

## PRE-FEASIBILITY REPORT

### 1.0 EXECUTIVE SUMMARY

Letter of Intent (LoI) for mining lease “Pobari Block/NYR B11”, Yamuna Nagar for minor mineral sand over an area of 23.05 hectares has been granted from Director, Mines and Geology department, Chandigarh, Haryana Memo No. **DMG/HY/Cont/ Pobari Block/NYR B11 /2015/ dated 19/06/2015/2934** for the period of **09** year to M/s Developer Strategies India Private Limited. (Copy enclosed as Annexure-I) The proposed production capacity of sand minor minerals is 11,00,000 TPA. The lease area lies on Yamuna riverbed. The total mine lease area is 23.05 hectares which is non- forest land. The proposed mining lease project covered the riverbed. The period of lease will be 09 years and same will commence with effect from date of grant of Environmental Clearance by the competent authority or on expiry of 12 months from the date of issuance of Letter of Intent, whichever is earlier.

The following special conditions shall be applicable for the excavation of minor mineral from river beds in order to ensure safety of river-beds, structures and the adjoining areas:

- a. No mining would be permissible in a river-bed up to a distance of five times of the span of a bridge on up-stream side and ten times the span of such bridge on down-stream side, subject to a minimum of 250 meters on the up-stream side and 500 meters on the down-stream side;
- b. There shall be maintained an un-mined block of 50 meters width after every block of 1000 meters over which mining is undertaken or at such distance as may be directed by the Director or any officer authorized by him;
- c. The maximum depth of mining in the river-bed shall not exceed three meters measured from the un-mined bed level at any point in time with proper bench formation;
- d. Mining shall be restricted within the central 3/4th width of the river/ rivulet;
- e. No mining shall be permissible in an area up to a width of 500 meters from the active edges of embankments in case of river Yamuna, 250 meters in case of Tangri, Markanda and Ghaggar and 100 meters on either side of all other rivers/rivulets;
- f. Any other condition(s), as may be required by the Irrigation Department of the State from time to time for river-bed mining in consultation with the Mines & Geology Department, may be made applicable to the mining operations in riverbeds.

A safety margin of two meters shall be maintained above the ground water table while undertaking mining and no mining operations shall be permissible below this level unless a specific permission is obtained from the competent authority in this behalf. Further, the depth of excavation of mineral shall not exceed nine meters (9m) at any point of time;

The leaseor shall be under obligation to carry out mining in accordance with all other provisions as applicable under the Mine Act, 1952, Mines and Minerals (Development and Regulation) Act, 1957, Indian Explosive Act, 1884, Forest (Conservation) Act, 1980 and Environment (Protection Act), 1986 and the rules made there under, wild life (Protection) Act 1972, water (Prevention and control of pollution) Act 1974 and Air (Prevention and Control of Pollution) Act, 1981.

### 1.1 Salient features of the project

Project name	Sand (minor mineral)	
Mining Lease Area	23.05 Hect.	
Location of mine	Pobari Block/NYR B11, Yamuna Nagar (area 23.05ha)	
Coordinates	<b>S.No.</b>	<b>Latitude and Longitude</b>
	1.	N 30 <sup>0</sup> ’12.942” E 77 <sup>0</sup> ’15’44.055”
	2.	N 30 <sup>0</sup> ’4.75” E 77 <sup>0</sup> ’16’4.75”
	3.	N 30 <sup>0</sup> ’16.79” E 77 <sup>0</sup> ’16’13.82”
	4.	N 30 <sup>0</sup> ’22.25” E 77 <sup>0</sup> ’15’54.19”



Khasra no.	Village –Pobari <b>Khasra numbers</b> <b>Pobari-</b> <b>14//5</b> <b>15//1</b> min,2min,3 min,6min, 7/1,7/2, 8, 9, 10, 12, 13, 14, 15, 16,17, 18, 25. <b>16//6/2</b> min, 7 min, 8 min, 9 min,10 min, 11/1,11/2, 12, 13, 14, 15, 16, 17,18,19, 20/1, 20/2,21.min,22 min,23,24,25. <b>17//3</b> min, 8, 9, 10 min, 11, 12,13, 18, 19, 20/1, 20/2, 21, 22, 23.  <b>Nakom-2//15</b> , 16min. <b>3//11</b> , 19, 20, 21min, 22, 23. <b>6//2min</b> , 3min, 4min, 5min, 6, 7,8min, 14min, 15min <b>5//10</b> , 11, 12, 18, 19, 20min, 22min, 23, 24, 25. <b>14//4min</b> , 5min. <b>15//1min</b> , 2min. <b>15//1min</b> , 2min.
Toposheet number	H43L8, H43L7, H43L11, H43L12
River/Nalla/Nadi/Khad	Gair Mumkin Nadi, Nala.
Minerals of mine	Sand (minor mineral)
Geological detail:	Geological reserves= 13,83,000 TPA Mineable reserves =11, 06,400 TPA (riverbed mining & the mineral will be replenished annually during monsoon period)
Proposed production	11,00,000 TPA
Method of mining	Open Cast Semi Mechanized
No of working days	300 Days
Water demand	About 38 KLD of water will be required (Domestic, dust suppression and plantation Purposes).
Man power	67
Nearest railway station	Jagadhari Railway station – 24.65Km SW
Nearest state highway/national highway	NH -73 ( 13Km, E) & SH-6 (11 Km NE )
Nearest air port	Chandigarh Airport – 85 Km, NW

