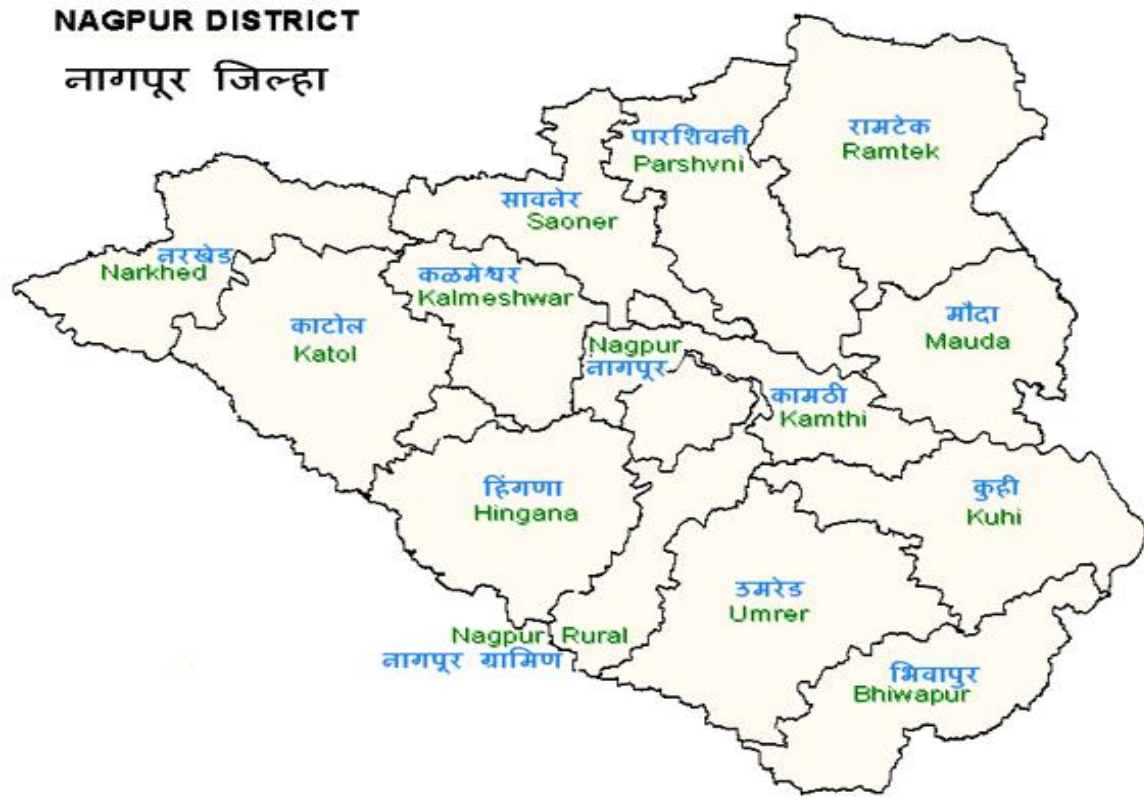


DISTRICT SURVEY REPORT

(In Respect Of Minor Mineral Quarries / Deposits Of District Nagpur, Maharashtra. As Per Notification No. S.O. 141(E) New Delhi, 15th January, 2016 Ministry Of Environment, Forest And Climate Change (MOEF & CC)



District Environmental Impact Assessment Authority, Nagpur

2018

PREFACE

The Ministry of Environment, Forest and Climate Change, Government of India through its gazette notification dated 15th January 2016 directed to establish District Environment Impact Assessment Authority (DEIAA) and District Environment Assessment Committee (DEAC) are to be constituted by the Divisional Commissioner for prior environmental clearance of quarry for minor minerals. The DEAC will scrutinize and recommend the proposals to DEIAA for prior Environmental Clearance and DEIAA to such proposals on the basis of recommendations of DEAC. This notification also directs to prepare District Survey Report for the district to identify the mineral resources and mining activities demand and supply of minerals, along with other relevant data of the District. This report contains details of leases of Sand mining, minor mineral, major mineral and Revenue generated from the same. This report is prepared on the basis of data collected from different concern Departments such as Geology Department or Irrigation Department or Forest Department or Public Works Department or Ground Water Boards or Remote Sensing Department or Mining Department etc. in the District.

The report has following structure:

- 1) Introduction
- 2) Overview of Mining Activity in the District
- 3) The List of Mining Leases in the District with location, area and period of validity
- 4) Details of Royalty or Revenue received in last three years
- 5) Detail of Production of Sand or Bajari or minor mineral in last three years
- 6) Process of Deposition of Sediments in the rivers of the District
- 7) General Profile of the District
- 8) Land Utilization Pattern in the district: Forest, Agriculture, Horticulture, Mining etc.
- 9) Physiography of the District
- 10) Rainfall: month-wise
- 11) Geology and Mineral Wealth

1 INTRODUCTION

Nagpur is the winter capital of the state of Maharashtra, a fast growing metropolis and third largest city in Maharashtra after Mumbai and Pune. With a population of 2,405,421 (2011) Nagpur Metropolitan Area is the 13th largest urban conglomeration in India. It has also recently been ranked as the cleanest city and the second greenest city of India . In addition to being the seat of annual winter session of Maharashtra state assembly “Vidhan Sabha”, Nagpur is also a major commercial and political center of the Vidarbha region of Maharashtra, and is also famous throughout the country as “Orange City” for being a major trade center of oranges that are cultivated in the region. In addition, the city also derives political importance from being the headquarters for the RSS and an important location for the Buddhist movement.

The city was founded by the Gonds but later became part of the Maratha Empire under the Bhonsles. The British East India Company took over Nagpur in the 19th century and made it the capital of the Central Provinces and Berar. After the first reorganisation of states, the city lost its capital status but according to the “Nagpur Pact” between political leaders it was made the second capital of Maharashtra. Nagpur is also called, “Tiger Capital of India ” as it connects many Tiger Reserves in India to the world. It is among the important cities for IT sector in Maharashtra after Pune. Nagpur lies precisely at the center of the country with the Zero Mile Marker indicating the geographical center of India.



Figure 1. Central Provinces and Berar, 1903. Princely states are shown in yellow.

The Nag River, a tributary of the Kanhan River, flows in a serpentine path and is therefore named “Nag”, the Marathi word for snake. And hence, the river and city is named as Nagpur.. While others says that the river flows through the old city of Nagpur and hence the city is named after this river. “Pur” is a common suffix given to cities, villages and towns across India, and is often simply translated “city” The seal of Nagpur Municipal Corporation depicts a cobra in the water of a river.

Human existence around present day Nagpur city can be traced back 3000 years to 8th century BC. Mehir burial sites at Drugdhamna (near Mhada colony) indicate megalithic culture existed around Nagpur and is still followed in present times. The first reference to the name

Nagpur is found in a 10th century copper-plate inscription discovered at Devali in the neighbouring Wardha district. The inscription is a record of grant of a village situated in the visaya (district) of Nagpura-Nandivardhana during time of Rastrakuta king Krsna III in the Saka year 862 (940 CE). Towards the end of third century King Vakataka dynasty, Vindhyaasakti is known to have ruled the Nagpur region. In the 4th century Vakataka Dynasty ruled over the Nagpur region and surrounding areas and had good relations with the Gupta Empire. The Vakataka king Prithvisena I moved his capital to Nagardhan (ancient name Nandivardhana), located at 28 kilometres (17 mi) from Nagpur. After the Vakatakas, the region came under the rule of the Hindu kingdoms of the Badami Chalukyas, the Rashtrakutas, and finally the Yadavas. In AD 1296 Allauddin Khilji invaded the Yadava Kingdom after capturing Deogiri, after which the Tughlaq Dynasty came to power in 1317. In the 17th century, the Mughal Empire conquered the region. However, regional administration was carried out by the Gond kingdom of Deogarh-Nagpur in the Chhindwara district of the modern-day state of Madhya Pradesh.

Recent history ascribes the founding of Nagpur to Bakht Buland, a prince of the kingdom of Deogarh-Nagpur. The next Raja of Deogarh was Chand Sultan, who resided principally in the country below the hills, fixing his capital at Nagpur which he made a walled town. On Chand Sultan's death in 1739, Wali Shah, an illegitimate son of Bakht Buland, usurped the throne and Chand Sultan's widow invoked the aid of the Maratha leader Raghuji Bhonsle of Berar in the interest of her sons Akbar Shah and Burhan Shah. The usurper was put to death and the rightful heirs placed on the throne. After 1743, a series of Maratha rulers came to power, starting with Raghuji Bhonsle, who conquered the territories of Deogarh, Chanda and Chhattisgarh by 1751.

In 1803 Raghuji II joined the Peshwa against the British in the Second Anglo-Maratha War, but the British prevailed. After Raghuji II's death in 1816, his son Parsaji was deposed and murdered by Mudhoji II. Despite the fact that he had entered into a treaty with the British in the same year, Mudhoji joined the Peshwa in the Third Anglo-Maratha War in 1817 against the British, but suffered a defeat at Sitabuldi in present-day Nagpur city. The fierce battle was a turning point as it laid the foundations of the downfall of the Bhonsles and paved the way for the British acquisition of Nagpur city. Mudhoji was deposed after a temporary restoration to the throne, after which the British placed Raghuji III the grandchild of Raghuji II, on the throne. During the rule of Raghuji III (which lasted till 1840), the region was administered by a British resident. In 1853, the British took control of Nagpur after Raghuji III died without leaving an heir.

From 1853 to 1861, the Nagpur Province (which consisted of the present Nagpur region, Chhindwara, and Chhattisgarh) became part of the Central Provinces and Berar and came under the administration of a commissioner under the British central government, with Nagpur as its capital. Berar was added in 1903. Tata group started the country's first textile mill at Nagpur, formally known as Central India Spinning and Weaving Company Ltd. The company was popularly known as "Empress Mills" as it was inaugurated on 1 January 1877, the day queen Victoria was proclaimed Empress of India.

The Non-cooperation movement was launched in the Nagpur session of 1920. After Indian Independence in 1947, Central Provinces and Berar became a province of India, and in 1950 became the Indian state of Madhya Pradesh, again with Nagpur as its capital. However, when the Indian states were reorganised along the linguistic lines in 1956, Nagpur and Berar regions were transferred to Bombay state, which in 1960 was split between the states of Maharashtra and Gujarat.

At a formal public ceremony on 14 October 1956 in Nagpur B. R. Ambedkar along with his supporters converted to Buddhism starting Dalit Buddhist movement which is still active. Nagpur is a city with great capabilities to grow and prosper in the coming days. It is very important for State and Central Governments to contribute to the growth, development, prosperity of Nagpur. Nagpur completed 300 years of establishment in the year 2002. A big celebration was organised to mark the event.

History and Culture:

Kalidas Festival :

Kalidas Festival is celebrated annually at Ramtek and Nagpur for two days in the month of November. Organized by MTDC in association with the District Collectorate Office of Nagpur, this festival of Music, Dance and Drama is held to honour Kalidasa. Kalidas was a great Sanskrit poet and dramatist of India, renowned for his historical drama Shakuntalam, Kumaarasambhava , Ritusamhaara and for the epic poem Meghdoot alias Meghdootam. It is said the picturesque Ramtek has inspired Kalidas to write his famous literary work, Meghdootam.



Figure 2. Kalidas Memorial, Ramtek

During Kalidas festival, celebrities of music, dance and drama gathered here to perform their talent. The festival brings back memories of the golden period of the Vidarbha region. People from different parts of India come here to attend the festival with full enthusiasm.



Figure 3. Kasturchand Park

Kasturchand Park :

One of the biggest meeting places in Nagpur city, Kasturchand Park is situated at about 1 km. from central railway station. It is the most popular place when it comes to holding big processions in the city. In fact, a lot of trade shows and fairs are also organized in the park owing to the space available here. The park is always thriving with all sorts of activities the entire year.

