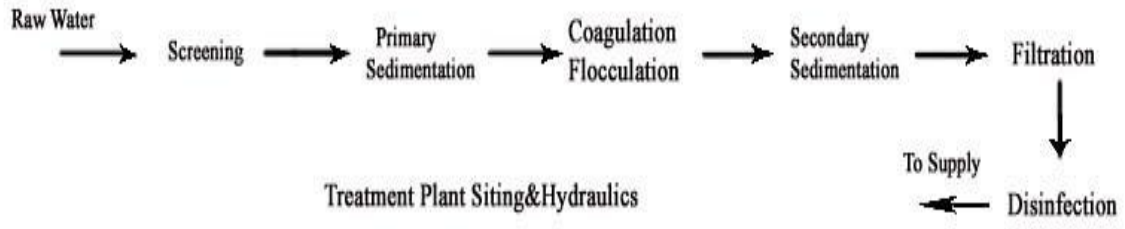
The main component are Parshall flume, Rapid mix unit, Clariflocculater, filter bed, back wash tank, clear water sump, chlorinator etc.

New Water Treatment Plant at KHARGONEwill have the following treatment units:
1. Prechlorination
2. Aeration

3. Alum dosing
4. Clarification
5. Filtration
6. Post chlorination.

Schematic flow diagram of the proposed water treatment plant at Khargone is given in figure 2.3

Figure 2.3 Schematic flow diagram of the proposed water treatment plant



Main component of the Treatment plant:

Sr. No.	Component	Size
1	Cascade aerator	Diameter 9.90 m with 4 step of 1.14 m width & rise 0.20 m Each
3	Rapid mix unit	Diameter of tank 1.86 m with tank height 4.67m. and 4 blade
4	Clariflocculater	Diameter of flocculator 4.71 m and clarifier 10.23 m.
5	Rapid sand filter	8 beds Width of filter bed= 5.71 m Length of filter bed= 6.34 m
6	Wash water tank	1 nos. of 12.89 m dia and 3 m height.
7	Clear water sump	1 no. sump & depth 4 m. Sump size= 25 m x 25 m

Pre-chlorination:

In order to keep the treatment plant units in disinfected condition and also to kill the algae in the raw water, it is proposed to provide pre-chlorination at a dose of 3 mg/lit.

Aeration:

The raw water contains traces of Iron. It will get removed aeration process. Cascade Type aerator is recommended.

Alum Dosing:

In the absence of jar test results, the alum dosing plant shall be sized, for a dose of 50 mg/lit. to water with a solution concentration of 10% in alum dosing tank. Dosing shall be by gravity dosers. 100% standby plant shall be provided.

Clarification:

The various types of clarifiers being offered today are conventional radial flow clariflocculator, conventional sludge blanket clarifiers (hopper bottom or flat bottom) and pulsators. The rise rate varies from 1.5 m/hr to 4 m/hr. In order to get the best cost effective technology, it is proposed to give freedom to the Bidder to offer his technology. In order to prevent very high surface rate the dosing of polyelectrolyte shall not be permitted.

Filtration:

The filtration rate shall be between 5.20 cum/hr. The number of filters shall be selected by Bidders. Three – (3) nos. standby Filters shall be provided. (One under draining, one under washing & one under maintenance). Backwashing by air and water shall be provided.

Post-Chlorination:

Post-Chlorination shall be done in the filtered water conduit. The chlorine dose will be provided to dose 1 mg/lit of chlorine.

Chlorine Contact Tank cum Treated Water Reservoir

A reservoir minimum of 30 minutes storage shall be provided to serve the dual purpose of chlorine contact time and treated water storage.

5. Clear Water Pump At Tp & At Sump At Town:

Provision of 3 numbers Centrifugal type pump having discharge 390.46 LPS and head of 40m with suitable motor is proposed with 50 percent standby arrangement at TP including suction pipe, control panel, cable and all accessories is made. The rating of each pump is 119.50 KW (say 120 KW).

6. Clear Water Rising Main:

Provision, laying and jointing of 300 mm – 800 mm 15385 m long long Ductile Iron, Class-K-9 length of the clear water rising main is long clear water pipe line to carry 40.94mld water from proposed Treatment Plant to Over Head Tank is proposed.

Table 2.3: Clear Water Rising main Details

PIPE DETAIL										
Label	Start Node	Stop Node	Length (m)	Dia. (mm)	Material	H-W Coeff	Flow (L/s)	Velocity (m/s)	Headloss (m)	Headloss Gr. (m/km)
P-3	J-2	J-3	640	800	Ductile Iron	140	416.077	0.83	0.42	0.661
P-4	J-3	J-4	210	750	Ductile Iron	140	338.067	0.77	0.13	0.616
P-5	J-4	J-5	560	600	Ductile Iron	140	156.02	0.55	0.24	0.436
P-6	J-4	J-6	1,860	600	Ductile Iron	140	182.047	0.64	1.08	0.581
P-7	J-6	J-7	540	450	Ductile Iron	140	104.037	0.65	0.45	0.836
P-8	J-2	J-8	350	450	Ductile Iron	140	78.01	0.49	0.17	0.491
P-9	J-3	J-9	480	450	Ductile Iron	140	78.01	0.49	0.24	0.491
P-10	J-5	J-10	430	450	Ductile Iron	140	78.01	0.49	0.21	0.491
P-11	J-5	J-11	3,030	450	Ductile Iron	140	78.01	0.49	1.49	0.491
P-12	J-6	J-12	2,485	450	Ductile Iron	140	78.01	0.49	1.22	0.491
P-13	J-7	J-13	550	300	Ductile Iron	140	26.027	0.37	0.25	0.463
P-14	J-7	J-14	1,000	600	Ductile Iron	140	78.01	0.28	0.12	0.121
P-15	R-1	J-2	3,250	800	Ductile Iron	140	494.087	0.98	2.95	0.909

7. **Overhead Tanks:**

It is proposed to distribute water through OHT by making suitable zone. Three over head tank is exists in the town in properly working condition. But for future point of view capacity of this exist tank is not sufficient so four overhead tank each of 2250KL capacity is proposed at Khargone town in respective area. Proposed reservoir will get water from Pumping Station at Khargone WTP.

List of Proposed Reservoir with capacity& staging height are given below.

The details of OHT with name are as follows –

Table 2.4: Details of Service Reservoirs

Sr.	Zone no.	OHT. Nos.	Capacity	Staging height
1.	Municipal Zone no – 1	OHT-1	2250 KL	18.0 M.
2.	Municipal Zone no – 3	OHT-3	2250 KL.	18.0 M.
3.	Municipal Zone no – 5	OHT-5	2250 KL.	18.0 M.
4.	Municipal Zone no – 7	OHT-7	2250 KL.	18.0 M.
---	**Total Proposed**	**4 NOS.**	**9000 KL.**	--------
TOTAL EXISTING OVERHEAD TANK				
1.	Municipal Zone no – 2	OHT-2	2250 KL	15.0 M.
2.	Municipal Zone no – 4	OHT-4	2250 KL.	15.0 M.
3.	Municipal Zone no – 6	OHT-6	750 KL.	20.0 M.
---	**Total EXISTING**	**3 NOS.**	**5250 KL.**	--------
TOTAL CAPACITY OF TANK				
---	**Total Tank**	**7 NOS.**	**14250 KL.**	--------

8. Distribution Networks:

The town has been divided into seven zones having three existing and four elevated service reservoirs. The total length of the proposed network is around 174064 m of diameter 110 mm to 200 mm HDPE PN 6 pipe and 300 mm-400 mm DI K-9 Pipe. The minimum size of pipeline taken is 110 mm as per CPHEEO manual for population less than 50000.

Table 2.5: Details of Distribution network

Zone-1 Pipe Details			
Inner Dia(MM)	**Outer Dia(MM)**	**LENGTH(M)**	**MATERIAL**
98.6	110.00	12537	HDPE
143.4	160.00	8400	HDPE
179.4	200.00	6300	HDPE
300	280.00	2250	DI
400	400.00	1940	DI
Total		31427	

Zone-2 Pipe Details			
Inner Dia(MM)	**Outer Dia(MM)**	**LENGTH(M)**	**MATERIAL**
98.6	110.00	13930	HDPE
143.4	160.00	10752	HDPE
179.4	200.00	10927	HDPE
300	280.00	1905	DI
400	400.00	1240	DI
Total		38754	

Zone-3 Pipe Details			
Inner Dia(MM)	**Outer Dia(MM)**	**LENGTH(M)**	**MATERIAL**
98.6	110.00	4270	HDPE
143.4	160.00	6720	HDPE
179.4	200.00	5180	HDPE
300	280.00	1140	DI
400	400.00	815	DI
Total		18125	

Zone-4 Pipe Details			
Inner Dia(MM)	**Outer Dia(MM)**	**LENGTH(M)**	**MATERIAL**
98.6	110.00	8260	HDPE
143.4	160.00	11165	HDPE
179.4	200.00	7987	HDPE
300	280.00	1990	DI
400	400.00	1610	DI

Total		31012	

Zone-5 Pipe Details			
Inner Dia(MM)	**Outer Dia(MM)**	**LENGTH(M)**	**MATERIAL**
98.6	110.00	5740	HDPE
143.4	160.00	10745	HDPE
179.4	200.00	7505	HDPE
300	280.00	1780	DI
400	400.00	1245	DI
Total		27015	

Zone-6 Pipe Details			
Inner Dia(MM)	**Outer Dia(MM)**	**LENGTH(M)**	**MATERIAL**
98.6	110.00	2950	HDPE
143.4	160.00	1520	HDPE
179.4	200.00	1680	HDPE
300	280.00	920	DI
Total		7070	

Zone-7 Pipe Details			
Inner Dia(MM)	**Outer Dia(MM)**	**LENGTH(M)**	**MATERIAL**
98.6	110.00	2670	HDPE
143.4	160.00	6435	HDPE
179.4	200.00	6976	HDPE
300	280.00	2725	DI

400	400.00	1855	DI
Total		20661	

9. Project cost: Khargone water supply scheme is estimated at cost of Rs.10326.77 Lakhs.

CHAPTER 3

LEGAL, POLICY AND ADMINISTRATIVE FRAMEWORK

3.1. Regulatory Framework - Environmental

Implementation of the subproject will be governed by the National and State of Madhya Pradesh environmental acts, rules, regulations, and standards, safeguard policies of The World Bank, and the Environmental and Social Management Framework (ESMF) of MPUDP. These regulations impose require avoide / minimize/mitigate likely impacts on the environment. It is the responsibility of the project executing and implementing agencies to ensure subprojects are consistent with the legal framework, whether national, state or municipal/local. Compliance to these polices is required at all stages of the subproject including design, construction, and operation and maintenance.

The summary of environmental regulations and mandatory requirements for the subproject is shown in **Table 3.**

Table 3.1 : Applicable Environmental Regulations for WSS

Law	Description
EIA Notification	EIA Notification of 2006 and 2009 (replacing the EIA Notification of 1994), set out the requirement for environmental assessment in India. This states that Environmental Clearance is required for certain defined activities/projects, and this must be obtained before any construction work or land preparation (except land acquisition) may commence. Projects are categorized as A or B depending on the scale of the project and the nature of its impacts. Category A projects requires Environmental Clearance from the The National Ministry of Environment and Forest . Category B projects require Environmental Clearance from the SEIAA. (Is this applicable for Burhanpur?)_
Water (Prevention and Control of Pollution) Act of 1974, Rules of 1975, and amendments	Control of water pollution is achieved through administering conditions imposed in consent issued under provision of the Water (Prevention and Control of Pollution) Act of 1974. These conditions regulate the quality and quantity of effluent, the location of discharge and the frequency of monitoring of effluents. (what is applicable for Burhanpur WSS??)
Environment (Protection) Act, 1986 and CPCB Environmental Standards.	Emissions and discharges from the facilities to be created or refurbished or augmented shall comply with the notified standards. (what is applicable for Burhanpur WSS??)
Air (Prevention and Control of Pollution) Act of 1981, Rules of 1982 and amendments.	The subprojects having potential to emit air pollutants into the atmosphere have to obtain CTE under Section 21 of the Air (Prevention and Control of Pollution) Act of 1981 from WBPCB before starting implementation and CTO before commissioning the project. The occupier of the project/facility has the responsibility to adopt necessary air pollution. (what is applicable for Burhanpur WSS??)

Forest (Conservation) Act, 1980 and Forest Conservation Rules, 2003 as amended	As per Rule 6, every user agency, who wants to use any forest land for non-forest purposes, shall seek approval of the Central Government. (what is applicable for Burhanpur WSS??)
Ancient Monuments and Archaeological Sites and Remains Rules of 1959	The Rules designate areas within a radius of 100 meters (m) and 300 m from the "protected property" as "protected area" and "controlled area" respectively. No development activity (including mining operations and construction) is permitted in the "protected area" and all development activities likely to damage the protected property are not permitted in the "controlled area" without prior permission of the Archaeological Survey of India (ASI). Protected property includes the site, remains, and monuments protected by ASI or the State Department of Archaeology. Please explain why it is relevant to Burhanpur
Madhya Pradesh State Water Policy, 2003	Prepared in accordance with the National Water Policy, it states that "for environmental balance, skillful and planned management of all types of developmental activities, economic use on equitable basis and in view of the prime importance of water for all human and other living beings, an effective and sound water policy is necessary". Policy is detailed in 17 sections dealing with different aspects of water resources. No. 7 deals with Water Allocation Priorities, and according to which drinking water supply shall have the highest priority followed by irrigation, power, tourism, etc. Water Resource Department is nodal department for permitting different uses of water resources. Policy also states that "clear provision for reservation of drinking water shall be made in irrigation projects" Please explain why it is relevant to Burhanpur
Social-Acts, notifications, policies and guidelines	
The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (RTFCTLARRAct 2013)	The Act provides for enhanced compensation and assistances measures and adopts a more consultative and participatory approach in dealing with the Project Affected Persons. As and when the rules for implementation of the Act are finalized, the processes and procedures of this Act will be complied with TheRTFCTLARR Act2013.
The Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014	GOI recently enacted the act that specifically aims to protect the rights of urban street vendors and to regulate street vending activities. It provides for Survey of street vendors and protection from eviction or relocation; issuance of certificate for vending; provides for rights and obligations of street vendors; development of street vending plans; organizing of capacity building programmes to enable the street vendors

	to exercise the rights contemplated under this Act; undertake research, education and training programmes to advance knowledge and understanding of the role of the informal sector in the economy, in general and the street vendors, in particular and to raise awareness.
The Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.	An Act to recognise and vest the forest rights and occupation in forest land in forest dwelling Scheduled Tribes and other traditional forest dwellers who have been residing in such forests for generations but whose rights could not be recorded; to provide for a framework for recording the forests rights so vested and the nature of evidence required for such recognition and vesting in respect of forest land

3.2. World Bank Safeguard Policies: The Bank requires environment and social assessment (ESA) of projects proposed for Bank financing to help ensure that they are environmentally sound and sustainable, and thus to improve decision making.

Table 3.2: World Bank Safeguard Policies

World Bank Safe Guard Policies	**Objective**	**Applicability** (The applicability should be discussed specific to the Burhanpur water supply sub project. As per the assessment OP 4.104, OP 4.36 and OP 4.12 are not triggered as these are not required for this sub-project. However, OP 4.10 is triggered and SMP shall make provision for consultation with Scheduled Tribes and ensuring equal access to the project benefits for scheduled tribes and other disadvantaged groups.)	**Safeguard Requirements**
OP 4.01 **Environmental Assessment**	The objective of this policy is to ensure that Bank financed projects are environmentally sound and sustainable.	The environmental issues will be addressed adequately in advance. An integrated Environmental Screening and Environmental Assessment (EA) with Environmental Management Plan (EMP) will be developed to manage environmental risks and maximize environmental and social benefits wherever it is applicable.	EIA and/or EMP required.
OP/BP 4.12 **Involuntary Resettlement**	The objective of this policy is to avoid or minimize involuntary resettlement where feasible, exploring all viable alternative project designs. Furthermore, it intends to assist displaced person in improving their former living standards; community participation in planning and implementing resettlement; and to provide assistance to affected people, regardless of the legality of title of land	There will be need for limited land acquisition resulting in: relocation or loss of shelter, loss of assets or access to assets; loss of income sources or means of livelihood. This policy applies to all components of the project that result in involuntary resettlement, regardless of the source of financing including projects that are carried out, or planned to be carried out, contemporaneously with the project.	Resettlement Action Plan in consultation with the community and project authorities
OP/BP 4.10 **Indigenous People**	This policy aims to protect the dignity, right and cultural uniqueness of indigenous people; to ensure that they do not suffer due to development; that they receive social and economic benefits	This policy shall trigger as the Scheduled Tribes are present in Burhanpur Town and falls in Schedule V Area as per constiutuion of India. However, they are scattered all over the town the tribal people in urban area do not exhibit typical characteristics such as living as a group; speak separate	Indigenous people development Plan

		language from dominant population, having separate institutions in close attachment to the forest etc. Hence no separate IPP is prepared.	
OP/BP 4.11 **Physical Cultural Resources**	This policy aims at assisting in the preservation of cultural property, historical, religious and unique natural value-this includes remains left by previous human inhabitants and unique environment features, as well as in the protection and enhancement of cultural properties encountered in Bank- financed project.	This policy may be triggered by sub-projects where cultural property, historical, religious and unique natural value-this includes remains left by previous human inhabitants and unique environment features may be affected due to project.	Application has to be prepared and submitted to Archaeological department in case any impact is envisaged due to the project.

CHAPTER 4

BASELINE ENVIRONMENT PROFILE

4.1. Introduction

Khargone formerly known as west nimar is located in western part of Madhya Pradesh. Khargone town is district headquarters of Khargone district. Geographically, the town lies about in between longitude E 74 25' to 76 15' and latitude N21' 30 to 22 35'.the town is regionally well connected to road network and is located at the junction of SH-1(kasarwadbistan road). Khargone is regionally connected to Indore with NH3 (Agra Mumbai road). Khargone is well connected with a good network of roads with all surrounding settlements like Khandwa, Maheshwar, Barwaha, Barwani, Dhar etc.Khargone town is centrally located in the district making the town a central place (regional center) in thedistrict. Khargone district is one of the 50 districts in the state of Madhya Pradesh and is part of Indore division. According to census 2011 population of KNP is 133400.

4.2. Site Environmental Features of Khargone WSS components

The subproject components locations are in subproject town and their surroundings. The intakes will be located close to river banks on government lands, while the WTPs including clear water sumps will be also located close to the intakes where sufficient government land is available. These facilities are located outside the town, and are mostly surrounded by agricultural lands and rivers/reservoirs. None of the components however located on any forest land. Rest of the components – water tanks, distribution lines, connections etc., will be located within the urban areas. The raw water transmission pipes, connecting intake and WTP, will be essentially outside the town, and clear water transmission pipes, from WTP to distribution reservoirs, will be partly outside and partly within the towns. Project area experience a subtropical climate, typical to north India, hot summers, cold and dry winters and monsoon rains. While there is no natural habitat left within the town areas, the areas near river intakes are comparatively intact though most of the lands there too converted into agricultural use. There are no protected areas, like wildlife sanctuaries, national parks, nor there are any historically, archeologically protected areas in the vicinity. Towns are densely populated in the core/old town areas with narrow lanes, and small and closely built houses, while most of the areas are undeveloped and are still under agricultural use. Commercial areas are along the main roads, which are mostly congested with activities, pedestrians and traffic.

Table 4.1 : Site environmental Features of proposed WSS components

S.No.	Components	Detail of Location and Environmental features	Site Photographs
1.	Intake Well	In the bank of river near wier which is constructed by NVDA on NVDA lift irrigation canal, there is proposed R.C.C. intake well of 9.0 m diameter and 9 m height. No noticeable aquatic life found in in the reservoir There are no sensitive features like forest etc near the proposed sites.	
2.	Raw water Rising Main	Raw water pipeline (1.4 km length) will be laid underground from the intake well to WTP	
3.	WTP	The existing WTP is proposed to be augmented as well as repaired and renovated. Since the augmentation has to be done in the same premises in which existing WTP is (total area- 12Ha), the component doesn't need any land acquisition. The land is already in possession of the KNP. There is thick plantation on one side of the campus. (The complete land details given appendix 1 - Screening checklist)	

4.	Clear water Gravity Main	Clear water Gravity mains (15.38 km length)of 300 mm-800 mm dia. will be laid underground along the RoW.	
5.	OHT	**OHT at Housing Board Colony** **Staging Height- 18.0m** **Capacity- 2250 KL** **Land use around the site- residential** Site is located within housing board colony. Site is vacant with no tree cover and owned by GoMP.	
		OHT at Rahim Pura **Staging Height- 18.0m** **Capacity- 2250 KL** **Land use around the site- residential** Site is located within the rahimpura, ward no 33, Site is vacant with no treecover and owned by GoMP.	
		OHT at ward no. 30 **Staging Height- 18.0m**	

		Capacity- 2250 KL **Land use aorund the site- residential and School Building** Site is located within the Teachers Colony, ward no. 30. Government school is located adjacent to the site,hence for safety purpose construction of compound wall should be incorporated in DPR . Site is vacant with no treecover and owned by GoMP.	
		OHT at Police ground **Staging Height- 18.0m** **Capacity- 2250 KL** **Land use aorund the site- vacant ground and old CRPF mess**	

4.3. Baseline Environmental Profile

The baseline environmental status is important to understand the region's existing physical and biological characteristics along with cultural and social status of residing community information. The data presented in this section is based on field surveys stakeholders interaction/consultation and secondary data collection where majority includes, Baseline generation (Water/Air/Noise quality /Soil monitoring), town census data and others. The information on the baseline environmental conditions forms the basis to analysis the probable impacts of the proposed project vis-à-vis the present background environmental quality of the core study area.