## 2. INTRODUCTION OF THE PROJECT/ BACKGROUND INFORMATION

### 2.1 Identification of Project and Project Proponent

Letter of Intent (LoI) for mining lease for sand minor mineral over an area of 23.05 Ha has been granted to M/s Developer Strategies India Private Limited., from Director of Mines and Geology Department, Govt. of Haryana vide Memo No. **DMG/HY/Cont/ Pobari Block/NYR B11 /2015/3924** dated **19/06/2015**.

The details of the project proponent and project are given below:

Name of the applicant	Sh. Inderpal Singh
Name & Address of Applicant	Sh. Inderpal Singh M/s Developer Strategies India Private Limited 468,Sarojini Colony,Yamuna Nagar-135001, Haryana
Name of Mine	Pobari Block/NYR B11 by M/s Developer Strategies India Private Limited



Mineral	Sand (minor mineral)
Area (ha)	23.05Hect.
Status of Project	New lease

## 2.2 Brief description of nature of the project

The proposed mining lease area 23.05Hect. of Pobari Block/NYR B11, Yamuna Nagar, Haryana is located on the Yamuna river from 13 Km of NH 73 in West Direction. It has been proposed to excavate approximately 11,00,000 TPA of sand from the bed of the Yamuna River. The Sand material will be replenished during monsoon season every year, as the mining will be undertaken on a rotation basis, in such a way that excavated areas of previous years of mining will act as depository for the post monsoon season.

## 2.3 Need for the Project and Its Importance to the Country or Region

Building huge infrastructure as envisaged by Government of India/Haryana Government particularly in road and housing sector requires basic building and construction raw materials. The sand is one of primary building material required for the purpose. The mining activities as proposed are the backbone of all construction and infrastructure projects as the raw material for construction is made available only from such mining. The sand to be excavated is in high demand at the local market for real estate and infrastructure industry. This project will also provide employment to local people helping them earn livelihood. In addition to this, it will further prevent widening of the Yamuna river bed due to the deposition of sediments which if not mined out will result in raising of the river bed causing flooding, damage to the adjoining areas, destruction of life and property.

## 2.4 Demands-Supply Gap

The demand for sand is ever growing with the growth of the infrastructure sector in our country. The mineral is used mainly in the construction activities like roads, buildings, bridges etc specially in NCR. The requirement for the mineral is always high in the nearby cities and towns. Therefore there is always a good demand of the mineral in the domestic market.

## 2.5 Imports vs. Indigenous Production

The demand in the domestic market is high Sand (minor mineral) is available in abundant quantity in the leased area and can be excavated indigenously. Import does not apply in the present case of sand mining.

## 2.6 Export Possibility

There is no proposal to export the sand.

## 2.7 Domestic/ Export Markets

**Domestic Market:** The sand excavated will be directly sold in the market.

**Export Market:** The proposed mining activity is for indigenous consumption only for real estate and infrastructure sector etc. No possibility of export of sand from this lease.

## 2.8 Employment Generation (Direct and indirect) due to the project

This project operation will provide livelihood to the poorest section of the society. It will provide employment to the people residing in vicinity and indirectly by the development of supporting infrastructure.

## 3.0 PROJECT DESCRIPTION

### 3.1 Type of Project Including Interlinked and Interdependent Projects, If Any.

The proposed project of 23.05 Hect. area is of sand mining project. The mineral excavated will be directly transported to the real estate, construction and infrastructure projects.



### 3.2 Location

The mining lease area is located on Yamuna at riverbed Pobari Block/NYR B11, Yamuna Nagar, Haryana. The project falls in SOI Toposheet No. - H43L4, H43L8, H43R1, H43R5. The lease area lie on 14 Km South direction fom Yamuna Nagar town. The site is approachable from 13 Km NH73 West direction. Location map of the Project site is presented in **figure 1**. The key plan is attached as **Annexure-III**.

### 3.3 Details of Alternate Sites

In the present case, the Government of Haryana has issued LOI for riverbed mining to the project proponent for carrying out extraction of sand in Riverbed falling within the territory of Pobari Block/NYR B11, Yamuna Nagar. Thus, the mining site has been specified by the government and thus, there is no case for alternate site studies.

#### 3.3.1 Size or Magnitude of Operation

The mine lease area is land in the river section and the project is contemplated to win the mineral sand by semi mechanized open cast method of mining without blasting. The daily production has been contemplated as 3,666 TPA.

#### 3.4 Size or magnitude of operation

The proposed mine has lease over an area of 23.05 Hect. The maximum rated capacity of the project will be 11,00,000 TPA which will be excavated out in layers upto a depth of 3m in the riverbed.