Nagardhan Fort , Ramtek :

Nagardhan, situated 38 kms northeast of Nagpur and about 9kms south of Ramtek, is an old town founded by a Suryavanshi King. Main attraction of Nagardhan is the Nagardhan Fort, supposed to be built by Raja Raghuji Bhonsle, a maratha king of the Bhonsale dynasty. The square shaped palace inside the fort has an outer rampart with bastions and had an inner wall surrounding the buildings. The main gate of the fort on the north-west side is still in good condition.



Figure 4. Nagardhan Fort , Ramtek

Inside the fort, nearby the palace there is a well which has two levels underground for people to stay with proper rooms. It also houses an idol of goddess Durga.

Sitabuldi Fort :

Sitabuldi Fort in Nagpur Sitabuldi fort, site of the 1817 Battle of Sitabuldi, is located atop a small hillock in the middle of Nagpur. The fort was built by Appa Sahib or Mudhoji II Bhonsle of the Kingdom of Nagpur, just before he fought against the British East India Company during the Third Anglo-Maratha War. The area surrounding the hillock is now known as Sitabuldi and is an important commercial hub for Nagpur.

Inside the fort one can find graves of numerous British soldiers and a cell where Mahatma Gandhi was imprisoned. At present, Sitabuldi fort is the home to the office of the territorial army. The fort opens to the general public only on two national holidays- 26th January and 15th August.



Figure 5. Sitabuldi Fort

Zero Mile :

Zero Mile in Nagpur Nagpur lies precisely at the center of the country with the Zero Mile Marker indicating the geographical center of India. The Zero Mile Stone was erected by the British who used this point to measure all the distances. The Zero Mile Stone consists of four horses and a pillar made up of sandstone. It is located on the south east of Vidhan Bhavan, Nagpur.



Figure 6. Zero Mile

The English rulers considered Nagpur as the centre of India and hence identified this point and constructed the Zero Mile Stone. Being at the center of the country, they also had a plan to make Nagpur the second capital city.

Marbat Festival :

Marbat Festival held especially in the Nagpur city, is an important festival in this region which is celebrated to protect the city from evil spirits. During the festival, people of Nagpur

venerate their God to save them from the evil spirits and they make statues of evil forces. These statues are taken to a vast ground as a procession, from all the areas of the city. They are burnt together on a belief that the city would be free from all types of evils. People purchase and wear new attires and ornaments on that day and women prepare delicious delicacies and distribute to everyone. Various cultural activities such as dance, drama etc are also organized during the festival.



Figure 7. Marbat Procession

2. OVERVIEW OF MINING ACTIVITY IN THE DISTRICT

The three types of minor mineral constituents such as sand stone and bajri are required for any type of construction apart from other material like cement and steel. In earlier times, the houses/ buildings were constructed in form of small dwellings with walls made up of mud plaster, stone and interlocking provided with wooden frames and there were negligible commercial as well as developmental activities resulting less demand of building material. However, with the passage of time when the District was carved out during new vistas of developmental activities were started. Mineral Resources: Nagpur district is moderately rich in minerals. Deposits of Coal, Manganese Ore, Dolomite, Clay, Copper Ore, Chromites, Tungsten Ore, Zinc Ore and Quartz etc. are found in the district. Coal reserves have been found in the North-West belt of the district i.e. from Saoner to Kanhan, Kamptee apart from the high grade coal found in Umred tahsil. Nagpur district is richly endowed with Manganese ore and the district is well placed in the country as far as production of Manganese ore is concerned. Manganese ore is found particularly in Ramtek and Saoner tahsils. Good quality limes to nes are found in Kandri and Deolapar, Mica and Tungsten are also found in the district. The sand from Kanhan River is considered to be of high quality as far as the construction of buildings is concerned.

As such the demand of minor mineral in the District started an increasing trend. The increase could be gauged from the fact that during year 16-17 the royalty receipt on minor mineral was merely Rs. 5.15 crores which has increased to Rs. 10.72 crores (Approx.) in the year 17-18. The quantity of minor mineral consumption is a thermometer to assess the quantity of developmental activities being undertaken in a particular area. In order to meet the requirement of raw material for construction, the extraction of sand, stone and bajri is being carried out exclusively from the river beds. The demand of sand is mainly met through by river borne sand whereas the demand of bajri/grit is either met through river borne collection or through manufactured grit by stone crushers. The demand of dressed or undressed stone is met through the broken rock material from the hill slope. The local residents used to lift gravel etc. from the river beds to meet out their bonafide requirement, however after coming into being the Mines and Minerals (Development and Regulation) Act, 1957 (67 of 1957) and Maharashtra Minor Mineral Extraction (Development and Regulation) Rules, 2013. as the mining was allowed in accordance to the rules.

3 THE LIST OF MINING LEASES IN THE DISTRICT WITH LOCATION, AREA AND PERIOD OF VALIDITY

The Nagpur District is moderately rich in mineral and there are both major mineral mines and minor mineral mines. There are 36 mines of Manganese, 16 mines of Dolomite, Quartz / Quartzite 2 of mines, 4 mines of Coal and 4 mines of Sand for stowing as well as there are around 171 mines of minor minerals (stone quarry). Details of the mining leases in the district are as follows.

List of Major Minerals Mining leases in the District:

Sr. No	Name Of The Lessee And Address	Minerals	Village	To Tal Area	Date Of Grant	Period For Which Granted
Saoner Tahsil						
1	M/S Manganese Ore India Ltd Post Box No. 34, Mount Road Edtn. Sadar, Nagpur	Manganese Ore	Gumgaon, Khapa, Tigai, Rajan	48.596	10.07.62	1-7-82 To 30-6-2002 (Applied For Renewal)
2	M/S Manganese Ore India Ltd Post Box No. 34, Mount Road Edtn. Sadar, Nagpur	Manganese Ore	Gumgaon, Khapa, Tigai, Rajan	1.33	28.11.05	24-9-99 To 23-9-2014
3	M/S Manganese Ore India Ltd Post Box No. 34, Mount Road Edtn. Sadar, Nagpur	Manganese Ore	Gumgaon, Khapa, Tigai, Rajan	35.97	20.06.86	30-6-2000 To 29-6-2020
4	Shri. A.D. Kuhite C/O Tukaram Chawi, Dixit Bhavan, Sadar, Nagpur	Manganese Ore	Bichawa	19.2	22.03.96	12-8-96 To 11-8-2016
5	Veet Rag Homes Pvt. Ltd, 267, Ganesh Fadnvish Bhavan, Near Trikoni Park, Dharampeth, Nagpur	Manganese Ore	Maharkund	10.62	23.05.02	29-8-02 To 28-8-2032
6	Veet Rag Homes Pvt. Ltd, 267, Ganesh Fadnvish Bhavan, Near Trikoni Park, Dharampeth, Nagpur	Manganese Ore	Kahurwahi/Wa degaon	78.5	17.10.02	30-6-03 To 29-6-2033

7	Veet Rag Homes Pvt. Ltd, 267, Ganesh Fadnvish Bhavan, Near Trikoni Park, Dharampeth, Nagpur	Manganese Ore	Kirnapur	23.67	08.04.03	9-4-03 To 8-4-2033
8	Shri. Ravindranath	Manganese Ore	Kirnapur	2.88	28.10.04	18-11-05 To 17-11-2025
9	M/S Subhnam Minerals	Manganese Ore	Kothulana	24	14.06.05	29-10-05 To 28-10-2035
10	Shri. Amol Bupendranath Nagpure, 206/12, Civil Line G.P.O. Square, Nagpur	Manganese Ore	Ramdongri	26.5	19.07.05	8-3-06 To 7-3-2026
11	Shri. Paramhans Singh 7/2, New Chankapur Tah. Saoner Distt. Nagpur	Manganese Ore	Tekadi	3.47	15.09.2010	16.11.2010 To 15.11.2020
Ramtek Tahsil						
12	M/S M.O.I.L	Manganese Ore	Kandri	83.06	16.09.04	1-7-02 To 30-6-2022
13	M/S M.O.I.L	Manganese Ore	Chargaon, Khairi, Mansar, Parsoda, Kandir	108.63	09.02.05	1-7-02 To 30-6-2022
13	M/S M.O.I.L	Manganese Ore	Chargaon	25.15	09.02.05	14-5-02 To 13-5-2022
14	M/S M.O.I.L	Manganese Ore	Manegaon	38.52	01.10.82	23-9-83 To 22-9-2003 (Applied For Surrender)
15	M/S M.O.I.L	Manganese Ore	Chargaon	8.17	11.08.67	26-7-69 To 25-7-89 (Applied For Renewal)
16	M/S M.O.I.L	Manganese Ore	Chargaon	0.97	11.08.67	26-7-89 To 25-7-09
17	M/S M.O.I.L	Manganese Ore	Mansar	5.74	21.0.72	18-7-72 To 17-10-92 (Applied For Renewal)

18	M/S M.O.I.L	Manganese Ore	Beldongri	26.66	10.07.62	1-7-2002 To 30-06-2022
19	M/S M.O.I.L	Manganese Ore	Beldongri	12.99	14.07.72	4-1-93 To 3-1-2013
20	M/S M.O.I.L	Manganese Ore	Panchala (BZ)	4.74	31.10.95	25-5-95 To 25-5-2015 (Applied For Renewal)
21	M/S D.P. Rai, 10, East High Court Road, Nagpur	Manganese Ore	Bhandarbodi	7.38	27.09.82	23-3-83 To 22-3-2003 (Applied For Renewal)
22	Shri. R.B. Lanjewar, P.O. Tumsar, Dist. Bhandara	Manganese Ore	Bhandarbodi	1.14	16.07.80	21-8-87 To 20-8-2007
23	Shri. R.B. Lanjewar, P.O. Tumsar, Dist. Bhandara	Manganese Ore	Bhandarbodi	4.1	01.07.70	1-2-71 To 30-1-1991 (Applied For Renewal)
24	Shri. Umashankar Agrawal P.O. Tumsar, Dist. Bhandara	Manganese Ore	Bhandarbodi	35.28	28.02.79	4-12-69 To 3-12-89 (Applied For Renewal)
25	Shri. Jamil Ahmad Akil Husan	Manganese Ore	Bhandarbodi	22.19	16.02.04	30-06-05 To 02-06-2025
26	Shri Amol Bupendranath Nagpur R/O 206/12, Civil Line, G.P.O. Square, Nagpur	Manganese Ore	Lohdongri	14.53	19.06.05	8-3-06 To 7-3-2026
27	Shri Shakeel Ahmed S/O Aqueel Husain, Near Bhora Masjid, Itwari, Nagpur	Manganese Ore	Wadegaon	2.49	19.01.07	29-01-2007 To 28-01-2027
28	Shri Shakeel Ahmed S/O Aqueel Husain, Near Bhora Masjid, Itwari, Nagpur	Manganese Ore	Wadegaon	3.97	19.01.07	29.01.2007 To 28.01.2027
29	Trimurti Commercial Pvt. Ltd. 35, Medha Bhavan, Central	Manganese Ore	Bhandarbodi	4.86	02.02.06	01.02.2007 To 31.01.2037

	Avenue, Nagpur					
30	M/S Pawari Kinite Mine Simco House, Indrasagar Ravindra Tagor Marg, Civil Line Nagpur	Manganese Ore	Bhandarbodi			25-01-2011 To 24-01-2021
Tahsil Parseoni						
31	M/S Felex Enterprises Pvt. Ltd. H-108 C, Connaught Circus, New Delhi	Manganese Ore	Parseoni	1.82	30-07-79	02-11-99 To 01-11-2019
32	M/S Felex Enterprises Pvt. Ltd. H-108 C, Connaught Circus, New Delhi	Manganese Ore	Parseoni	1.21	26-03-87	15-05-02 To 14-05-2022
33	M/S Felex Enterprises Pvt. Ltd. H-108 C, Connaught Circus, New Delhi	Manganese Ore	Parseoni	14.58	31.03.97	9-6-98 To 8-6-2018
34	M/S M.O.I.L	Manganese Ore	Satak	8.68	24.11.05	1-7-02 To 30-6-2022
35	M/S M.O.I.L	Manganese Ore	Satak	16.84	06.12.79	10-10-00 To 9-10-2020
Saoner Tahsil						
36	Shri A.D. Kuhite, C/O Tukaram Chawl, Dixit Bhavan, Sadar Nagpur	Dolomite	Tekadi	11.57	22.03.96	11-8-96 To 10-8-2016
37	Shri Mulchand Gupta & Son's At. Post Khapa Tah. Saoner, Dist. Nagpur	Dolomite Felsper	Chargaon	10.9	16.02.84	3-8-84 To 2-8-2004