4.3.1. Physical Profile

Physiographic and Topography

Khargone formerly known as West Nimar is located in western part of Madhya Pradesh. Khargone town is district headquarters of Khargone district.

- Geographically, the town lies about in between longitude E 74 25' to 76 15' and latitude N21' 30 to 22 35'.
- The area forms a part of **malwa plateau** and lies between the **vindhyan ranges in the north and dissected plateaus in the south**.
- The alluvial plains of the Narmada River lie between 170-260 m above the **M.S.L**.
- The steep **slopes** areas show the gradient between 10-12 m/km and gently sloping areas show gradient of 0.4 to 0.7m/km.
- Geomorphic units give the brief and synoptic idea of the general topography of the terrain.
- The whole area exhibits the presence of the **FLUVIAL UNITS**, showing the **presence of alluvium in the flood plains** of all the major river systems.
- The **gently undulating plains** occupy the major portion of the khargone district on the south eastern part.
- **Buried Pedi plains**, showing denudation hills occupy the North –western part of the area on the either side of Narmada.

Topography:

The area forms a part of Malwa plateau and lies between the Vindhyachal ranges in the north and dissected plateaus in the south. The alluvial plains of the Narmada River lie between 170-260m above the M.S.L. The steep slopes areas show the gradient between 10-12 m/km and gently sloping areas show gradient of 0.4 to 0.7m/km. Geomorphic units give the brief and synoptic idea of the general topography of the terrain, the whole area exhibits the presence of the fluvial units, showing the presence of alluvium in the food plains of all the major river systems.

Climate:

The climate in the area is tropical, generally hot in summer and cool in winter. From May to September there is not much variations in temperature conditions. The humidity is as low as 11 percent in dry months and is about 97% in monsoon season. May is generally the hottest month with the mean daily maximum temperature 45.50^{o}C and mean daily minimum temperature at 25.4°C. January is the coldest month with the mean daily, maximum temperature at 35° and mean daily 9.3°. The average rainfall in the town is 1211 mm.

The area is influenced by south west monsoon. Highest velocity prevails during May and June while it is lowest during December and January. Wind direction during rainy season is mainly from south west and North West while wind direction changes during winter season again and it starts from north- east and south-west.

Air Environment: There are no major air polluting sources in the project area and generally the air quality in the area is found to be good.

Drainage and Slope characteristics: Khargone town has developed on the bank of Kunda River on a relatively level tract. Barring western portion of the town, rest of the town is almost a level plain. Kunda River flows along the western limit of the town from south to north. Natural slope of the town generally is towards Kunda River from south to north. However, a portion of southern half of the town has a slope towards east Natural drainage follows the general slope of the town as explained above. The basin exhibits sub-dendrite drainage pattern.

Water Quality

Ground Water: Groundwater potential is moderate to low in the area. Khargone block falls under semi-critical safe category as assessed by Central Ground Water Survey Board. Therefore the ground water sources could not be found reliable as source of water supply for longer period for Khargone town.

Surface Water: Kunda River to the extent of Khargone town is extremely polluted particularly the stretch between Odal river and Shamshan Ghat where all major drains enter into the river. There are no wastewater treatment plants to protect Kunda from pollution. Kunda is being polluted

as there is no sewerage system in the town to collect wastewater and treat them before it is allowed into the river. During rainy season, the river banks get inundated. Frequent floods and indiscriminate dumping of waste into Kunda River further complicate the situation. Deteriorating health of Kunda river needs immediate attention. Proper storm water drains and sewerage system covering entire town along with treatment plants are needed to control pollution of Kunda and ultimately pollution of Beda and Narmada. Also due to lack of sanitation facilities, open defecation along river side and its bed is a common sight causing pollution of Kunda River.

4.3.2. Biological Profile

Forests- Flora and Fauna

The flora and fauna identified in the study area are commonly found and not specific to the region due to the absence of forest in the study area. Moreover, there are no National Parks, Wild life sanctuaries, Bird sanctuaries within 10 Km radius of the project site. There is no rare and endangered species in the area.

4.4. **Socio Economic Profile**

The present population is approximately 116150 (2011 census), of the total population of town the male are 51.44% and female are 48.56%.Scheduled Caste population comprises 7.59% whereas tribal population constitutes a mere 9.11% of the total population.Khargone town has average literacy rates of 65.3% with male and female of 57.9% and 42.1% respectively. Khargone town has lower literacy rate as compared to other urban areas of the district.

Khargone Municipal Area has been divided into 33 wards for development and administrative purposes. The total households of Khargone city are 22448.The density distribution shown in table below:

Density Distribution of Khargone town

Table 4.2: Density Distribution

Sr. No.	Residential Density Distribution	Total Number of Wards	Ward Numbers
1	<300	2	11,13

2	300-500	10	5,12,14,22,24,27,28,31,32,33
3	500-1000	13	3,4,6,8,9,18,20,21,23,25,26,29,30
4	1000-2000	7	1,2,10,15,16,17,19
5	>2000	1	7

Table 4.3 shows that ward number 7, Dr. Ambedkar Ward has the highest residential density of 3,166 persons per hectare and ward number 13, Sahakari Bank Ward has the lowest residential density (about 237 persons per hectare). Average residential density in town is 527 persons per hectare.

Land use pattern of Khargon town

Table 4.3: Land use pattern

S.NO.	LANDUSE	EXISTING 2000		PROPOSED 2011		NORMS
		AREA (HA.)	%	AREA (HA.)	%	
1.	Residential	201.69	39.57	668.00	44.53	40-45
2.	Commercial	43.86	8.60	90.00	6.00	3-4
3.	Industrial	35.89	7.04	120.00	8.00	8-10
4.	Public+ Semipublic	80.12	15.72	145.00	9.67	10-12
5.	Public Utilities And Services	5.70	1.12	29.00	1.93	
6.	Recreational	30.00	5.89	148.00	9.87	18-20
7.	Transportation	112.48	22.07	300.00	20.00	12-14
8.	**TOTAL**	**509.74**		**1500**	**100.00**	**-**

The above table shows the land use pattern of Municipal council's administrative boundaries. Maximum land use is for Residential purpose in town ie.44.53%.Commercial and Industrial percentage of use of land is very less 6% and 8% only.

Sex Ratio

Sex Ratio is an important indicator of health and social status of women in society which has direct and indirect bearing on other key indicators like child mortality. Sex ratio of Khargone town is 929 females per 1000 males in 2001 which is lower than district's figure of 949 but higher than state's sex ratio of 919. Sex ratio of Khargone town in 1981 was 890 which increased to 902 in 1991 and further increased to 929 in 2001 showing an improving status of females since last 3 decades which is very encouraging.

Religion

Hinduism is majority religion in Khargone city with 61.50 % followers. Islam is second most popular religion in city of Khargone with approximately 37.23 % following it. In Khargone city, Christinity is followed by 0.18 %, Jainism by 0.56 %, Sikhism by 0.38 % and Buddhism by 0.38 %. Around 0.00 % stated 'Other Religion'; approximately 0.08 % stated 'No Particular Religion'.

Table 4.4: Religion composition

Sr.No	Type of Religion	Followers
1	Hinduism	61.50 %
2	Islam	37.23 %
3	Christianity	0.18 %
4	Jainism	0.56 %
5	Sikhism	0.38 %
6	Buddhism	0.38 %

Social Composition

Social Composition of town is representing the percentage of Scheduled Caste and Scheduled Tribe out of the total population. As per census 2001, 7.6% and 9.1% of the total population are SC and ST respectively, which is also represented in **Table 4.6**

Table 4.5: Social Composition in Khargone Town

Social Composition	Population	Percentage of population
SC	8816	7.59
ST	10583	9.11

Others	75482	83.3
Total Population of Town	**116150**	**100**

(Source: Census, 2011)

Education

Khargone town has average literacy rates of 65.3% with male and female of 57.9% and 42.1% respectively. Khargone town much has lower literacy rate as compared to other urban areas of the district. Table 9. shows how the respondents responded to the question on the distance to the nearest primary school

Table 4.6: Literacy Rate in Khargone:

AREA	NO. OF LITERATES	LITERACY RATES		
		MALE	FEMALE	TOTAL
Khargone Town	56086	72.9%	57.1%	65.3%
District Khargone (Urban)	155767	73.5%	58.2%	66.15%

Income and expenditure

About 74.4% of the surveyed population are in the informal employment while 25.6% are formally employed. The primary source of income for the respondents at 55.7% is service / job; this is followed by a 23% in trading and salaried employment at 14.8% (table 9). The least source of income by the respondents is farm labour and construction work at 3.3%.

Occupational structure

Occupational structure of the populace is the primary indicator of nature of economy and economic base of the town. Occupational structure of the Municipal area has been shown in. Workforce participation rate of the Khargone town is 32. The total workforce of Khargone town is 32% out of this 82.07% are male and only 17.93% are of female workers. The marginal workers in khargone town are 91.38% out of total work force, the male marginal workers are 83.17% and female are 16.83%.

Table 4.7-1: Total Worker of Khargone (2011)

Area	Total Population	Total Workers			WFPR
		Main	Marginal	Total Workers	

		Workers	Workers		
Municipal Area	116150	37163 (31.4%)	33958	71121 (61.23%)	32

Table 4.7-2: Total main Worker of Khargone (2011)

Area	Total Population	Total Workers	Total Main Worker				
			% Workers	Male Workers	% Male worker	Female Workers	% female worker
Municipal Area	**116150**	**37163**	**32.00**	**30500**	**82.07**	**6663**	**17.93**

(Source: Census 2011)

Table 4.7-3: Total Marginal worker of Khargone (2011)

Area	Total Population	Total Marginal Workers	Total Marginal workers				
			% Marginal Workers	Male Marginal Workers	% Male Marginal worker	Female Marginal Workers	% female Marginal worker
Municipal Area	**116150**	**33958**	**91.38**	**28243**	83.17	**5715**	16.83

(Source: Census 2011)

It can be observed from Table 8.1, 32.00% of the working population are main workers having full time employment showing less employment level in town. Out of the total main workers 17.93% are female workers in Khargone town as shown in **Table 4.8**.

Table 4.8: Male-Female Workers in Khargone (2011)

Area	Main Workers			Non Workers(district)		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
Municipal Area	**30500**(82.07%)	**6663**(17..93%)	**33958**(100%)	**434867** (45.63%)	**544060** (59.14%)	**978927** (52.26%)

(Source: Census 2011)

Category of main workers in any area is an actual representative of the important economic activities of the town and thus the same has been shown in **Table 4.9** to understand the economic base of the town. The non workers population of district is 52.26%.

Table 4.9 : Category of Main Workers in Khargone (2011)

Category of Workers	Main Workers	Percentage (%)
Cultivator	1332	4.4
Agricultural labours	3301	10.9
Household Industry Workers	570	1.8
Other Workers	25297	82.9
Total Main Workers	**30500**	**100**

(Source: Census 2011)

It can be observed that 4.4% of the main workers are engaged in primary activities in which are mainly agricultural labourersand 10.9% are engaged in household industries. It is evident from the **Table 4.10** that majority of the main workers are categorised into 'Other Workers' category which includes other than agricultural and household industry workers. 'Other Workers' includes workers engaged mainly in manufacturing industries, trade and commerce, construction activities, transport and communication and other service activities. Thus majority of population is engaged in secondary and tertiary sector activities in Khargone town.

Gender ratio in Earning Population

Ratio of working population above 18 years of age is 29% of the sample population. So far as women's share in working population is concerned the PIA reveals a picture with only 5% of

women gainfully employed. **(Table.4.11)** This may be due to "invisibility" of women in work force, which is more common in rural Bihar where women of both caste Hindu and Muslim families are customarily not allowed to work outside home. Besides, enumeration of working women is not favored among the male dominated rural interior society. It has also been noticed that 962 persons out of 1864 population belonging to 15-59 years age-group are gainfully engaged. This amounts to about 52% of the active population of 15-59 years. This also indicates a working ratio that is less than the potential workers.

Table 4.11: Working status by Sex

Working Status	**No. population**	**% to T. Population**
Male (18+ yrs)	**30500**	**26.26%**
Female (18+ yrs)	**6663**	**5.73%**
Total worker	**37163**	**32%**

Source: *Census 2011*

Vulnerability

Almost 35% of sample households belong to vulnerable categories (***Table.4.12***). While 31 percent of the population lives below poverty line which also includes the Schedule Caste household belongs to BPL, households with disabled members account for nearly 2 percent. Scheduled Caste households account for 15 percent. There are only Five Women headed households. Scheduled Tribe family has been recorded 10 percent among the sample households.

Table 4.12: Vulnerability

Type of vulnerability	**No. HH.**	**% to Total HH**
BPL	9344	7.86%
Family with disabled member	1452	1.24%
Scheduled. Tribes	10583	10.2%
WHH	2149	1.85%

Source: *Census 2011*

Unorganised Commercial Streets

Khargone town has retail and wholesale markets for special agricultural tools, agricultural products and related manufacturing products. There are wholesale markets for vegetables, hardware, medicines, agricultural products and agro based industrial products from which town and its surrounding areas fulfil their daily needs. In addition to above hardware, iron, construction material, auto parts, and agricultural tools are the major items of retail and wholesale market of Khargone. Major retail and wholesale products and prominent location of their markets are represented in **Table 4.13**. Due to lack of space for commercial activities, shops on footpaths and stalls on road sides have established creating traffic congestion on roads. These informal shops are concentrated on Khandwa road, Sanawad road, Bistan road, Talab chowk, Aurangpura and near Bawadi bus stop etc.

Table 4.13: Location of Various Types of Retail and Wholesale Markets

S. No.	Type of Commercial Activities	Major Location
1	Sukha Meva, Grossery Shop	Mahatma Gandhi Marg, Hospital road, Jawahar Nagar, Tilak Path, Bistan road
2	Hardware, construction material, auto parts and agricultural equipments	Diversion road, Sanawad road, Bistan road
3	Cycle parts and Repair shop	Bistan road, Khandwa road, Tilak path
4	Cloth, Readymade Garments Shops	Bistan road, Khandwa road, Mahatma Gandhi road, Hospital road
5	Plastic, Glass, China Clay potteries	Mahatma Gandhi Marge, Diversion road
6	Gold & Silver Jewellery	Mahatma Gandhi Marg, Hospital road, Jhanda chowk to Bawdi Marg
7	Commercial Offices	Tilak Road, Bistan road, Jawahar Marg
8	Vegetable and Fruit market	Back of krishna talkies, near city post office, Talab chowk
9	Books and Stationary	Mahatma Gandhi Marg
10	Timber market, wooden furniture and wood	Depot Diversion road, Umarkhali road, Talab chowk, Bistan road, Julwania road
11	Utensils Market	Hospital road, Mahatma Gandhi Marg
12	Electrical equipments	Bistan road, Hospital road

13	Medical Stores	Hospital road, Sanawad road and Mahatma Gandhi Marg
14	Truck Body Making	Bistan Road
15	Truck Repairing/Mechanic Nagar	Khandwa Road

(Source: Master Plan 2011)

BPL population and Identified Slums

Table 4. 14. Below poverty line population

District	Below poverty Line				
	Population	Population below poverty line	% of Population below poverty line	Number of Households below poverty line(based on Avg. HH size)	Number of Households below poverty line (based on Avg. HHD size of BPL hhd
Khargone (West Nimar)	234855	106848	45.5	19871	18595

Source: State planning commission

Slums

A survey has been done by Municipal Council in 2007 to identify the slum pockets in Khargone Municipal Area under Integrated Slum Housing and Development Programme. During this survey it was identified that 42600 population are Below Poverty Line and 54450 population are living in slums in Khargone town. Apart from this town also have population of pavement dwellers which are homeless, are among the poorest in city for which there is no estimation. It was observed during survey that slum pockets have been scattered in all the wards. Slum population in each of the 33 wards identified as per survey done under IHSDP scheme is shown in **Table 4.15**.

Table 4.15 : List of Identified Slums of Municipal Council Khargone

Ward No.	Name of the Ward	Ward Population (2001 Census)	Slum Population (as per IHSDP)
1	Harijan Ward	1500	1000

2	Siddhant Ward	2326	1900
3	Haider Mastan Ward	2667	1500
4	Nag Mandir Ward	4591	800
5	Circuit House Ward	4766	2500
6	Bohara Bakhal Ward	1447	900
7	Dr. Ambedkar Ward	3166	1600
8	Mahajan Ward	1278	900
9	Bakimata Ward	1131	650
10	Hanuman Mandir Ward	2582	1700
11	Ravindra Ward	3109	2400
12	Nutan Nagar Ward	3313	2600
13	Sahakari Bank Ward	3414	2650
14	Balwant Kunj Ward	3187	850
15	Dr. Jakir Husain Ward	1886	1350
16	Tekdi Ward	1556	1100
17	Geruwa Darwaja Ward	2744	1600
18	Hajariram Mandir Ward	1150	850
19	Imalipura Ward	1872	1350
20	Taiwadi Ward	1720	1500
21	Kaharwadi Ward	1801	1300
22	Kaladewal Ward	1556	1200
23	Kajipura Ward	5824	1700
24	Goshala Ward	2154	1900
25	Shri Krishna Mandir Ward	1599	1300
26	Shri Ram Mandir Ward	1885	1200
27	Raghuvanshi Ward	1876	1450
28	Bhilat Mandir Ward	3287	2800
29	Bajrang Mandir Ward	3812	2100
30	Indira Nagar Ward	3701	2600
31	Sanjay Nagar Ward	5059	4100

32	Aurangpura Ward	2002	1800
33	Navgrah Mandir Ward	1929	1300
	Total	**85890**	**54450**

(Source: Integrated Housing and Slum Development Programme Scheme Report, 2007)

SOCIAL SECURITY SCHEMES

Five major social security pension schemes were launched in Khargone. Schemes and beneficiaries of each of the schemes is represented in **Table 4.16.**

Table 4.16 : Social Security Schemes and their Beneficiaries

S. No.	Social Security Schemes	Beneficiaries
1	Rastriya Pariwar Sahayata	300
2	Deen Dayal Bima Yojna	100
3	Deen Dayal Antyodaya Upchar Yojna	220
4	Samajik Surakasha Pension Yojna	150
5	Janani Surakha Yojna	330
	Total	**1100**

(Source: Integrated Housing and Slum Development Programme Scheme Report, 2007)

TOURISM AND CULTURAL SIGNIFICANCE

Khargone and its neighborhood are full of places of interest. The main tourist attractions include,

a) Shree Navgrah Mela

The fair is held at the Mela Grounds situated near the banks of river Kunda, near the famous Navagraha temple. The name 'Navgraha Mela' is itself derived from the Navagraha mandir (temple), which is the temple devoted to the nine planets (Nav-grahas) and the god 'Sun'. Besides attractions, such as 'circus' or 'moving theatres' and amusement rides for children and youth, A significant feature of the event is a large market with hundreds of stalls selling a wide variety of goods. A large amount of business is generated by this fair every year in Khargone. Food and cuisine is also an important attraction, with many different local cuisines available.A separate

cattle and livestock market also takes place during the fair where various animals such as cows, goats and calves are brought from nearby villages and areas for exchange and sale.

b) Nimar Utsav

During this event, different arts and cultural programs are held, such as displays of different dance forms and the cultural aspects of Nimar. Many tourists attend the event every year.

Outcomes of the Baseline study:- The present population is approximately 116150 (2011 census), of the total population of town the male are 51.44% and female are 48.56%.Scheduled Caste population comprises 7.59% whereas tribal population constitutes a mere 9.11% of the total population.Khargone town has average literacy rates of 65.3% with male and female of 57.9% and 42.1% respectively. Khargone town has lower literacy rate as compared to other urban areas of the district. Khargone Municipal Area has been divided into 33 wards for development and administrative purposes. The total households of Khargone city are 22448.

The subproject components locations are in subproject town and their surroundings. The intake will be located close to river bank on government land, while the WTP including clear water sump will be located in the the existing WTP premises (close to the intakes where sufficient government land is available). These facilities are located outside the town, and are mostly surrounded by agricultural lands and river bed . None of the components however located on any forest land. Rest of the components – water tanks, distribution lines, connections etc., will be located within the urban areas. The raw water transmission pipes, connecting intake and WTP, will be essentially outside the town, and clear water transmission pipes, from WTP to distribution reservoirs, will be partly outside and partly within the town. Project area experience a subtropical climate, typical to north India, hot summers, cold and dry winters and monsoon rains. While there is no natural habitat left within the town area, the area near river intakes are comparatively intact though most of the lands there too converted into agricultural use. There are no protected areas, like wildlife sanctuaries, national parks, nor there are any historically, archeologically protected areas in the vicinity.

CHAPTER 5

ASSESSMENT OF ANTICIPATED IMPACTS

5.1 Introduction

This Chapter identifies and discusses both positive and negative impacts associated with the proposed project and their mitigation measures. The anticipated impacts and corresponding mitigation measures are discussed in Phases namely: design, construction, operation and decommissioning Phases. This chapter focuses on the prediction and assessment of impacts on the various ES components due to the project activities. Based on the magnitude and duration of the project activities, the nature, duration and extent of impact are assessed. Minor project impacts have also been identified and basis for their insignificance has been provided. Wherever relevant, the EMP/SMP also addresses the minor impacts and provides environmental and social mitigation / environmental enhancement measures.

