BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL PRINCIPAL BENCH, NEW DELHI

IN

ORIGINAL APPLICATION NO. 09/2025

IN THE MATTER OF:

VINAY SHRIVASTAV

.... APPLICANT

VS.

STATE OF U.P. & ORS.

.... RESPONDENT

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THROUGH

Ankit Verma

(ANKIT VERMA)
STANDING COUNSEL STATE OF UP
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.... RESPONDENT

AFFIDAVIT OF DISTRICT MAGISTRATE, HAMIRPUR, IN COMPLIANCE OF ORDER DATED 21.01.2025 PASSED BY THIS HON'BLE TRIBUNAL

The Respondent No. 9 herein states as under:

MOST RESPECTFULLY SHOWETH:

I, Ghanshyam Meena aged about 35 years, S/o Ramanand Meena presently posted as District Magistrate – Hamirpur, the deponent, do hereby solemnly state and affirm as under:-

1. That I am the above-mentioned authorizedofficer of answering Respondent No. 9 and is duly competent to file the present affidavit. That the Deponent is well conversant with the facts and the circumstance of the instant case and is competent to swear this affidavit.

2. That the Deponent has read and understood the contents of the present affidavit. The averments made in the Original Application, which are not specifically admitted hereunder must be considered to have been denied by the Deponent.

3. That the deponent is posted as District Magistrate-Hamirpur, since 14.09-2024 and is swearing this affidavit in his official capacity.

4. That this Hon'ble Tribunal vide its order dated 21.01.2025 was pleased to issue the following directions: -

".....8. Learned Counsel for the Applicant also seeks leave to implead Director, Geology and concerned District Magistrate. The prayer is allowed. Let the cause title be amended and fresh memo of parties be prepared, and the additional respondents be also served.

9. List on 05.03.2025"

A copy of the order dated 21.01.2025 passed by this Hon'ble Tribunal is annexed herewith and marked as **Annexure R-1**.

5. That the present affidavit is being filed in respectful compliance of the order dated 21.01.2025 passed by this Hon'ble Tribunal, in this present Original Application.

6. That the present Original Application has been filed by the Applicant herein praying for following reliefs: -

a. *Quash and set-aside the District Survey Report for District Hamirpur prepared in 2024 in violation of the MOEF Notification dt.15.01.2016, the SSMMG 2016 and other applicable laws;*

b. *Quash and Set aside the advertisement letter dated 09/11/2024 whereby the District Magistrate, Hamirpur invited persons / institution to*

participate for E Tender cum E Auction of Vacant areas of Sand and Gravel available in the Riverbed in Hamirpur District, State of Uttar Pradesh.

c. *Issue directions to the State of Uttar Pradesh to conduct a replenishment Study of all rivers in District Hamirpur, U.P. and to prepare a fresh District Survey Report in compliance with the SSMMG, 2016 and EMGSM 2020 after duly considering the results Replenishment Study;*

d. *Direct and restrain the State of Uttar Pradesh from auction and/or grant of mining leases in District Hamirpur, U.P. and further restrain the Respondents from granting mining leases in pursuance of the impugned District Survey Report during the pendency of the present Original Application;*

e. *Direct Respondents to pay the costs of the present Application to the Applicant;*

f. *Pass any other order that this Hon'ble Tribunal may deem fit."*

7. That in an another identical Original Application No. 65 of 2025, titled as Jagveer Singh vs. State of U.P. & Ors., this Hon'ble Tribunal vide its order dated 12.02.2025 was pleased to observe that similar issue is involved in the present Original Application, therefore, it directed the Original Application No. 65 of 2025 be listed along with the instant Original Application.

8. That in Original Application No. 65 of 2025, titled as Jagveer Singh vs. State of U.P. & Ors., the applicant has sought an Ad- Interim Ex Parte Stay against the issuance of Letter of Intent, for vacant sand areas which was advertised vide E-Tender-cum-E-Auction Notice dated 01.01.2025, issued

by the deponent and further sought quashing of the DSR of District Hamirpur on the ground that it is incomplete and has been approved by SEIAA in a mechanical manner.

9. That since both the matters are identical in nature, therefore the deponent craves leave of this Hon'ble Tribunal to file the response on behalf of District Hamirpur, in the instant Original Applicationwhich may also be treated as a response of the deponent in OA No. 65 of 2025.

10. That at the very outset, it is pertinent to submit that the aforementioned Original Application, filed by the applicant seeking the quashing of the District Survey Report for District Hamirpur prepared in the year 2024, along with the Notice/Advertisement dated 09.11.2024, is predicated upon baseless, misleading, and erroneous assertions. Consequently, the Original Application filed by the Appellant is devoid of merit, not maintainable in law, and thus liable to be dismissed.

11. That the District Survey Report, of District Hamirpur of Year 2024, pertaining to RiverBed Sand/Morrum Mining Areas, has been duly prepared by the Sub-Divisional Committee, of District Hamirpur, which was constituted in accordance with the provisions of MoEF&CC Notification No. S.O. 141(E) dated 15.01.2016, S.O. 3611(E) dated 25.07.2018, and the Sustainable Sand Mining Management Guidelines – 2016 (as revised). Upon securing the requisite approval from the competent authority, the said report has been duly enforced which is in conformity with the Standard Operating Procedure (SOP) issued by SEIAA, U.P. dated 02.02.2024. A copy of the SOP duly issued by SEIAA, UP is herewith being annexed as **AnnexureR-2** to this affidavit.

NOTARY KALICHARAN NISHAD DIST. HAMIRPUR (U.P.)

12.That it is relevant to mention here at this juncture that the DSR- Hamirpur has been duly approved by the SEIAA on 08.11.2024 which has further been uploaded on the official website on 12.12.2024. A copy of the approval of DSRgranted by the SEIAA along with a snippet depicting DSR of Hamirpur being uploaded on the official website is collectively being annexed as **Annexure R-3(Colly)**to this affidavit.

13.That the District Survey Report (DSR), prepared by the Sub-Divisional Committee (SDC), was duly uploaded on the official portal of District Hamirpur for a period of 30 days to invite public objections and suggestions. Additionally, a public notice was published in two newspapers on 10.05.2024 in compliance with procedural requirements. However, no objections or suggestions were received in the office of deponent within the stipulated period. A copy of the publication dated 10.05.2024 is herewith being annexed as **Annexure R-4** to this affidavit.

14.That it is imperative to note that mining areas cannot remain unoccupied for an extended period due to inter-district stakeholding, as prolonged vacancy significantly increases the risk of illegal mining activities. Accordingly, an E-Tender-cum-E-Auction Notice dated 09.11.2024 and 01.01.2025 were issued in strict adherence to the applicable rules and regulations.