### 3.5 Project Description with Process Details

#### Method of Mining

The method of mining is open cast semi mechanized method. Mining will be done by deploying earthmovers like excavator/Poclaim, Backhoe and loaders for loading of mineral into trucks, tippers and tractor/trolleys and directly transported into market. Mining Machinery and transporting vehicles may be deployed on leaseual basis. No mineral beneficiation will be carried out at the site.

#### 3.6 Raw Material Required Along With Estimated Quantity, Likely Source, Marketing Area of Final Product/s, mode of Transport of Raw Material and Finished Product

No raw material will be required in the proposed project. The operation involves the excavation of sand in its existing form and transported to the endusers.

**The Mineral production (in Tons) for the Next Five years is given below:**

Year	Sand (Tons)
First Year	11,00,000
Second Year	11,00,000
Third Year	11,00,000
Fourth Year	11,00,000
Fifth Year	11,00,000

#### 3.7 Resource Optimization/ Recycling and Reuse

Minerals are generally depleting asset once mined; but minerals like sand will be replenished naturally. Thus a scientific approach will be taken up for excavation of mineral with systematic method. There will be no Overburden and Solid waste generation.

#### 3.8 Availability of Water, its Source, Energy/ Power Requirement and Source

##### 3.8.1 Water Requirement

The total water requirement will be 38 KLD. This water will be sourced from the nearby villages



through tankers. Water balance is given in figure 2.