5.2. Environmental Impact

In the proposed WSS, direct and/or indirect impacts are generated which are rather short-term as they are felt and manifested during the actual performance of the construction activities. It is expected that impacts from these types of activities will cease once the contractor completes the project and demobilizes from the site. Following table shows the influence area of the proposed sub project components:-

Table 5.1: Influence area details of proposed Khargone WSS

S.No.	Components	Influence Area	Description of Construction activity and impacts
1.	**Intake Well-** R.C.C. intake well of 9.0 m diameter and 9 m height.	1 km upstream and 1km downstream of river	• Influence area of Intake well covers 1km u/s and 1km d/s length of Kunda river, but there is no noticeable aquatic life and flora & fauna present in the influence • Intake well cum pump house will involve construction within the water body. An enclosed area (about 10 m dia) will be created at the selected site using temporary barriers like sand bags or sheet piles and the water will be pumped out to make the area dry for construction. Once this is created, the rest of the construction will follow the general construction procedures to create a RCC well of size 9 m diameter. Once the work is over, the temporary barriers will be removed, hence construction activity have temporary and moderate impacts. (Detailed contruction impacts and mitigation measures are given in section • Construction of intake well in the reservoir

			may lead degradation of water quality due to increase in turbidity and chemical contamination from fuels and lubricant used in construction work. Increase in silt content and water turbidity, chemical quality can affect the aquatic life, silting/chocking of spill ways/ canals etc., Though there are no notable aquatic life, to ensure that any negative impacts are mitigation, the contractor will be required to take necessary mitigation measures. (Given is section and table
2.	**RWPM**-Approx. 1.4 km length and 700 mm dia	1.5 m each side- Along the pipe line laying	• In one side of Influence area BT road is present and on other side vacant land is present, so there is no noticeable impacts in the influence area. • Civil works in the RWPM include linear excavation for laying pipes along the roads, placing pipes in the trench and refilling with the excavated soil. Thetrenches will be of 1.2 m wide and 1.5- 2.0 m depth.
3.	**WTP-** Construction of 35 MLD capacity (Design demand for 2033)Rapid Gravity Filter based Treatment Plant with Clear Water Sump is proposed.	200 m dia	• Influence area of WTP site covers vacant government land and agricultural land, hence influence area of WTP site does not cover any environmental impacts. • WTP construction works will be confined to sites, and construction will include general activities like excavation for foundation, construction of foundations, columns, walls and roof in cement concrete and masonry, and fixing of mechanical and electrical fixtures, etc.
4.	**CWRM-** Provision, laying and jointing of 300 mm – 800 mm 15385 m long Ductile Iron:Class-K9, length of the clear water rising main is long clear water pipe line to carry 40.94mld water from proposed Treatment Plant to Over Head Tank is proposed.	1.5 m each side - Along the pipe line laying	• In one side of Influence area BT road (PWD road) is present and on other side vacant land is present, so there is no noticeable impacts in theinfluence area. • Civil works in the CWRM include linear excavation for laying pipes along the roads, placing pipes in the trench and refilling with the excavated soil. The trenches will be of maximum 1.2 m wide and 1.5 m depth. • Detailed contruction impacts and mitigation measures are given in section 5.2.2

5.	**OHT**-four overhead tanks each of 2250KL capacity is proposed at Khargone town	Influence area should be at least 100 m either of the OHT	• All the overhead tanks are proposed on government vacant land, hence there is no sensitive area comes under influence area of OHTs sites. • Detailed contruction impacts and mitigation measures are given in section 5.2.2
6.	**Distribution Network**-The town has been divided into seven zones having three existing and four elevated service reservoirs. The total length of the proposed network is around 174064 m of diameter 110 mm to 200 mm HDPE PN 6 pipe and 300 mm-400 mm DI K-9 Pipe. The minimum size of pipeline taken is 110 mm as per CPHEEO manual for population less than 50000.	The whole town is influenced by this activity.	• Construction activity: Earth work excavation will be undertaken by machine (backhoe excavator) and include danger lighting and using sight rails and barricades at every 100 m., while pipe laying workswill include laying pipes at required gradient, fixing collars, elbows, tees, bends and other fittings including conveying the material to work spot and testing for water tightness. Sufficient care will be taken while laying so that existing utilities and cables are not damaged and pipes are not thrown into the trenches or dragged, but carefully laid in the trenches. As trenches are a maximum of 1.2 m, there is no risk of collapse of trenches or risk to surrounding buildings. Once they are laid, pipes will be joined as per specification and then tested for any cracks of leakages. The minimum working hours will be 8 hours daily, the total duration of each stag depends on the soil condition and other local features. About 95% of the excavated soil willbe used for refilling the trench after placing the pipe and therefore residual soil after pipe laying and refilling is not significant. This soil shall be used for construction of WTP in ground leveling. • Excavation along the roads, hauling of construction materials andoperation of equipment on-site can cause traffic problems. Roads in the core/old town area of Khargone are very narrow. However, most of the roads are used bypedestrians and two wheelers, and four wheelers vehicles are very limited. Potential impact isnegative but short term and reversible by mitigation measures. • Detailed contruction impacts and mitigation measures are given in section 5.2.2

5.2.2. Construction Phase Impacts

1. Positive Impacts

(i). Employment opportunities:With the construction of the proposed Project, there will be employment opportunities for both skilled and unskilled workers. This will be beneficial both from the economic and social point of view. Economically, it means abundant unskilled labour will be used in production. Several workers including casual labourers, plumbers and engineers are expected to work on the site for a period of time. Semi-skilled, unskilled and formal employees are expected to obtain gainful employment during the period of construction.With labour intensive construction technologies, the project will provide employmentfor youths and provide support to the GoMP initiatives on creation ofjobs.

(ii). Creation of a market for construction: The Project will require materials, some of which will be sourced locally and someinternationally. These include plant (pump sets, switch gear, instrumentation) pipes,valves, cement, sand and chemicals. This will provide a ready market forsuppliers in and outside the project area.

1. Negative impacts during construction

The following negative impacts are associated with the construction of the proposedProject:

(i). Interference with the physical setting: The proposed project could result into the following negative impacts to the physicalsetting:

- Changes in the local topography during site grading, development of treatmentsystems and laying of pipes among others (CWRM may disturb the natural drain along the RoW)
- Blockage of natural drainage system at differennt crossing points
- Excavation for creation of access routes and related structures

Mitigation:

- The design shall in no way propose to implement developments that will hinderdrainage, change the topography or introduce physical changes that are not inharmony with the physical setting of the Project area;
- The structures to be developed should be aesthetically acceptable to blend in withthe surrounding. These structures should not form or end up being used by the resident population as access or bridges;
- The proponent shall as much as possible complete the works in such a way thatnatural aesthetics shall be retained at the locations;
- Restoration shall be undertaken to ensure that the original setting is as much aspossible retained.

(ii). Interruption of existing installations on the pipeline route: The various installations will cross, move in or move along installations among them:

- Property accesses;
- Roads
- Underground utilities e.g. electricity and telephone links; and
- Fences and structures.

These services are critical and have implications with spillover effects on the social andeconomic performance.

Mitigation:

- Formal request for permission to cross, break in and build the water pipeline shouldbe sought from affected property owners and the relevant institutions such as MPEB;
- Formal engagement should be done with key land and other property ownersneighbouring the pipeline;
- Ensure dissemination of relevant information to each of the affected parties;
- A work plan with clear responsibilities for each party should be developed to ensuresmooth execution of the construction.

(iii). Noise generation: Construction of the proposed Project will most likely result in noise emissions as aresult of the machines that will be used e.g. excavation equipment and construction vehicles delivering materials to site.Significance of noise impacts depends on whether the Project would increase noiselevels above the existing ambient levels by introducing new sources of noise. Noise impacts would be considered significant if the Project would result in the following:

- Exposure of persons to, or generation of, noise levels in excess of standardsestablished in the local general plan or noise ordinance, or applicable standards ofother agencies;
- Exposure of persons to, or generation of, excessive ground-borne vibration orground-borne noise levels;
- A substantial permanent increase in ambient noise levels (more than 3 dBA) in theproject vicinity above levels existing before the project; and
- A substantial temporary or periodic increase in ambient noise levels in the projectvicinity above levels existing before the project.
- The Proponent through the Contractor shall put in place several measures that will mitigate noise pollution arising during the construction phase.

Mitigation

- Install portable barriers to shield compressors and other small stationary equipmentwhere necessary;
- Use of quiet equipment (i.e. equipment designed with noise control elements);
- Limit pickup trucks and other small equipment to a minimum idling time andobserve a common-sense approach to vehicle use, and encourage workers to shut offvehicle engines whenever possible;
- Provision of appropriate personnel protective equipment;
- Construct mainly during the day; and
- Consider labour based construction methodologies.

(vi). Dust emissions: Dust will be emitted during excavation and related earthworks. Air-borne particulatematter pollution is likely to occur during the route clearance and excavation. This is likely to affect site workers, in extreme situations leading to respiratory problems.

Mitigation:

- Minimizing the number of motorised vehicles on use;
- Provide scour checks on over-15% slopes or when working in loose soils;
- Use predetermined tracks;
- Avoiding machinery working in seasonally marshy areas, pans and floodplains;
- Wet all active construction areas as and when necessary to reduce dust;
- Undertake staff training and allocate roles to trained/responsible staff members.

(v). Disposal of spoil: Project construction will involve earthworks and excavation. This will result in thegeneration of some spoil materials. But there will be little carting away of excavatedmaterial. The soils may affect the surrounding environment if not adequately disposed.

Mitigation:

- Maximize the re-use of excavated materials in the works as far as feasible to ensurethat no permanent spoil dumps are created;
- Properly dispose off the spoil in the identified by the design team and approved bythe confirmed land owners;
- Care should be taken to avoid spoil location in land that could otherwise be used forproductive purposes.

(vi). Solid waste generation: Solid wastes generated from the construction activities are excess excavated earth (spoils), discarded construction materials, cement bags,wood, steel, oils, fuels and other similar items. Domestic solid wastes may also be generatedfrom the workers' camp. Improper waste management could cause odor and vermin problems,pollution and flow obstruction of nearby watercourses and could negatively impact thelandscape.

Mitigation:

- Construction waste should be recycled or reused as much as possible to ensure thatmaterials that would otherwise be disposed off as waste are diverted for productiveuses;
- The Proponent shall put in place measures to ensure that construction materialsrequirements are carefully budgeted and to ensure that the amount of constructionmaterials left on site after construction is kept minimal;
- Minimization of solid waste during construction of the proposed Project throughuse of durable, long-lasting materials that will not need to be replaced often,thereby reducing the amount of construction waste generated over time;
- Skips and bins should be strategically placed within the campsite and constructionsite, they should also be adequately designed and covered to prevent access byvermin and minimize odour. They should also be emptied regularly;
- Measures to ensure that waste materials from the Project are disposed at suitablesites will be taken. These will include engaging only reputable truckers and conducting appropriate spot checks to verify that disposal are done in accordance with the requirements of MSW rules;

(vii). Vegetation loss: The construction of the proposed project will involve clearing of vegetation coverespecially in proximity to proposed developments. During construction, a small amountof vegetation will be cleared to give way for the proposed water pipelines and watertreatment plants. Riverine vegetation will also be cleared around the Kunda river. Not only may vegetation be lost, but also faunal habitatsmay also be lost or at least partly destroyed. In addition, the removal of areas ofvegetation could mean that the same degree of interception will no longer occur, andconsequently increased run-off might be expected. However, the significance of thevegetation loss during the site clearance is minimal.

Mitigation:

- The Contractor will ensure proper demarcation of the Project area to be affected bythe construction works;
- Strict control of construction vehicles to ensure that they operate only within thearea to be disturbed by access routes and other works;
- Retention of trees and shrubs, where possible on the potential sites for screening ofthe visual impact;
- Where the proposed route requires the removal of any vegetation, care will betaken to minimize the destruction or damage of trees.
- Replanting of destroyed trees in cleared areas where works are complete.

(viii). Workers accidents and hazards: Construction workers are likely to have injuries and hazards as the construction worksunavoidably expose workers to occupational health and safety risks. The workers are also likely to be exposed to risk of accidents and injuries resulting from accidental falls and injuries from hand tools and construction equipment.

Mitigation:

- To reduce the workers accidents and hazards the Proponent will develop andcommit the Contractors to Site Occupational Health and Safety rules
- All construction workers should be advised of the dangers associated withconstruction work;
- Workers should be provided with suitable personal protective equipment (PPE);
- Provision of adequate sanitary facilities to workers;
- Train all workers on Safety Health and Environment (SHE) with an aim ofimproving awareness;
- Where construction activities interfere with the movement of traffic, the siteshould be signed and controlled by trained flagmen/flag women and lit by night.

5.2.3. Operation Phase Impacts

1. Positive impacts during operation: Just as in the construction phase, there are positive impacts associated with theoperation phase of the proposed Project. These positive impacts are discussed below.

(i). Improved water quality and quantity: Improved water quality will in turn reduce exposure to water borne diseases to theconsumers. General hygiene in the served area will improve through use of acceptablewater quality. Markets and communities within Khargone town will greatly benefitfrom the project.

(ii). Reduced exposure to health risks and improved nutrition: Improved water quality for domestic consumption reduces the risk to the health of theconsumers and dependants of water resources that could translate into financial savingthrough less related expenditures.

(iii). Improved performance and living standards within the project area: Water provision is one of the goals for 2018. It istherefore envisaged that the continued existence of the project area as a sustainablesettlement is reliant of the supply clean potable water for each and every person. Thiswill immensely contribute to the property value, land value and aesthetic value of theProject area while ensuring that the population in this area remains healthy andproductive.Accesses to water will in the long term result in improved income levels and health ofthe people, this

consequently leads to poverty reduction. Reduced distances travelledand time used to collect water is then put to economic activities.

2. **Negative impacts during operation phase:** The following negative impacts are associated with the proposed Khargone Water Supply Scheme.

(i). Reduced downstream flows: The construction of water treatment plants at the bank of Kunda river may lead toincreased abstraction of water from River. Thedownstream flow is likely to be affected as a result of over abstraction. However, thisimpact is expected to be minimal because no additional abstraction will be done at theexisting intake sites.

Mitigation:

- There should be due adherence to the safest maximum abstractable water quantitiesof throughout the project life;
- Adhere to WRD water use permits;
- The Proponent shall monitor the hydrology to determine whether there is reduceddownstream flow.

(ii). Increased domestic wastewater generation: The proposed Project will result in increased wastewater generation through theintroduction of more water in the system. This may lead pollution of the environment.The urban region in Khargone do not have proper conventionalsewerage infrastructure. Residents rely on pit latrines and septic tanks for sewerdisposal and gray water through surface drain to farmland for irrigation and goes finally in river Kunda.

Mitigation

- Plans should be put in place by the UADD/MPUDC on how to address sewer and waste water especially in fast growing towns like Khargone.

.(iii). Sludge management:One of the main by-products resulting from the treatment plant activities is sludge.This sludge will be kept on site temporarily before disposal or other uses such as use asfertilizer. The sludge, if not properly managed can have impacts on water quality,health of people around the plant, aquatic life and the natural habitat.

5.3.Social impacts

The study has predicted and evaluated anticipated impacts using acceptable standardmethods of impact prediction and evaluation. The significance of impacts is subjective,and expert judgments were used. Public participation and consultation with a widesector of the community were conducted to reduce uncertainty. Table 5-1 belowsummarizes the anticipated environmental problems observed which may be createdby the project.

Table 5-2: Summary of social impacts

Social Impact	Impact/ No impact	Direct/ indirect	Temporary /permanent	Major / Minor	Occurrence	
					Design and Construction	Operation

loss of dwelling land and structure	No impact	indirect	Temporary	minor	Y	
loss of agricultural land and structure	No impact	indirect	Temporary	minor	Y	
loss of commercial/ industrial/ Institutional land and structure	No impact	-	-	-	-	
Social Impact	Positive/ negative	Direct/ indirect	Temporary /permanent	Major / Minor	Occurrence	
					Design and Construction	Operation
loss of access to common resources and or facilities	impact	direct	temporary	minor/ major	Y	
losses to host communities	No impact	-	-	-	–	
impact on indigenous people	No impact	indirect	temporary	minor	Y	Y
any induced development	No impact	-	-	-	–	
impact on CoI (linear corridor)	impact	direct	temporary/ permanent	minor	Y	Y
Employment opportunities	Positive	Direct/ Indirect	Permanent/ Temporary	Major	Y	Y
Creation of awareness	Positive	Direct	Permanent	Minor	Y	
Creation of markets for construction material	Positive	Direct	Permanent	Minor	Y	
Increased water quality and Quantity	Positive	Direct	Permanent	Major	-	Y
Improved performance and living standards of the residents withintheprojectarea	Positive	Direct	Permanent	Major	-	Y
Creation of Wealth	Positive	Direct	Permanent	Minor	-	Y

Reduced exposureto health risks and improved nutrition	Positive	Direct	Permanent	Major	-	Y
Sustainability of the Water Service Providers	Positive	Direct	Permanent	Major	-	Y
Enhanced gender and participation in development	Positive	Indirect	Permanent	Minor	-	Y

Social impact	Positive/ negative	Direct/ indirect	Temporary /permanent	Major/ Minor	Occurrenc	
					Design and Construction	Operation
Education benefits to girl child	Positive	Indirect	Permanent	Minor	-	Y
Interference with the physical setting	Negative	Direct	Permanent	Minor	Y	Y
Interruption of existing installations on the pipeline	Negative	Direct	Permanent	Major	Y	-
Landtake	Negative	Direct	Permanent	Major	Y	-
Accidental spills and leakages	Negative	Direct	Temporary	Minor	Y	-
Worker accidents and hazards	Negative	Direct	Permanent	Major	Y	Y
Increased water demand	Negative	Direct	Temporary	Minor	Y	-
Immigration and settlement	Negative	Direct	Temporary	Minor	Y	-
Growth of unplanned settlements	Negative	Indirect	Temporary	Minor	Y	-
Child labour	Negative	Direct	Temporary	Minor	Y	-
Indigenous people participation	Positive	Direct	Permanent	Major	Y	Y

Positive impacts during planning and design phase:

Employment opportunities

With the planning and design phase of the proposed Project, there will be employment opportunities especially for professionals. Those involved in planning and designinclude engineers, surveyors, valuers, environmentalists and sociologists among others.Those employed will improve their living standards from the fees they will be paid fortheir services.

Creation of awareness

During the planning and design phase of the proposed Project, the community will beinformed of the Project and their views sought on the Project. In this way, awarenesswill be created for both

the community and the Proponent. The Proponent will also bein a position to put into practice the useful advice from the community when planningand designing the Project.
Further, there will be enhanced interaction between key parties including governmentand private institutions in the Project area. The key players in this process shall include Officials, relevant departments and the local community in the Project area. Theadministration will also be of vital importance in thedisclosure.

Negative impacts during planning and design phase

The Consultant will mobilise a large team of skilled and unskilled human resource toundertake the surveys and other studies required to complete the designs. Among theactivities to be undertaken are excavations for beacons and control stationsestablishment. These studies shall however not allow for large scale destruction anddisturbance of vegetation and soils.
Mobilisation of the skilled and non-skilled labour and the process of disclosure andconsultations among the residents and other stakeholders shall however lead toheightened expectations and speculations.
With the foregoing, it is envisaged that there will be minimal to no negative impactsduring the planning and design stage.

Mitigation:
Impacts during this phase of the project are not significant. However, the DesignTeam shall take necessary measures to document any concerns and address them onas they occur. In that regard, the Design Team shall incorporate an EnvironmentalExpert in the team and take time to sensitise and alert the residents of the ongoings.

Positive impacts during construction phase

Employment opportunities

With the construction of the proposed Project, there will be employment opportunitiesfor both skilled and unskilled workers. This will be beneficial both from the economicand social point of view. Economically, it means abundant unskilled labour will be usedin production. Socially these people will be engaged in productive employment andminimise social ills like drug abuse and other criminal activities.Several workers including casual labourers, plumbers and engineers are expected towork on the site for a period of time. Semi-skilled, unskilled and formal employees areexpected to obtain gainful employment during the period of construction.With labour intensive construction technologies, the project will provide employmentfor youths and provide support to the Government initiatives on creation ofjobs.

Creation of a market for construction

The Project will require materials, some of which will be sourced locally and some nationally based on standards. These include plant (pump sets, switch gear, instrumentation) pipes,valves, cement, sand, hardcore and chemicals. This will provide a ready market forsuppliers in and outside the project area.

Negative impacts during construction

The following negative impacts are associated with the construction of the proposedProject.

Interference with the physical setting

The proposed project could result into the following negative impacts to the physicalsetting:

- Changes in the local topography during site grading, development of treatmentsystems and laying of pipes among others;
- Blockage of natural drainage system at valley crossings;
- Excavation for creation of access routes and related structures; and
- Development of informal business depending on the intensity of labour import.

Mitigation:

- The design shall in no way propose to implement developments that will hinderdrainage, change the topography or introduce physical changes that are not inharmony with the physical setting of the Project area;
- The structures to be developed should be aesthetically acceptable to blend in withthe surrounding. These structures should not form or end up being used by theresident population as access or bridges;
- The proponent shall as much as possible complete the works in such a way that natural aesthetics shall be retained at the locations;
- Restoration shall be undertaken to ensure that the original setting is as much as possible retained.
- Damages to public utilities shall be restorated with in time limits.

Interruption of existing installations on the pipeline route

The various installations will cross, move in or move along installations among them:

- Property accesses;
- Roads
- Underground utilities e.g. electricity and telephone links; and
- Fences and structures.

These services are critical and have implications with spillover effects on the social and economic performance.