15.That in the aforesaid mentioned E-Tender-cum-E-Auction Notice dated 09.11.2024, 29 vacant new sand areas were advertised wherein, 14 Letter of Intent (LOI) has been issued to the Intending Lease holders. A copy of 14 Letter of Intent issued to the Intending Lease Holders is herewith being annexed as **Annexure R-5** to this affidavit.

NOTARY KANCHAN NISHAD DIST. HAMIRPUR (U.P.) GOVT. OF U.P.

16. That in the E-Tender-cum-E-Auction Notice dated 01.01.2025, which is a subject matter in Original Application No. 65 of 2025, 17 vacant sand areas were advertised wherein, 6 Letter of Intent (LOI) have been issued to the Intending Lease Holders. A copy of 6 Letter of Intent (LOI) issued to the Intending Lease Holders is herewith being annexed as **Annexure R-6** to this affidavit.

17. That the issuance of Letter of Intent (LOI) is the primary stage for awarding mining leases. The project proponent is not permitted to commence any mining operations until an approved mining plan environment clearance is submitted by him.

18. That the applicant on mere assumptions, contends that the "area in question shall lead to illegal mining and environmental damage." However, it is imperative to note that prior to the commencement of any mining operations, the allotment of a lease is subject to rigorous regulatory scrutiny and mandatory clearances, including the approval of a Mining Plan, Environmental Impact Assessment (EIA), Public Hearing, Environmental Clearance (EC), and Consent to Operate (CTO).

19. That the impugned District Survey Report (DSR) has been duly approved, and pursuant to its implementation, the advertisement has been issued in accordance with the law. There exists no illegality or procedural infirmity in the process.Furthermore, the State Government is vested with the authority to auction mining leases under Rule 23(1) of the Uttar Pradesh Minor Mineral (Concession) Rules, 2021 (UPMMCR-2021).

20. That the District Survey Report (DSR) for Hamirpur District has been meticulously prepared by the competent authority through a duly authorized committee, following a comprehensive replenishment study, which includes the incorporation of precise geo-coordinates. Consequently, the DSR of District Hamirpur is in strict conformity with the provisions of the Sustainable Sand Mining Management Guidelines, 2016 (SSMMG), the Enforcement and Monitoring Guidelines for Sand Mining, 2020 (EMGSM-2020) and the Environment (Protection) Act, 1986, and is not violative of any of these statutory mandates in any manner.

21. That in compliance with the directives issued by this Hon'ble Tribunal, the replenishment study for Hamirpur District was conducted and duly completed by CMPDIL in the year 2022. A copy of the replenishment study for Hamirpur District conducted and prepared by CMPDIL is herewith being annexed as **Annexure R-7** to this affidavit.

22. That it is pertinent to mention that the Sub-Divisional Committee (SDC) members conducted on-site inspections for each location proposed in the District Survey Report (DSR) and subsequently submitted their field verification report. The geo-coordinates of the mining areas were meticulously verified against the revenue records and Khasra maps, ensuring accuracy and compliance. Accordingly, the verified geo-coordinates of all designated mining areas have been duly incorporated into the DSR. A copy of the field verification report submitted by the Sub- Divisional Committee is herewith being annexed as **Annexure R-8** to this affidavit.

23. That the mineral development is a continuous and dynamic process, the data collected in the year 2022 was utilized by the Sub-Divisional Committee

(SDC) for further assessment. In addition, comprehensive field visits of riverbeds were conducted in 2023, during which replenishment was observed in all mining areas. The mineral potential of these replenished areas was duly evaluated and incorporated into the revised District Survey Report (DSR) 2024.

24. That in compliance with the requirement for conducting Replenishment Studies in accordance with the Sustainable Sand Mining Management Guidelines, 2016 (SSMMG-2016) and the Enforcement and Monitoring Guidelines for Sand Mining, 2020 (EMGSM-2020) on an annual basis, the Secretary, Mining, State of Uttar Pradesh, issued a detailed procedure for the same through an office order dated 17.05.2023. A copy of the office order dated 17.05.2023 is herewith being annexed as **AnnexureR-9** to this affidavit.

25. That it is further submitted that the State Directorate of Geology and Mining (DGM) has empanelled Exploration Agencies and endorsed QCI/NABET Accredited Agencies for the purpose of conducting replenishment studies. Intending Leaseholders are permitted to engage these agencies for conducting the requisite studies, preparing the Replenishment Study Report in accordance with Section-5 of the EMGSM-2020 Guidelines, and submitting the same to the District Committee for evaluation and appraisal.

26. That in Hamirpur District, it is strictly ensured that leaseholders timely conduct and submit pre-monsoon and post-monsoon replenishment study reports. These reports form the basis for determining the operational feasibility of the leases in the subsequent mining season. Accordingly, the

status of operative leases that have completed the replenishment process is duly recorded and monitored.

27. That the Hon'ble Supreme Court of India in **Civil Appeal No. 3661-3662of 2020** titled as "***State of Bihar vs. Pawan Kumar***" vide its order dated 10.11.2021 has held as follow: -

"13. We further find that when the 2020 guidelines as well as the notification issued by MoEF and CC of 2016 itself provide for constitution of sub-divisional committees comprising of the officers of the State Government from various Departments for identification of the potential sites for mining, there would be no necessity of the DSRs being prepared through private consultants as directed by the Tribunal in the impugned order. The sub-divisional committee consists of various officers from Revenue Department, Irrigation Department, State Pollution Control Board, Forest Department and Geology Mining Department of the State Government. They are better equipped to visit the sites and prepare the draft DSR for the concerned district. Apart from that, preparation of DSR through private consultants would also unnecessarily burden the public exchequer. We are therefore of the view that the direction in that regard issued by the Tribunal requires to be modified. We are further of the considered view that until the DSRs are finalized and granted approval by SEAC and SEIAA, it is appropriate that certain necessary arrangements are permitted so that the State can continue with legal mining activities. This apart from preventing illegal mining activities, would also ensure that the public exchequer is not deprived of its share in legalized mining."

28. That a joint meeting of the State Environmental Impact Assessment Authority (SEIAA) and the State Expert Appraisal Committee (SEAC) was convened on 02.02.2024 to deliberate upon the procedure for the approval of the District Survey Report (DSR). The agenda discussed, as per the minutes of the meeting, is as follows:

a. A detailed Standard Operating Procedure (SOP) for the preparation and modification of the DSR for Sand Mining, River Bed Material (RBM), and in-situ rocks was discussed and duly formulated.

b. It was resolved that the Secretariat shall forward the approved SOP for the preparation and modification of the DSR for Sand Mining, RBM, and in-situ rocks to the Directorate of Geology & Mining (DGM) to ensure its effective implementation across the respective districts.

c. It was further resolved that all DSRs received by SEIAA/SEAC shall be forwarded to the DGM by the Member Secretary/Nodal Officer, SEAC, for their comments and suggestions.

29. That the Standard Operating Procedure (SOP) issued by SEIAA has been strictly followed in preparation & approval of the District Survey Report (DSR).