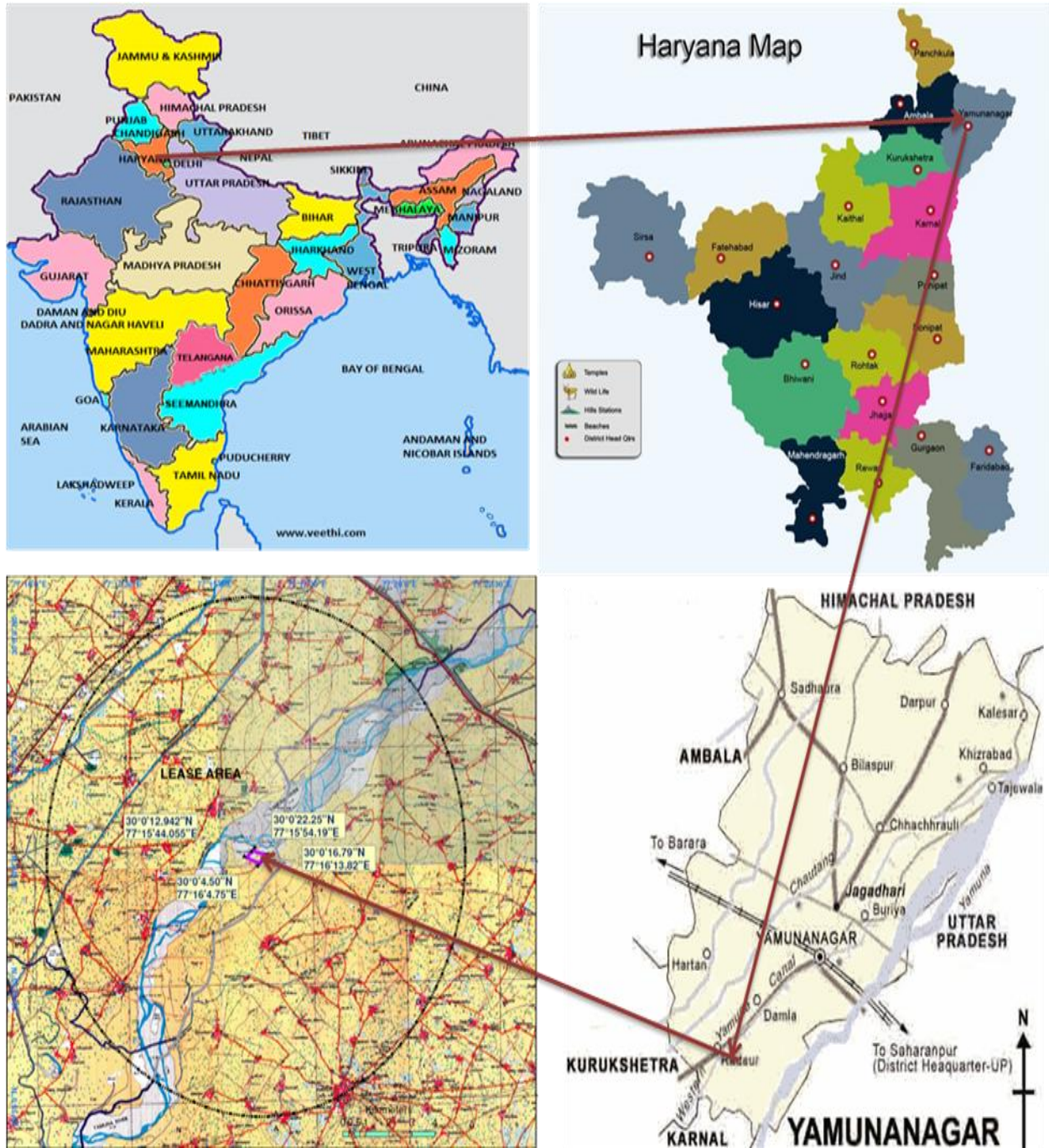


Figure 1: Location Map of the Project Site

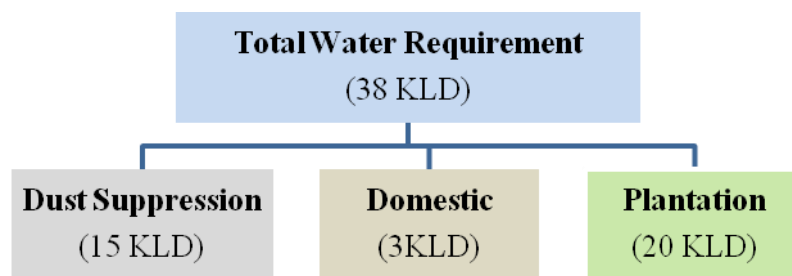


Figure 2. Water balance daigram



### 3.8.2 Power

All the activities will be carried out in a semi mechanized manner. The material will be excavated and loaded directly into, dumpers, tractors-trolley etc by the diesel run excavator cum loaders. The operation will be done only from sun rise to sun set. So there is no power requirement for the mining activity.

### 3.8.3 Liquid Effluent

No liquid effluent will be generated at the mine site due to the mineral excavation.

### 3.9 Schematic Representations of EIA Process

Schematic Representations of the Feasibility Drawing which give information of EIA Process is given in figure 3.