Mitigation:

- Formal request for permission to cross, break in and build the water pipeline should be sought from affected property owners and the relevant institutions .
- Formal engagement should be done with key land and other property owners neighbouring the pipeline;
- Ensure dissemination of relevant information to each of the affected parties;
- A work plan with clear responsibilities for each party should be developed to ensure smooth execution of the construction.

CHAPTER 6

STAKEHOLDER AND PUBLIC CONSULTATION

6.1 Background

Public consultation is useful for understanding likely impacts, determining community and individual preferences, selecting project alternatives and designing viable and sustainable mitigation and compensation plans. Extensive public consultation meetings for the Khargone Water Supply Project took place while undertaking this EIA study. The main objective for the consultation process was to involve the community at the very early stages so as to identify likely negative impacts and find ways to minimize negative impacts and enhance positive impacts of the project.

6.2 Objectives of the Public Consultations

The overall goal of the consultation process is to disseminate project information and to incorporate the views of the project beneficiaries and Project Affected Persons (PAPs) in the design of the mitigation measures and a management plan. The specific aims of the consultation process are to:

- Improve project design and, thereby, minimize conflicts and delays inimplementation;
- Facilitate the development of appropriate and acceptable entitlement options;
- Increase long term project sustainability and ownership;
- Reduce problems of institutional coordination;
- Make the resettlement process transparent; and
- Increase the effectiveness and sustainability of income restoration strategies, andimprove coping mechanisms.
- An important element in the process of impact assessment is consulting withstakeholders to gather the information needed to complete the assessment. The mainobjectives of community consultations were to:
- Provide clear and accurate information about the project to the beneficiarycommunity;
- Obtain the main concerns and perceptions of the population and theirrepresentatives regarding the project;
- Obtain opinions and suggestions directly from the affected communities on their preferred mitigation measures; and
- Identify local leaders with whom further dialogue can be continued in subsequent stages of the project.

6.3. Public consultations scheduled

Public sensitization and inclusion meetings were held within the wards of the project area from 18th April' 2016 to 19th April' 2016 with the help of respective local administration and the elected representatives. A total of 9 meetings were held as shown in **Table 6-1** below, with enthusiastic community members. The attendance lists and minutes of meetings are presented in **Appendix 5.**

Table 6-1: Second round of Public consultation during ESA

S. No.	Date	Ward no.	Venue	Number of Participants	
				M	**F**
1.	18-4-2016	Ward No. 01	At main road.	12	08
2.	19-4-2016	Ward No. 03	Near saraswati Vidya Mandir	14	05
3.	18-4-2016	Ward No. 06	At Old Housing Chouraha	12	02`
4.	18-4-2016	Ward No. 14	At Anjuman Nagar	10	09
5.	18-4-2016	Ward No. 15	Near Mohan Talkies	12	09
6.	18-4-2016	Ward No. 17	Near Dr. Khan's clinic.	17	10
7.	18-4-2016	Ward No. 19	At Shri Krishna ward	12	10
8.	18-4-2016	Ward No. 21	Near Temple, at Ganesh Chowk.	18	12
9.	18-4-2016	Ward No. 20	At Moti mata ward	10	07
10.	19-4-2016	Ward No. 28	At Nutan Nagar	12	09
		Grand Total		**209**	

Table 6-2: Public Consultation Details

S. No.	Ward no.	Location	Date	Participants	Issues Raised/Discussed	Suggestion from Participants	Mitigation Measures
1	**1**	**Khargone** **Ward No. 1**	**18.04.16**	Local Residents, Shopkeepers and Public representative of ward-01 **Total 20** **Participants**	The Project Background,Environmental, Social, traffic safety issue and benefit from the project were explained to the Stakeholders. • For Safety of Local Traffic as well as to reduce the traffic congestion which interns reduce the noise and air pollution • The Consultants Team raise the issue for the hike in monthly water tariff for proper operation and maintenance of water supply system for 30yrs	The main suggestion of participants was: • Peoples also demanded for proper traffic signage for speed limits for minimising the accident • The people who can afford the hiked water tariff gave consent ,but those are from low income group reacted on this issue and demanded subsidy	The suggestion was noted down and forwarded to the high official for proper compliances The costing incorporated in Detailed project report. 1.As water policy of state under draft stage suggestion/problem of the community people helps in finalizing the draft policy. 2.Ground level views help in proper implementation of project
2	Ward No. 03	Near saraswati Vidya Mandir	19-4-16	Local Residents, And public representative of ward 03 **Total 19** **Participants**	The Project Background, Environmental, Social, traffic safety issue and benefit from the project were explained to the Stakeholders. • Ward is having acute shortage of water in summer it get worse and not able to access Quality water • The Consultants Team raise the issue for the hike in monthly water tariff for proper operation and maintenance of water supply system for 30yrs	The main suggestion of participants was: • The community gave suggestion regarding water connection. They will take connection only when they get sufficient water through out the year. • As present water tariff is Rs. 30 only three times it get hiked .the suggestion from people came that not to hike immediately as the supply gets start	It is being in the Project that 135LPCD given to the whole population covered under town Suggestion are noted down. The decision will be taken by local body representatives this has been discussed with them

						properly than people get convinced and get ready to pay.	
3	Ward No. 06	At Old Housing Chouraha	18-4-2016	Local Residents, And public representative of ward 06 **Total 14 Participants**	The Project Background, Environmental, Social, traffic safety issue and benefit from the project were explained to the Stakeholders. • Besides above issues the following issues discussed with the community • Road Side Water logging due to presence of Built-up Zone on either side. • Effect of Noise and Dust Pollution during construction and after construction. • Safety of Local traffic and pedestrian in Built-up Zone	The main suggestion of participants was: • Provision of Drain in Built-up Section to eliminate the issue of road side water-logging • For Safety of Local traffic and pedestrian in Built-up Zone, footpath should be provided. • Adequate provision for minimizing the Dust and Noise Pollution during	The suggestion was agreed and Incorporated • Proper traffic signage shall be provided for speed limits. • Proper EMP shall be fiinalise to minimise Dust and noise Pollution during Construction work in Built-up Zone. • Proper Improvement of Major Cross Junction on main roads included in design for minimising the Traffic Congestion as welll • to minimise the Noise, Dust and air pollution in Built-up Section.
4	Ward No. 14	At Anjuman Nagar	18-4-16	Local Residents, And public representative of ward 014 **Total 18 Participants**	The Project Background, Environmental, Social, traffic safety issue and benefit from the project were explained to the Stakeholders. • For Safety of Local Traffic as well as to reduce the traffic congestion which interns reduce the noise and air pollution • The Consultants Team raise the issue for the hike in monthly water tariff for proper operation and maintenance of water supply system for 30yrs	The main suggestion of participants was: • Peoples also demanded for proper traffic signage for speed limits for minimizing the accident • The people who can afford the hiked water tariff gave consent ,but those are from low income group reacted on this issue and demanded subsidy	The suggestion was noted down and forwarded to the high official for proper compliances The costing incorporated in Detailed project report. 1.As water policy of state under draft stage suggestion/problem of the community people helps in finalizing the draft policy. 2.Ground level views help in proper implementation of project

5	Ward No. 15	Near Mohan Talkies	18-4-16	Local Residents, And public representative of ward 15 **Total 21 Participants**	The Project Background, Environmental, Social, traffic safety issue and benefit from the project were explained to the Stakeholders. • Besides above issues the following issues discussed with the community • Road Side Water logging due to presence of Built-up Zone on either side. • Effect of Noise and Dust Pollution during construction and after construction. • Safety of Local traffic and pedestrian in Built-up Zone	The main suggestion of participants was: • Provision of Drain in Built-up Section to eliminate the issue of road side water-logging • For Safety of Local traffic and pedestrian in Built-up Zone, footpath should be provided. • Adequate provision for minimizing the Dust and Noise Pollution during	The suggestion was agreed andIncorporated • Proper traffic signage shall beprovided for speed limits. • Proper EMP shall be fiinalise to minimise Dust and noise Pollution during Construction work in Built-up Zone. • Proper Improvement of Major Cross Junction on main roads included in design for minimising the Traffic Congestion as well. • to minimise the Noise, Dust and air pollution in Built-up Section.
6	Ward No. 17	Near Dr. Khan's clinic	18-4-16.	Local Residents, And public representative of ward 17 **Total 27 Participants**	The Project Background, Environmental, Social, traffic safety issue and benefit from the project were explained to the Stakeholders. • For Safety of Local Traffic as well as to reduce the traffic congestion which interns reduce the noise and air pollution • The Consultants Team raise the issue for the hike in monthly water tariff for proper operation and maintenance of water supply system for 30yrs	The main suggestion of participants was: • Peoples also demanded for proper traffic signage for speed limits for minimising the accident • The people who can afford the hiked water tariff gave consent ,but those are from low income group reacted on this issue and demanded subsidy	The suggestion was noted down and forwarded to the high official for proper compliances The costing incorporated in Detailed project report. 1.As water policy of state under draft stage suggestion/problem of the community people helps in finalizing the draft policy. 2.Ground level views help in proper implementation of project
7	Ward No. 19	At Shri Krishna ward	18-4-16	Local Residents, And public representative of ward 19 **Total 22 Participants**	The Project Background, Environmental, Social, traffic safety issue and benefit from the project were explained to the Stakeholders. • Ward is having acute shortage of water in summer it get worse and	The main suggestion of participants was: • The community gave suggestion regarding water connection. They will take connection	It is being in the Project that 135LPCD given to the whole population covered under town.

					not able to access Quality water • The Consultants Team raise the issue for the hike in monthly water tariff for proper operation and maintenance of water supply system for 30yrs	only when they get sufficient water through out the year. • As present water tariff is Rs. 30 only three times it get hiked .the suggestion from people came that not to hike immediately as the supply gets start properly than people get convinced and get ready to pay.	Suggestion are noted down .The decision will be taken by local body representatives this has been discussed with them

Key recommendations came out during Stakeholders Consultations are summarized below:-

- Rich people, traders and migrants may turn to be major beneficiaries, while other local residents particularly, vulnerable people may not gain immediately and directly from the project so during implementation all will be treated equally.
- Scheduled castes, woman headed households and other vulnerable social groups affected by the project needed to be identified. They require special consideration for water supply connections on priority basis.
- Physical relocation and resettlement should be minimised. The social fabric of the persons relocated should be maintained. The time factor in any resettlement programme and compensation should be monitored properly .
- Efforts should be made to prevent loss of access to livelihood activities.
- Community should be consulted before the drawings of the design and Alignments are finalized.
- Safety is an important issue especially for children, women and cattle and therefore utmost safety measures must be provided during civil construction works.Accidents need to be controlled through various safety measures. Emergency facilities should be provided immediately.
- The participants emphasized the provision of diversions and aligning the way in the interest of community safety and environmental protection, repeatedly.
- Special care should be taken if any structure came in the alignment in case of removing or shifting the sacred trees, temples, mosques and other places of cultural and historical significance (by following the rituals and customs of community concerned).
- Stray cattle, domestic and wild animals accentuate road accidents. emissions from road works, higher traffic volume, etc., will deteriorate air quality leading to various health hazards and damage to the vegetation. Protection of local flora and fauna need protection on priority basis.
- Hand pumps, tanks, wells and other traditional sources of surface water may get affected due to the project excavations.

Women's Participation in Consultations and out comes

The participation of women in FGDs during the census survey was not encouraging because of their shy nature and ignorance. Out of 20 FGDs conducted with different stakeholders the women members were turned up only at twelve locations due to non availability of time as they are working as construction labour/domestic maid servants. Some of their specific concerns are summarized below.

- FGD conducted in fringe areas where piped water supply not reached. The major part of the fringe area of town depends on the hand-pumps for its water needs; the issue of replacement of hand-pumps attains a very special significance in context of the women.
- Almost two hours get spend daily in the morning for brining water from handpumps.

- In summer the condition get worst when the near by area hand pumps get exhausted, women have to fetch water from long distance or depend on the tankers provided by ULB.
- Working women livelihood get hampered in fetching water daily.
- So many women revealed that they are facing health problem in carrying water containers.
- The working women and girl students face lot of problem for fetching out water have to stand in queue for longer time, due to no availability of water in summer sometimes compels the girl students, abstains from classes.
- Responsible girl child of house gets dropout from school to manage household work specially water.

During FGD some other concerned/issues raised regarding project by the women group:

- Women from poor families concerned was that they will get job opportunity during construction work as casual labour or at office. so that they get regular wage during implementation period .
- Some women demanded to operate individual / family enterprise by opening small tea stalls, shops/eateries to provide meals to the construction officials /temporarylabourers coming from outside. This will enhance their family income as well as their entrepreneurial skill, which may be useful in future.

Draft ESA consultation

After finalisation of Draft ESA for Khargone Water Supply Subproject , the detailed ESA shared with Primary and Secondary Stakeholders on 11th July 2016.The Minutes of Consultations are given in **Annexure- 6**

CHAPTER 7

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

7.1 Overview

The ESMP presented in this Chapter summarizes the key impact elements identified and the remedial measures, the actions to be taken by various parties and the monitoring activities. An indication of the time scale for implementation and cost involved is also provided. The ESMP can be further be updated during implementation with documented procedures and guidelines for work practices so as to be as responsive to the situations that various Contract Parties will encounter. The Parties should formulate procedures and practices and maintain records. The implementation of the EMP should be done within the provisions of the law and for the ultimate benefit of the people in the Project area. The effectiveness of the ESMP shall be monitored and assessed during spot checks, formal inspections and at the end of the Project when an overall audit of the works shall be carried out.

A Construction Environmental Management Plan is a practical and achievable plan of management to ensure that any environmental impact during the design, planning and construction phase are minimized An Operational Environmental Management Plan is focused on sound environmental management practices that will be undertaken to minimize adverse impacts on the environment through normal operation of a facility. The management plan further identifies what measures should be taken in the event of emergencies or incidents during the operation of the facilities.

Table 7-1 : Environmental Management Plan during Construction and Operation Phase

Impact	Mitigation Measures	Institutional Responsibility	Time Frame	Cost
	Construction Phase			
Interference of existing installations on the pipeline route	• CWRM laid along the PWD roads, Formal request for permission to cross, break in and build the water pipeline should be sought from the relevant institutions such as PWD etc; • A work plan with clear responsibilities for each party should be developed to ensure smooth execution of the construction.	D(R)BO contractor / ULBs	Throughout construction period	50,000.00
Utilities	• Identify and include locations and operators of these utilities in the detailed design documents to prevent unnecessary disruption of services during construction phase; and • Require construction contractors toprepare a contingency plan to include actionsto be donein caseof unintentional interruption ofservices. Measures are taken to ensure they are protected and conserved.	D(R)BO contractor	Throughout construction period	10,00,000.00
Dust emissions	• Minimizing the number of motorised vehicles on use; • Provide scour checks on over-15% slopes or when working in loose soils; • Use predetermined tracks; • Avoiding machinery working in seasonally marshy areas, pans and floodplains; • Wet all active construction areas as and when necessary to reduce dust;	D(R)BO contractor	Throughout construction period	5,00,000.00
Construction work camps, , stockpile areas, storage	• Prioritize areas within or nearest possible vacant space in the sub project location; • If it is deemed necessary to locate elsewhere,consider sites that will not promote instability and result in destruction of property,	D(R)BO contractor	Throughout construction period	1,00,000.00

areas, and disposal areas	vegetation, irrigation,and drinking watersupply systems; • Do not consider residential areas; • Take extreme care in selecting sites to avoid direct disposal to water body which will inconvenience the community.			
Air Quality	• Consult withMPUDC/PMC onthe designated areasfor stockpiling of clay, soils, gravel,and other constructionmaterials; • Dampdownexposedsoil andany stockpiled onsiteby sprayingwith waterwhennecessary duringdry weather; • Use tarpaulins to cover sand and other loose material when transported by trucks;and • Fitall heavy equipmentand machinery withair pollution control devices which are operating correctly.	D(R)BO contractor / MPUDC	Throughout construction period	1,00,000.00
Noise Pollution	• Plan activities in consultation with MPUDC/PMC so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance; • Require horns not be used unless it is necessary to warn other road users or animals of the vehicle's approach; • Minimize noise from construction equipment by using vehicle silencers, fitting jack hammers with noise- reducing mufflers, and portable street barriers the sound impact to surrounding sensitive receptor; and • Maintain maximum sound levels not exceeding 80 decibels (dbA) when measured at a distance of 10 m or more from the vehicle/s.	D(R)BO contractor	Throughout construction period	1,00,000.00
Accessibility	• Confine work areas along the roads to the minimum possible extent; all the activities, including material & waste/surplus soil stocking should be confined to this area. Proper barricading should be provided; avoid material/surplus soil stocking in congested areas immediately removed from site/ or brought to the as and when required • Leave spaces for access between mounds of soil; • Provide walkways and metal sheets where required to maintain access across for people and vehicles; • Plan transportation routes so that heavy vehicles do not use narrow local roads, except in the immediate vicinity of delivery sites;	D(R)BO contractor	Throughout construction period	2,00,000.00

	• Schedule transport and hauling activities during non- peak hours; • Locate entry and exit points in areas where there is low potential for traffic congestion; • Keep the site free from all unnecessary obstructions; • Coordinate with Traffic Police for temporary road diversions, where necessary, and for provision of traffic aids if transportation activities cannot be avoided during peak hours			
Disposal of Spoils	• Maximize the re-use of excavated materials in the works as far as feasible to ensure that no permanent spoil dumps are created • Properly dispose off the spoil in the identified by the design team and approved by the confirmed land owners; • Care should be taken to avoid spoil location in land that could otherwise be used for productive purposes.	D(R)BO contractor	Throughout construction period	2,00,000.00
Solid Waste	• Construction waste should be recycled or reused as much as possible to ensure that materials that would otherwise be disposed off as waste are diverted for productive uses; • The Proponent shall put in place measures to ensure that construction materials requirements are carefully budgeted and to ensure that the amount of construction materials left on site after construction is kept minimal; • Minimization of solid waste during construction of the proposed Project through use of durable, long-lasting materials that will not need to be replaced often, thereby reducing the amount of construction waste generated over time; • Skips and bins should be strategically placed within the campsite and construction site, they should also be adequately designed and covered to prevent access by vermin and minimize odour. They should also be emptied regularly; • Measures to ensure that waste materials from the Project are disposed at suitable sites will be taken. These will include engaging only reputable truckers and conducting appropriate spot checks to verify that disposal are done in accordance with the requirements of MPUDC; • The ultimate fate of the wastes should be monitored so that they are not illegally disposed of;	D(R)BO contractor and KNP	Throughout construction period	1,00,000.00

	• Provide portable sanitary conveniences for the construction workers for control of sewage waste. A ratio of approximately 25 workers per chemical toilet should be used.			
Vegetation Loss	• The Contractor will ensure proper demarcation of the Project area to be affected by the construction works; • Strict control of construction vehicles to ensure that they operate only within the area to be disturbed by access routes and other works; • Retention of trees and shrubs, where possible on the potential sites for screening of the visual impact; • Where the proposed route requires the removal of any vegetation, care will be taken to minimize the destruction or damage of trees. • Re planting of destroyed trees in cleared areas where works are complete.	D(R)BO contractor	Throughout construction period	50,000.00
Accidental spills or leakages	• Maintain vehicles and machineries at manufacturers specifications; • Ensure proper storage of chemicals / materials; • During the course of the construction works, temporary drainage channels should be constructed to encourage dispersal of meteoric waters	D(R)BO contractor	Throughout construction period	20,000.00
Workers accident and hazards	• To reduce the workers accidents and hazards the Proponent will develop and commit the Contractors to Site Occupational Health and Safety rules and regulations as stipulated in the Labour Law; • All construction workers should be advised of the dangers associated with construction work; • Workers should be provided with suitable personal protective equipment (PPE); • Provision of adequate sanitary facilities to workers; • Train all workers on Safety Health and Environment (SHE) with an aim of improving awareness; • Trenches over 1.5 m deep or wherever soil conditions dictate should be shored and secured against accidental entry by workers and the public; • Install safety signage along the work areas; • Where construction activities interfere with the movement of traffic, the site should be signed and controlled by trained flagmen/flag women and lit by night.	D(R)BO contractor	Throughout construction period	5,00,000.00

Spread of communicable diseases and other infections	• Treat affected local and migrant workers which will control the movement of disease vectors (through contaminated water and between people); • Provision of personal hygiene facilities in good condition with adequate water supply; • Ensure awareness raising on proper sanitation and personal hygiene to promote proper health.	D(R)BO contractor	Throughout construction period	50,000.00
Child Labour	• The contractor should ensure that all the personnel employed should be adults and should possess valid national identification cards.	D(R)BO contractor	Throughout construction period	No additional cost
Operation Phase				
Reduced downstream Flows	• There should be due adherence to the safest maximum abstract able water quantities of throughout the project life; • Adhere to WRD water use permits; • The Proponent shall monitor the hydrology to determine whether there is reduced downstream flow.	KNP/ D(R)BO contractor	Throughout Operation Phase period	-
Increased domestic wastewater generation	• Plans should be put in place by the ULBs/MPUDC on how to address sewer and waste water	KNP/ D(R)BO contractor	Throughout Operation Phase period	-
Sludge Management	• Apply quicklime treatment to dewatered sludge in order to create a pathogen and odor free product; • Dry sludge on the drying beds before disposing off in a dedicated disposal site; • Preparation and enforcement of operational guidelines for sludge treatment / management.	KNP/ D(R)BO contractor	Throughout Operation Phase period	2,00,000.00
Back Wash Water	• Drain the waste water into an oxidation pond / tank to allow for stabilization and neutralization; • Pass the stabilized backwash water into a soak pit or a controlled wetland before the water diffuses underground with sand filtration; • Recycle the treated backwash water to the channel leading to the filters; • Carrying out water sampling tests for both bacteriological and physical element	KNP/ D(R)BO contractor	Throughout Operation Phase period	No additional cost
Safety hazards	• Providethefollowingmeasureatthechlorineapplication unit:	KNP/ D(R)BO	Throughout	3,00,000.00

(Chlorine and Alum Storage)	i. Chlorineneutralizationpitwithalimeslurry feeder ii. Properventilation,lighting,entryandexitfacilities iii. Facilityforisolationintheeventof majorchlorine leakage iv. Personalprotectionandsafetyequipmentforthe operatorsinthechlorineplant v. Providetrainingtothestaffinsafehandlingand applicationof chlorine;this shallbe includedinthe contractof Chlorinatorsupplier	contractor	Operation Phase period	
Noise generation and vibration	• The design shall propose noise and vibration proofed systems installation. These shall be monitored during operation and if the values go above ambient or specifications, the necessary measures shall be undertaken which may include: i. Improvement of proofing systems; ii. Servicing of the offending equipment; iii. Development of foundations and mountings; and iv. Complete or partial overhaul. • Personal protective equipment shall be provided at noisy areas for use by workers and visitors.	KNP/ D(R)BO contractor	Throughout Operation Phase period	1,50,000.00
Emergency preparedness and response	• Design and implement an emergency response plan; • Coordinate with aid organizations/agencies such as with the local fire brigade; • Install fire hydrants within the proposed development; • Install a fire extinguisher at the plant and train workers on how use.	KNP/ D(R)BO contractor	Throughout Operation Phase period	2,00,000.00
Capacity building	• Provide a forum for human resources development on environmental conservation; • Establish a schedule for continuous improvement of human capacity on environmental management; • Develop in-house guidelines on environment, health and safety management.	KNP/ D(R)BO contractor	Throughout Operation Phase period	Included in TA Component
	Total EMP cost			38,20,000.00
Social Management Plan during Construction & Operation				
Impact	**Mitigation Measures**	**Institutional**	**Time Frame**	**Budget***(in lakhs)*

		Responsibility		
Interference of existing installations on the pipeline route	Formal request for permission to cross, break in and build the water pipeline should be sought from affectedproperty owners and the relevant institutions · Formal engagement should be done with key land andother property owners neighbouring the pipeline;in case of any dispute · Ensure dissemination of relevant information to each ofthe affected parties; · A work plan with clear responsibilities for each party should be developed to ensure smooth execution of the construction	the contractor,KNP, PIU,MPUDC	Throughout construction period	100,000 No additional costs
Child labour ·	The contractor should ensure that all the personnel employed should be adults and should possess valid national identification cards.	Contactor, PIU,MPUDC	Throughout construction period	

The entitlement framework proposed in ESMF chapter 3 is adapted based on the present version of the RFCTLARR, 2013.The impact category and compensation has been defined as per RFCTLARR 2013.