30. That it is pertinent to mention here that a Replenishment Study for all mining areas in District Hamirpur was conducted and completed by the Sub Divisional Committee (SDC) in the year 2023. The geo-coordinates of all mining areas have been explicitly recorded in the DSR.

31. That further on the basis of the said Replenishment Study and site inspections report, the District Survey Report of District Hamirpur of year

2023, pertaining to river bed sand/mauram mining areas, has been duly prepared by the Sub Divisional Committee, of District Hamirpur, which was constituted in accordance with the provisions of MoEF & CC Notification No. S.O. 141(E) dated 15.01.2016, S.O. 3611(E) dated 25.07.2018, and the Sustainable Sand Mining Management Guidelines 2016 (as revised). Upon securing the requisite approval from the competent authority, the said report has been duly enforced which is in conformity with the Standard Operating Procedure (SOP) issued by SEIAA. NOTARY

32. That the deponent herein undertakes before this Hon'ble Tribunal that the District Administration Hamirpur has ensured that all necessary environment and statutory compliances are completed before actual commencement of mining operations by the Intending Lease Holders. NOTARY

33. That the deponent most respectfully submits before this Hon'ble Tribunal that he is duty bound to ensure the compliance of the orders passed by this Hon'ble Tribunal and the sand mining guidelines issued by the MoEF. NOTARY

NOTARY KALICHARAN NISHAD HEAD DISTRICT CENTER HAMIRPUR (U.P.) GOVERMENT OF (U.P.)

DEPONENT

VERIFICATION

Verified at. Hamirpur......, on 3/3/25.......... that the contents of the paras 1 to of this affidavit are true and correct to the best of my knowledge. No part of it is false and nothing material has been concealed therefrom.

Execution of this ... Admitted
And Signed Before Me By Shri Ghanshyam Meena
.... In The C... Premises My Office
At. Hamirpur Dated 3/3/2025

DEPONENT

Kalicharan Nishad
Advocate & Notary
Distt.-Hamirpur (U.P.)

BEFORE THE NATIONAL GREEN TRIBU[illegible]

PRINCIPAL BENCH, NEW DELHI

IN

ORIGINAL APPLICATION NO. 09 OF 2025

IN THE MATTER OF:

VINAY SHRIVASTAV ....Applicant

Versus

STATE OF U.P. & Ors ....Respondent(s)

AFFIDAVIT

I, Ghanshyam Meena S/o Ramanand Meena aged about 35 years presently posted as District Magistrate Hamirpur, Uttar Pradesh, do hereby solemnly affirm and declare as under-

1. That I am fully acquainted with the facts and circumstances and records of the case and thus competent to swear the present affidavit.
2. That the contents of the accompanying reply have been prepared under my instructions and have been understood by me and I declare the same to be true and correct to my knowledge of facts and law.
3. The contents as stated above are true and correct to my knowledge and belief.

Verification

It is verified at Hamirpur on 3/3/25 that the contents of the present application are true and correct and nothing has been concealed therefrom.

Execution of this Affidavit Admitte
And Signed Before Me By Shri
In The Court Premises My Office
At. 11 AM Dated 3/3/2025

Ghanshyam Meena

DEPONENT

Kalicharan Nishad
Advocate & Notary
Distt -Hamirpur (U.P.)

Item No. 04 Court No. 1

BEFORE THE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No. 09/2025
(I.A. Nos. 37/2025 & 32/2025)

Vinay Shrivastav Applicant

Versus

State of Uttar Pradesh & Ors. Respondent(s)

Date of hearing: 21.01.2025

CORAM: **HON'BLE MR. JUSTICE PRAKASH SHRIVASTAVA, CHAIRPERSON**
HON'BLE DR. A. SENTHIL VEL, EXPERT MEMBER

Applicant: Mr. Gaurav Kumar Bansal, Ms. Nandita Bansal & Ms. Chandrika Upadhyaya, Advs.

Respondent: Mr. Ankit Verma, Adv. for the State of UP

ORDER

1. In this original application, Applicant has challenged the District Survey Report (DSR) for District Hamirpur prepared in 2024 mainly on the ground that it has been prepared without conducting the replenishment study.

2. Counsel for the Applicant referring to the meeting of SEIAA, UP held on 25.10.2024 has submitted that the minutes suggest that no replenishment study was done. Referring to the Sustainable Sand and Gravel Mining Guidelines and also the 2020 Enforcement and Monitoring Guidelines for Sand Mining, he submitted that before the preparation of the DSR, replenishment study is mandatory. In this regard, he has also relied upon the Notification dated 15.01.2016 issued by the Ministry of Environment, Forest and Climate Change (MoEF&CC) and has referred to Appendix-X (page 153) requiring replenishment study for the preparation

of the DSR. He has stated that in the DSR 2024, it is nowhere mentioned that the replenishment study was done.

3. The OA raises substantial issues relating to compliance of environmental norms.

4. Issue notice on OA and IA No. 32/2025 and IA No. 37/2025 to the respondents.

5. Mr. Ankit Verma, Advocate accepts notice on behalf of Respondents No. 1, 2 and 5. Let a copy of the OA along with annexures be supplied by Counsel for the Applicant to Counsel for Respondents No. 1, 2 and 5 within three days. It will be open to Respondents No. 1, 2 and 5 to file their response within four weeks.

6. The applicant is directed to serve other respondents and file the affidavit of service at least one week before the next date of hearing.

7. The respondents are directed to file their response by way of affidavit disclosing if the replenishment study was done at the stage of preparation of DSR 2024 for Hamirpur District.

8. Learned Counsel for the Applicant also seeks leave to implead Director, Geology and concerned District Magistrate. The prayer is allowed. Let the cause title be amended and fresh memo of parties be prepared and the additional respondents be also served.

9. List on 05.03.2025.

Prakash Shrivastava, CP

Dr. A. Senthil Vel, EM

January 21, 2025
Original Application No. 09/2025
(I.A. Nos. 37/2025 & 32/2025)
dv..