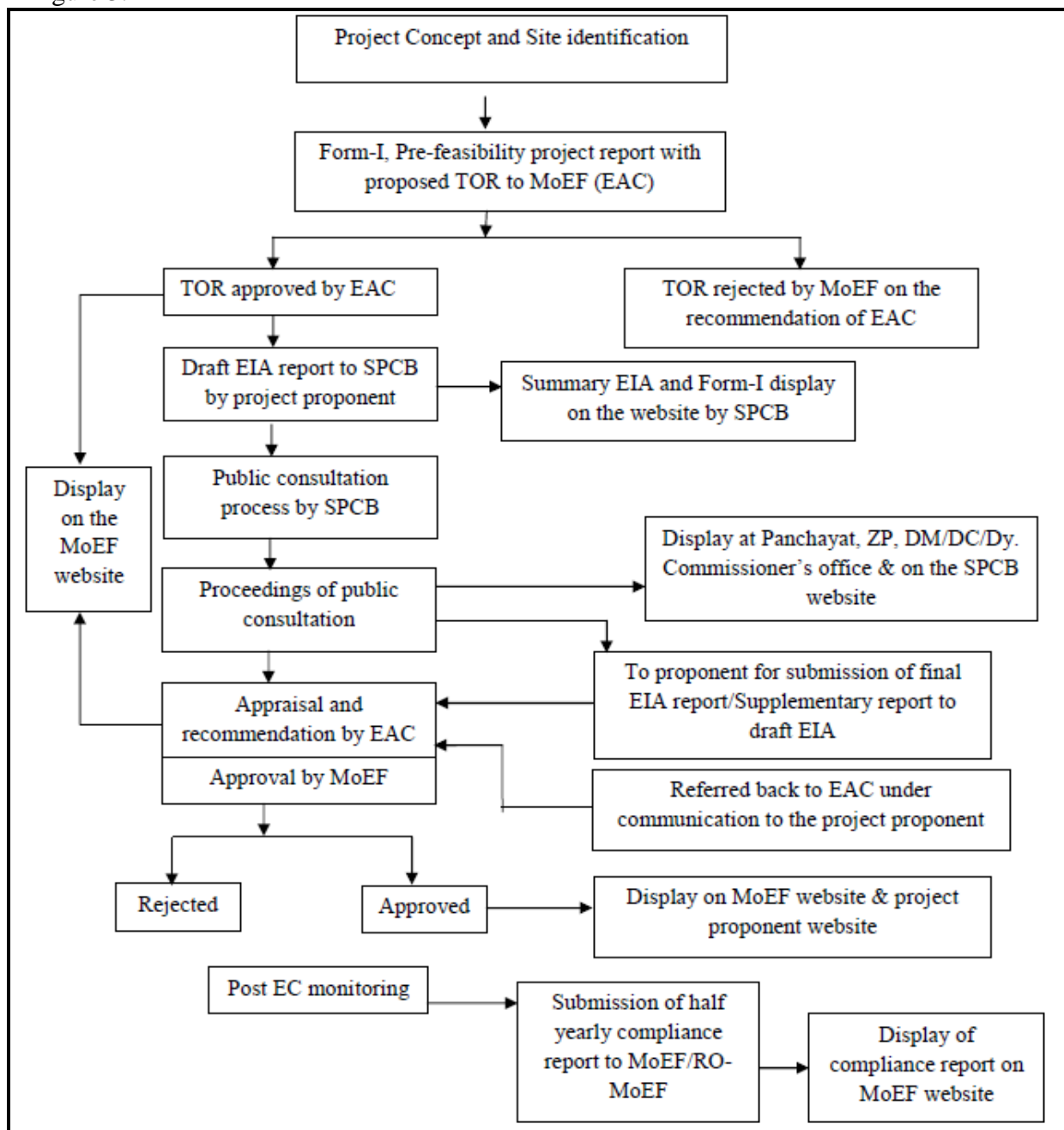


Figure 3. Flow Diagram of Schematic Representations of EIA Process

Sources: Ministry of Environment, Forest and Climate Change, New Delhi.



## 4. SITE ANALYSIS

### 4.1 Connectivity

**4.1.1 Nearest Railway Station-** Jagadhari Railway station – 12.61Km N

**4.1.2 Nearest Airport-** Chandigarh Airport – 85 Km, NW

**4.1.3 Nearest Highway-** NH -73, (13 Km, E)

### 4.2 Landform, Landuse and Land ownership

The leased block is a part of Gair mumkin nadi nallah & Yamuna riverbed. The proposed activity is to take place in the stream bed and hence there will be no change in land use.

### 4.3 Topography

Yamuna Nagar district of Haryana located in north-eastern part of Haryana State. The district is bounded, in north by Himachal Pradesh, in the east by Uttar Pradesh, in west by Ambala district, in south by Karnal and Kurukshetra districts. Total geographical area of the district is 1756 sq.Km and comprises 4% of total area of State. The district is mainly drained by the rivers Yamuna, Markanda and its tributaries. Markanda is tributary of river Ghaggar and drains major part of the district. The high land between Markanda River and small rivulets of River Yamuna acts as basin boundary between west flowing rivers of Indus system and east flowing Rivers of Ganga basin. River Yamuna drains eastern part of the district and acts as boundary between Haryana and Uttar Pradesh State. Yamuna Nagar district is bestowed with rich water resources, both surface as Well as ground water resources. The ground water is major sources of irrigation in the district. Nearly 40% of area is irrigated by canal water. Distributaries in the district are 21.45 Km long. Two major canals passing through the district are Western Yamuna Canal and augmentation canal. Length of unlined WYC is 63.64Km whereas augmentation canal is 22.54 Km long. Net irrigated area is 1130Km<sup>2</sup> whereas, gross irrigated area 1860Km<sup>2</sup>. Percentage of gross area irrigated to total cropped area is 91.6%. Systematic hydro geological surveys in the district was carried out by Geological Survey of India during 1956 -61.Re-Appraisal Hydro Geological Surveys in the district were carried out by Central Ground Water Board, during 1975 -77,1981- 82 and 1988-89.

(Source: [http://cgwb.gov.in/District\\_Profile/HariyanaYamunaNagar.pdf](http://cgwb.gov.in/District_Profile/HariyanaYamunaNagar.pdf))

### 4.4 Existing land use pattern and shortest distances from Forests, Water bodies, Eco sensitive areas, etc.

The mine lease area is an undulating River bed. There is no forest land in the mine lease area. The entire mining lease lies within the bed of Yamuna River. No Protected and Reserve Forest areas present within 10 Km of the project sit.

### 4.5 Existing Infrastructure

The site being on YamunaRiver bed has no existing infrastructure, except for connecting road for transportation.

### 4.6 Environmental Settings

#### 4.6.1 Physiography

The district is divided into four Physiographic units,

- Siwaliks,
- Dissected Rolling Plains,
- Interfluvial Plains,
- Active and Recent Flood Plains,
- Relict Plains.



**Siwaliks hills** - Siwalik hill ranges occupy the northern fringe of Yamuna Nagar district and attain the height up to 950m amsl (above mean sea level). The hills are about 500m high with respect to the adjacent alluvial plains. These are characterized by the broad tableland topography that has been carved into quite sharp slopes by numerous ephemeral streams come down to the outer slopes of the Siwaliks and spread much of gravels boulders, pebbles in the beds of these streams.

**Kandi Belt:** A dissected rolling plain in the northern parts of district is a transitional tract between Siwaliks hills and alluvial plains. It is about 25 Km wide and elevation varies between 250 and 375m amsl(above mean sea level).

**Interfluvial plains:** This tract is part of higher ground between Ghaggar and Chautang and includes high mounds and valleys. In general, the slope is from northeast to southwest

**Active and recent flood plains:** This plain is narrow tract along river Yamuna in the district.

**Relict wedge plain:** This is almost in alignment to the surface water divide between the westward flowing Ghaggar and eastward flowing Yamuna River.