Table 7-2 : Resettlement Action Plan

Sr.	Impact Category	Yes/ No	Entitlement Framework as per RFCTLARR Act	Social Management Measures	Estimated Cost in INR
1.			**Impacts to Title holders (Loss of Private Properties)**		
A	Loss of Land (agricultural, homestead, commercial or otherwise)	No	Compensation as per RFCTLARR Act, 2013 criteria provided in paragraph 26 of the Act 1.One time grant not exceeding Rs. 5,00,000/- for each affected household or annuity policy that shall pay Rs.2000/- per month for 20 years with appropriate indexation to Consumer Price indexation.	I. No.of HHs (with valid title) to be given developed plots and house II. No.of HHs to be given cash compensation = III. No. of squatters to be given developed plots and house = IV. No .of HHs to be given shifting allowance = V. No. of HHs to be given transitional assistance =	not applicable
B	Loss of residential structure	No	The Compensation for the structure will be paid as per the provisions of the RFCTLARR Act 2013 . 1. Cash compensation as per the	i. No.of HHs (with valid title) to be given alternative land = ii. No.of HHs (with valid	not applicable

			Market Value of the structure and 100 % solatium. 2. Each affected family having cattle will be provided one time financial assistance of Rs. 25,000 . 3. Provision of alternative house or Minimum of Rs. 1,50,000 financial assistance in Urban Areas. Provision of House in case of rural area as per IAY specifications or equivalent cost of the house. 4. Transportation cost of Rs. 50,000/- 5. Right to salvage affected materials	title) to be given cash compensation = iii. No. of individuals to be given cash compensation = iv. No. of individual tenants / leaseholder / sharecroppers to be given cash assistance = v. No. of individuals to be given notice for harvesting = vi. No. of individuals to be given cash compensation for non-perennial crops = vii. No. of individuals to be paid cash compensation for perennial crops = viii. No. of individuals to be paid cash assistance for loss of agricultural labour =	
C	Loss of Commercial structure	No	The Compensation for the structure	i. No. of units (with valid	not applicable

			will be paid as per the provisions of the RFCTLARR Act 2013. 1. Cash compensation as per the Market Value of the structure and 100 % solatium. 2. One time grant to artisan, small trader and certain others shall get a one-time financial assistance of Rs. 25,000/- 3. Transportation cost of Rs. 50,000/- 4. Right to salvage affected materials	title) to be given alternative land = ... ii. No. of units (with valid title) to be given cash compensation = iii. No. of units (with valid title) to be given livelihood assistance = iv. No. of tenants to be given livelihood assistance = ... v. No. of tenants to be given shifting assistance = vi. No. of squatters to be given developed plot and built shop = vii. No. of squatters / encroacher to be given cash compensation = viii. No. of squatters to be given shifting assistance = ix. No. of squatters to be given livelihood	

				assistance =..... x. No. of employees to be given livelihood assistance =	
D	Impacts to tenants (residential / commercial/agricultural)	No	**Residential** 1. Each affected family that is displaced due to land acquisition shall be given a monthly subsistence allowance equivalent to Rs. 3000/- per month for a period of one year from the date of award. 2. One time financial assistance of Rs. 50,000 as transportation cost for shifting of the family, building materials, belongings and cattle. 3. Right to salvage affected materials **Commercial** 1. One time financial assistance of Rs. 50,000 as transportation cost for shifting of the family, building materials, belongings and cattle.	i. No. of HHs to be provided CPRs ii. No. of HHs to be provided amenities	not applicable

			2. One time grant to artisan, small trader and certain others shall get a one-time financial assistance of Rs. 25,000 **Agricultural Tenants** In case of agricultural tenants advance notice to harvest crops or compensation for lost crop at market value of the yield determined by agricultural department			
E	Impacts to trees, plants and standing crops,	Yes	The Collector for the purpose of determining the value of trees, plants and standing crops attached to the land acquired, use the services of experienced persons in the field of agriculture, forestry, horticulture, sericulture, or any other field, as may be considered necessary by him.	i. Money to be spent on restoration of losses due to resettlement = nil ii. Money to be spent on restoration of amenities =**20**	as per collectorate rate	
2.			**Impacts to Non-title holders (Squatters)**			
A	Loss of House	No	• Compensation at Market Value for the affected structure OR Alternative house with minimum area as per Government norms • One time Subsistence grant of Rs. 18,000/-		No. of houses= transportation	not applicable

			• One time financial assistance of Rs. 5,000/- as transportation cost for shifting of the family, building materials, belongings and cattle. • Right to salvage the affected materials;	charge=	
B	Loss of Shop		• Compensation at Market Value for the affected structure. • One time financial assistance of Rs. 5,000/- as transportation cost for shifting • One time grant of Rs. 2500/- for loss of trade/self-employment for the business owner • Right to salvage the affected materials;	i. No.of HHs (with valid title) to be given land for land = nil ii. No.of HHs to be given cash compensation = nil iii. No of HHs to be given livelihood assistance = 20 iv. No. of squatters to be given developed plots and house / shop = nil	50,000 75,000

				v. No. of squatters / encroachers to be given cash compensation = nil vi. No .of squatters to be given livelihood assistance = 30	
C	Encroached Structure	yes	• Cash compensation for the affected structure as per the Market Value • One time shifting assistance of Rs. 5000/- for Kiosks • Right to salvage material.	No. of vendors=20	1,00000
3.	**Loss of Income Livelihood**	No	Subsistence allowance equivalent monthly minimum agricultural / industrial wages for 3 months		not applicable
4.	**Impact to Vulnerable Displaced People**	No	Training for skill development. This assistance includes cost of training and financial assistance for travel/conveyance and food. One adult member of the affected household, whose livelihood is affected, will be entitled for skill development.	no.of HHs	not applicable

			Additional assistance for SC/ST and other vulnerable households whose livelihood/loss of shelter is impacted by the project will be paid additional one time assistance of Rs. 5000 in case of non-title holder families.		
5.	**Unidentified Impacts**	Yes	Unforeseen impacts encountered during implementation will be addressed in accordance with the principles of this policy		5,00000
			Total		**8,25000**

Table 7.3 : Environmental Monitoring Plan during Construction Phase

S.No.	Attributes	Stage	Parameters to be monitored	Location	Frequency	Responsibility (R) and Monitoring (M)
1.	Debris/ Construction materials disposal	Construction Stage	Safe disposal of construction wastes including bituminous wastes	One at WTP construction site, minimum five sites in the town (including OHTs construction sites and distribution network where sensitives area comes like Hospital, school etc.)	Minimum once in week	R- Contractor M- PMU,PIU and PMC
2.	Dust Suppression	Construction Stage	No. of tankers for water sprinkling, Timing of sprinkling, Location of sprinkling, Log Book	One at WTP construction site, minimum five sites in the town (including OHTs construction sites and distribution network where sensitives area comes like Hospital, school etc.)	Minimum once in week	R- Contractor M- PMU,PIU and PMC
3	Ambient Air Quality	Construction Stage	PM10, PM 2.5, SO2, NOx, CO	One at WTP construction site, minimum five sites in the town (including OHTs	Once in a season (except monsoons) for the entire construction period	Contractor, to be monitor through Engagement of approved agency

				construction sites and distribution network where sensitives area comes like Hospital, school etc.)		
5	Noise Levels	Construction Stage	Equivalent Day & Night Time Noise Levels	One at WTP construction site, minimum five sites in the town (including OHTs construction sites and distribution network where sensitives area comes like Hospital, school etc.)	Once in a season during construction and operation stages	Contractor, to monitor
7	Establishing Medical Facilities	Construction Stage	Access to health facilities for the construction workers	Workers Camp and one mobile medical vehicle.	Continuous	Contractor
8	Accident Record	Construction Stage	No. of fatal accidents, No. of injuries, No. of disabilities	All construction sites	Continuous	Contractor
9	Post construction clearance of site	Construction Stage	Whether temporary locations for workers camp, site office, batching plant and other construction locations are restored to preproject conditions	All construction sites	Post construction	Contractor

Table 7.4: Environmental Monitoring Plan: Operation Phase

Monitoringfield	**Monitoringparameters**	**Frequency**	**Responsibility**	**Cost & Source of Funds**
Source water quality	pH,Cl,F,NO3,TC,FC, Hardness, Turbidity BOD,COD,DO,Total Alkalnity heavy metals & pesticides	Quarterly	DBO Contractor and KNP	Operating costs
Monitoring of quality of water supplied to consumers	pH,Nitrite,Nitrate, Turbidity, Total Alkalnity, Fluoride, Iron, Total coliform and Feacal coliform etc . and follow IS:10500-2012 .	Monthly Once	DBO Contractor and KNP	Operating costs

SMP Monitoring & Evaluation

The compensation and R&R assistance will be paid prior to taking over of land and affected assets. In case if the land owner refuses to accept the compensation or is not available for taking over of the compensation or R&R assistance is not paid for any other reasons, the assessed compensation and assistance amounts will be transferred to interest bearing escrow account before taking over of the land and assets. This will be ensured that money is available as soon as the land owners come forward to receive compensation.

The budget estimates and its sources will be reflected in RAPs and included in the cost of the project. Therefore, while appraising the project financially, necessary grant for viability as well as for meeting the cost of RAP would be considered by MPUDC within the framework for appraisal criteria. As per MPUDC institutional framework the responsibilities of RAP will be defined during implementation and operation phase.

7.2. Project implementation and Monitoring Agencies

Urban Development and Environment Department (UDED) of Government of Madhya Pradesh (GoMP) will be the Executing Agency for the Program, responsible for management, coordination and execution of all investment program activities. Implementing Agency will be the Madhya Pradesh Urban Development Company (MPUDC) of GoMP, which will implement this program via a Project Management Unit (PMU) at Bhopal, and Project Implementation Units (PIUs) at project towns. PMU will appoint contractors to build infrastructure and PIUs will coordinate the construction. PMU and PIUs will be assisted by Program Management Consultants (PMC).

Table 7-5: Organizational Roles

Level	Organization	Role
State	UDED	Monitor and evaluate the works and execution of EMP
State	MPUDC (PMU)	Appraisal and approval of sub-projects and variations Execution Financing and monitoring

		Forwarding Grievances Procurement of services of consultants Procurement of Centralized Goods and Works (with ULB's consent)
	Empowered Committees	Review and appraise sub-Projects Approval of sub-projects and variations Approval and clearances for various activities including the contracts etc.
	Project Management Consultants	Help in Project Execution and Preparation Supervision Quality Control
	Panel of Consultants	Consultancies required of MPUDP at state and ULB level
	MPUDC (PIU)	Implementation through contractors and ensure effective implementation of safeguards through rigorous monitoring Obtaining various clearances and approvals required and essential for project implementation Implementation, supervision and progress monitoring of reforms consolidation activities Implementation, supervision and progress monitoring of sub project activities Implementation, supervision and progress monitoring of all Community Awareness and Participation activities
District	District Collector	Transfer of Government Lands, Grievance

Level	(Revenue)	Redressal in case any.
City level	Council	Overall monitoring of EMP In case of any grievance, bring it to the notice of appropriate authority through Mayor/Chairman / Commissioner/ Chief Municipal Officer
	ULB	Support in Implementation Assistance in obtaining necessary government approvals and orders for implementation of project Implementation, supervision and progress monitoring of reforms consolidation activities Implementation, supervision and progress monitoring of town planning activities Implementation, supervision and progress monitoring of all Community Awareness and Participation activities

CHAPTER 8

VULNERABLE GROUP (SC/ST) IN KHARGONE

Distribution of Scheduled Tribes in Madhya Pradesh in Relation to India

1. The tribal population of Madhya Pradesh increased to 15,316,784 in 2011 from 12,233,474 in 2001.The decadal growth rate during this period is 25.20 percent..
   The trends in the population of the Scheduled Tribes by residence (total, Rural and Urban) for Census Years 1961- 2011 shows that the percentage of Scheduled Tribes Population in the Rural Areas (11.3 percent) much higher that Urban Population (2.8 percent). In Madhya Pradesh certain areas have been declared as scheduled area as Specified by the Scheduled Areas under the fifth Schedule of Indian Constitutions[1]. List of Schedule Areas in Madhya Pradesh is provided in **Appendix 5**.
2. Government of Madhya Pradesh has a dedicated Tribal Welfare Department; their role is limited to awarding stipends, running residential schools, hostels and implementing other central schemes for development of Schedule Tribes. They have no role in land acquisition or rehabilitation and resettlement. Safeguards related to land acquisition and resettlement and rehabilitation as outlined in the LARR Act, 2013 is also applicable for the tribal community or the indigenous people of the land and this has been adopted by the State Government of Madhya Pradesh The regulations outlined for adverse social impacts and risks are also applicable for the tribal community. The LARR Act, 2013 provides some additional benefits to the affected SC/ST people. The provisions and benefits that are listed here is deem appropriate for urban projects.

3. According to the Census of India 2011, 8.61 percent of the Indian population is classified as ST. In comparison to the national figure, Madhya Pradesh has 14.7 percent of its populations classified as ST. The major tribes of Madhya Pradesh are classified in **Appendix 6.**

4. The social composition of Khargone given in table below state that out of total population of Khargone town SC and ST comprises of 7.59% and 9.11% respectively.

Table 8-1: Social Composition in Khargone Town

Social Composition	Population	Percentage of population
SC	8816	7.59
ST	10583	9.11
Others	75482	83.3
Total Population of Town	**116150**	**100**

(Source: Census, 2011)

[1]Scheduled areas are autonomous areas within a state, administered federally, usually populated by a predominant Scheduled Tribe.

Table 8-2. Wardwise detail of Indigenous people population of Khargone Municipal

S.no	Ward no.	Total population of ward	Total population (Schedule Tribe)	Male	Female	Total population (Schedule caste)	Male	Female
1	01	1340	4	1	3	10	6	4
2	02	2162	32	32	0	18	12	6
3	03	2756	58	29	29	49	23	26
4	04	6625	322	165	157	868	441	427
5	05	8332	776	431	363	563	285	278
6	06	2052	1	0	1	42	22	20
7	07	2960	04	02	02	567	290	277
8	08	1071	05	02	03	0	0	0
9	09	926	0	0	0	0	0	0
10	10	2809	11	7	4	0	0	0
11	11	2920	374	119	255	193	60	133
12	12	4173	465	215	250	236	117	119
13	13	7295	1792	893	899	746	387	359
14	14	4570	908	514	394	267	172	95
15	15	1918	5	1	4	0	0	0
16	16	1488	0	0	0	0	0	0
17	17	2612	6	4	2	0	0	0
18	18	858	0	0	0	41	19	22
19	19	1744	1	1	0	45	21	24
20	20	1629	0	0	0	88	49	39
21	21	1624	12	06	06	175	78	97
22	22	1888	164	8	156	95	30	65
23	23	9739	134	64	70	87	51	36

24	24	1795	21	15	06	5	3	2
25	25	1561	31	16	15	28	17	11
26	26	1546	12	06	06	219	120	99
27	27	1742	41	21	20	23	11	12
28	28	4877	287	143	144	743	378	365
29	29	6189	1171	618	563	1027	536	491
30	30	4792	318	151	167	259	124	135
31	31	6396	29	14	15	49	26	23
32	32	2160	295	155	140	196	106	90
33	33	1905	158	72	86	465	225	240
34	34	1226	86	45	41	64	26	38
35	35	1807(OG)	469	291	178	274	147	127
36	36	3399	1011	526	435	1122	558	564
37	37	1212	325	158	167	167	85	82
38	38	900	743	401	342	29	14	15
39	39	568	173	95	78	39	19	20
40	40	584	339	181	158	17	11	6
Total			**10583**			**8816**		

Source:Census 2011

As Khargone district is declared scheduled area in Schedule V by Government of Madhya Pradesh. (**Appendix -6**)Social Impact screening done on different aspects no negative impact of project on Indigenous people .project is coming under category C .No IPP plan required for IPs but strategy should be planned for the active participation of Indigenous people.

Public Consultation

During the entire planning phase, an effort has also been made to help people understand the positive impacts and benefits from the project for them in terms of better connectivity and linkage with the surrounding areas, reduction in the problems, minimization of health risks through provisions of good services of quality supply, underpasses, median control and other design interventions, improvement in the economy of the people, better access to health, education facilities in the region. The process has helped in building confidence amongst the Indigenous people of different wards and mainstreamed them in the process and making

them partners in the project. For consultation the wards selected on the basis of highest population of SC/ST in KNP. During consultation process it was ensured the participation of Indigenous people also. The Number of Indigenous people participated in consultation given in table ward wise given below:

Table 8-3-Participation of ST/SC population during Public Consultation

WARD no.	SC/ST Household		
	Total	M	F
04	12	07	05
05	14	05	09
11	16	06	10
12	15	08	07
13	22	12	10
14	27	13	14
29	39	20	19
36	25	15	10
TOTAL	**170**		

Key issues of consultations with vulnerable group:

- Not getting sufficient drinking water, as in some wards are not having 100% piped supply and the supply is alternate days in KNP.
- People complaint about contaminated water due to leakage in existing lines.
- In summers due to scarcity of water livelihood of working men & women get hampered.
- Demanded subsidy in water connection and user charges.
- Safety measured during excavation must be ensured as some working couples leave their small children at home.

STRATEGY FOR TRIBAL PEOPLE'S PARTICIPATION

i) Consultations and information disclosure are an integral part of IPP preparation in order to ensure that the priorities, preferences, and needs of the tribal groups have been taken into consideration adequately. With that objective in view, a strategy for consultation with tribal communities and their leaders will be developed so that these are conducted in a participatory manner.

ii) The affected / Beneficiaries IPs will be actively engaged in all stages of the project cycle, including project preparation, and feedback of consultations with the IPs will be reflected in the project design, followed by disclosure. Their participation in project planning will inform project design, and the TPs should be convinced of their benefits from the project. The awareness material prepared will be translated into the local language of the IPs and made available to them before implementation of the project.

iii) Local CBOs/tribal community representatives will be involved in IPP implementation and resolving all issues related to the IP through consultation and facilitation by the ULB and PMU. The PMU/ULB will ensure adequate flow of funds for consultation and facilitation of planned activities within IP.

iv) The Schemes running by government of Madhya Pradesh for Vulnerable people, there participation will be ensured during project period.

v) One project information disclosure (PID) brochure will be prepared, translated into a language understandable to the tribal people, and distributed among them. Budget included in SMP.

vi) Project Monitoring Indicators will be designed to monitor project impact as beneficiaries to the IPs.The regular participation of IPs ensured through the monitoring Indicators.

CHAPTER 9
CONCLUSION AND RECOMMENDATIONS

The Environmental and Social Assessment (ESA) Study was carried out based on field assessments and public consultations with the community who are likely to benefit or to be affected by the proposed Project and the Proponent in compliance with the World Bank environmental policies and GoI , GoMP Regulations. The proposed sub-project is step towards providing water to the people of Khargone Town and in that case, there is overwhelming acceptance of the project by the local community.