Annexure-2

प्रेषक,

सदस्य–सचिव,
राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति, उ0प्र0,
विनीत खण्ड, गोमती नगर, लखनऊ।

सेवा में,

निदेशक,
भूतत्व एवं खनिकर्म निदेशालय, उ0प्र0,
लखनऊ।

पत्रांकः– 845 /पर्या/ डी0एस0आर0/2023 दिनांक 7 फरवरी, 2024

विषयः जिला सर्वेक्षण रिपोर्ट (डी0एस0आर0) के अनुमोदन हेतु SOP के गठन हेतु राज्य स्तरीय पर्यावरण प्रभाव निर्धारण प्राधिकरण, उत्तर प्रदेश एवं राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति की संयुक्त बैठक दिनांक 02–02–2024 के कार्यवृत्त का प्रेषण।

महोदया,

भारत सरकार से प्राप्त मार्गदर्शन के कम में राज्य स्तरीय पर्यावरण प्रभाव निर्धारण प्राधिकरण, उत्तर प्रदेश एवं राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति–1 व 2 की संयुक्त बैठक का आयोजन दिनांक 02–02–2024 को पर्यावरण निदेशालय, विनीत खण्ड–1, गोमती नगर, लखनऊ के सभाकक्ष में किया गया।

संयुक्त बैठक में जिला सर्वेक्षण रिपोर्ट (डी0एस0आर0) के संबंध में एक विस्तृत Standard Operating Procedure (SOP) तैयार किया गया है। संयुक्त बैठक का कार्यवृत्त सूचनार्थ एवं आवश्यक कार्यवाही हेतु संलग्न कर प्रेषित है।

भवदीया,

(श्रुति शुक्ला)
उप निदेशक

संलग्नक–यथोक्त।

Standard Operating Procedure for preparation of DSR for for Sand Mining or RBM by District Level Sub-Divisional Committee and its Appraisal/Approval by SEAC/SEIAA, U.P.

Preparation of DSR

DSR which is a technical document shall be prepared in line with MoEF&CC, GoI, Notification No. S.O. 141(E), dated 15-Jan-2016, S.O. 3611 (E), dated 25-July-2018, Sustainable Sand Mining Management Guidelines 2016 and Enforcement & Monitoring Guidelines for Sand Mining 2020.

Contents of Report

1. Introduction
2. Overview of Mining Activity in the District (brief history of old working, pre-existing and proposed mining activities).
3. 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/Morrum/RBM or other minor mineral in last three years.
6. Process of deposition of sediments in the Rivers of the District (River Geometry).
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.
12. The report shall also contain:-
    a) District wise detail of river or stream and other sand source;
    b) District wise availability of sand or gravel or aggregate resources;
    c) District wise detail of existing mining leases of sand and aggregates.
13. Drainage system with description of main rivers
    a) Name of the river.
    b) Area drained (sq. km)
    c) Percentage area drained in the District.
14. Salient Features of Important Rivers and Streams:-
    a) Name of the river or stream.
    b) Total length in the district.(in Km.)

c) Place of origin.
d) Altitude at origin.
e) Portion of the river or stream recommended for mineral concession.
f) Length of area recommended for mineral concession.(in Kms)
g) Average width of area recommended for mineral concession (in meters)
h) Area recommended for mineral concession (in square meter)
i) Mineable mineral potential (in metric tonne) (60% of total mineral potential)

15. Mineral Potential:-
a) Boulder (MT)
b) Bajari (MT)
c) Sand (MT)
d) Total Mineable Mineral Potential (MT)

16. Annual Deposition:-
a) River or Stream.
b) Portion of the river or stream recommended for mineral concession.
c) Length of area recommended for mineral concession.(in Kms)
d) Average width of area recommended for mineral concession (in meters)
e) Area recommended for mineral concession (in square meter)
f) Mineable mineral potential (in metric tonne) (60% of total mineral potential)
g) Total for the District

- After this **Annexure-I to Annexure-IV** shall also be prepared as per the format provided in Enforcement & Monitoring Guidelines for Sand Mining-2020, which will be enclosed as annexure to the Draft DSR
(Reference – Page- 64 to 67 of EMGSM-2020)
- Lease wise NOC will be taken from Irrigation and Forest Department and Deposit Verification/Estimation reports shall also be prepared by SDC.
- The proposed lease should clearly identify and mark the mineable deposit on satellite image/drone image.
- The mineable resource is to be calculated based on field investigation, geology of the catchment area, site conditions locations, depth of mineral availability and other geomorphic features. The mineable resource should be 50 to 60 % of the total resource available.
- Once the Draft DSR and Annexure I to IV is prepared, then all the SDC members evaluate and approve it, which will be uploaded in the District Website for 30 days for public comments/objections as well as DM/ADM/MO office. (*For this the notification should be issued by District Authority about draft DSR for suggestions/comments /objections from public in minimum two newspapers having wide circulation. Date of uploading and last date of receiving suggestions/comments/objections should be clearly mentioned in the notification.*

(Reference - EMGSM- -2020, Para 4.1.1 (clause – O & P; Page-19))

- The Draft DSR shall be withdrawn from District Website after 30 days and SDC Members shall conduct a joint meeting to mitigate/resolve the public comments/objections received, if any. *(Reference - EMGSM- -2020, Para 4.1.1 (clause – p; Page-19) (In case no objection/comments are received then Mining Officer will issue a Certificate that no comments/objections have been received in the period of uploading.)*
- Thereafter, the draft DSR shall be finalized including Annexure-I to Annexure-VII which will be signed by all SDC Members and then forwarded to D.M. for perusal and approval.
- The DM shall forward the proposed DSR to SEAC for examination and approval.
- The Member Secretary/Nodal Officer will forward it to DGM, U.P. for comments and suggestions. The SEAC will evaluate after getting the comments and suggestions of DGM, U.P.
- The SEAC may invite a representative of DGM, U.P. to assist SEAC in appraisal of the draft DSR.

Action Required

- D.M. shall issue an Office Memorandum regarding nomination and formation of Sub-Divisional committee in the district.
- The sub-divisional committee (SDC) will prepare the draft DSR. If required the SDC may take help/assistance of QCI/NABET Consultants, DGM Approved Exploration Agencies as per Government Order ref. no 1659/86-2023 dated 17-May-2023 issued by Secretary Geology & Mining.
- Additionally, the SDC may also take help/assistance of renowned academic institutions/ Universities having domain expertise in Environment/ Geology and Mining.
- It will be the responsibility of SDC/hired agency to collect primary and secondary data, DSR drafting with Annexure-I to Annexure-VII and conduct presentation before SEAC/SEIAA and DGM.
- Whenever a new lease is identified for adding in the DSR, the SDC/hired agency will follow the entire procedure every time on the basis of existing DSR. The validity of amended or modified DSR will be upto the validity of the original DSR.