#### 4.6.2 Drainage

The important rivers/ streams of the district are Yamuna, Sarasvati, Chautang, Rakshi, Somb, Boli, etc. Yamuna river after rising from the snow-clad peaks of the middle himalayas at Yamnotri, enters the district from its northeastern corner through a narrow corridor in the Siwaliks. It is a perennial river. Bolinadi joins the Sombnadi near dadupur and then the combined Somb and Bolinadis join the Yamuna River at Meharmajra. The rakshi stream takes its birth in the rolling foot hill plain while the Chautang and Sarasvati rivers originate in the lower hills. Generally, the slope of the district is from north-east to south-west, in which direction most of rivers/nadis/ rainfed torrents flow down.

#### 4.6.3 Geography

Yamuna Nagar District falls in geological domain in the Shivalik hills which are confined to the northern part of Haryana. Yamuna Nagar District has subtropical continental monsoon climate that is characterised by seasonal rhythm, hot summers, cool winter, unreliable rainfalls and great variation in temperature. In winters frost sometime occurs during December and January. Yamuna Nagar District experiences extreme climate conditions. May and June are the hottest months while December and January are the coldest. Maximum temperature on average goes as high as 44 degree Celsius in the summer season. Temperature starts rising steadily from February onwards till the onset of monsoon. The average annual rainfall of the district comes out to be 970.33mm. The important rivers of the district are Yamuna River, Sarasvati, Chautang, Rakshi Rivers, etc. Yamuna River enters the district from its northeastern corner through a narrow corridor in the Shivalik. It is a perennial river. Generally, the slope of Yamuna Nagar District is from north-east to south-west, in which direction most of rivers flow down. The soils in the district are mainly loamy in nature. The underground water in the district is suitable for domestic and irrigation purposes. The district has favorable climate for the growth of rich vegetation due to reasonably good rainfall and elevation. Tropical dry deciduous forests and subtropical forests are found here. Yamuna Nagar District of Haryana receives second\_highest\_rainfall\_after\_Panchkula\_District.

(Source:[http://www.indianetzone.com/48/yamuna\\_nagar\\_district.htm](http://www.indianetzone.com/48/yamuna_nagar_district.htm))

##### 4.6.3.1 Climatic condition

The climate of Yamuna Nagar district can be classified as subtropical monsoon, mild and dry winter, hot summer and sub-humid which is mainly dry with hot summer and cold winter except during monsoon season when moist air of oceanic origin penetrates into the district. There are four seasons in a year. The hot weather season starts from mid March to last week of the June followed by the southwest monsoon which lasts up to September. The transition period from September to November forms the post monsoon season. The winter season starts late in November and remains up to first week of March.



(Source: [http://cgwb.gov.in/District\\_Profile/HariyanaYamunaNagar.pdf](http://cgwb.gov.in/District_Profile/HariyanaYamunaNagar.pdf))

#### 4.6.3.2 Rainfall and Temperature

The normal annual rainfall of the district is 1107 mm, which is unevenly distributed over the area in 43 days. The south west monsoon sets in from last week Of June and withdraws in end of September, contributed about 81% of annual Rainfall. July and August are the wettest months. Rest 19% rainfall is received during Non-monsoon period in the wake of western disturbances and thunderstorms.

##### Rainfall

Normal Annual Rainfall - 1107 mm  
 Normal monsoon Rainfall- 898 mm

##### Temperature

Mean Maximum- 48.8°C (May and June)  
 Mean Minimum- 6.8 °C (January)  
 Normal Rainy - 43 days

(Source: [http://cgwb.gov.in/District\\_Profile/HariyanaYamunaNagar.pdf](http://cgwb.gov.in/District_Profile/HariyanaYamunaNagar.pdf))

#### 4.6.3.3 Administrative Set-up

The district Yamuna Nagar comes under the Haryana State administratively. It has the following administrative subdivisions:

Sub-Division	Tehsil	Block	Area of block (hectares.)
Jagadhari	Jagadhari	Jagadhari	38546
		Mustafabad	20481
		Radaur	23995
Bilaspur	Bilaspur	Bilaspur	28435
		Chhachhrauli	45570
	Chhachhrauli	Sadhaura	15182

#### 4.6.3.4 Economy

Yamuna Nagar is well known for its industries. It has emerged as an important industrial destination in the state. This has been despite its relatively isolated location from rest of the state. Due to expanding industries, the city kept on extending geographically. This is primarily due to an increasing number of immigrants. This led to an intermixing of diverse culture. It also has to do with the rural ambiance which is reported to have undergone a lot of change. With increasing population, the trading aspects became brighter and the city went on becoming the second highest revenue generator of Haryana, immediately after Faridabad that owes its position largely to its prime location.

The city produces sugar machinery, paper machinery along with highly efficient equipments for petro-chemical plants, which are shipped to various refineries across the country. The city is also known for its Plywood productions, which is attributed to the easy accessibility of primary raw material – poplar tree. It has also one of India's largest railway carriage and wagon repair workshops. Recently, Reliance Industries has also installed a thermal power plant in the town. Haryana Urban Development Authority has done major development work in the land stretch linking the city with Jagadhri, the other part of twin city.