There are no environmentally sensitive areas (like forest, sanctuaries etc) in or near sub-project area. Also there are no archeological and historical protected areas/ sites within or near the town. Hence the impacts identified are mostly related to construction and operation phase.There is no land acquisition nor any involuntary resettlement required in the project. During implementation only temporary disruption (damage to public utilities/temporary structure etc) is assumed this can be avoided. No negative impact on vulnerable group.

The subproject is unlikely to cause significant adverse impacts because: (i) most of the individual components involve straightforward construction and operation, so impacts will be mainly localized; (ii) in most cases the predicted impacts are likely to be associated with the construction process and are produced because the process is invasive, involving excavation, obstruction at specific construction locations, and earth movements; and (iii) being located mainly in the already constructed facilities and built-up area will not cause direct impact on terrestrial biodiversity values. The potential adverse impacts that are associated with design, construction, and operation can be mitigated to standard levels without difficulty through proper engineering design and the incorporation or application of recommended mitigation measures and procedures.

The following recommendations are made with respect to the implementation of the proposed Khargone Water Supply Project:

- That since the laying of pipeline from Pipari to Proposed Intake at Kunda river by NVDA, is a linked activity for the sub project of MPUDP, the Environment and Social Management Framework for MPUDP will also be strictlt adhered to during its construction.
- That all land required for the proposed sub-project is government /ULB land.
- That construction of all facilities in the proposed Project is carried out in accordance with approved plans, regulations, policies and laws.
- That the Operation and Maintenance of the Water Supply should comply with the international Best Practices and the principles ofenvironmental management including the principles of sustainability,prevention, precaution and public participation.

Appendix 1

Screening Checklist

Appendix 1: Environmental and Social Checklist

Checklist For Subprojects In Proposed Madhya Pradesh Urban Development Project

Part A

Name of the Department/cell: **Urban Development and Environment Department (UDED)**

Name of the City/Municipality: **KhargoneMunicipal Council**

Name,Address and Telephone of the Officers Responsible
(i) Chief Municipal Officer : Shri Nishikant Shukla.

(ii)Engineer: Shri G.N. Chouhan.

(iii)Others: _____

Name of the proposed sub project: **Water Supply Augmentation Scheme Khargone (M.P)**

Name of the proposed site: **Khargone**

Proposed utility sub component/functions at the site: **Intake well/WTP/ OHT/Rising main/distribution line** eg.Intake point/STP/WTP/Rising main/Distribution main/ distribution line etc..

Current land use of the proposed site(s):

S. no	Component proposed	capacity	Location	Khasra details	land availability / require area	ownership of land	Status of land	NOC
1	Proposed Intake well	45MLD	Near existing intake well	-	-	Water Resource Department (but in possession of ULB)	vacant	RecievedNoC for water extraction from Kunda
2	Proposed Water Treatment Plant	40 MLD	Umarkhali road	9/2	12.0 Ht	In possession of ULB	Vacant	Recieved
3	Over Head Tank	2250KL	Master colony Arampura	459,460	0.5 Ht.	In possession of ULB	vacant	Recieved
4	Over Head Tank	2250KL	Qilamaidan	37	0.5 Ht.	Government Land	vacant	To be received

5.	Over Head Tank	2250KL	Vindyaviha r colony	23/1,23 /2,21/4	0.5 Ht.	In possession of ULB	vacant	Received
6.	Over Head Tank	2250 KL	Aurangpur aZulwaniya road	10/3,10 /2	0.5 Ht.	Government Land	vacant	To be received

Part B
(Please tick mark √ in the appropriate column and provide relevant information in Col.6)

			Probable social Impacts		
Sl.No	**Social Screening Questions**	**Yes**	**No**	**Possible**	**Extent/Number/ Remarks**
1	2	3	4	5	6
1	Is land in the possession of Municipality? What is the area?	Yes			Yes, New WTP is proposed adjacent to existing WTP 1400m from intake well. The site is in the possession of ULB
2	Is the current ownership status of the proposed site clear? Who is the current owner?	Yes			Current ownership of existing Intake well is of Water Resource Department, WTP &OHTs are of Revenue Department
3	Is there any land transfer formalities to be completed before using the site for proposed function?	**Yes**			WTP land transferred to ULB,OHT land transfer proposals submitted to revenue Department .Transfer of land under process.
4	Will there be loss perennial crops (yielding and/or fruit bearing and other trees?		No		
5	Will the project displace residential structures (Houses)		No		

6	Will the project displace commercial structures (shops workshops, factory and other establishments)?		No		
7	Will there be loss of structures other than buildings? (Compound wall/gate/water tanks/ slabs/ wells/ septic tanks, etc.		No		
8	Are any cultural properties (place of worship, religious structure memorial, monument, cemetery, etc.) affected or displaced?		No		
9	Are any community properties (hand pump, well, tap, chabutra, community hall etc.) affected or displaced?			possible	during excavation/laying of pipeline in lanes
10	Are any tenants running enterprises or operating from the structures that would be displaced?		No		
11	Are there any tenants residing in the structures that would be displaced?		No		
12	Are there residential squatters within the proposed site boundary?	Yes			Within Project area there are in wards.
13	Are there commercial squatters/vendors/Hawkers within the proposed site boundary?	Yes			The street vendors and mobile hawkers are inside the project area
14	Will there be loss of incomes and livelihoods of employees of affected establishments / structures?			**possible**	The Street vendors and mobile hawkers around the congested market and near market areas get affected during laying.

15	Will people lose access to common facilities, services, or natural resources?			possible	May be common facilities get effected during excavation
16	Will there be loss of existing access to private properties and services?		No		
17	Is there any Tribal community members residing in group / cluster in close proximity to the site?			possible	As Khargone is declared scheduled area for Indigenous people. Tribal community members may reside in wards in scattered form.
18	Is there possibility of any conflict/Grievances by the surrounding land users due to proposed activities on the site?		No		

	Project Proximity to Environmental Sensitive Aspects			
Sr. No.	Components	Yes	No	Details
1.	Notified Protected Areas (National Parks/ Wildlife Sanctuaries, Eco-Sensitive Zones, Biosphere Reserves, Ramsar Sites, Mangrove forests, etc.)		√	The closest wild life sanctuary around Khargone is 49 km called Yawal Wildlife Sanctuary.
2.	Important Bird Areas in India (Ref: Priority sites for conservation, BNHS)		√	-
3.	Scheduled Areas	√		Khargone Comes under Declared schedule area V
4.	State borders (overlapping resource sharing such as rivers, lakes, roads etc.)		√	-

5.	Hazard Prone Areas (Floods, Earthquakes, Wind / Cyclones), Vulnerability Atlas of India, BMTPC		√	-
6.	Climate Change impacted area (water intakes in CC affected rivers, lakes), MP State Climate Change Action Plan and Other Sources		√	-
7.	Critically polluted areas (such as Indore Industrial cluster in MP)		√	Commercial and Industrial percentage of use of land is very less 6% and 8% only.
8.	Landuse (Sensitive receptors hospitals, residential areas, schools)		√	The land use pattern of Municipal council's administrative boundaries. Maximum land use is for Residential purpose in town ie.44.53%.Commercial and Industrial percentage of use of land is very less 6% and 8% only.
9.	Pre-existing litigations concerning E&S issues with the Project location or site		√	-
10.	Archeological Survey of India (ASI) sites		√	-
11.	Socio-Cultural- Economic activities (religious/heritage/ cultural sites, tourist interests, etc.)	√		The NavgrahMela is held at the Mela Grounds situated near the banks of river Kunda, near the famous Navagraha temple.
12.	Defense installations, specially those of security importance and sensitive to pollution		√	-
13.	Does the Project Involve the following:			
14.	Vegetation removal and Cutting of trees	√		

15.	Potential Habitat fragmentation		√	
16.	Quarrying, Mining or Resource Extraction		√	
17.	Excessive Resource Consumption or Waste Generation, Cutting and Filling of Earth	√		Approx. 160 km length of distribution network is proposed in Khargone town, hence large excavation activity takes place in the project.
18.	Risk to Neighborhood Community Health	√		Adverse impact on the health of the workers and residents in and around the due to deterioration of the air quality, increase of noise and traffic
19.	Use / release of Hazardous Chemicals, toxic materials	√		Potential hazard from the use of chlorine
20.	Generation of Air Emissions, Wastewater, Solid Wastes (including Hazardous Waste)	√		Exhaust and dust emissions from construction vehicles and machinery
21.	Is the project design considering energy conservation measures/ energy recovery options?	√		-
22.	Is the project considering waste minimisation or waste reuse/recycle options?	√		100% recyle of backwash water

Name: Nishikant Shukla.

Signature and name of the officer responsible:

Appendix 2: NVDA letter for details of Khargone WSS

कार्यालय, कार्यपालन यंत्री,
नर्मदा विकास संभाग क्र. 18, दामखेड़ा कालोनी, खरगोन (म.प्र.)

पत्र क्रमांक 2513/कार्य/सी–27(सी)/डिसनेट/15 खरगोन, दिनांक 16/11/2015

प्रति,

मुख्य नगरपालिका अधिकारी
नगरपालिका परिषद
खरगोन (म.प्र.)

विषय :– खरगोन शहर की पेयजल योजना की जानकारी बाबद्।

संदर्भ :– 1. आपका पत्र क्र. 12870/जलप्रदाय./2015 खरगोन, दिनांक 07/11/2015
2. इस कार्यालय का पत्र क्र. 2374//कार्य/सी–27(सी)/डिसनेट/15 खरगोन, दिनांक 18/10/2015

*****

उपरोक्त विषयान्तर्गत संदर्भित पत्र सरल क्र. 1 द्वारा चाही गई मई खरगोन शहर की पेयजल योजना से संबंधीत बिन्दुवार जानकारी निम्नानुसार है :–

1	Capacity of Pipari Reservior	-	7.723 Mcum
2	HFL	-	286 M.
3	Bed level	-	272 M.
4	Dia pipe from Reservior to proposed WTP	-	300 mm

कृपया सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रस्तुत।

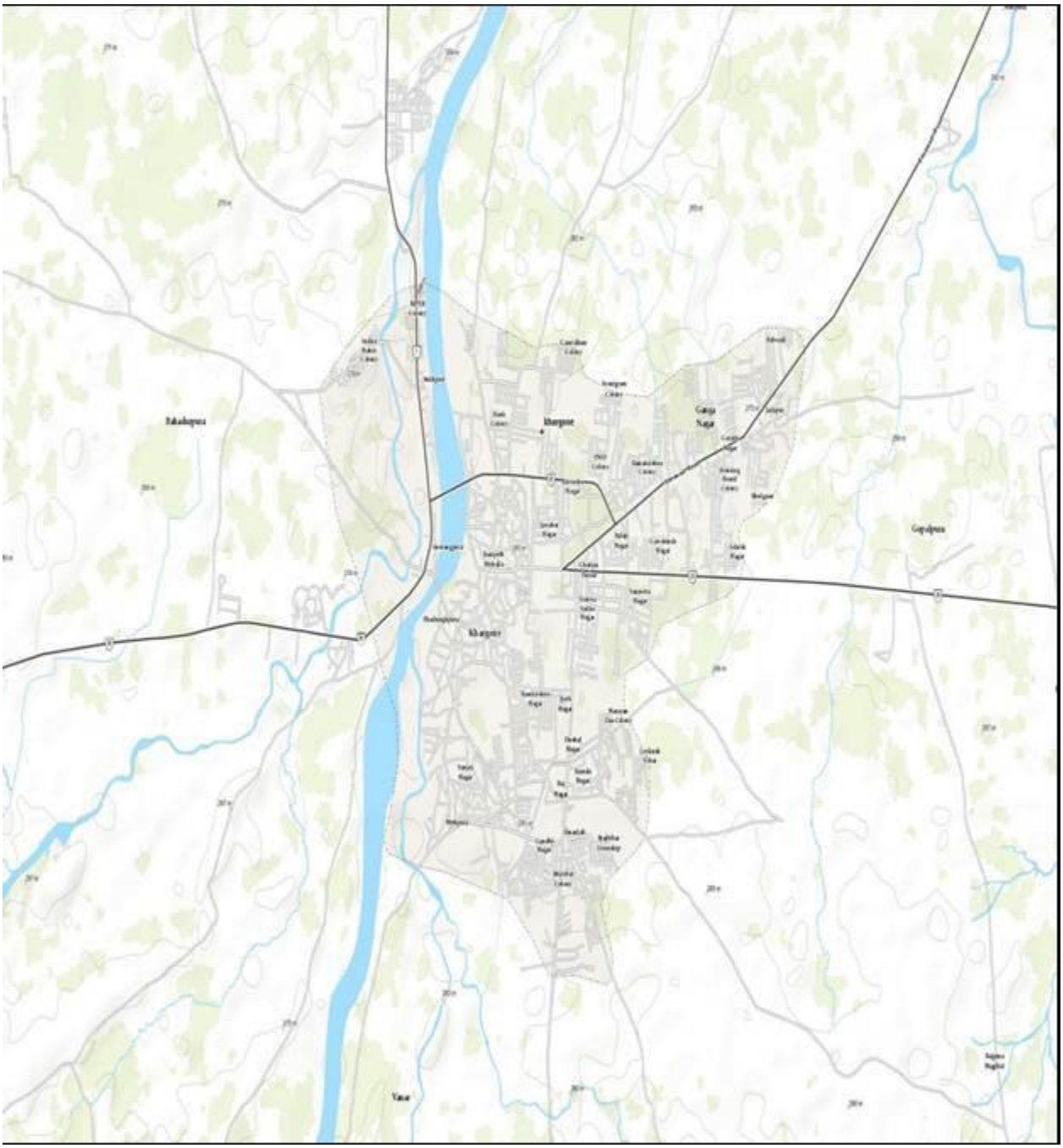
सहपत्र :– शून्य।

कार्यपालन यंत्री,
नर्मदा विकास संभाग क्र. 18
खरगोन (म.प्र.)