38	Shri Mulchand Gupta & Son's At. Post Khapa Tah. Saoner, Dist. Nagpur	Dolomite	Badegaon	14.38	26.12.63	24.4.96 To 23.4.2006 (Applied For Renewal)
39	M/S Chargaon Dolomite Mines (Shri Rajendra Arunkumar Pandya) R/O Surendra Nagar, Nagpur	Dolomite	Chargaon	3.47	02.12.95	16-3-96 To 15-3-2016
40	Shri. Waman Budhu Markam, At. Post Kawatha Tah. Saoner	Dolomite	Kawatha	4.85	06.10.98	3-4-99 To 2-4-2029
41	Shri. Ashish Ramesh Belorkar R/O G-8, Arohi Aptt. Bharat Nagar, Nagpur	Dolomite	Tembhurdoh	1.32	21.03.07	03-04-2007 To 02-04-2027
Ramtek Tahsil						
42	M/S Shankuntalal Minerals Pvt. Ltd. 23, Durga Colony, Tumsar, Dist. Bhandara	Dolomite	Karwahi	12.13	28.06.94	18-12-94 To 17-12-2024
43	M/S Shankuntalal Minerals Pvt. Ltd. 23, Durga Colony, Tumsar, Dist. Bhandara	Dolomite	Karwahi	11.82	12.06.96	26-10-96 To 25-10-26
44	Shri. Pradyumnakumar Trivedi, Main Road, Balaghat(M.P)	Dolomite	Karwahi	8.84	17.11.95	13-6-96 To 12-6-2026
45	M/S Angira Granite Pvt. Ltd. C-5, MIDC, Hingna Dist. Nagpur	Dolomite & Lims To Ne	Karwahi	5.2	18.01.03	23-5-03 To 22-5-2023

46	Shri Ashok Kumar Badkul, SM-52, Padmanabhpur, Durg	Dolomite	Karwahi	13.15	08.12.00	15-5-01 To 14-5-2031
47	M/S Cordal Minerals (Indai) Pvt. Ltd. Dhadival Complex, Opp. Government House, Ka To L Road, Chhaoni, Nagpur	Dolomite	Dongartal	3.72	22.08.86	06-02-87 To 05-02-2007
48	M/S M.S.M.C., 5 Abhyankar Nagar, Nagpur	Dolomite	Patgowari	42.52	20.11.01	9-5-2000 To 8-5-2020
49	M/S M.S.M.C., 5 Abhyankar Nagar, Nagpur	Dolomite	Patgowari	13.11	08.10.04	11-8-05 To 10-8-2025
50	Shri. Sanjay Kumar Hirawat	Dolomite	Pathrai	3.15	02.06.05	30-06-05 To 29-06-2025
51	Shri Mohmad Isak Mohmad Ismil, House No. 908 A, Hanuman Mandir Road, Chhaoni, Nagpur	Dolomite	Manegaon(Tek)	1.95	23.02.07	12-03-2007 To 11-03-2027
Ramtek Tahsil						
51	Shri. R.B. Lanjewar, Tumsar, Bhandara	Quartz & Quartzite	Bhandarbodi	1.07	06.11.84	31-07-85 To 30-07-2005
52	Shri. Abhishekh Rai	Quartz	Seoni-Bodki	16.6	26.07.02	11-01-03 To 10-01-2033
53	M/S WCL	Coal	Silewara	265.99	11.02.64	1-5-73 To 30-4-2003 (Applied For Renewal)
Parseoni Tahsil						

54	M/S WCL	Coal	Tekadi, Gondegaon, Junikamptee, Pipri, Kandri	999.46	06.03.54	1-5-73 To 30-4-2003 (Applied For Renewal)	
55	M/S WCL	Coal	Tekadi, Gondegaon, Junikampti,Kan dri	156.31	22.02.85	29-5-95 To 28-5-2015	
56	M/S WCL	Coal	Pipari Kandri	92.08	30.06.80	16-11-80 To 14-11-2010	
Tahsil Umrer							
57	M/S WCL	Coal	Umrer	1056.6	10.07.62	1-5-73 To 30-4-2003 (Applied For Renewal)	
Saoner Tahsil							
58	M/S WCL	Sand(S To Wing)	Dahegaon, Pardi	92.02	03.07.78	31-05-79 To 30-05-1999 (Applied For Renewal)	
	M/S M.O.I.L	Sand(S To Wing)	Rajna, Ramdongri (Kanhan River)	15	07.02.02	5-6-2002 To 4-6-2032	
Parseoni Tahsil							
59	M/S WCL	Sand(S To Wing)	Rohana,Junika mthi,Dorli Ghat, Junikamti, Pipari Dorli, Ghatrohana	76.86	30.11.81	2-5-82 To 1- 5-2002 (Applied For Renewal)	
60	M/S M.O.I.L	Sand(S To Wing)	Kalapatha (Pench River)	8	07.02.02	5-6-2002 To 4-6-2032	

List of Minor Minerals Mining leases in the District:

Sr.No	Name Of Lease Holder /Owner	Village	Gat No /Kh No	Area In Ha Or Acr.	Type Of Land	Pried Of Leases	Grant Of Year
Taluka Umrer							
1.	M.N.D. Enterprises Pro. Nikunj Shah	Surgaon	367	2.00	Govt.	29.09.2011 To 28.09.2021	10
2.	M.S.N. Enterprises Part. Shree Sureshkumar Kungwani	Surgaon	367	4.00	Govt.	29.09.2011 To 28.09.2021	10
3.	Shree. Mayank Ramprakash Mishra, Shree. Manish Ramprakash Mishra	Surgaon	354/1	4.05	Govt.	09.09.2010 To 07.09.2020	10
4.	Shree. Tekchand Guralmal Gangwani	Pachgaon	536/1	1.22	Pvt.	06.03.2012 To 05.03.2017	5
5.	M.V. R. Patil	Salaimendha	45/2	1.62	Pvt.	12.03.2012 To 11.03.2017	5
6.	Shree. Santoshkumar Tekchand Gangwani	Pachgaon	539	1.21	Pvt.	26.03.2012 To 25.03.2017	5
7.	Pawanputra Buildcon Pvt. Lmt. Shree Tawri	Salaimendha	42/1 42/2	2.83	Pvt.	21.05.2012 To 20.05.2017	5
8.	Shree. Nishikant Babarao Babhale	Pachgaon	546/9 546/10	1.27	Pvt.	21.05.2012 To 20.05.2017	5
9.	Shree. Jayprakash Parsumal Khatri	Undari	70	0.73	Pvt.	26.06.2012 To 25.06.2017	5
10	Shree. Ashish Kishor Avsekar	Salaimendha	45/1	42796.00	Pvt.	26.06.2012 To 25.06.2017	5
11	M. Ashirwad Interprises Shree	Surgaon	261,362, 363.	1.18	Pvt.	21.01.2013. To	5

	Bhende					20.01.2018	
12	Shree Stone Crusher Shree Pagariya	Salaimend ha	33/1	1.30	Pvt.	21.01.2013 To 20.01.2018	5
13	Rathod & Company Shree Rathod	Surgaon	368	10 Acr	Govt.	29.09.2011 To 28.09.2021	10
14	Shree Sukhdayal Lalchand Arora	Surgaon	354/1	5 Acr	Govt.	29.09.2011 To 28.09.2021	10
15	Shree Nitin Krushnrao Vaidhy	Surgaon	354	5.00 Acr	Govt.	09.09.2010 To 07.09.2020	10
16	Shree Nitin Krushnrao Vaidhy	Surgeon	354	2.50 Acr	Govt.	06.03.2012 To 05.03.2017	10
17	M. Om Sai Entreprises Shree Dhote	Surgeon	195	4.00	Govt.	12.03.2012 To 11.03.2017	10
18	Shree Rajesh Badriprasad Sharma	Surgeon	357	4 Acr	Govt.	26.03.2012 To 25.03.2017	10
19	Shree Altaf Ahamad	Surgeon	354/1	4 Acr	Govt.	21.05.2012 To 20.05.2017	10
20	Shree Sunil Gangadhar Kimmatkar	Surgaon	354/1	5.50 Acr	Govt.	21.05.2012 To 20.05.2017	10
21	Shree Omprakash Gurubakshani	Pachgaon	495/1	1.85	Pvt.	26.06.2012 To 25.06.2017	5
22	Prachi Enterprises	Surgaon	368	2.00	Govt.	26.06.2012 To 25.06.2017	10
23	Shree Sachin Lakshmikant Pitale	Undari	77/3	1.33	Pvt.	21.01.2013. To 20.01.2018	5
24	Shree. Omkar Pradip Palandurkar	Bhivapur (Uti)	5/1	2.80	Pvt.	21.01.2013 To 20.01.2018	5

25	Shree Girish Surajmal Bothada	Undari	65	1.56	Pvt.	29.09.2011 To 28.09.2021	5
26	M. Balaji Stone Crushers Through Shree Patel	Pachgaon	523/1	1.82	Pvt.	29.09.2011 To 28.09.2021	5
27	Shree. Satish Prabhakar Limaye	Pachgaon	518	2.08	Pvt.	09.09.2010 To 07.09.2020	5
28	Shree Jayantilal Manajibhai Patel	Pachgaon	512/2,513	1.88	Pvt.	06.03.2012 To 05.03.2017	5
29	Shree Sharadkumar Vijaykumar Wekhande	Undari	78/3	1.37	Pvt.	12.03.2012 To 11.03.2017	5
30	Me. Harekrushna Stone Mines Through Shree Shyam Lalaram Jaiswal	Pachgaon	431/1	1.01	Pvt.	26.03.2012 To 25.03.2017	5
31	Shree Prabhakar Shreepatraon Pillare	Surgaon	532/1, 532/2, 532/3	2.43	Pvt.	21.05.2012 To 20.05.2017	5
32	Me. Paul Stone Crusher Through Shree Ashwin Sureshkumar Mehta	Surgaon	341	7.50 Acr	Govt.	21.05.2012 To 20.05.2017	10
33	Shree Wasudeo Bhaskarao Pitale	Salaimendha	53	2.32	Pvt.	26.06.2012 To 25.06.2017	5
34	Shree Vilas Pralhad Gawande	Surgaon	341	7 Acr	Govt	26.06.2012 To 25.06.2017	10
35	M. Ashokwan Enterprises Pro. M/S. Kalpana Bhende	Surgeon	368	7.50ac r	Govt	21.01.2013. To 20.01.2018	10
36	Shree Abdul Kadir Mohhmad	Surgeon	195	8 Acr	Govt	17.09.2014 To 16.09.2024	10
37	Shree. Harcharansingh Ranjitsingh Bhatiya	Surgaon	368	7 Acr	Govt	10.10.2014 To 09.10.2024	10
38	Shree Sureshkumar	Surgaon	368	3 Acr	Govt	10.10.2014	10