Sources: <http://msmedikarnal.gov.in/dps/yamunana.pdf>



#### 4.6.3.5 Geophysical Status

Gross area irrigated in the district Yamuna Nagar is 1860 Km<sup>2</sup>, whereas net area irrigated is 1130 Km<sup>2</sup>, percentage of gross area irrigated to total cropped area is 91.6%. Nearly about 1040 Km<sup>2</sup> of area is irrigated through 28561 shallow tube wells and pump sets, besides this there are 200 deep public tube wells. The discharge of shallow tubewells varies between 200 lpm and 480 lpm, whereas the discharge of deep tubewells varies between 2000 lpm and 3500 lpm. The depth of shallow tubewells ranges between 40-80m, whereas deep tubewells range up to 270m depth. Of the shallow tube wells 8851 are diesel engine operated and remaining 19710 are run by electric motors. The drinking water supply is mainly ground water based in the district, besides piped water supply, the public health department as well as public has installed hand pump as most convenient water source to meet water shortage in villages and towns.

The Yamuna is Perennial River and descending from Himalayas in Uttarakhand and a dam has been constructed at Tajewala to harness water, which is being used for irrigation in west Yamuna canal areas. But this water is used mostly in other districts. In Yamuna Nagar district, only 40 Km<sup>2</sup> area is irrigated by this canal system.

#### 4.6.3.6 Infrastructure

It is an important industrial town having metal, utensil and plywood industries. Large industries like Shri Gopal Paper Mills and Saraswati Sugar Mills (biggest Sugar mill in Asia) are also located here. The city produces sugar machinery, paper machinery along with highly efficient equipments for petro-chemical plants, which are shipped to various refineries across the country. The city is also known for its Plywood productions, which is attributed to the easy accessibility of primary raw material – poplar tree. It has also one of India's largest railway carriage and wagon repair workshops. Recently, Reliance Industries has also installed a thermal power plant in the town. Haryana Urban Development Authority has done major development work in the landstretch linking the city with Jagadhri, the other part of twin city.

#### 4.6.3.7 Demography

As per provisional data of 2011 census Yamuna Nagar urban agglomeration had a population of 383,318, out of which males were 205,346 and females were 177,972. The literacy rate was 85.72 per cent.

#### Social Infrastructure Available:

Road Connectivity	NH -73 13kmE,
Nearest Railway Station	Jagadhari Railway station – 12.61Km N
Nearest Airport	Chandigarh Airport – 85 Km NW
Nearest Police Station	Jagadhri Police-station- 14.64 Km N
Nearest Hospital	Hospital at Ladwa,Haryana- 11.18 Km N
Nearest school	Khajuri School, Khajuri 5.31 Km N
Nearest Post office	Model Town Post Office, Yamuna Nagar 15Km N

#### 4.6.3.8 Biological Environment

The dominant trees in this area are *Azadirachta indica* (Limbado), *Mangifera indica* (Aam), *Bombax ceiba* (Semal), *Delonix regia* (Gaulmor). The dominant shrub community in this area was represented by Kaner (*Thevetia peruviana*), *Prosopis juliflora* (Bilayati babool), *Calotropis procera*, *C. gigantea* (Akoda), *Ipomoea fistulosa* and *Abutilon indicum*, etc. Major crops in the study area are Sugar cane (*Saccharum officinarum*), Wheat (*Triticum aestivum*), Paddy (*Oryza sativa*), Maize (*Zea mays*) and Barley (*Hordeum vulgare*). The minor crops of this region are Mustard (*Brassica campestris* var.), Green gram (*Vigna radiate*), Sesamum (*Sesamum indicum*), Pigeon Pea (*Punica*



*granatum*) Jowar (*Sorghum bicolor*) and Black Gram (*Vigna mungo*). Aam (*Mangifera indica* L.), Papaya (*Carica papaya* L.), Banana (*Musa Paradisiaca* L.), Lime (*Citrus aurantifolia*), Guava (*Psidium guajava*), Jack-fruit (*Artocarpus heterophyllus*), Jujube (*Ziziphus mauritiana*), Myriobalan (*Phyllanthus emblica*) and Palmgranate (*Punica granatum*). The most commonly spotted bird species of this area were Cattle Egret, Intermediate Egret, Black-winged Stilt, Red-wattled Lapwing, Rock Pigeon, Eurasian Collared-Dove, Spotted Dove, Chestnut-headed Bee-eater, Bank Myna and Common Myna.

## 5 .PLANNING BRIEF

### 5.1 Planning Concept

Open cast semi mechanized mining method will be adopted for sand mining. Project will annually produce 11,00,000 TPA sand Per Year, which will be used for meeting the huge demand of construction material like coarse and fine aggregate required in building construction and infrastructure works, road material for construction and maintenance of roads / highway.

### 5.2 Assessment of Infrastructure Demand (physical and social)

Adequate infrastructure facilities are available in the vicinity of mine lease area and due to the mining activities; no extra infrastructure over and above the existing infrastructure is required except for the creation of approach road from riverbed to link roads from different blocks of mining.

### 5.3 Amenities/Facilities

**Mines Office, Workshop etc.:** Proper site services such as First Aid, Rest Shelter, and Drinking Water will be provided to the mine workers.