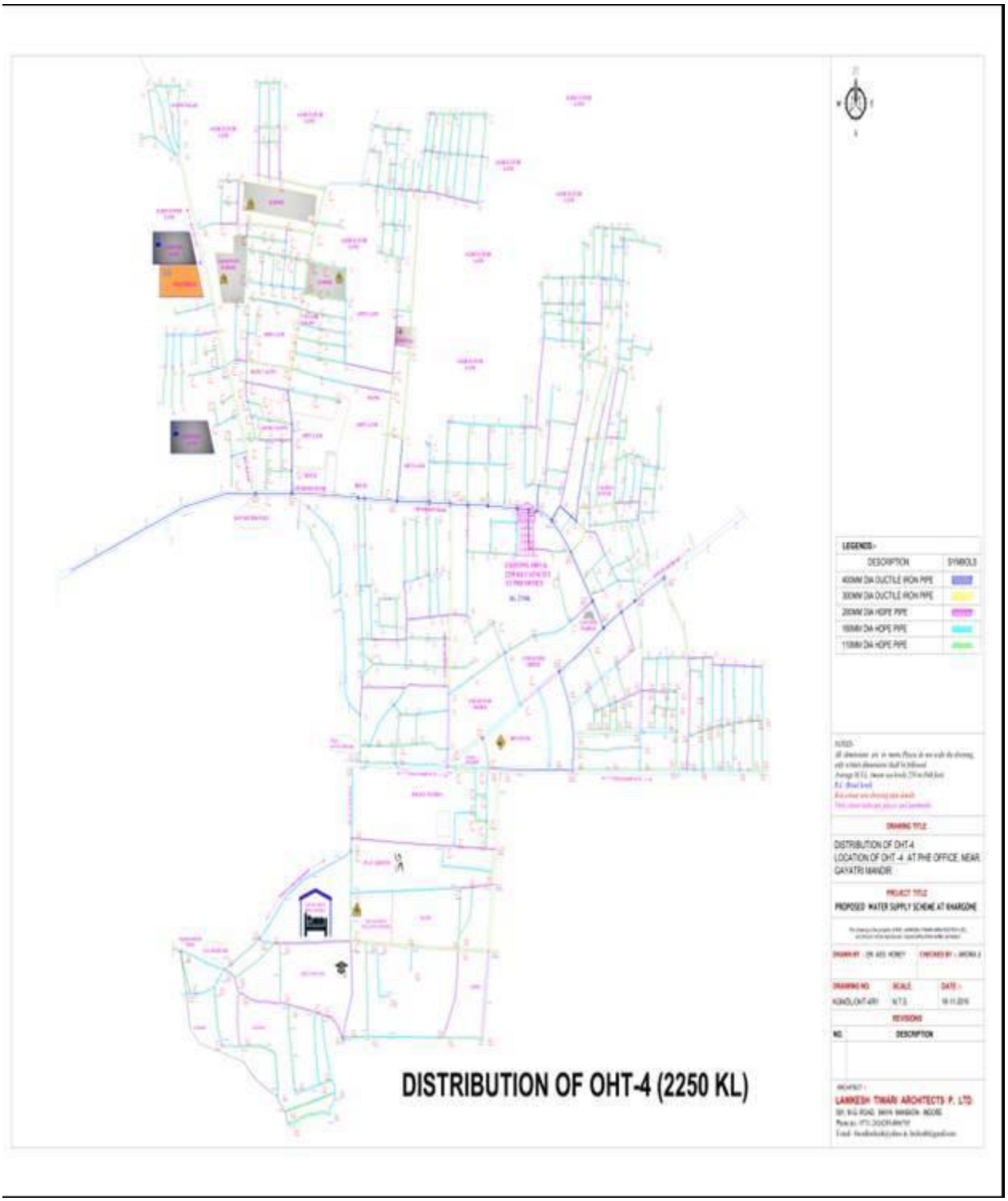
=140-CONTRACTOR (MEIL) CORR- LETTER

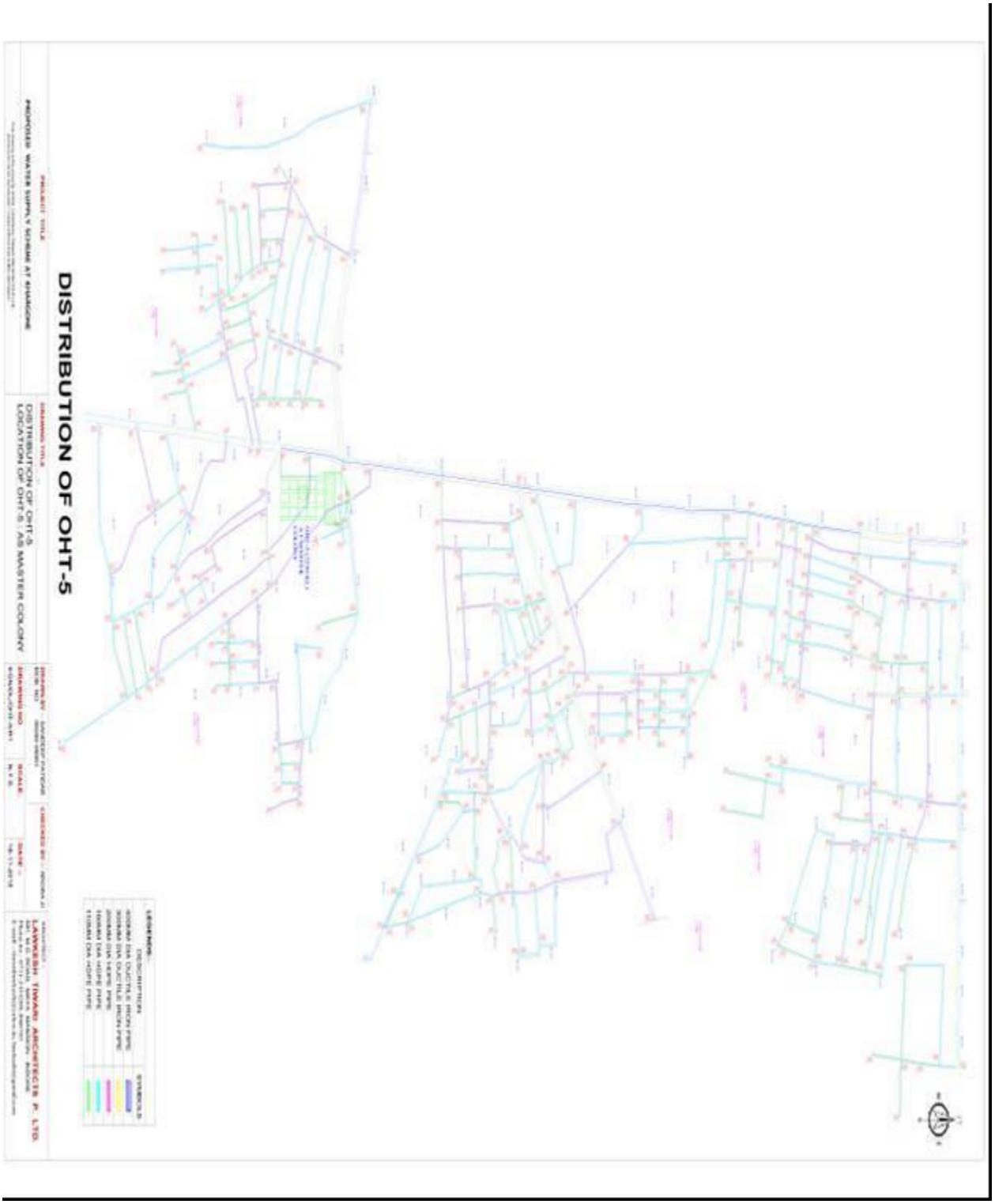
Appendix: 3

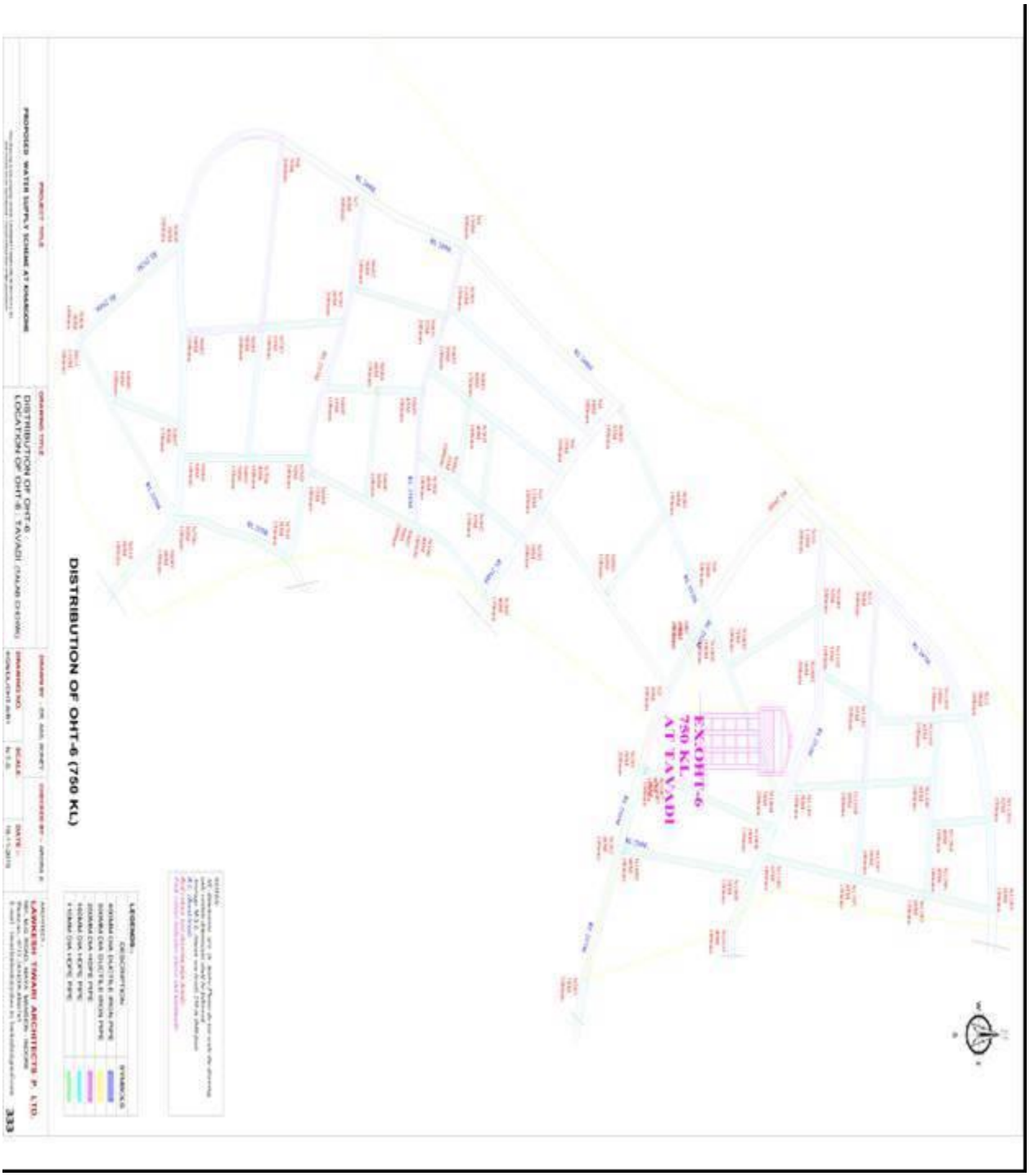
Location of proposed Sub-project on Survey of India Toposheet

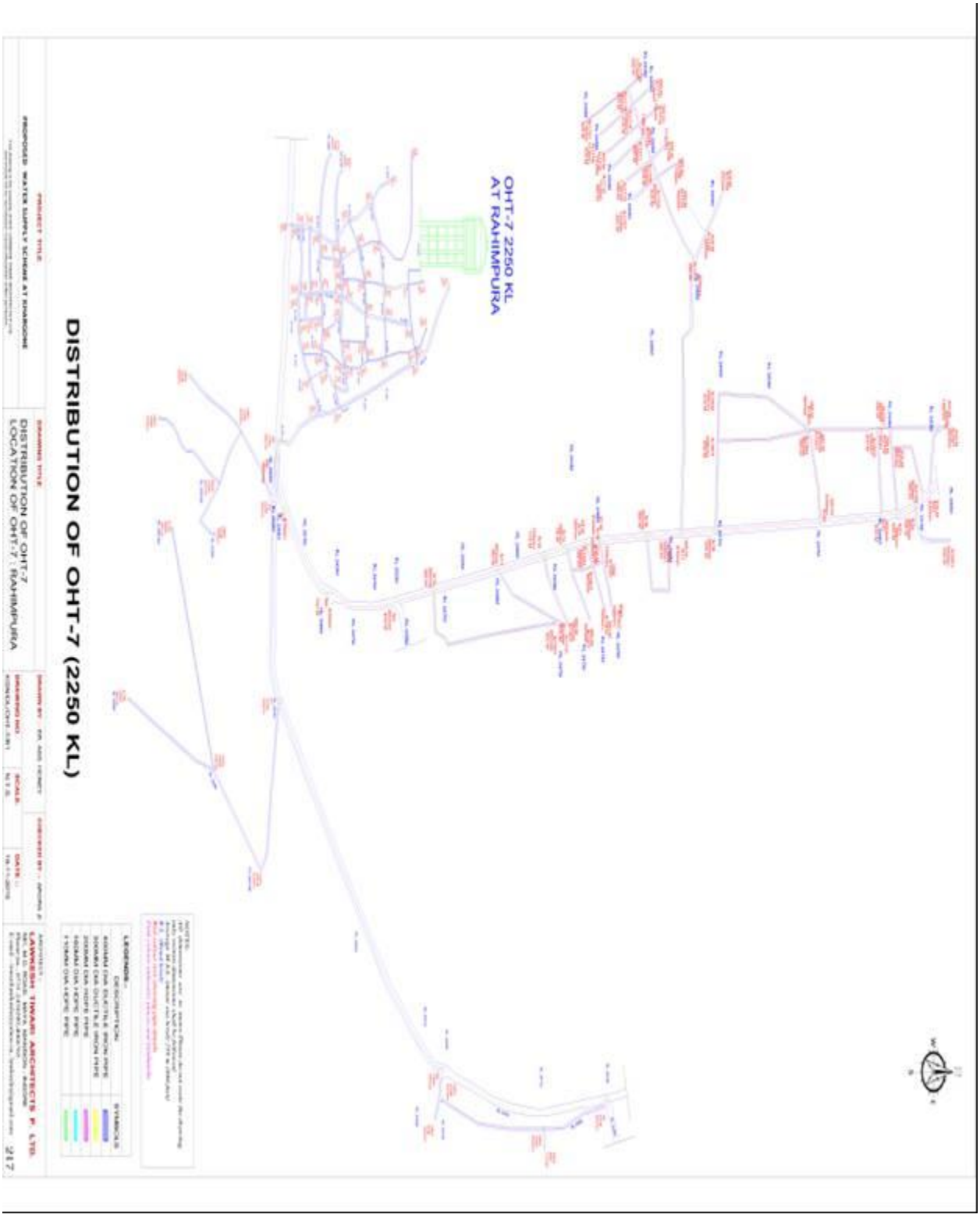


Appendix 4: Drawings of Proposed WSS




DISTRIBUTION OF OHT-5
PROPOSED WATER SUPPLY SCHEME AT KHARGONE
DISTRIBUTION OF OHT-5
LOCATION OF OHT-5 AS MASTER COLONY
LEGEND
LAWKESH TIWARI ARCHITECTS P. LTD.


DISTRIBUTION OF OHT-6 (750 KL)
EX.OHT-6
750 KL
AT TAVADI
PROPOSED WATER SUPPLY SCHEME AT KHARGONE
DISTRIBUTION OF OHT-6
LOCATION OF OHT-6 TAVADI
333


DISTRIBUTION OF OHT-7 (2250 KL)
OHT-7 2250 KL
AT RAHIMPURA
PROPOSED WATER SUPPLY SCHEME AT KHARGONE
DISTRIBUTION OF OHT-7
LOCATION OF OHT-7 : RAHIMPURA
LEGEND
DESCRIPTION
SYMBOLS
LAWKESH TIWARI ARCHITECTS P. LTD.

Appendix: 5

Photographs & List of Participants during Consultations

Ward No. 01

1	Mr Deepak Choure
2	Mr Kailash avole
3	Mr Devram avole
4	Mr rivaram avole
5	Mr parvat avole
6	Mr dinesh sindore
7	Mr kamal singh
8	Mr subhash sindore
9	Mr antar sindore
10	Mr ramlal sindore
11	Mr sodhan sindore
12	Mr parsuram sindore
13	Mr lakhan sindore
14	Mr jitendra hirve
15	Mr manish hirve
16	Mr ganesh sindore
17	Mr yogesh avore
18	Mr balram avore
19	Mr pannalal avore

20	Mr prakash avore	
Ward No. 03		
1	Lokesh bhavsar	
2	Jmnntha mandloi	
3	Bhart patedar	
4	Baliram patrdar	
5	Mukash patedar	
6	Badre parshad patedar	
7	Mahesh patedar	
8	Chunelal patedar	
9	Jidandr bhavsar	
10	Lalu patedar	
11	Ramesuwar patedar	
12	Lkhan patedar	
13	Heemnt patedar	
14	Thulseram patedar	
15	Pars patedar	
16	Shuram patedar	
17.	Aashish patedar	
18	Verandr patedar	
19	Sunel jane	

Ward No. 06		
1	Mr virendra singh bhadoriya	
2	Mr ravindra tomar	
3	Mr sintaram kushwah	
4	Mr shubham shrivashtav	
5	Mr aloke siduwar	
6	Mr kamal singh	
7	Mr chhaganlal	
8	Mr bhavesh shukla	
9	Smt reva kushwah	
10	Mr bhimsingh chouhan	
11	Mr laxman rai	
12	Mr harindra Mishra	
13	Mr rahul joshi	
14	Mr tulsiram varma	
Ward No. 14		
1	Mr sahid khan	
2	Mr vajid ali sayad	
3	Mr altaf khan	
4	Mr idrish sekh	
5	Mr mohammd ramij	

6	Mr abhula khatri	
7	Mr harut kahtri	
8	Mr Abdullhak	
9	Mr sarukh	
10	Mr fejal khan	
11	Mr jahir khan	
12	Mr mujahit khan	
13	Mr saluddin sekh	
14	Mr vasuddin sekh	
15	Mr parvej khan	
16	Mr jakir khatri	
17	Mr jumarkaruk khatri	
18	Mr sahid bhopali	
Ward No. 15		
1	Mr ayaj ali	
2	Mr monish khan	
3	Mr shay khan	
4	Mr soheb khan	
5	Mr ramjan khan	
6	Mr Jaid ali	
7	Mr mohmmad amisekh	

8	Mr amjad khan	
9	Mr napisingh	
10	Smt kalo	
11	Smt gola	
12	Smt jeddisinh	
13	Smt kamish sah	
14	Mr rasul khan	
15	smt mumtaj khan	
16	smt sahida	
17	Mr anish khan	
18	Mr magbul bagwan	
19	Mr sherkhan	
20	Mr mehbub	
21	Mr majudin	

Ward No. 17		
1	Mr nilesh varma	
2	Mr mirja	
3	Mr rakesh yadav	
4	Mr rajesh varma	
5	Mr jagan yadav	

6	Mr mahesh varma
7	Mr ajay dhangar
8	Mr manish
9	Smt manisha
10	Smt santoshi
11	Smt rekha
12	Smt Padma
13	Smt kiran
14	Smt kaveri
15	Smt santubai
16	Smt durgabai
17	Smt nisha
18	Mr krashnakant
19	Smt chhya joshi
20	Smt radhabai
21	Smt vahkorebai
22	Mr kishore varma
23	Mr shivam
24	Mr vinay
25	Mr lakhan yadav
26	Mr krashnalal

27	Mr sekhsalim	
Ward No. 19		
1	Mr jitendra kevat	
2	Mr jagdish alival	
3	Mr hiralal chouhan	
4	Mr shubham pal	
5	Mr ganesh soniyar	
6	Mr kanha ji	
7	Mr rajendra	
8	Mr Ankit sen	
9	Mr rajeet pal	
10	Mr pinkis soniyar	
11	Mr rameshvar karma	
12	Mr arjun chouhan	
13	Mr mukesh sorya	
14	Mr pramod soniyar	
15	Mr gopal rao gomte	
16	Mr anhomali	
17	Mr anil patil	
18	Smt sangeeta	
19	Smt shital	

20	Smt sarita	
21	Smt sumitra	
22	Mr rajendra patel	

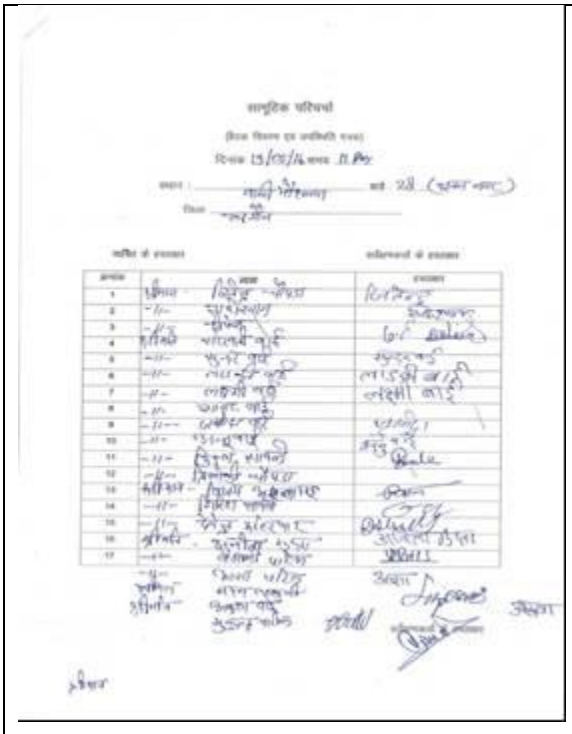
Ward No. 20		
1	Mr R.K telor	
2	Mr nandkishore pandit	
3	Mr badrilal pal	
4	Mr raja parmar	
5	Mr tisak patel	
6	Mr antiya pure	
7	Mr pramod manvade	
8	Mr nilesh solanki	
9	Mr pankaj soni	
10	Mr santosh varma	
11	Mr sunil pal	
12	Mr jitendra sen	
13	Mr nantu kevat	
14	Mr babulal pal	
15	Mr ravi pal	
16	Mr sandeep pal	

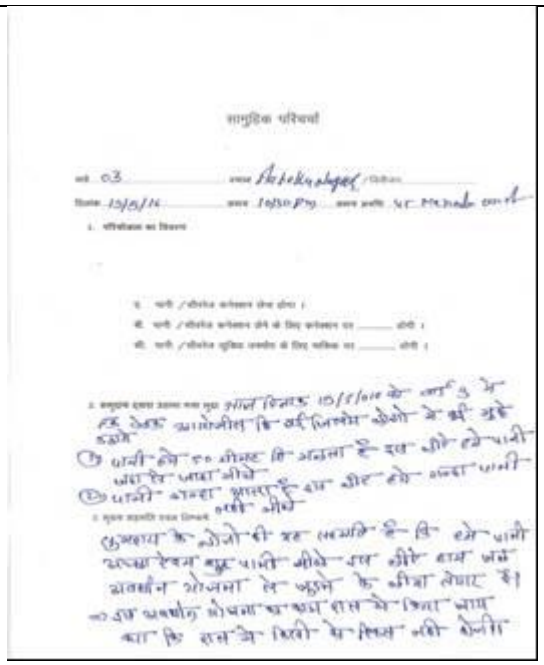
17	Mr ranjeet mane	
Ward No. 21		
1	Mr santosh sajjan	
2	Mr kailash	
3	Mr Mahesh	
4	Mr atul	
5	Mr kamlesh	
6	Mr jitendra karma	
7	Mr gajendra yadav	
8	Mr omprakash kumavat	
9	Mr santosh	
10	Mr mukesh	
11	Mr rakesh kohli	
12	Smt sushilabai	
13	Smt dondibai	
14	Smt ganubai	
15	Smt shila	
16	Smt gaytri	
17	Smt durupta	
18	Mr dharmendra dhangar	
19	Mr jagan bihari	

20	Mr mangilal kirade	
21	Mr Mahesh pal	
22	Mr mohit pal	
23	Mr rakesh viplode	
24	Mr sohan sirpure	
25	Mr pankaj soni	
26	Mr pramod mankhede	
27	Mr rajesh karma	
28	Mr sitaram pal	
29	Mr trilok vithore	
30	Mr ranjeeta mane	

Ward No. 28		
1	Jithendr chopdha	
2	Mr Radeshyam	
3	Mr Dipes	
4	Smt Suneeta bae	
5	Mr Sundar bae	
6	Smt Ladhke bai	
7	Smt Laxmi bhi	
8	Smt Sagar bai	

9	Smt Anpudha bae	
10	Smt Kiran sawla	
11	Mr Theelok chopdha	
12	Mr Vijay bhawsar	
13	Mr Girish savla	
14	Mr Dewandr aaherwar	
15	Smt Anita gupta	
16	Smt Veeshle patel	
17	Smt Aasha patel	
18	Mr Mukund patel	





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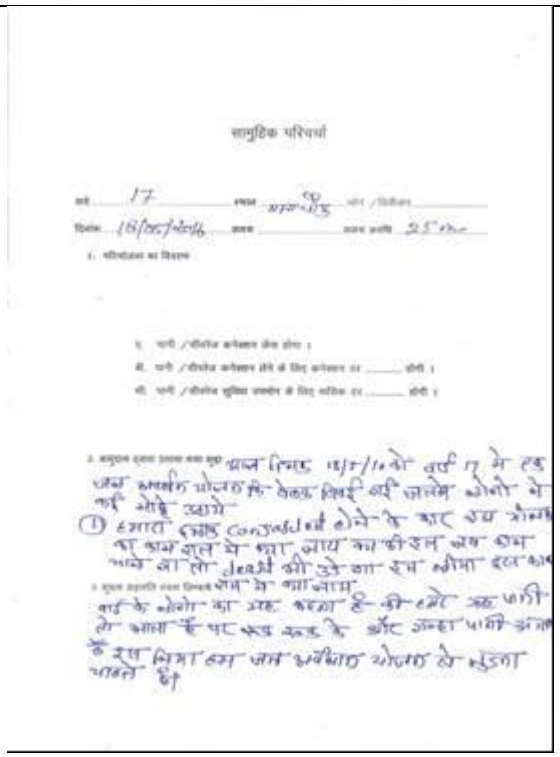
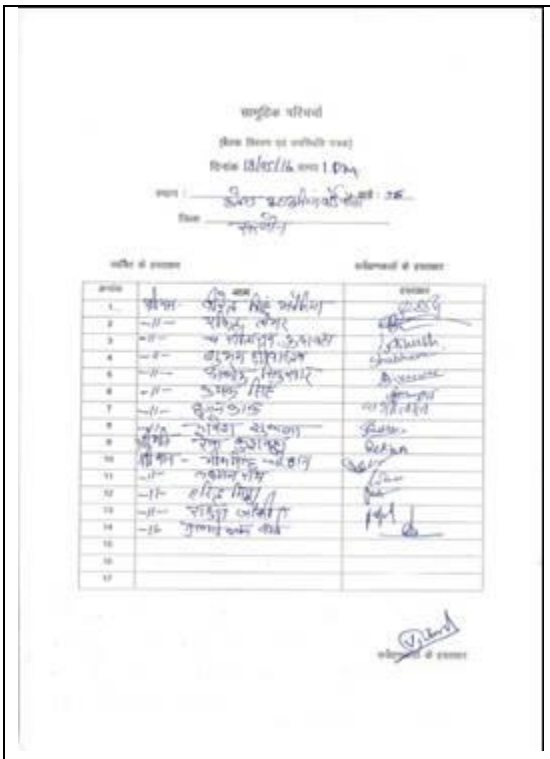


सामुहिक परिचर्चा

सामुहिक परिचर्चा

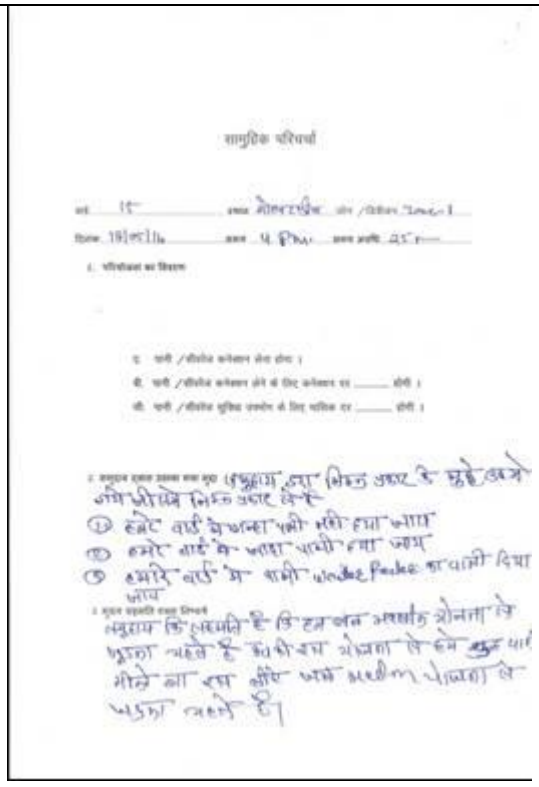
सामुहिक परिचर्चा



सामुदिक परिचर्चा

सामुदिक परिचर्चा

सामुदिक परिचर्चा



सामुदिक परिचर्चा

Appendix: 6

List of Tribal Communities in State of Madhya Pradesh as Provided by Ministry of Tribal Affairs, Government of India