	Bhagwandas Kunjwani					To 09.10.2024	
39	Shree Anand Eknath Lokhande	Surgaon	354/1 353	1.10	Govt	31.01.2015 To 30.01.2025	10
40	Bidra Stone Mines	Pachgaon	431/1	1.01	Pvt.	27.02.2015 To 26.02.2020	5
41	Laki Metals Shree Mahesh Pinjani	Undari	68,72	2.09	Pvt.	16.03.2015 To 15.03.2020	5
42	Shree Purushottam Bhimji Patel	Pachgaon	516 517	1.96	Pvt.	30.03.2015 To 29.03.2020	5
43	Tirupati Quarry Shree Kishor Patel	Undari	77/2	1.96	Pvt.	30.03.2015 To 29.03.2020	5
44	Bhawani Stone Smt. Jyotiben Patel	Pachgaon	534	1.96	Pvt.	30.03.2015 To 29.03.2020	5
45	Shree Kishanchand Lilaram Lulla	Salaimendha	17/2 17/3	2.03	Pvt.	30.03.2015 To 29.03.2020	5
46	Shree Mayur Murlidhar Wadhwani	Khapri Raja	77	1.02	Pvt.	15.04.2015 To 14.05.2020	5
47	Shree Suresh Shankarao Thakre	Pachgaon	419	2.02	Pvt.	28.04.2015 To 27.04.2020	5
48	Shreepawanputra Buildcon Pvt. Ltd. Shree Tayri	Salaimendha	43/1 43/2	1.82	Pvt.	05.05.2015 To 04.05.2020	5
49	Shree Murlidhar Govindram Wadhwani	Pachgaon	425	1.21	Pvt.	15.04.2015 To 14.05.2020	5
50	Shree Sundar D. Khatri	Surgaon	368	1.15	Pvt.	29.06.2015 To 28.06.2025	10
51	Me. Satyam Stone Industries Smt. Malve	Pachgaon	568/2	0.80	Pvt.	30.06.2015 To	5

						29.06.2020	
52	Shree Vinod Ramkaran Mittal	Surgaon	368	2.02	Pvt.	24.07.2015 To 23.07.2025	10
53	Shree Pramod Ramkaran Mittal	Surgaon	341	2.02	Pvt.	10.09.2015 To 09.09.2025	10
54	Punit Industries	Pachgaon	570/2	1.74	Pvt.	20.07.2015 To 19.07.2020	5
55	Shree Manij Krilokchand Arora	Salaimendha	27	1.47	Pvt.	08.02.2016 To 07.02.2021	5
56	Shree Gurmitsingh Chawala	Pachgaon	411 413 418	3.77	Pvt.	01.03.2016 To 28.02.2021	5
57	Mining Transport	Undari	80/1	1.30	Pvt.	01.03.2016 To 28.02.2021	5
58	Shree Ajay Gopaldas Jaiswani	Pachgaon	474/1 474/3	1.62	Pvt.	14.03.2016 To 13.03.2021	5
59	Bhawani Stone Through Shree Ashok Thakre	Pachgaon	420/1 420/2	2.35	Pvt.	14.03.2016 To 13.03.2021	5
60	Shree Nitin Kedar Kamble	Salaimendha	57	2.02	Pvt.	28.04.2016 To 27.04.2021	5
61	Shree Stone Crusher Shree Dinesh Chandanmal Pagariya	Salaimendha	37/1	1.74	Pvt.	08.11.2016 To 06.11.2021	5
62	Shree Harinarayan Shyamsundar Gupta	Pachgaon	534	3.08part 3.25	Pvt.	01.12.2016 To 30.11.2021	5
63	Shree Krushna Stone Crusher Through Shree Rupesh Khat	Salaimendha	66,67,68, 71,72	3.92	Pvt.	02.12.2016 To 01.12.2021	5
64	Shree Khushal Bapurao Bhojar	Pachgaon	450/3	1.50	Pvt.	21.12.2016 To 20.12.2021	5

65	Shreesantoshkumar Tekchand Ganagwani	Pachgaon	505	2.13	Pvt.	29.11.2016 To 28.11.2021	5
66	Shree Devendra Suryabhan Shirbhate	Salaimend ha	37/2	2.00pa rt 1.00	Pvt.	31.12.2016 To 30.11.2021	5
67	Me. Sidheshwar Infrastructural Through Shyam Lalaram Jaiswal	Pachgaon	480/4 480/1	4.25	Pvt.	22.11.2016 To 21.11.2021	5
68	Shree Me.Y.E.C. Minerals Through Shree Shalabh Radheshan Vijayvargi	Sayki	124/1 124/2	3.40	Pvt.	20.04.2017 To 19.03.2022	5
69	Shree Gajanan Stone Industries Through Shree Ravikumar Prabhakarao Pillare	Salaimend ha	18/1	1.20	Pvt.	20.04.2017 To 19.03.2022	5
70	Shree Tekchand Guralmal Gangwani	Pachgaon	540 546/4 535 536/1	4.55ha . Part 3.00ha	Pvt.	15.03.2017 To 14.03.2022	5
71	Vyankateshwara Basalt Incooperation Pro. Smt. Uma Sushil Mundhada	Pachgaon	523/2 523/3	1.60	Pvt.	20.04.2017 To 19.04.2022	5
72	Me. D. C. Gurubhaxani	Pachgaon	494/1 494/2	2.50 Ha.	Pvt.	1.06.2027 To 31.05.2022	5
73	Shree Vinod Gulabron Pillare	Salaimend ha	16/1	1.01	Pvt.	06.10.2017 To 05.10.2022	5
74	Smt. Priya Pradip Kolhe	Pachgaon	510,511	1.60	Pvt.	29.11.2017 To 28.11.2022	5
75	Sweta Stone Through Shasikant Avgate	Salaimend ha	29/2	1.00	Pvt.	29.11.2017 To 28.11.2022	5
76	Pavankumar Satyanarayan Bihani	Salaimend ha	30	1.57	Pvt.	05.12.2017 To 04.12.2022	5

Nagpur Garmin							
78	Shree Homraj Meghraj Patel	Khadgaon	232	0.79	Pvt.	09.04.2012 To 08.04.2017	5
79	Shree Santoshkumar Okarmal Yaduka	Navegav	45/2	0.82	Pvt.	17.05.12 To 16.05.2017	5
80	Shree Vijaykumar Okarmal Yaduka	Navegav	45/1	1.78	Pvt.	17.05.12 To 16.05.2017	5
81	Shree Mahesh Ramesh Hiranwar	Khadgaon	247/1	1.06	Pvt.	02.06.2012 To 1.06.2017	5
82	Shree Stone Crusher Through Shree Pagariya	Salaigodhni	183	3 Acr	Pvt.	21.01.2013 To 20.01.2018	5
83	Me. Galex Crushing Through Shree Samir Agrawal	Navegav	32	4.46	Pvt.	11.06.2013 To 10.06.2018	5
84	Me. Altratake Cement Shree. Agrawal	Alagodhi	128/2 128/3 128/4	4.72	Pvt.	14.06.2013 To 13.06.2018	5
85	Shree Prakash Wamanraon Atkar	Mahurjhari	148 149 150 163	3.00	Pvt.	20.06.2013 To 19.06.2018	5
86	Shree Ramesh Raghunath Nimbalkar	Navegav	34	2.02	Pvt.	26.06.2013 To 25.06.2018	5
87	Shree Pankaj Muralidhar Khadse	Salaigodhni	184	5 Acr	Pvt.	11.07.2013 To 10.07.2018	5
88	Me. Sdhik & Company Shree Vali	Pitesur	43	3.77	Pvt.	22.07.2013 To 21.07.2018	5
89	Shree Shanker Pesumal Waswani	Khadgaon	156 157 160/1	2.94	Pvt.	12.08.2013 To 11.08.2018	5
90	Shree Chandrashekhar	Ghuti	16/2	5.00 Acr	Pvt.	23.09.2013 To	5

	Raghawallbh Mundhda					22.09.2018	
91	Shree Rajesh Mulchand Dayaramani	Lava	237	1.45	Pvt.	22.10.2013 To 21.10.2018	5
92	Shree Rajesh Mulchand Dayaramani	Khadgaon	236/2	1.98	Pvt.	22.10.2013 To 21.10.2018	5
93	Smt. Sultana Habib Baig	Mahurjhari	148 149 150 163	1.01	Pvt.	06.11.2013 To 05.11.2018	5
94	Shree Shailesh Bhimrao Kadu	Khadgao	233	1.92	Pvt.	23.02.15 To 22.02.20	5
95	Shree Datta Stone Crushing Shree Amdhare	Salaigodhni	184/2	1.21	Pvt.	16.03.15 To 15.03.20	5
96	Shree Arif Mo. Ayub Azmi	Ghuti	59/2	2.03	Pvt.	30.03.15 To 29.03.20	5
97	Shree Devkumar Tharumal Lakhani	Pitesur	68	0.81	Pvt.	23.04.15 To 022.04.20	5
98	Shree Rajkumar Shevakram Gurubaxani	Mahurjhari	146	3.03	Pvt.	15.05.15 To 14.05.20	5
99	Shree Kilod Sitaram Mankar	Khadgao	158	1.01	Pvt.	30.06.15 To 29.06.20	5
100	Smt. Renukabai Mohan Hiranwar	Khadgao	224	1.21	Pvt.	24.07.15 To 23.07.20	5
101	Shree Basant Ramaji Aatram	Navegao	20/1	1.47	Pvt.	28.08.15 To 27.08.20	5
102	Shree Dilip Rajaramji Warjurkar	Navegao	41	2.12	Pvt.	21.09.15 To 20.09.20	5
103	Shankar Stone	Navegao	13	2.00	Pvt.	21.09.15	5

	Quarry					To 20.09.20	
104	Shree Shailesh Shankarao Patil	Mahurjhari	254	2.00	Pvt.	08.12.15 To 07.12.20	5
105	Shree Sanjay Sheshrao Kunte	Mahurjhari	231/2	0.81	Pvt.	09.03.16 To 08.03.21	5
106	Shree Ajay Gopaldas Jaiswani	Khadgao	258	3.25	Pvt.	14.03.16 To 13.03.21	5
107	Shree Akash Ghansyam Gangwani	Khadgao	234	2.02	Pvt.	29.03.16 To 28.03.21	5
108	Shree Nayan Jamunadas Makdiya	Navegao	30/7 30/9	2.00	Pvt.	19.11.16 To 18.11.21	5
109	Rushiraj Infra Pro. Shree Tarun Rushiraj Hiranwar	Lava	229/2	1.77	Pvt.	23.11.16 To 22.11.21	5
110	Radha Stone Industries Pro. Satyanarayan Biyani	Salaigodhni	206/1,2	1.21	Pvt.	06.12.16 To 05.12.21	5
111	Shree Ram Govindram Wadhwani	Khadgao	171/3	2.44	Pvt.	09.02.16 To 08.02.21	5
112	Shree Murli Govindrao Wadhwani	Khadgao	152	2.71	Pvt.	09.02.16to 08.02.21	5
113	Shree Rajesh Ladharam Madhwani	Navegao	37	2.30	Pvt.	21.12.16 To 26.12.21	5
114	Shree Arvind Janrao Gajbhiye	Salaigodhni	186/2,3	2.59	Pvt.	16.12.16 To 15.12.21	5
115	Smt. Tulsabai Ganesh Hirnwar	Lava	236	1.91	Pvt.	02.01.17 To 1.01.22	5
116	Shree Santoshkumar Okarmal Yaduka	Navegao	21/1	2.02	Pvt.	04.07.17 To	5