**Rest Shelter:** Rest shelter along with first-aid station complying with all the provisions of Mines Rules shall be provided by the project proponent.

**Water Supply:** Water will be supplied for human consumption, dust suppression and for plantation.

**Power Supply:** The mine will work in day time only, so no lighting arrangement will be required.

**Transport of Men and Material:** Employee will report to the duty on own means. The material from the mine will be transported by trucks / tippers / tractor trollies.

**Communication:** Mobile phones shall be used for communication.

**Security Arrangements:** Appropriate security arrangement shall be made.

### 5.4 Population Projection

The project will employ most of the workers from nearby villages except for supervisory staff. Thus there will no increase in population due to the project. However, few people from other areas may migrate in this area for employment and business opportunities.

### 5.5 Land Use

The mining lease area 23.05hect is part of Yamuna river bed falling in Pobari Block/NYR B11, Yamuna Nagar, Haryana. Entire land of the lease area is gair mumkin, nadi, nallah & yamuna riverbed. There is no forest land in the lease area. The area so excavated will get filled up due to sediment inflow during monsoon in the river bed. The ultimate land use of the mine lease area will not change after systematic and scientific mining closure.

## 6 PROPOSED INFRASTRUCTURE

### 6.1 Industrial Area (Processing Area)

No industrial area is proposed.

### 6.2 Residential Area (Non Processing Area)

As the local people will be given employment, no residential area/ housing is proposed.



### 6.3 Green Belt

The green belt shall be developed as per approved eco-friendly mine lease plan and as per CPCB guidelines. The project proponent shall also develop greenbelt in the premises of the schools, hospitals and also carry out the avenue plantation in the vacant areas along roads. The greenbelt shall be developed by planting saplings per year. Indigenous species with the consultation of the State Forest Department shall be planted and maintained.

### 6.4 Social infrastructure

- Road facility (existing roads will be maintained regularly),
- Employment opportunity,
- Medical camps,
- Social awareness camps,
- Donations to schools,
- Secondary employment opportunities,
- Formation of self help groups for the women in nearby villages.
- 

### 6.5 Connectivity

From the lease area, an unmetalled road joins a metalled road which further joins the NH -73 (13 Km, E) & SH -6 (11 Km, NE).

### 6.6 Drinking Water Management

Water required for drinking purpose will be obtained through tankers from the nearby available sources.

### 6.7 Sewerage System

No sewerage system is proposed. However for sanitation purpose portable toilets will be made available.

### 6.8 Industrial Waste Management

Not applicable

### 6.9 Solid Waste management

Negligible quantities of silt /clay mixture will be generated, most of which will be left on stream bed for back filling and and remaining will be used for plantation.

### 6.10 Power Requirement & Supply/Source.

All the activities will be carried out in a semi mechanized manner with diesel operated machinery. The operation will be done only from sun rise to sun set hence there is no power requirement for the proposed activity.

## 7 REHABILITATION AND RESETTLEMENT (R&R) PLAN

There is no human settlement within the mine lease area. No human settlement will be disturbed due to the mining activity. So, no Rehabilitation and Resettlement is proposed.

## 8 PROJECT SCHEDULE & COST ESTIMATES

### 8.1 Likely date of start of construction and likely date of completion.

The project will commence once Environmental Clearance and other necessary certificates are obtained from the respective departments.



## 8.2 Estimated project cost along with analysis in terms of economic viability of the Project

The Estimated cost of the proposed Project is approximately **Rs. 5.5 Crores.**

### 8.3 Viability of the Project

1. Per Annum Production = 11,00,000 Tons
2. Production Cost of Mineral = Rs. 112.50 per Tons or Rs. 4.50 per cu. ft.
3. Sale Value of Mineral = Rs. 118 per Tons or Rs. 4.72 per cu. ft.
4. Profit = Sale Value – production Cost = Rs. 118 – Rs. 112.50 per TONS  
= Rs. 5.50 per Tons
5. Estimated Profit per annum = Rs. 5.00 X 11,00,000  
= **Rs. 55,00,000 (Rupees Fifty Five Lakhs Only)**

As stated above, there is possibility that the project maybe viable.

## 9.0 ANALYSIS OF PROPOSAL (RECOMMENDATIONS)

The Project will bring economical benefits to the state by way of royalty on the mineral excavated and despatched . Achieving a huge infrastructure as being envisaged by Government of India particularly in road and housing sector requires basic building materials. Sand is one of primary building material required for the purpose. The mining activities as proposed are the backbone of all construction and infrastructure projects as the raw material for construction is available only from such mining. Sand excavated is in high demand at the local market for real estate industry. This project operation will provide livelihood to the poorest section of the society/economically backward population and tribals in the area. It provides employment to the people residing in vicinity directly or indirectly. The mine management will also help nearby villages by providing aid to school, conducting medical and social awareness camps, helping in formation of self help groups, etc. Thus the project will bring about socio-economic improvement of the area and will prove beneficial to the area.