- The SDC/hired agency will update the data in the revised DSR with reference to the primary DSR. Special focus on collection of latest data will be done w.r.t. land use pattern, rainfall, IMD data, river geometry, updated geology (if any), water table, population data etc. as such parameters generally change in every 5 years.
- The source of secondary data used in DSR should have proper citation reference and in case primary data has been collected, then the name and details of experts involved in collection and synthesis and interpretation of data will be mentioned in the DSR.
- It should be specifically ensured that DSR is the district specific environmental document in which all the environmental and safety parameters as per the guidelines and notifications should be covered and reflected in the DSR document.
- A district specific mineral resource map shall be prepared in which the drainage patterns of rivers along with explored mineral resources shall be reflected.
- A letter to the District Information Office will be issued for uploading the draft DSR in District Website for 30 days.
- A joint meeting of SDC Members is required for final draft DSR examination/evaluation.
- A recommendation of SDC Members is required who will finalize the draft DSR and forward it to the D.M.
- The DM of respective district shall send the draft DSR, along with following documents
  1. Primary DSR which requires addition/modification.
  2. Draft Modified/ Revised DSR Document.
  3. Annexure-I to VII.
  4. Lease wise NOC from Irrigation and Forest Department.
  5. Revenue report and resource evaluation/ reserve estimation.
  6. Notification regarding the constitution of the SDC.
  7. Minutes of the SDC about draft DSR.
  8. Office order for uploading the draft DSR in the district website for a period of 30 days along with newspaper notification.
  9. Minutes of the SDC recommending draft DSR.
- The DSR being a public document after approval shall be signed with seal *(in each page of DSR)* by the competent authority of SEIAA and will be uploaded in the respective district portal within a week.

Standard Operating Procedure for preparation of DSR for in-situ rocks by District Level Sub-Divisional Committee and its Appraisal/Approval by SEAC/SEIAA, U.P.

Preparation of DSR

DSR which is a technical document shall be prepared in line with MoEF&CC, GoI, Notification No. S.O. 141(E), dated 15-Jan-2016, S.O. 3611 (E), dated 25-July-2018, Sustainable Sand Mining Management Guidelines 2016 and Enforcement & Monitoring Guidelines for Sand Mining 2020.

Contents of Report

1. Introduction
2. Overview of Mining Activity in the District (brief history of old working, pre-existing and proposed mining activities).
3. General Profile of the District
4. Geology of the District
5. Drainage of Irrigation pattern.
6. Land Utilisation Pattern in the District: Forest, Agricultural, Horticultural, Mining etc.
7. Surface Water and Ground Water scenario of the district
8. Rainfall of the district and climatic condition
9. Details of the mining leases in the District as per the following format:-
   a) Sl. No.
   b) Name of the Mineral
   c) Name of the Lessee
   d) Address &Contact No. of Lessee
   e) Mining lease Grant Order No. & date
   f) Area of Mining lease (ha)
   g) Period of Mining lease (Initial) – [From till To]
   h) Period of Mining lease (1st /2nd …renewal) - [From till To]
   i) Date of commencement of Mining Operation
   j) Status (Working/Non-Working/Temp. Working for dispatch etc.)
   k) Captive/Non-Captive)
   l) Obtained Environmental Clearance (Yes/No), If Yes Letter No with date of grant of EC.
   m) Location of the Mining lease (Latitude & Longitude)

n) Method of Mining (Opencast/Underground)

10. Details of Royalty or Revenue received in last three years
11. Details of Production of Minor Mineral in last three years
12. Mineral Map of the District
13. List of Letter of Intent (LOI) Holders in the District along with its validity as per the following format:-
14. Total Mineral Reserve available in the District.
    a) Sl. No.
    b) Name of the Mineral
    c) Name of the Lessee
    d) Address & Contact No. of Letter of Intent Holder
    e) Letter of Intent Grant Order No.& date
    f) Area of Mining lease to be allotted
15. Quality /Grade of Mineral available in the District
16. Use of Mineral
17. Demand and Supply of the Mineral in the last three years
18. Mining leases marked on the map of the district
19. Details of the area of where there is a cluster of mining leases viz. number of mining leases, location (latitude and longitude)
20. Details of Eco-Sensitive Area, if any, in the District
21. Impact on the Environment (Air, Water, Noise, Soil, Flora & Fauna, land use, agriculture, forest etc.) due to mining activity
22. Remedial Measures to mitigate the impact of mining on the Environment
23. Reclamation of Mined out area (best practice already implemented in the district, requirement as per rules and regulation, proposed reclamation plan)
24. Risk Assessment & Disaster Management Plan
25. Details of the Occupational Health issues in the District. (Last five-year data of number of patients of Silicosis & Tuberculosis is also needs to be submitted)
26. Plantation and Green Belt development in respect of leases already granted in the District
27. Any other information.

- After this **Annexure-I to Annexure-IV** shall also be prepared as per the format provided in Enforcement & Monitoring Guidelines for Sand Mining-2020, which will be enclosed as annexure to the Draft DSR *(Reference – Page- 64 to 67 of EMGSM-2020)*
- Lease wise NOC will be taken from Irrigation and Forest Department and Deposit Verification/Estimation reports shall also be prepared by SDC.
- The proposed lease should clearly identify and mark the mineable deposit on satellite image/drone image.

- The mineable resource is to be calculated based on field investigation, geology of the area, site conditions locations, depth of mineral availability and other geomorphic features.
- Once the Draft DSR and Annexure I to IV is prepared, then all the SDC members evaluate and approve it, which will be uploaded in the District Website for 30 days for public comments/objections as well as DM/ADM/MO office. (*For this the notification should be issued by District Authority about draft DSR for suggestions/comments /objections from public in minimum two newspapers having wide circulation. Date of uploading and last date of receiving suggestions/comments/objections should be clearly mentioned in the notification.*
  (Reference - EMGSM- -2020, Section 4.1.1 (clause – o & p; Page-19))
- The Draft DSR shall be withdrawn from District Website after 30 days and SDC Members shall conduct a joint meeting to mitigate/resolve the public comments/objections received, if any. *(Reference - EMGSM- -2020, Section 4.1.1 (clause – p; Page-19)(In case no objection/comments are received then Mining Officer will issue a Certificate that no comments/objections have been received in the period of uploading.)*
- Thereafter, the draft DSR shall be finalized including Annexure-I to Annexure-VII which will be signed by all SDC Members and then forwarded to D.M. for perusal and approval.
- The DM shall forward the proposed DSR to SEAC for examination and approval.
- The Member Secretary/Nodal Officer will forward it to DGM, U.P. for comments and suggestions. The SEAC will evaluate after getting the comments and suggestions of DGM, U.P.
- The SEAC may invite a representative of DGM, U.P. to assist SEAC in appraisal of the draft DSR.

Action Required

- D.M. shall issue an Office Memorandum regarding nomination and formation of Sub-Divisional committee in the district.
- The sub-divisional committee (SDC) will prepare the draft DSR. If required the SDC may take help/assistance of QCI/NABET Consultants, DGM Approved Exploration Agencies as per Government Order ref. no 1659/86-2023 dated 17-May-2023 issued by Secretary Geology & Mining.