						03.07.22	
117	Shree Vijaykumar Okarmal Yaduka	Navegao	45/1	1.78	Pvt.	05.06.17 To 4.06.22	5
118	Rushiraj Infra Pro. Shree Tarun Rushiraj Hiranwar	Khadgao	171/1	1.78	Pvt.	20.04.17 To 19.04.22	5
Kalmeswar							
119.	Me. Savla Tredars Part Nikunj Shah	Khapri (Uma)	87/1	3.00	Pvt.	16.11.16 To 15.11.21	5
120.	Me. Savla Tredars Part Nikunj Shah	Khapri (Uma)	95	2.00	Pvt.	31.05.16 To 30.05.21	5
121.	Shree Shaym Govindrao Wadhwani	Khapri (Uma)	83/2	0.89	Pvt.	20.06.13 To 19.06.18	5
122	Shree Jagdish Shreechand Daswani	Khapri (Uma)	90	1.75	Pvt.	25.06.13 To 24.06.18	5
123	Smt. Pradhya Dhyaneshwer Nimbalkar	Telgaon	323 324 325 327 B	4.74	Pvt.	22.07.13 To 21.07.18	5
124	Vijaykumar Chetumal Kevalramani	Khapri (Uma)	93/1	0.81	Govt.	01.12.14 To 30.11.19	10
125.	Shree Harish Ramchandra Kevalramani	Khapri (Uma)	55/7	0.81	Pvt.	01.12.14 To 30.11.19	5
126	Shree Vijay Ramchandra Kukreja	Khapri (Uma)	94	1.86	Pvt.	23.04.15 To 22.04.20	5
127.	Shree Choithram Bacchapasrad Khubnani	Khapri (Uma)	93	0.84	Pvt.	29.06.15 To 28.06.20	5
128	Ankit Construction	Khapri (Uma)	84/2	3.58	Pvt.	21.01.16 To 20.01.21	5
129	Shree Sureshkumar	Khapri	91	3.19	Pvt.	01.04.17	5

	Rochiram Jgyasi	(Uma)		Part 12.61 Ha.		To 31.03.22	
130	Smt. Indirabai Girde Stone Quarry Pro. Pakesh Ramesh Girde	Nimji	347 Old & New 94	2.20	Pvt.	03.07.2017 To 02.07.2022	5
Higana							
131	Shree Ramnarayan Shyamsundar Gupta	Metaumri	83/3	2 Acr	Pvt.	13.08.2010 To 12.08.2015	5
132	Shree Sanjay Madhukar Pande	Savangi Devali	194/2	3 Acr	Pvt.	03.11.2010 To 02.11.2015	5
133	Shree Kamal Radheshtam Agrawal	Mhsala	125 126	1.97	Pvt.	14.12.2010 To 13.12.2015	5
134	Shree Sharad Mannubhai Patel	Khairi Khurd	85	1.82	Pvt.	05.01.2011 To 04.01.2016	5
135	Shree Tarun Rushiraj Hiranwar	Savangi	191	1.47	Pvt.	11.04.2011 To 10.04.2016	5
136	Shree Nandkishor Marotrao Burade	Zilpi Mohgaon	28/2	1.80	Pvt.	24.08.2011 To 23.08.2016	5
137	Shree Harish Dashrath Fulsunge	Shingardip	93	1.43	Pvt	16.09.2011 To 15.09.2016	5
138	Shree Parvindar Gurubaksh Singh Mokha	Kohala	6/1	3.23	Pvt	13.10.2011 To 12.10.2016	5
139	Shree Ashish Anadrao Durugkar	Kohala	6/1	1.47	Pvt	14.10.2011 To 3.10.2016	5
140	Me. Sai Crushre Part Sanjay Pande	Savangi Devli	188/1 188/2	5 Acr	Pvt	13.10.2011 To 12.10.2016	5
141	Paras Stone Crusher Through	Shingardip	24/1	4.73	Pvt	31.05.2015 To 3.05.2021	5

	Sunil Mishra						
142	Shree Prashant Kishor Ghanote Jagruteshwer	Shingardip	146/2	8 Acr	Pvt	10.07.2013 To 09.07.2018	5
143	Smt. Jyoti Nandkishor Ramteke	Shingardip	26	1.41	Pvt	22.07.2013 To 21.07.2018	5
144	Shree Santosh Ramprasad Agrawal	Shingardip	25	1.41	Pvt	22.07.2013 To 21.07.2018	5
145	Shree Mo. Harun Haji Hasan Nagani	Savangi	67	3 Acr	Govt.	06.08.2013 To 05.08.2018	5
146	Madhu Industries Shree Subhash Agrawal	Panjari	55/2 55/2	1.21	Pvt	11.09.2013 To 10.09.2018	5
147	Shree Mayuresh Mukund Hrdas	Haldgaon	146	5 Acr	Govt.	05.10.2013 To 04.10.2018	10
148	Shree Mahesh Arvind Sabne	Haldgaon	146	5 Acr	Govt.	05.10.2013 To 04.10.2018	10
149	Shree Radheshyam Nathuji Durugkar	Haldgaon	146	10 Acr	Govt.	18.10.2013 To 17.10.2018	10
150	Me. Vidharbh Stone Metal Through Shree Jakir Salambhai Pathan	Khairi Khurd	88/2	2.01	Pvt	31.12.2013 To 30.12.2018	5
151	Shree Atul Ratnakar Durugkar	Haldgaon	88/2	5 Acr	Govt.	07.07.2014 To 06.07.2019	10
152	Shree Sunil Mdhukar Borikaradhyksh Mihan Prkalpgrast Bahuddeshiy Seva Sahakari Santha Maryadit Khapri	Savangi Devli	186	4.00	Govt.	08.07.2017 To 07.07.2022	10
153	Shree Sunil Mdhukar Borikaradhyksh	Savangi Devrli	186	4.00	Govt.	08.07.2014 To	10

	Mihan Prakalpgrast Bahuddeshiy Seva Sahakari Santha Maryadit Khapri					07.07.2019	
154	Shree Sunil Mdhukar Borikaradhyksh Mihan Prakalpgrast Bahuddeshiy Seva Sahakari Santha Maryadit Khapri	Savangi Devli	186	4.00	Govt.	08.07.2014 To 07.07.2019	10
155	Shree Ashish Anandrao Durugkar	Haldgaon	146	5 Acr	Govt.	19.08.2014 To 18.08.2019	10
156	Shree Pramod Shreeram Dehankar Adhyaksh Kargo Mihan Prakalpgrast Bahuddeshiy Seva Sahakari Santha Maryadit Kalkuhi	Savangi Devli	186	4.00	Govt.	17.09.2014 To 16.09.2019	10
157	Shree Pramod Shreeram Dehankar Adhyaksh Kargo Mihan Prakalpgrast Bahuddeshiy Seva Sahakari Santha Maryadit Kalkuhi	Savangi Devli	186	4.00	Govt.	17.09.2014 To 16.09.2019	10
158	Shree Pramod Shreeram Dehankar Adhyaksh Kargo Mihan Prakalpgrast Bahuddeshiy Seva Sahakari Santha Maryadit Kalkuhi	Savangi Devli	186	4.00	Govt.	17.09.2014 To 16.09.2019	10
159	Me. Balaji Buildcon Through Shree Sanjay Heliwal	Haldgaon	146	10 Acr	Govt.	17.09.2014 To 16.09.2019	10
160	Shree Keshav Gharaj Sontakke Kargo Mihan Prakalpgrast	Savangi Devli	186	4.00	Govt.	10.10.2014 To 09.10.2019	10

	Bahuddeshiy Seva Sahakari Santha Maryadit Dahegaon						
161	Shree Keshav Gharaj Sontakke Kargo Mihan Prakalpgrast Bahuddeshiy Seva Sahakari Santha Maryadit Dahegaon	Savangi Devli	186	4.00	Govt.	10.10.2014 To 09.10.2019	10
162	Shree Keshav Gharaj Sontakke Kargo Mihan Prakalpgrast Bahuddeshiy Seva Sahakari Santha Maryadit Dahegaon	Savangi Devli	186	4.00	Govt.	10.10.2014 To 9.10.2019	10
163	Shree Anadrao Shreehari Durgkar	Savangi Devli	146	2.02	Govt.	19.11.2014 To 18.11.2019	5
164	Shree Kostubh Sudhir Dive	Mandavgho rda	158	1.81	Pvt	04.02.2015 To 03.02.2020	5
165	Shree Altaf Ahmad	Savangi Asola	67	2081	Govt.	23.02.2015 To 22.02.2020	10
166	Shree Ramesh Kishanlal Agrwal	Metaumri	101	3.00	Govt.	16.03.2015 To 15.03.2020	10
167	Shree Mo. Harun Hagi Hasan Nagane	Savangi	67	2.00	Govt.	15.05.2015 To 14.05.2020	5
168	Shree Kailas Pandurang Thakre	Panjari	68	2.00	Govt.	28.08.2015 To 27.08.2020	10
169	M. K. Builders	Panjari	68	2.00	Govt.	28.08.2015 To 27.08.2020	10
170	Shree Kamal Radheshyam Agrwal	Mhasala	126 125	1.97	Pvt	11.12.2015 To 10.12.2020	5
171	Me. Vinayak Metals		104	1.84	Pvt	11.12.2015	5

						To 10.12.2020	
172	Shree Prashant Petkar	Metaumri	86/2	1.00	Pvt	18.01.2016 To 17.01.2021	5
173	Rushiraj Infra Pro. Shree Tarun Rushiraj Hiranwar	Savangi Devli	191		Pvt	28.04.2016 To 27.04.2021	5
174	Shree Nandkishor Marotrao Burade	Mahgaon Jilpi	28/2	1.46	Pvt	29.11.2016 To 28.11.2021	5
175	Me. Jagruteshwer Metals Pvt.Lmt. Through Smt. Vaishali Pamod Kapse	Singardip	148	1.80	Pvt	09.01.2017 To 07.01.2021	5
176	Shree Sanjay Madhukar Pande	Savangi Devli	191/2	2.22	Pvt	20.03.2017 To 19.03.2022	5
177	Sana Stone Crusher Pvt.Ltd. Through Mo. Akram Shaikh	Khairi Kurd	86/1	1.22	Pvt	16.02.2017 To 15.02.2022	5
178	Quality Minerals Through Mo. Samir Rangunwala	Mhsala	28/2	2.83	Pvt	28.11.2017 To 27.11.2022	5
179	Mordan Minerals Through Mo. Anсад Rangunwala	Mhsala	109/1	10.16 Part 4.90	Pvt	28.11.2017 To 27.11.2022	5
180	Shree Rajesh Ramkishan Nikhare	Shingardip (Rithi)	137/1	1.62	Pvt	22.11.2017 To 21.11.2022	5
181	Jagruteshwar Metals Pvt.Ltd Through Smt. Laxmi Chandrashekhar Kapse	Shingardip (Rithi)	136	2.07	Pvt	26.10.2017 To 25.10.2022	5
182	Shree Rajesh Ramkishan Nikhare	Shingardip (Rithi)	137/1	1.62	Pvt	22.11.2017 To 21.11.2022	5
183	Anil Balkishan	Panjari	71 A	1.18	Pvt	27.09.2017	5

	Hiranwar					To 26.09.2022	
Saoner							
185.	Shree Pravin Sukhdeo Bhiaswar	Borgao (J)	100 101	4.30	Pvt	04.10.2010 To 03.10.2015	5
186.	Shree Umesh Nagorav Nimje	Chtrapur	197	1.07	Pvt	14.02.2011 To 13.02.2016	5
187.	Shree Rambhau Gulabrao Musale	Chtrapur	210	1.96	Pvt	09.05.2011to 08.05.2016	5
188.	Shree Sitaram Rajeram Deshmukh	Borgao (J)	121/1	1.88	Pvt	21.10.2011 To 20.10.2016	5
189.	Shree Ashok Hiraman Umathe	Chtrapur	218	3 Acr	Pvt	27.09.2017 To 26.09.2022	5
190.	M. D.D. Associatedshree Damale	Chtrapur	204 207	3.14	Pvt	30.30.2015 To 29.03.2020	5
191.	Shree Ketankumar Arunkumar Singh	Chtrapur	72/1 72/2	3.72	Pvt	24.07.2015 To 23.07.2020	5
192	Hightex Bricas	Bhanegao	224	4.05	Pvt	22.01.2016 To 20.01.2021	5
193	H. G. Infra Engineering Lmt.	Borgao (J)	128	3.80	Pvt	01.03.2016 To 28.02.2021	5
194	Smt.Maya Dadarao Mangale	Borgao (J)	120/1 121/2	1.82	Pvt	01.03.2016 To 28.02.2021	5
195	Shree Swapnkumar Ganguli	Borgao (J)	116	1.70	Pvt	04.04.2016 To 03.04.2021	5
196.	Shree Tushar Madanrao Umate	Chtrapur	85-1	1.87	Pvt	06.05.2016 To 05.05.2021	5
197	Shree Gangadhar Nagorao Nikam	Borgao (J)	98/1 A	3.17	Pvt	10.05.2016 To	5