1. Agariya
2. Andh
3. Baiga
4. Bhaina
5. Bharia Bhumia, Bhuinhar Bhumia, Bhumiya, Bharia, Paliha, Pando
6. Bhattra
7. Bhil, Bhilala, Barela, Patelia
8. Bhil Mina
9. Bhunjia
10. Biar, Biyar
11. Binjhwar
12. Birhul, Birhor
13. Damor, Damaria
14. Dhanwar
15. Gadaba, Gadba
16. Gond; Arakh, Arrakh, Agaria, Asur, Badi Maria, Bada Maria, Bhatola, Bhimma, Bhuta, Koilabhuta, Koliabhuti, Bhar, Bisonhorn Maria, Chota Maria, Dandami Maria, Dhuru, Dhurwa, Dhoba, Dhulia, Dorla, Gaiki, Gatta, Gatti, Gaita, Gond Gowari, Hill Maria, Kandra, Kalanga, Khatola, Koitar, Koya, Khirwar, Khirwara, Kucha Maria, Kuchaki Maria, Madia, Maria, Mana, Mannewar, Moghya, Mogia, Monghya, Mudia, Muria, Nagarchi, Nagwanshi, Ojha, Raj, Sonjhari Jhareka, Thatia, Thotya, Wade Maria, Vade Maria, Daroi
17. Halba, Halbi
18. Kamar
19. Karku
20. Kawar, Kanwar, Kaur, Cherwa, Rathia, Tanwar, Chattri
21. (Omitted)
22. Khairwar, Kondar

23. Kharia

24. Kondh, Khond, Kandh

25. Kol

26. Kolam

27. Korku, Bopchi, Mouasi, Nihal, Nahul Bondhi, Bondeya

28. Korwa, Kodaku

29. Majhi

30. Majhwar

31. Mawasi

32. Omitted

33. Munda

34. Nagesia, Nagasia

35. Oraon, Dhanka, Dhangad

36. Panika [in (i) Chhatarpur, Panna, Rewa, Satna, Shahdol, Umaria, Sidhi and Tikamgarh districts, and (ii) Sevda and Datia tehsils of Datia district]

37. Pao

38. Pardhan, Pathari, Saroti

39. Omitted

40. Pardhi, Bahelia, Bahellia, Chita Pardhi, Langoli Pardhi, Phans Pardhi, Shikari, Takankar, Takia [In (i) Chhindwara, Mandla, Dindori and Seoni districts, (ii) Baihar Tahsil of Balaghat District, (iii) Betul, Bhainsdehi and Shahpur tahsils of Betul district, (iv) Patan tahsil and Sihora and Majholi blocks of Jabalpur district, (v) Katni (Murwara) and Vijaya Raghogarh tahsils and Bahoriband and Dhemerkheda blocks of Katni district, (vi) Hoshangabad , Babai, Sohagpur, Pipariya and Bankhedi tah sils and Kesla block of Hoshangabad district, (vii) Narsinghpur district, and (viii) Harsud Tahsil of Khandwa district]

41. Parja

42. Sahariya, Saharia, Seharia, Sehria, Sosia, Sor

43. Saonta, Saunta

44. Saur

45. Sawar, Sawara

46. Sonr

Appendix: 7

List of Schedule Areas in Madhya Pradesh as Specified by the Scheduled Areas under the fifth Schedule of Indian Constitutions

1. Jhabua district

2. Mandla district

3. Dindori district

4. Barwani district

5. Sardarpur, Dhar, Kukshi, Dharampuri, Gandhwani and Manawar tahsils in Dhar district

6. Bhagwanpura, Segaon, Bhikangaon, Jhirniya, Khargone and Meheshwar tahsils in Khargone district

7. Khalwa Tribal Development Block of Harsud tahsil and Khaknar Tribal Development Block of Khaknar tahsil in Khandwa district

8. Sailana and Bajna tahsils in Ratlam district

9. Betul tahsil (excluding Betul Development Block) and Bhainsdehi and Shahpur tahsils in Betul district
10. Lakhanadone, Ghansaur and Kurai tahsils in Seoni district

11. Baihar tahsil in Balaghat district

12. Kesla Tribal Development Block of Itarsi tahsil in Hoshangabad district

13. Pushparajgarh, Anuppur, Barhi, Kotma, Jaitpur, Sohagpur and Jaisinghnagar tahsils of Shahdol district

14. Pali Tribal Development Block in Pali tahsil of Umaria district

15. Kusmi Tribal Development Block in Kusmi tahsil of Sidhi district

16. Karahal Tribal Development Block in Karahal tahsil of Sheopur district

17. Tamia and Jamai tahsils, patwari circle Nos. 10 to 12 and 16 to 19, villages Siregaon Khurd and Kirwari in patwari circle no. 09, villages Mainawari and Gaulie Parasia of patwari circle No. 13 in Parasia tahsil, village Bamhani of Patwari circle No. 25 in Chhindwara tahsil, Harai Tribal Development Block and patwari circle Nos. 28 to 36,41,43,44 and 45B in Amarwara tahsil Bichhua tahsil and patwari circle

Nos. 05,08,09,10,11 and 14 in Saunsar tahsil, Patwari circle Nos. 01 to 11 and 13 to 26, and patwari circle no. 12 (excluding village Bhuli), village Nandpur of patwari circle No. 27, villages Nikanth and Dhawdikhapa of patwari circle no 28 in Pandurna tahsil of Chhindwara district.

Annexure 8: Draft ESA Consultation and disclosure details

Photographs of Draft ESA Consultation

Public Disclosure

दैनिक जनसत्ता संदेश 11-7-16

अधिक से अधिक वृक्ष रोपण कर

सुझाव हेतु नगरपालिका ने बुलाई महत्वपूर्ण बैठक

खरगोन। खरगोन नगर में नागरिकों की मूलभूत आवश्यकताओं की पूर्ति के लिय कटिबद्ध नगरपालिका खरगोन द्वारा नगर की पेयजल से जुडी महत्वाकांक्षी जल आवर्धन योजना तैयार की गई है। जिसका क्रियान्वयन शीघ्र ही राज्य शासन की मुख्य प्रदेश अर्बन डेवलपमेंट कंपनी के माध्यम से आरंभ किया जाना है। नगरपालिका द्वारा इस योजना के क्रियान्वयन हेतु योजना से संबंधित विभिन्न पक्षो पर जन सामान्य के विचार जानने के लिये योजना तैयार करते समय व्यक्तिशः संपर्क किया गया है। इसी श्रृखला में अपरान्ह 3:00 बजे नगरपालिका सभा कक्ष मे एक महत्वपूर्ण बैठक आयोजित की गई है, योजना के तकनीकी, पर्यावरणीय एवं सामाजिक पक्षों को जन सामान्य के समक्ष प्रस्तुत किया जावेगा। इस बैठक मे नगर के सभी राजनैतिक दलो से जुडे जनप्रतिनिधियों, नगरपालिका परिषद के सभी पूर्व अध्यक्ष, नगरपालिका पार्षद, समाजसेवी एवं स्वयंसेवी संगठनो के पदाधिकारी प्रचार माध्यमों के प्रतिनिधि एवं सभी गणमान्य नागरिकों को आमंत्रित किया गया है। नगरपालिका अध्यक्ष विपिन कुमार गौर, मुख्य नगरपालिका अधिकारी निशिकांत शुक्ला न.पा. उपाध्यक्ष कन्हैया कोठने ने सभी से अनुरोध किया है कि, वे नगर की पेयजल से जुडी इस महत्वपूर्ण योजना के क्रियान्वयन हेतु निश्चित समय पर स्थानीय नगरपालिका सभा गृह में उपस्थित होकर अपने बहुमूल्य सुझाव प्रदान करे। ताकि, इस योजना का निर्बाध एवं सफलता पूर्वक क्रियान्वयन नगर हित मे सुनिश्चित किया जा सकें।

जनसंख्या स्थिरीकरण माह एवं दस्तरोग नियंत्रण पखवाडे का शुभारंभ

खरगोन। जिला चिकित्सालय खरगोन में जनसंख्या स्थिरीकरण माह एवं सघन दस्तरोग नियंत्रण पखवाडे, विशाल नसबंदी शिविर एवं परिवार कल्याण कार्नर तथा जिंक-ओ.आरएस कार्नर का शुभारंभ विधायक बालकृष्ण पाटीदार, के करकमलों द्वारा फिता काटकर किया गया। इस अवसर पर मुख्य चिकित्सा एवं स्वास्थ्य अधिकारी जिला खरगोन डॉ. गोविंद गुप्ता, डीएचओ डॉ. बीएस कनेय, सिविल सर्जन डॉ. रमेश नीमा एवं अन्य अधिकारी/ कर्मचारी उपस्थित थे। उक्त अवसर पर नसबंदी शिविर में 25 महिलाओं का नसबंदी ऑपरेशन किया जाएगा। साथ ही परिवार कल्याण कार्नर पर महिला रोग विशेषज्ञ डॉ. गुप्ता मेडम द्वारा अनिसर पति असलम खरगोन को दो बच्चों में अंतर रखने हेतु कॉपर-टी के लिए प्रोत्साहित किया गया, जिससे संबंधित द्वारा कॉपर-टी हेतु सहमति दी गई। जिंक-ओआरएस कार्नर से बच्चों में दस्त रोकने के लिए ओआरएस पैकेट वितरित किए गए।

स्वात्वाधिकारी, प्रकाशक और मुद्रक ज्योति माहेश्वरी
R.N.I.No.-MPHIN/2014/59433 सम्पादक -ज्योति माहे

Minutes of Draft ESA Consultation:

कार्यालय नगरपालिका परिषद, खरगोन, जिला खरगोन (म.प्र.)

दूरभाष (कोड-07282) ☎ 231333 फैक्स – 21333 – E-Mail : cmokhargone@mpurban.gov.in

विषय – खरगोन शहर की जल आवर्धन योजना, पर्यावरण एवं सामाजिक प्रबंधन अन्तर्गत पेयजल प्रबंधन योजना के संबंध में आयोजित बैठक दिनांक 11.07.2016 के संबंध में ।

——00——

आज दिनांक 11.07.2016 को नगर पालिका परिषद, खरगोन के सभाकक्ष में विषयाकिंत के संबंध में बैठक दोप. 3.00 बजे प्रारंभ हुई । आयोजित बैठक में परिषद के पार्षदगण, शहर के सामाजिक संगठनों के अध्यक्ष एवं प्रतिनिधि उपस्थित हुए है, साथ ही शहर के प्रबुद्ध पत्रकारगण भी उपस्थित हुए ।

बैठक के दौरान पार्षद एवं जनता के द्वारा निम्नानुसार मत प्रस्तुत प्रस्तुत किये गये:–

1. पार्षद द्वारा पर्यावरण संबंधी विचार व्यक्त करते हुए बताया गया कि, खरगोन शहर की जल आवर्धन योजना में वाटर ट्रीटमेंट प्लांट साईट पर किसी तरह के पर्यावरणीय हानि जैसे – वृक्ष, पेड़ पौधों को हटाकर पर्यावरण हानि तो नहीं होगी ? साथ ही जो योजना के तहत टंकिया प्रस्तावित की गई है उनके निर्मित होने पर भी किसी प्रकार की पर्यावरणीय हानि तो नहीं हो रही है ?

   कार्यालय द्वारा प्रोजेक्ट रिपोर्ट अनुसार जानकारी दी गई कि, जल आवर्धन योजना के क्रियान्वयन पर किसी भी प्रकार के वृक्ष, पेड़–पौधों को हटाया जाना प्रस्तावित नहीं है और न ही पानी की टंकिया निर्माण के दौरान किसी भी प्रकार की पर्यावरणीय हानि नहीं होगी ।

2. जल आवर्धन परियोजना के तहत कौन सी पाईप लाईन का उपयोग किया जा रहा है तथा पाईप लाईन डालने पर किसी भी प्रकार के मकान या समुदाय को हानि तो नहीं होगी ?

   कार्यालय द्वारा प्रोजेक्ट रिपोर्ट अनुसार जानकारी दी गई कि, जल आवर्धन योजना के तहत शहर में पाईप लाईन डाली जाने के दौरान किसी भी मकान या समुदाय को हानि नहीं होगी ।

3. जनता का सुझाव आया कि, मीटर लगाने के पहले ट्रायल रन किया जावे। तथा यह सुनिश्चित हो सके की पानी पर्याप्त मात्रा में मिल रहा है, इस संबंध में विस्तृत रूप से जानकारी दी गई ।

4. जनता की तरफ से कहा गया कि खरगोन नगर पालिका परिषद द्वारा लागू की जा रही जल आवर्धन योजना का क्रियान्वयन का विचार अच्छा है, परन्तु योजना शुरू होने में कितना समय लगेगा ।

   इस पर जानकारी दी गई कि, जल आवर्धन योजना के पूर्ण होने मे अनुमानित 2 वर्ष का समय लगना है ।

5. जनता द्वारा जानकारी चाही गई कि, योजना पूर्ण होने पर योजना के रखरखाव की क्या व्यवस्था होगी ?

इस पर जानकारी दी गई कि, ठेकेदार द्वारा कार्य पूर्ण होने के 10 वर्षों तक रख रखाव /मरम्मत करने का दायित्व होगा ।

6. जनता द्वारा कहा गया कि, कोई नागरिक पर्यावरण के क्षेत्र में कार्य कर पेड़, पौधे लगाता है तो उस व्यक्ति को जलकर में कोई सुविधा प्रदान की जावेगी ?

इस पर कार्यालय द्वारा बताया गया कि, आपका सुझाव अच्छा है । जलकर में सुविधा प्रदान करने हेतु शासन से मार्गदर्शन प्राप्त किया जावेगा ।

बाद उपस्थित परिषद के सदस्य, पत्रकारगण एवं शहर के सामाजिक संगठनों के प्रतिनिधियों के द्वारा जल आवर्धन योजना के क्रियान्वयन किये जाने के संबंध में परिषद को बधाई दी गई तथा खरगोन शहर की जल आवर्धन योजना का शीघ्र क्रियान्वयन के संबंध में शासन को उपरोक्त सुझाव एवं मत भेजे जाने की सहमति दी गई।

मुख्य नगरपालिका अधिकारी,
नगरपालिका परिषद, खरगोन

VIJAYANT
PAGE NO.:
DATE:

कार्यालय नगर पालिका परिषद खरगोन, जिला खरगोन

निकाय जल आवर्धन योजना क्रियान्वयन हेतु
आयोजित बैठक दिनांक 11/07/2016 समय दोप. 3.00 बजे
का कार्य विवरण। -

बैठक आमंत्रित सदस्यों की उपस्थिति

क्र.	नाम	निवास का पता	उपस्थिति हस्ताक्षर
1	सायनेस अध्यक्ष साधना [illegible]	सौमित्र [illegible]	[illegible]
2	मा. नीलिमा परसाई [illegible]	[illegible]	[illegible]
3	प्रवीण [illegible] ([illegible])	[illegible]	[illegible]
4	श्री श्याम चंद्र [illegible]	[illegible]	[illegible]
5	[illegible]	[illegible]	[illegible]
6	[illegible]	[illegible]	[illegible]
7	श्रीमति कलाबाई [illegible]	[illegible]	[illegible]
8	हीरालाल	[illegible]	हीरालाल
9	[illegible]	[illegible]	[illegible]
10	राजेन्द्र [illegible]	[illegible]	[illegible]
11	पुरुषोत्तम जोशी [illegible]	[illegible]	[illegible]
12	[illegible]	[illegible]	[illegible]
13	Ayyub Khan	[illegible]	[illegible]
14	पवन [illegible]	[illegible]	[illegible]
15	[illegible] Raghuvanshi	Dainik Bh[illegible]	[illegible]
16	[illegible]	[illegible]	[illegible]
17	[illegible]	[illegible]	[illegible]
18	गोपाल [illegible]	[illegible]	गोपाल

VIJAYANT
PAGE NO.:
DATE:

क्र.	नाम	निवास का पता	उपस्थिति हस्ताक्षर
39	शिव तिवारी	9425326725	[illegible]
	अध्यक्ष शहर कांग्रेस खरगोन		
40	शेख कलीम पार्षद वार्ड क्र 16	9826831831	[illegible]
41	सौ. कुसुम नीमा अध्यक्षा	9826399884	कुसुम नीमा
42	श्रीमती शाहिना लाडी सचिव	942585152	Sh
43	रोहित आयसार	9926357150	[illegible]
44	अजय तिवारी [illegible]	9826626075	[illegible]
45	श्री जगदीश [illegible]	रवडी	
46	श्री [illegible] शेख [illegible]	रवडी	
47	श्रीमति [illegible]	[illegible]	[illegible]
48	[illegible]	[illegible]	[illegible]
49	Hemant Khede Ad 9424554355	[illegible]	Hu
50	[illegible]	9826330048	[illegible]
51	अनवर जिन्दान उपाध्यक्ष [illegible]	9406688111	[illegible]
52	संजय चौहान	9926953224	[illegible]
53	दिलमोहन [illegible]	9584[illegible]	[illegible]
54	सुरेश [illegible]	9977349854	11-6-16
55	सुनील कुमार भायरे	98270575385	[illegible]

जल आवर्धन योजना से पर्यावरण पर नहीं पड़ेगा विपरित प्रभाव

खरगोन निप्र। नगर को पर्याप्त पेयजल आपूर्ति से जुड़ी एवं विश्व बैंक तथा म.प्र. शासन के सहयोग से क्रियान्वित होने वाली 103.04 करोड़ लागत वाली जल आवर्धन योजना के क्रियान्वयन मे स्थानीय पर्यावरण पर किसी भी तरह का विपरित प्रभाव नहीं पड़ेगा। यह योजना पर्यावरण एवं सामाजिक हितों को ध्यान मे रखकर ही क्रियान्वित की जाएगी। ये बात योजना बनाने वाली एजेंसी एवं मुख्य नगर पालिका अधिकारी निशिकांत शुक्ला ने बताई। कार्यशाला के प्रारंभ में नगर पालिका अध्यक्ष विपिन गौर ने इस योजना को लेकर संक्षिप्त जानकारी दी।

जैसे आवर्धन योजना के क्रियान्वयन मे पर्यावरणीय एवं सामाजिक प्रभावो जैसें संवेदनशील मुद्दो पर जन सामान्य की जिज्ञासाओं एवं प्रश्नो के जवाब के लिए स्थानीय नगरपालिका परिषद सभागृह मे नगर पालिका द्वारा आयोजित एक महत्वपूर्ण बैठक मे जनप्रतिनिधियों, समाजसेवी, स्वयंसेवी संस्थाओं के पदाधिकारियों नगर पालिका के वर्तमान पार्षदों, गणमान्य नागरिको एवं पत्रकारो की उपस्थिति मे मुख्य नगर पालिका अधिकारी श्री निशिकांत शुक्ला ने इस योजना के संबंध में जानकारी दी। जिज्ञासाओ एवं पूछे गए प्रश्नों के जवाब दिए।

बैठक मे विशेष रूप से जलावर्धन योजना से जुडे श्री दिनेश प्रजापति सिविल इंजीनियर एवं सामाजिक पक्ष से जुड़े राकेश शांडिल्य ने योजना के क्रियान्वयन मे नगर के विभिन्न क्षेत्रों मे किसी भी प्रकार की व्यक्तिगत सम्पत्ति को नुकसान नहीं होने देने का विश्वास दिलाया। उल्लेखनीय है कि, नगरवासियों को इस महती जल आवर्धन योजना से 24 घण्टें एवं पर्याप्त पेयजल उपलब्ध कराया जाएगा। नगर के लिए यह महत्वकांक्षी योजना सिद्ध होगी। जिसका लाभ आने वाले कई वर्षो तक नगरवासियों को मिलेगा।

बैठक की अध्यक्षता नगर पालिका परिष के अध्यक्ष श्री विपिन कुमार गौर ने करते हु कहा कि, यह जलावर्धन योजना शहर के लि वरदान सिद्ध होगी। उन्होंने कहा कि योजन निश्चित समयावधि मे क्रियान्वित होकर पूरी हो इसमें शहर के जिम्मेदार गण मान्य नागरिकों जन-प्रतिनिधियों एवं सार्वजनिक क्षेत्र मे का करने वाले समाज सेवियों का सहयोग ए उनके परामर्श अत्यावश्यक हैं। योजना के क्रियान्वयन मे इनसे प्राप्त सुझाओं को ध्या रखा जाएगा।

बैठक मे नगरीय विकास विभाग के संभागी कार्यपालन यंत्री श्री गजानन्द चैहान ने विशे रूप से उपस्थित होकर इस योजना से जु विभिन्न जिज्ञासाओं का संतोषजनक समाध किया। बैठक मे नगरपालिका के सहायक यं श्री रघुनाथ वर्मा, उपयंत्री श्री सरजू सांग सहित नगरपालिका के अधिकारी एवं कर्मच उपस्थित थें।

दैनिक समाचार पत्र "चैथा संसार" - दिनांक 12/07/2016

समस्त आवश्यक ... जिसमें कलेक्टर विभागीय अधिकारियों के ... के बाद नाका मार्ग से ...