- Additionally, the SDC may also take help/assistance of renowned academic institutions/ Universities having domain expertise in Environment/ Geology and Mining.
- It will be the responsibility of SDC/hired agency to collect primary and secondary data, DSR drafting with Annexure-I to Annexure-VII and conduct presentation before SEAC/SEIAA and DGM.
- Whenever a new lease is identified for adding in the DSR, the SDC/hired agency will follow the entire procedure every time on the basis of existing DSR. The validity of amended or modified DSR will be upto the validity of the original DSR.
- The SDC/hired agency will update the data in the revised DSR with reference to the primary DSR. Special focus on collection of latest data will be done w.r.t. land use pattern, rainfall, IMD data, river geometry, updated geology (if any), water table, population data etc. as such parameters generally change in every 5 years.
- The source of secondary data used in DSR should have proper citation reference and in case primary data has been collected, then the name and details of experts involved in collection and synthesis and interpretation of data will be mentioned in the DSR.
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- A letter to the District Information Office will be issued for uploading the draft DSR in District Website for 30 days.
- A joint meeting of SDC Members is required for final draft DSR examination/evaluation. And recommendation of SDC Members is required who will finalize the draft DSR and forward it to the D.M.

- The DM of respective district shall send the draft DSR, along with following documents:-
    1. Primary DSR which requires addition/modification.
    2. Draft Modified/ Revised DSR Document.
    3. Annexure-I to VII.
    4. Lease wise NOC from Irrigation and Forest Department.
    5. Revenue report and resource evaluation/ reserve estimation.
    6. Notification regarding the constitution of the SDC.
    7. Minutes of the SDC about draft DSR.
    8. Office order for uploading the draft DSR in the district website for a period of 30 days along with newspaper notification.
    9. Minutes of the SDC recommending draft DSR.
- The DSR being a public document after approval shall be signed with seal *(in each page of DSR)* by the competent authority of SEIAA and will be uploaded in the respective district portal within a week.

Annexure-3

प्रेषक,

सदस्य सचिव,
एस0ई0आई0ए0ए0,
गोमती नगर, लखनऊ।

सेवा में,

निदेशक,
भूतत्व एवं खनिकर्म विभाग, उ0प्र0,
लखनऊ।

पत्रांक : 733 /पर्या./सामान्य/2023 दिनांक 08 नवम्बर, 2024

विषयः- District Survey Report (DSR) of District- Hamirpur के सम्बन्ध में।

महोदया,

कृपया अवगत कराना है कि आपके पत्र संख्या 1399/डी0एस0आर0 दिनांक 12.09.2024 द्वारा प्रेषित ड्राफ्ट डी0एस0आर0- जनपद हमीरपुर को राज्य स्तरीय विशेषज्ञ मूल्यांकन समिति की बैठक दिनांक 10.10.2024 तथा राज्य स्तरीय पर्यावरण प्रभाव निर्धारण प्राधिकरण, उ0प्र0 की बैठक दिनांक 25.10.2024 में 119 पट्टे हेतु निम्न शर्तों के साथ अनुमोदन प्रदान किया गया :-

1. The District Survey Report (DSR) shall be updated once in five years as mentioned in MoEF&CC, Govt. of India Notification No. S.O. 141(E), dated 15/01/2016, as per laid down procedure, under intimation to SEIAA.
2. It was informed that there are 119 mining lease areas are proposed in the final DSR.
3. If any new lease is identified, Sub-Divisional Committee will follow the entire procedure every time on the basis of existing DSR.
4. After approval of DSR from SEIAA, the District Administration shall upload the DSR in public domain along with Lease Wise Digital Maps showing the status of deposits and pillar wise coordinates of existing and proposed areas.
5. The District Administration shall utilize the District Mineral Foundation Funds as per notification no. 866/86-2017-132/2016 dated 15/05/2017 issued by Department of Geology and Mining, Government of U.P. or any modification in it by competent authority.
6. DMF fund should also be utilized for the environmental protection, development and maintenance of haulage road.
7. The lease shall periodically conduct audits of operative mine leases and take corrective measures as per the directions of District Administration in case of adverse observations and, a yearly report on this shall be sent to SEIAA as compliance.
8. Replenishment study on the basis of which the mineral availability is assessed should be uploaded on websites of District and Mining Department Uttar Pradesh and submitted to SEIAA along with methodology adopted for study and details like geo-coordinates etc. of study points.
9. The District shall prepare a schedule for conducting replenishment study annually. This study should be done by a reputed Central or State Govt. Institute and should be uploaded on the websites of district, Geology and Mining Department and submitted to SEIAA on its website. Quantity mined and auctioned shall be strictly based on replenishment study. District administration as well as Mining Department will follow all norms and procedure to ensure no illegal mining takes place.
10. Mining Department shall be responsible for demarcating the leases where-ever needed after the monsoon.

11. Details of social and environmental preservation work done like name of the villages, health care facility, School etc. under DMF should be uploaded on district website and submitted to SEIAA.
12. Geo-coordinates of each lease should be mentioned in the DSR and submitted to SEIAA online.
13. Clusters should be clearly marked on district map and submitted to SEIAA within a months.

समिति/प्राधिकरण की बैठक मे लिये गये निर्णय के आलोक मे सम्बन्धित कार्यवृत्त की प्रति इस अनुरोध के साथ प्रेषित है कि उक्त के सम्बन्ध मे आवश्यक कार्यवाही करवाने का कष्ट करें।

भवदीय,

संलग्नक- यथोक्त।

(अजय कुमार शर्मा)
सदस्य सचिव,
एस0ई0आई0ए0ए0

प्रतिलिपि- जिलाधिकारी, हमीरपुर को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

(अजय कुमार शर्मा)
सदस्य सचिव,
एस0ई0आई0ए0ए0

Kalp Vriksha

4 Tehsil

7 Block

14 Police Station

330 Gram Panchayats

Latest News

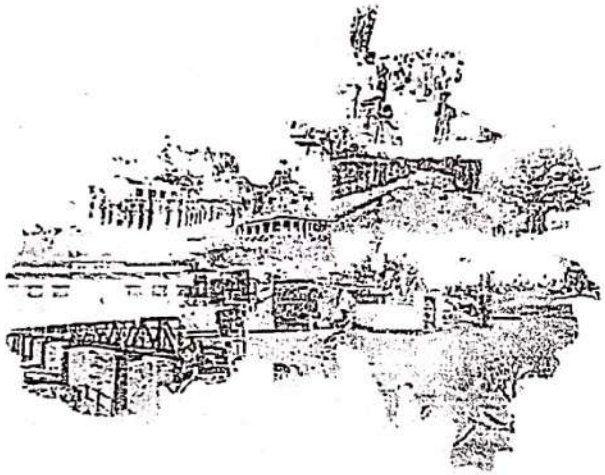
- New Draft District Survey Report -(DSR)- Geology and Mining Department-(09-05-2024 to 07-06-2024)
- Final report of Land Acquisition of land coming in Alignment for construction of bridge on Chandrawal River.
- Excise Department :Notification of etender/renewal of shops 2024-25
- Tehsil wise allocation list of newly selected Lekhpal-2024
- Support Person Recruitment (District Probation Office)
- Assistant Teacher 12460 Provisional Selection List
- कस्तूरबा गांधी आवासीय बालिका विद्यालय में नवीन फर्नीचर एवं इक्यूपमेंट सामग्री की आपूर्ति जेम पोर्टल के माध्यम से निविदा
- जिला परियोजना अधिकारी की संविदा नियुक्ति हेतु विज्ञप्ति
- जीर्ण-शीर्ण विद्यालय भवनों की नीलामी
- होनहारों को काम : सेवा मित्र
- Digital India Week (DIW) 2023
- भूतत्व एवं खनिकर्म विभाग- जिला सर्वेक्षण