						09.05.2021	
198.	Smt. Kalpana Sonba Musale	Chtrapur	208 209 201/1	2.31	Pvt	25.05.2016 To 24.05.2021	5
199.	Shree Sudhakar Bapurao Bandhekar	Chtrapur	213	2 Acr	Pvt	25.04.2016 To 24.04.2021	5
200.	Shree Sudhakar Bapurao Bandhekar	Chtrapur	212	2.80	Pvt	02.06.2016 To 01.06.2021	5
Kuhi							
201	Shree Minal Jaganji Zade	Chichghat	50 Samoril Khanhan Nadiche Patr	2.00	Govt.	31.05.2014 To 30.05.2019	5
202	Parshivani						
203	Deshraj & Company	Khandala (Gh)	34/1	6.15	Pvt.	08.12.2015 To 07.12.2020	5
Kamthi							
204	Anmol Bricks Manufacturing	Neri	231	6.31	Pvt.	08.12.2015 To 07.2.2020	5
205	Maharashtra Bricks	Neri	250/2 251/1 253	6.19	Pvt.	08.12.2015 To 07.12.2020	5
205	Shrdha Bricks & Blonk Through Shree Gagan Chabra	Neri	227/1 2.3	5.66	Pvt.	03.12.2016 To 02.12.2021	5

4. DETAILS OF ROYALTY OR REVENUE RECEIVED IN LAST THREE YEARS

The details of royalty collection in last three years is as follows:

Sr. No.	Year	Royalty in Lakh Rs.		Total Collection
		Major Minerals	Minor Minerals	
1.	2017-2018	31101.00	13500.00	44601.00
2.	2016-2017	21800.00	9300.00	31100.00
3.	2015-2016	19800.00	7200.00	27000.00

5. DETAIL OF PRODUCTION OF SAND OR BAJARI OR MINOR MINERAL IN LAST THREE YEARS

Sr. No.	Year	Production (in MT)		
		Sand	Bajari	Minor Mineral
1.	2017-2018	-	3307500	6142500
2.	2016-2017	213882	1825250	3389750
3.	2015-2016	229444	1225000	2275200

6. PROCESS OF DEPOSITION OF SEDIMENTS IN THE RIVERS OF THE DISTRICT

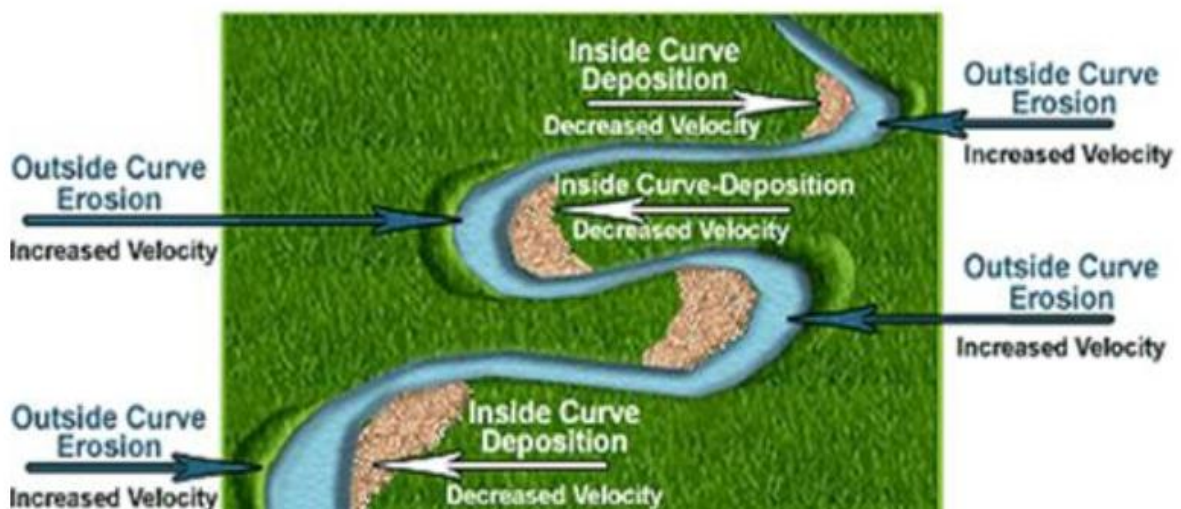
Deposition is the opposite of erosion. Deposition is where a river lays down or drops the Sediments or material that it is carrying. Rivers carries lots of different sediments, including rocks, boulders, silt, mud, pebbles and stones. Normally, a river has the power to carry sediments. If the force of a river drops, the river cannot carry sediment. This is when the river deposits its sediment.

Constituents of minor mineral

The work done by a river consists of the following

- 1) Erosion
- 2) Transport of the material produced by erosion
- 3) Accumulation (deposition) of the transported material Constituents of minor mineral.

The erosion and transport of material go hand in hand with the deposition of the latter. There is not a single river that doesn't carry fragmental material and deposit it. Even at the early stages, in the development of a river, when the erosion and transport definitely prevails over accumulation, the material carried by the river is deposited in some of the sections. During youthful stage of the river, these deposits are unstable and when the volume of water and stream velocity increases (during flood), they may start moving again downstream. The load carried by a stream includes the rock waste supplied to it by rain wash, surface creep, slumping etc. by tributaries , external agents such as glaciers, wind, together with, acquired by its own erosion work. The term load doesn't specifically mean the maximum amount of debris, that a stream could carry in a given set of conditions, that amount is referred to as the transporting power or capacity of a river.

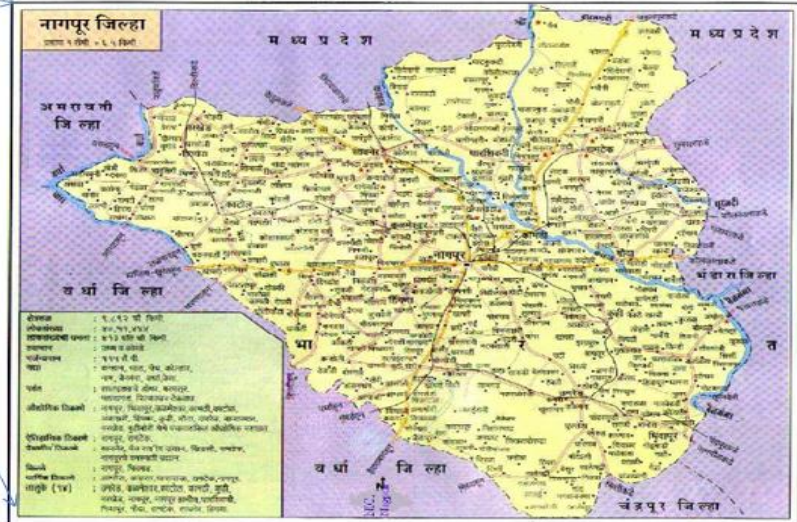


The term load is technically defined as the total weight of solid detritus transported in unit time. The transporting capacity of a stream rises very rapidly as the discharge and the velocity increases. Experiments show that with debris of mixed shapes and sizes, the maximum load that can be carried is proportional to something between the third and fourth power of the velocity. But the fragments of a given shape, the largest size that can be moved (not the actual mass of mixed debris) is proportional to the sixth power of the velocity, provided of course that the depth of water is also adequate for the purpose. As the velocity of a river is checked, the bed load s first to come to rest with continued slackening of the flow, the larger ingredients of the suspended load are dropped, followed succevely by finer and finer particles. When the stream begins to flow more vigourously, the finer materials are the first to move again. A river begins to sort out its load or burden as soon as it receives it. The proportion of fine to coarse amongst the deposited materials tend on average to increase downstream, but there may be interruptions of this tendency because of addition of coarse debris from tributataries or from landslides and steepening of the banks.

7. GENERAL PROFILE OF THE DISTRICT

Nagpur District at Glance:

Location of Nagpur in India



Map of Nagpur District with major towns and rivers.

Details of the District

Coordinates:	21°09'N 79°05'E 221°09'N 79°05'E
Coordinates:	21.15°N 79.09°E 1.15°N 79.09°E
Country	 India
State	Maharashtra
Region	Vidarbha
District	Nagpur
Founded	1702 A.D
Founder	Raja Bakhta Buland Shah
Government	
Divisional Commissioner	
Collector	Shri. Ashwin Mudgal, I.A.S.
Body	Nagpur Municipal Corporation (NMC)
Mayor	Mrs. Nanda Jichkar (BJP)
Municipal Commissioner	Virendra singh { IAS officer of 2006 batch, }
Police Commissioner	Dr. BHUSHAN KUMAR UPADHYAY
Superintendent of Police	Shri Rakesh Ola
Body	Zilla Parishad

President	Sua. Nishatai Tekchand Savarkar
CEO	Shri Snajay Yadav, I.A.S.
Nickname(s):	The Orange City, Tiger Capital of India
Area:	
Metropolitan City	217.65 km2 (84.04 sq mi)
Metro	3,780 km2 (1,460 sq mi)
District	9,892 km2
Elevation	310 m (1,020 ft)
Number of Talukas	14
Number of Subdivisions	5
Number of Municipalities	10 + 1.M. Corporation
Number of Villages	1953
Loksabha Constituencies	2
Assembly Constituencies	12
Population (2011):	
Metropolitan City	2,405,421
Rank	13
Density	11,000/km2 (29,000/sq mi)
Metro	25,83,911
Nagpur District	46,53,171
Density	470/km2
Literacy	89.52%
Languages:	
Official	Marathi
Time zone	IST (UTC+5:30)
PIN	440xxx
STD code	91-712
Vehicle registration	MH31 (Nagpur City West) MH49 (Nagpur City East) MH40 (Nagpur Metro)
Website	www.nagpur.gov.in

8. LAND UTILIZATION PATTERN IN THE DISTRICT: FOREST, AGRICULTURE, HORTICULTURE, MINING ETC.

Forest:

During the year 2011-2012 an estimated 2523 Sq. K.Ms. of area was under forest which is 25.51% of the total area. Most of the land under forest can be found on the banks of Pench River, at the foot hills of Satpuda in Ramtek tahsil forest has been divided in 3 categories namely reserved, protected and unclassified. Area under these categories are given below.

Forest Category in the District:

Sr.No	Category	Area in Sq.Kms.
1	Reserved Forest	1387
2	Protected Forest	832
3	Unclassified Forest	304
	Total	2523

The Major and Minor forest products of the district for the year 2005- 2006 are given below:

Sr.No.	Forest Produce	Production	Value for Sale in '000'
A) Major forest products:			
1	Timber wood (m3)	1.613	17820
2	Fuel wood (m3)	6.969	6774
B) Minor forest products:			
1	Bamboo (Nos.)	13702	127.85
2	Tendu Leave (S.B.)	38408	31405.74
3	Gum (Quintal)	12	65.70
4	Others	10	14.40

Agriculture:

Nagpur district has basically an agrarian economy and the rural economy is inextricably woven with the district economy. The district has total geographical area of 9892 Sq.Km. Out of these 644 th. hq. is cultivable area. The main crop of the district are Paddy, Jowar, Cotton, Tur and Soyabean. The area and production of principal crops are given in Table.