INFORMATION

- CANDIDATE AFFIDAVIT PORTAL
- Lok Sabha General Election-2024
- The Draft of Gazetteer Hamirpur-2024
- हमीरपुर महोत्सव 5-6 फरवरी 2024
- Kalp Mahotsav theme Song
- EHRMS – Manav Sampada
- Sankalp Coffee Table E-Book
- Meri Maati Mera Desh
- Amrit Mahotsav
- Administrative Activities In Media
- मिशन-शक्ति
- राष्ट्रीय पोषण माह
- Telephone Directory
- Helpline

REVISED
DISTRICT SURVEY REPORT, HAMIRPUR – YEAR 2024
for
River Bed Sand/Morrum Mining

As per MoEF&CC Notification No. S.0.141(E) Dated 15-Jan-2016, S.0.3611 (E) dated 25-July-2018, Sustainable Sand Mining Management Guidelines-2016 and Enforcement & Monitoring Guidelines for Sand Mining-2020



खान निरीक्षक, हमीरपुर	खान अधिकारी, हमीरपुर	उपजिलाधिकारी, हमीरपुर	उपजिलाधिकारी, मौदहा	उपजिलाधिकारी, सरीला
उपजिलाधिकारी, राठ	क्षेत्रीय अधिकारी, उ0प्र0 प्रदूषण नियन्त्रण बोर्ड, बांदा	अधिशासी अभियन्ता, सिंचाई विभाग, मौदहा बांध, हमीरपुर	प्रभागीय वनाधिकारी, हमीरपुर	अपर जिलाधिकारी (वि0/रा0) हमीरपुर

(राहुल पाण्डेय)
जिलाधिकारी
हमीरपुर

Prepared by
Sub Divisional Committee, District Hamirpur

Scanned with OKEN Scanner

Annexure-4

व्यापार

500

चौदह फीसदी अधिक सोना बिकने की उम्मीद

बाजार में हाहाकार, निवेशकों के 7.6 लाख करोड़ डूबे

- सेंसेक्स 1062.22 अंक टूटकर 72,404.17 पर बंद
- निफ्टी 335.40 अंक फिसलकर 21,957.50 पर बंद

शेयरों में सबसे ज्यादा गिरावट

हिंडाल्को शेयर में बड़ी गिरावट

सौर ऊर्जा उत्पादन मामले में भारत तीसरे नम्बर पर

विदेश से पैसा भेजने के मामले में भारतीयों ने बनाया नया रिकॉर्ड

जल्द शुरू होंगी वंदे भारत स्लीपर ट्रेनें

चीन का निर्यात और आयात अप्रैल में बढ़ा

बाजार भाव

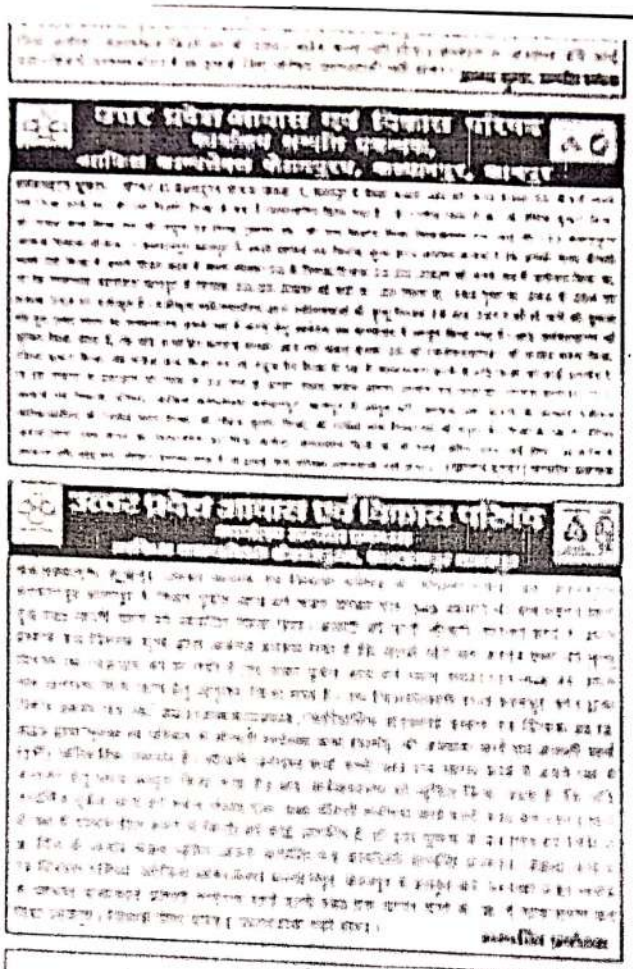
कार्यालय जिलाधिकारी हमीरपुर

सार्वजनिक सूचना

... Sustainable Sand Mining Management Guidelines 2016, Enforcement & Monitoring Guidelines for Sand Mining 2020 ... Update ... DSR ...

अपर जिलाधिकारी

(वि०/रा०) हमीरपुर



कार्यालय जिलाधिकारी हमीरपुर

(खान अनुभाग)

संख्या– 188/एडमिन–एम0एम0सी–सीरा–विविध (2024–25) दिनांक– 09.05.2024

सार्वजनिक सूचना

सर्वसाधारण को सूचित किया जाता है कि भारत सरकार के पर्यावरण वन एवं जलवायु परिवर्तन मन्त्रालय की अधिसूचना संख्या–125 दिनांक–15.01.2016 एवं Sustainable Sand Mining Management Guidelines-2016, Enforcement & Monitoring Guidelines for Sand Mining-2020 के अनुक्रम में जनपद हमीरपुर के जिला सर्वेक्षण रिपोर्ट में विद्यमान क्षेत्र के साथ नये क्षेत्रों की Updation एवं संशोधन का कार्य करते हुये ब्लॉक वाइज जिला सर्वेक्षण रिपोर्ट तैयार किया गया है, जिसे गठित SDC समिति द्वारा अनुमोदन प्रदान किया गया है।