Production, Productivity of Principle Crops:

Sr. No.	Crop	Area in '00' ha.	Production in '00' tonnes	Productivity in kg/ha.
		2009-2010	2011-2012	2008-2009
1	Paddy	646	1466	1419
2	Soyabean	2779	1411	823

3	Wheat	636	1073	1191
4	Ground Nut	43	23	670
5	Jowar	259	60	305
6	Cotton	7454	213	250
7	Tur	294	466	532
8	Gram	394	611	734

Horticulture:

As a cash crop, concept of growing different variety flowers in the district is on constant increase. Indication of society towards flower decoration on different occasion has enhanced. Total area under floriculture was 22742 hectares and the total production of Rose, Shewanti, Zendu, Nishigandha, Gladioli, Gaillardia, White Lilly, Goldenrod, Dezi, Mogra and Ostre are 1365.53 M.T. Camomile, Rose, Mogra, Lilly and Marigold can be developed in Nagpur distt. for the industrial use. It may used to manufacture perfumes, Rose water and Gulkand. The important cut flowers like Rose, Lilly, Chrysanthemum, Gladidus, Carnation, Tuberose and Orchids can be developed in Nagpur for Exports.

Land Use pattern:

The total area of the district is 986 thousand hectares of which forest cover 159 thousands hectares, 121 thousands hectares are not used for the Agriculture and area under cultivation is 644 thousands Hectares. The land utilization pattern of the district is given in Table.

Land Utilisation:

Sr. No.	Classification	Area in '000' hectare
1	Total geographical area	986
2	Forest land	159
3	Barren land	128
4	Land to non-agriculture use	121
5	Cultivable area	644

Mineral Resources:

Nagpur district is moderately rich in minerals. Deposits of coal, manganese Ore, Dolomite, Limestone, Iron Ore, Clay, Copper Ore, Chromites, Tungsten Ore, Zinc Ore and Quartz etc. are found in the district. Coal reserves have been found in the North-West belt of the district i.e. from Saoner to Kanhan (Kamptee apart from the high grade coal found in Umred tahsil. Nagpur district is richly endowed with Manganese ore and the district is well placed in the country as far as production of Manganese ore is concerned. Manganese ore is found particularly in Ramtek and Saoner tahsils. Good quality limestones are found in Kandri and Deolapar, Mica and Tungsten are also found in the district. The sand from Kanhan River is considered to be of high quality as far as the construction of buildings is concerned.

Mineral production in Nagpur district 2006-2007:

Sr.No	Mineral	Production (MT)	Value (Rs. Lakh)	No of Mines
1	Manganese Ore	202804	5433.26	34
2	Coal	8512081	84029.42	27
3	Dolomite	43207	60.66	15
4	White Clay	200	0.12	0.2
5	Quartz	80	0.05	01
6	Sand (Stowing)	664571	835.96	01

Mineral deposits in Nagpur district:

Sr. No.	Mineral	Deposits in Million Tonnes
1	Coal	1183.395
2	Lime stones	31.000
3	Manganese ore	9.389
4	Dolomite	28.740
5	Clay	3.555
6	Copper ore	1.300
7	Tungsten ore	19.980
8	Zinc ore	8.270
9	Chromites	0.056
10	Granite (Million Cubic mt.)	4.880

Fisheries:

Out of the total geographical area of the district an area of 15037 hectares can be used for fish farming apart from the 650 Kms long area under river water. During the 2010-2011 the fish production in the district was around 11200M.T. valued at approximately over Rs. 5600 lacs. Maharashtra Govt. has undertaken various developmental schemes/project for fish farming.

Sericulture:

Sericulture a bio-agro industry in India is practiced since time immemorial and our country stands in the third position in production of raw silk in the world. India has also the distribution of producing all the three commercially known varieties of silk viz. Mulberry, Tassar, Iri and Murga. Maharashtra state stands third in the country in Mulberry and Tassar cultivation according to latest estimates. The present area under Sericulture in Nagpur district is about 141.00 acres which is mostly concentrated in Nagpur, Kalmeshwar, Katol, Narkhed and Ramtek of Nagpur district.

9. PHYSIOGRAPHIC OF THE DISTRICT:

Nagpur district is situated in the eastern part of Maharashtra and renowned for its citrus orchards and manganese deposited and manganese deposits. Nagpur District lies in the southern fringes of Satpura range. It is hilly in the northeast and west where the elevation varies from 350m to 583m msl. The Southern and eastern parts have vast pediplain with gentle slopes towards east. The average elevation of the pediplain surface is about 300m msl. Pench and Kanhan are the main tributaries of Wainganga river flowing from northwest to southeast in the northern part.

10. RAINFALL: MONTH-WISE

Climate and Rainfall

The climate of the district is characterized by a hot summer and general dryness throughout the year except during the south-west monsoon season, i.e., June to September. The mean minimum temperature is 12°C and mean maximum temperature is more than 45°C. The normal annual rainfall (1901-1992) over the district ranges from about 1000 mm to 1200 mm. It is the minimum in the western parts around Katol (985.4mm) and increases in the eastern direction and reaches a maximum around Umrer (1213.6 mm). Rainfall data from 14 rain gauge stations for the periods 2002-2011 are given in table 3. The average annual rainfall for the last 10 years ranges from 753.9 in Hingni to 1164.9 in Umrer. It is also observed that all stations have recorded average annual rainfall within the range of district normal annual rainfall except at Hingni, Katol, Narkhed and Kamleshwar where it is less than.

Rainfall data of Nagpur District (2002-2011):

Taluka	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Average
Nagpur city	1176.1	1431.5	702.3	973.4	975.7	741	952.9	954.4	1395.3	879.4	1018.2
Nagpur gramin	966.7	1229	689	1274.7	1205.5	966.3	953.2	947.4	1494.7	913.8	1064.0
Kamthi	1035.8	1208.7	707.1	1475.8	1178.2	1205	791.6	1032.6	1098.6	861.3	1059.5
Hingni	479.2	770	583.3	920.4	814.9	806	683.1	724.7	942.2	814.8	753.9
Ramtek	1101.3	822.5	733.9	1435.5	1133	1370.8	865.3	905.2	1184	885.1	1043.7
Parshiwani	850.1	1056.9	858.4	1239.5	1106.2	878.8	1068.6	983.6	1086.6	1043.8	1017.3
Maudha	904	1171.6	631.3	1679.1	1114.3	1030.9	814.1	1280.4	1520.5	1366.2	1151.2
Katol	649.6	920.1	555.1	1092.3	937.4	1271.8	773.2	888.4	1027.9	801.8	891.8

Narkhed	822.8	778	606.7	914.9	768.6	1281.3	671	954.1	1136.9	764.9	869.9
Savner	823.6	1063.6	812.6	1497.2	974.1	1209	873.6	941.6	1078.4	945.8	1022.0
Kalmeshwar	740	1092.9	808.6	1320.9	916.4	1203.4	675.9	780.5	1180.5	855.2	957.4
Umrer	846.2	1296.8	747.1	1856.3	1014.2	1464	1060.3	926.2	1551.2	887.1	1164.9
Bhiwapur	923.3	1146.3	740.4	1431.2	1045.6	1341.8	853.2	993.7	1690.1	1088.4	1125.4
Kuhi	859.2	1057.2	596.4	1543.8	828.6	1286	817.9	950.3	1291.5	1024.7	1025.6
Average	869.9	1074.7	698.0	1332.5	1000.9	1146.9	846.7	947.4	1262.7	938.0	1011.8

(Source: www.agri.mah.nic.in)

District wise rainfall for the Division : Nagpur for the year 2018

S r	Dist rict	June, 2018			July, 2018			August, 2018			September, 2018			1st June to 04 September		
		No rmal	Act ual	% To	No rmal	Act ual	% To	No rmal	Act ual	% To	No rmal	Act ual	% To	No rmal	Act ual	% To
		Ra inf all	Rai nfa ll	No rmal	Rai nfa ll	Rai nfa ll	No rmal	Rai nfa ll	Rai nfa ll	No rmal	Rai nfa ll	Rai nfa ll	No rmal	Rai nfa ll	Rai nfa ll	No rmal
1	War dha	171.4	195	113.8	321.6	280.1	87.1	245.1	120	49	24.3	4.7	19.3	762.4	599.8	78.7
2	Nag pur	173.4	204.7	118.1	346.5	356.2	102.8	274.4	205.8	75	25.9	1.5	5.8	820.2	768.2	93.7
3	Bha ndar a	195.9	175.8	89.7	443	390.5	88.1	413.2	338.9	82	30.4	5.8	19.1	1082.5	911	84.2
4	Gon dia	200.5	152.7	76.2	488.3	531	108.7	436.2	326.2	74.8	29.9	40.2	134.3	1154.9	1050.1	90.9
5	Cha ndra pur	185.9	150.9	81.2	397.8	367.2	92.3	343.2	234.8	68.4	28.7	8.7	30.3	955.6	761.6	79.7
6	Gad chir oli	203.2	249.9	123	498.9	473.3	94.9	435.2	481.9	110.7	29	18.5	63.8	1166.3	1223.6	104.9

	Nag pur Avg	18 7.5	189 .7	10 1.2	412 .3	387 .8	94. 1	352 .4	268 .3	76. 1	27. 9	11	39. 4	980 .1	856 .8	87. 4
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(Source: www.agri.mah.nic.in)

10. GEOLOGY AND MINERAL WEALTH

Regional Geology of the area:

Name of the formation	Age
Soil	Recent.
Deccan basalt flows (Traps) with	Lower Eocene
Associated Intertrappean sediments	to. Upper Cretaceous.
Lameta beds	Cretaceous.
Gondwana group {Kamthi stage}	Permian
{ Barakar stage}	
{ Talchir stage}	Carboniferous.
Streaky Granitiegneisses Sausar and Sakoli series of metasediments	Archaeans

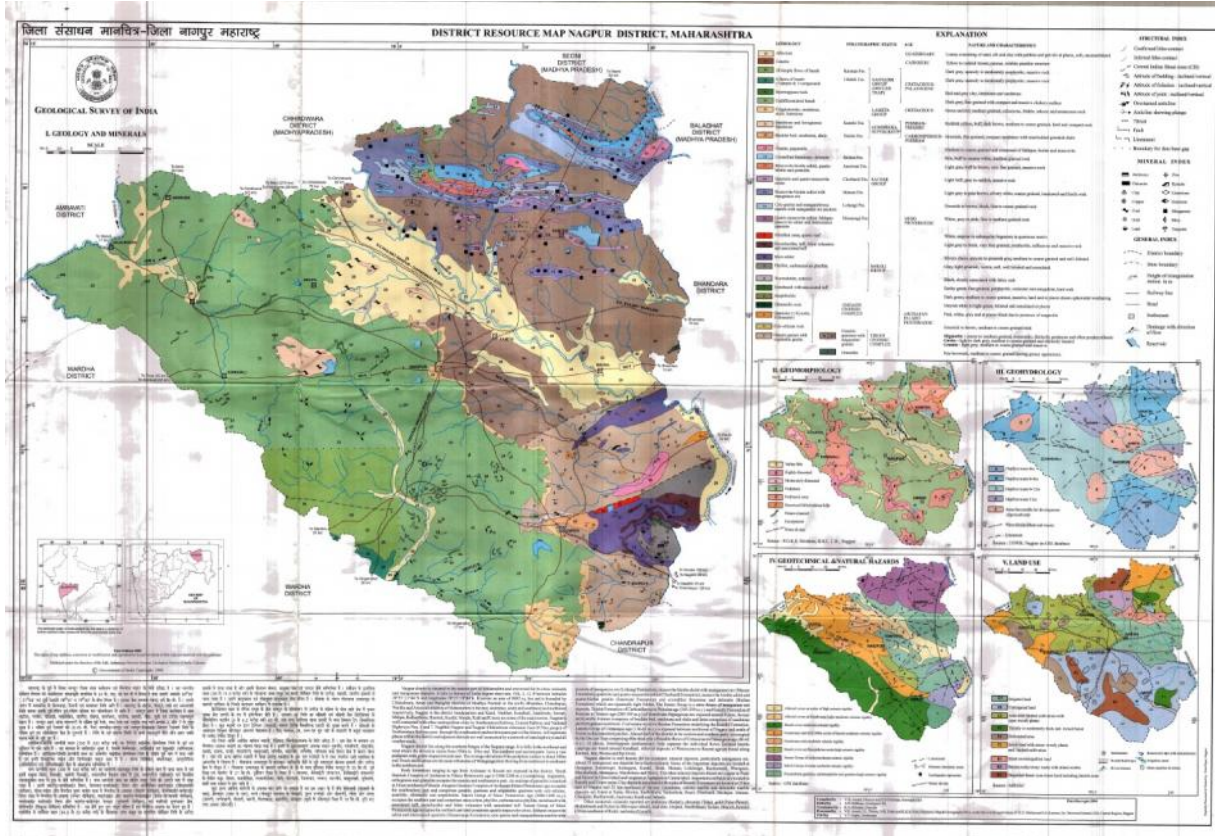
Archaean Rocks:

The Archaeans of Nagpur district are comprised of two distinct lithological units; the older unit comprising gneisses and schists resulting from repeated metamorphism of ancient sediments (similar to Dharwar formation of Southern India) and a younger group of gneisses representing perhaps a granitic intrusion into above metasediments. As both these rock units have suffered intense deformation and metamorphism it is difficult to distinguish them from each other and consequently are generally grouped together as unclassified metamorphic and crystalline series.

Sausar and Sakoli Series:

Rocks of the older metasedimentary group have been mapped in great detail and named Sausar series (occurring in the Northern 'Nagpur-Chhindwada' region) and Sakoli series (occurring in the Southern 'Nagpur-Bhandara' region); the latter, viz., Sakoli series are assumed to be an upward continuation of the former, viz., Sausar series. The Sausar series is further subdivided into stages mostly on their lithology; the Lohangi, Mansar and Chorbaoli being important in view of their containing manganese ore zones. The rock types comprising these series include biotite-gneiss, quartz-pyroxene-gneiss, calciphyre, crystalline limestone, quartzite, mica-schist, hematite-schist, pegmatite and various manganese rocks known as Gondite. Gondite (named after the aboriginal tribe 'Gonds' found in these areas) is a rock composed of quartz and manganese Garnet 'spessar-tite'. Many other rock types carrying rare species of manganese minerals such as *Blanfordite*-a manganese pyroxene (from Kachurwahi and Ramdongri), *Vrendenburgite*-a strongly magnetic manganese ore (from Beldongri), *Hollandite*-crystalline form of psilomelane (from Junawani) and *Beldongrite*-black pitch like mineral

regarded as an alteration product of spessartite, have been grouped under the Gondite series. Of the other minerals found in the manganeseiferous rocks of the region, *Sitaparite Chiklite*, *Winchite*, *Juddite*, *Rhodonite* and *Piedmontite* deserve mention. An excellent exposure of crystalline limestone containing piedmontite nodules occurs in the Pench river at Ghogra (Gokula) about 3 km. north-east of Parseoni.



Geological map of Nagpur District

Streaky-Granitiegneisses:

Rocks of the younger group comprise coarse grained granitic gneisses, prevalent amongst which, is a streaky biotite gneiss which at places covers large areas. These are, however, distinguished from schists and gneisses of sedimentary origin (Sausar series) in view of their not being confined to any particular horizon, and occurring adjacent to any of the stages of the Sausar series. Another feature of these rocks is the occurrence in them of coarse pegmatite intrusive. Based on these and other lines of field evidence, it is thought that these rocks are intrusive into the Sausar series.

Structure of Archaean Rocks.:

The Archaean rocks of this district have a very complex structural pattern. The Sausar series (northern belt) generally dips towards south-south-east or south and the Sakoli series to the north-north-west while the middle or axial region may be a zone of faulting or overthrust. In the

Sausar series the southern part is composed of isoclinal folds with steep (50° - 80°) dips to south; in the middle strip the folds are recumbent, with 30° to 60° dip to the south, while the northern strip shows thrust sheets. There are many steep dipping strike faults which are generally thrust faults. Three 'Nappe' units have been recognised in the Nagpur-Chhindwada region at Sapghota, Ambajhari and Deola-par from west to east all of them having a low southernly dip. 'Nappe' is a structure wherein a sheet of rocks has been tectonically transported far from its original site. Earlier folds in Sausar series have been refolded by late stage deformation and the resulting 'cross-fold' structure is seen at Ramtek, Junawani and Deolapar. Lineations of various kinds are well developed in the Archaean rocks of the district, all of which plunge 20° to 30° towards east.

Gondwana group:

Rocks referable to the Talchir, Barakar and Kamthi stages of the Gondwana system of fluviatile and lacustrine origin were deposited in troughs, generally produced by faults, which in many cases form the boundary of Gondwanas with older rocks and therefore known as 'Boundary fault'. The Kelod-Kamptee line which marks the north-east boundary of Kamthi beds with Archaeans is a boundary fault. The Gondwana formations have been affected by other minor faults as revealed in several drillholes put down to prove the existence of coal seams around the towns of Kanhan and Kamptee. There is a marked unconformity between the Barakars and Kamthis; during the time interval indicated by this unconformity, Barakars were partially or completely eroded away in some areas and the Kamthis rest directly over the Talchirs. At other places absence of Barakar outcrops is due to overlap (extension of a strata in a conformable sequence beyond the boundaries of those lying beneath) by Kamthis.

Talchirs:

Talchir beds are exposed at Kodadongri (north of Patansaongi) and 9 km. north of Nagpur near Suradevi hills, while to 8 km. north of these hills minor exposures are seen. Talchirs comprise green shales and sandstones with minor intercalations of clay and rest unconformably with a basal conglomerate over the Archaean rocks.

Barakars:

Coal-bearing Barakar beds consisting of white and grey sandstones and grits, fireclays and carbonaceous shales are exposed in Tekadi-Silewada-Patansaongi and Bhokara-Chakki-Khapa tract. They are also reported from below the Lameta beds near Umrer. Barakar outcrops are generally lacking in the district, being either overlapped by Kamthis or concealed under the alluvium. About 200 metres north of Kanhan Railway Station a drill hole has revealed Barakars beneath the alluvium.

Kamthis:

These rocks occupy an area which is bounded by Kelod-Kamptee line towards north-east along which Kamthis have been faulted against Archaeans. Southwards they stretch upto

Bhokara, 6 km. north of Nagpur. The western boundary is the irregular edge of the Deccan basalts. At Silewada, about 8 km. northwest of Kamptee, a low range of hills is composed of Kamthis. Detached from above, two inliers are seen in the trap area to the west. One of these (about 14 km. long by 6 wide) lies to the north-east of Bazargaon and the other roughly 54 km. north-west of Nagpur at Ghorkheri (6 km. long by 4 wide).

Kamthis trend in west-north-west-east-south-east direction with 5° to 30° dip towards south-south-west and their estimated thickness is about 1,500 m. Predominantly composed of soft and coarse grained sandstones, Kamthis also contain fine grained mica-ceous sandstones, hard and gritty sandstones and homogeneous and compact shales. Bazargaon inlier contains considerable thickness of conglomerates composed of white quartz pebbles set in a matrix of grit. Interstratified with this conglomerate is a fine red argillaceous sandstone.

Fossil flora include species of *Phyllothea*, *Vertebraria*, *Pecopteris*, *Gangamopteris*, *Angiopteridium*, *Macrotaeniopteris*, *Noeggeria-thiopsis* and *Glossopteris*. The best known localities for fossils in Kamthis are the stone quarries at Silewada and Kamptee.

Lametas:

Lametas, also known as Infratrappeans for their subjacent position to traps (Deccan basalts), are fresh water deposits which rest horizontally over the older Gondwana and Archaean rocks with an unconformity. Lametas which rarely attain a thickness up to 8 metres grade from calcareous sandstones to sandy limestones with intercalations of chert and clay. These occur at the foot of Kelod and Sitabuldi (Nagpur) hills, west of Adyal and at Ketapur. A large spread of these rocks is situated immediately to the west of Umrer. Lametas have also been found fringing the trap outliers in the north-west corner of the district. Fossil Mollusca found in the beds at Nagpur are *Melania*, *Paludina* and *Corbicula* and *Physa*.

Deccan basalts (Traps) and Intertrappeans:

The western part of the district is covered by layers of doleritic and basaltic lavas, commonly known as 'traps' because of step like appearance of their outcrops, the term being of Scandinavian origin. Apart from the main area to the west, several outliers are found north-west of Bhivagad, whilst the southern end of the tongue of trap separating the Pench Valley in Chhindwada district just crosses the border into Nagpur.

These traps are of fissure-eruption type, i.e., they welled up through long narrow fissures in the earth's crust and flowed out as horizontal layers one over the other. Individual flows (layers) have been traced for distances of 100 km. in this district. Some layers are hard and compact while others are soft, vesicular or amygdaloidal having cavities filled with secondary calcite, zeolite and quartz. Columnar joints, sheeting and spheroidal weathering are characteristic of these rocks. The Deccan traps belong to 'Plateau basalt' type, essentially composed of plagioclase (mostly labradorite) and augite with some magnetite. Palagonite is abundant in the basalts near Nagpur. These rocks are generally dark grey in colour having a specific gravity of 2.9.

Intertrappeans:

Layers of fresh water sedimentary rocks, are interbedded with the Deccan basalt flows to the west of Nagpur. Such intertrappean beds occur near Dhapewada, between Bhokara and Mahu-jhari, Takli, Telankhedi and Sitabuldi. They range in thickness from a few centimetres up to two metres and are composed of cherts, impure limestones and pyroclastic material including trap detritus. Numerous fossils have been collected from these rocks, the most famous locality being Takli. The collection includes Replitian bones, remains of a fresh water Tortoise, Fish-scales, Coleoptera, Entomostracans. Dinosaurian tooth similar to Mega-losaurs and following fresh water mollusca-Ballinus. Melania, Limnaea, Succinea, Paludina, Phvsa and Vilvala. Fossil flora includes over 50 species of fruits and seeds, 50 species of exogenous and endogenous leaves and stems, some of the latter being six feet in girth, roots and Chara.

Soil:

In the Archaean area the rocks are hidden beneath a considerable thickness of alluvial soil, deposited by the tributaries of the Kanhan and the Wainganga rivers. In the trappean area the soil is usually the black cotton soil known as regur with Kankar, which is also found in the soils on the Archaean areas.

MISCELLANEOUS DETAILS OF THE DISTRICT :**1) Drainage system with description of main rivers**

Sr. No.	Name of river	Area drained in sq. km	% area drained in district
1	Kanhan	1488	46 %
2	Pench	557	17 %
3	Wardha	223	07 %
4	Kolar	996	30 %

2) Sailable features of important rivers and streams

Sr. No	Name of the river or stream	Total length in the district in km	Place of origin	Altitude at origin
1	Kanhan	113	Damua, Satpura range, MP	-
2	Pench	56	Junnarde, Chindawara District, MP	1048m
3	Wardha	60	Khairwani near Multai, Betul. District, MP	785m
4	Kolar	54	N-E corner of Katol Taluka, MH	600m

Portion of the River or Stream Recommended for Mineral Concession	Length of area recommended for mineral concession (in kilometer)	Average width of area recommended for mineral concession (in meters)	Area recommended for mineral concession (in square meter)	Mineable mineral potential (in metric tonne) (60% of total mineral potential)
Kanhan River	14.22	88.75	1132000.00	3878940
Kundiya Nallah	0.30	25.00	22700.00	1653.
Kolar River	1.20	49.33	61400.00	22843
Khairi Panjab Nallah	0.20	20.00	4000.00	881
Pench River	1.55	82.66	130200.00	34443
Wardha River	1.90	25	47400.00	10473
Sur River	0.97	63.75	59200.00	15392

Mineral potential

Sr. No.	Boulder (MT)	Bajari (MT)	Sand (MT)	Total Mineable Mineral Potential (MT)
2018	7063875	3803625	205992	11073492

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