जिला हमीरपुर की प्रस्तावित ड्राफ्ट जिला सर्वेक्षण रिपोर्ट को तैयार कर सर्वसाधारण से टिप्पणी, आपत्ति प्राप्त किये जाने हेतु जनपद हमीरपुर की वेबसाइट https://hamirpur.nic.in पर 30 दिन हेतु अपलोड किया गया है तथा कार्यालय अपर जिलाधिकारी (वि0/रा0) एवं खनिज कार्यालय के नोटिस बोर्ड पर चस्पा किया गया है। सर्वसाधारण से प्राप्त टिप्पणी/आपत्तियों पर विचार किया जायेगा और उपयुक्त पाये जाने पर उन्हें अन्तिम रूप दी जाने वाली जिला सर्वेक्षण रिपोर्ट (DSR) में सम्मिलित किया जायेगा। यदि कोई व्यक्ति उक्त के सम्बन्ध में अपना सुझाव/आपत्ति देना चाहता है, तो वह 30 दिवस के अन्दर कार्यालय जिलाधिकारी (खनन अनुभाग) हमीरपुर/एन0आई0सी के वेबसाइट में प्रस्तुत कर सकता है।

अपर जिलाधिकारी
(वि0/रा0), हमीरपुर

Annexure- 5

List of 14 Letter of Intent Issued to the Intending Lease Holders

SL No	LOI Holders name and address	Detail of Mining Area	Amount to be Deposited (45 % of total)	Date of LOI
1	M/s Jai Shri Mahakal Construction address 471 Rajendra Nagar Babi Road Orai Jalaun UP Mob no 8081781129	Tehsil-Rath Village-Lidhaura Khand no 1 gata no 1118 area-18.00 hec.	10,89,93,600/-	17.01.2025
2	M/s MPL Infra Address 41 Raipur IIM Road Lucknow Pro Mohd Javed S/o Mohd Aziz address 41 Raipur IIM Road Lucknow Mob No-8881550022	Tehsil Rath Village Gadhar 01 Khand no 01 area 17.700 hec.	7,88,85,360/-	28.12.2024
3	M/s B.T Infra pvt ltd address Maharajpur Kanpur Dir Shrimati Meenu Gupta W/o Shri Anand Kumar Gupta address Maharajpur Kanpur Nagar UP & Shri Anand Kumar Gupta S/o Shri Laxmi Narayan Gupta address Maharajpur Kanpur Mob No-9506033211	Tehsil Sarila Village Chandwari Dariya Khand no 26/7 area 29.930 hec.	14,95,81,161/-	27.12.2024
4	M/s Sutra Construction and suppliers address near Shyam chopda sivajinagar Jhansi UP Partner Shri Shailesh Agrawal S/o Shri Ramesh Chandra Agarwal address 783 shivaji nagar near RTO office Jhansi. Mob No 8115550478	Tehsil Rath Village Jigni 1771 Gha khand no 3 area 15.30 hec.	8,83,48,320/-	28.12.2024
5	M/s Siddhbaba Mining pvt ltd address pure Agnihotri nouganv Fatehpur Dir Shri Ashutosh Kumar S/o shri Shivsharan address 12 162 Pure Agnihotri nouganv Fatehpur U.P. Mob No-9450607495	Tehsil Rath Village Lidhaura 01ka, 1118 Khand no 2 area 16.50 hec.	13,30,56,000/-	09.01.2025
6	M/s Raas India pvt ltd address 2 floor opposite DM niwas Manjhanpur Kaushambi Dir Shri Kapil dev Joshi S/o Shri Rameshwar Prasad Joshi Address Court Gate ke andar joshiwada Bikaner Rajsthan Mob no 9667337911	Tehsil Sarila village Chikasi 24/18 Gata no 14/12 area 36.437 hec.	14,79,63,370/-	17.12.2024
7	M/s Satyaom Developers pvt ltd address 130/576 A Bakargunj transport nagar Kanpur nagar Dir shri Satya Prakash Gupta S/o Shri Om Prakash Gupta address 128/346 H Block Kidwai nagar Kanpur nagar U.P Mob no 7388121111	Tehsil Rath village Jigni 01 Khand no 01 area 25.00 hec.	18,32,40,000/-	09.01.2025
8	M/s Amrit Phosphate pvt ltd Address Nehru ward pipariya District pipariya M.P Dir Shri Trilok singh Rathor S/o Shri Makhan Singh Rathor House no 270/25 Bank coloni guru tegbahadur school ke paas tehsil pipariya Bijanwada Pipriya Haushangabad M.p Mob No-7898345516	Tehsil Hamirpur Village Pateyora Dariya Khand no 31/8 Gata no 01, 02, 03 area 36.437 hec.	5,31,25,146/-	31.12.2024

9	M/s Anandeshwar Interprises pvt ltd Address 42 Om purwa Chakeri Road lal Bangla Kanpur Nagar Dir Shri utsav Gupta S/o Shri Manoj Kumar Gupta address 484 Kazikheda Vishembhar Nath Market Lal Bangla Kanpur Nagar U.P. Mob no 7007725634	Tehsil Rath Village Jigni 780, 1271Gha Khand no 2 area 20.00 hec.	17,03,52,000/-	27.12.2024
10	M/s Anandeshwar Interprises pvt ltd Address 42 Om purwa Chakeri Road lal Bangla Kanpur Nagar Dir Shri utsav Gupta S/o Shri Manoj Kumar Gupta address 484 Kazikheda Vishembhar Nath Market Lal Bangla Kanpur Nagar U.P. Mob no 7007725634	Tehsil Rath Village Tolakhagaran 01 khand no 7 area 10.00 hec.	8,69,04,000/-	09.01.2025
11	M/s Satyaom Developers pvt ltd address 130/576 A Bakargunj transport nagar Kanpur nagar Dir shri Satya Prakash Gupta S/o Shri Om Prakash Gupta address 128/346 H Block Kidwai nagar Kanpur nagar U.P Mob no 7388121111	Tehsil Rath Village Gadhar 01, 23/2 khand 2 area 26.00 hec	18,86,97,600/-	17.01.2025
12	M/s Anandeshwar Tradelink pvt ltd Dir Shrimati Renu Gupta W/o Satya Prakash Gupta Address 128 24 K Kidwainagar Kanpur Nagar U.P. Mob no 7007721331	Tehsil Sarila Chandaut Dariya, Chandaut Dada Khand no 22/15 Gata No 35/1, 27/1 439/3, 445/34 area 24.291 hec.	14,49,70,215/-	17.01.2025
13	M/s B.T Infraheight pvt ltd address Maharajpur Kanpur Dir Shrimati Meenu Gupta W/o Shri Anand Kumar Gupta address Maharajpur Kanpur Nagar UP Mob No-7007965494	Tehsil Sarila Village Bilganv 1/1 khand no 01 area 15.00 hec.	15,97,32,000/-	09.01.2025
14	M/s Anandeshwar Land Developers pvt ltd Address 128 H 24 kidwai nagar block L Kidwainagar Kanpur Dir Shri Satya Prakash Gupta S/o Shri Om Prakash Gupta Address 128/346 H Block Kidwai nagar Kanpur nagar U.P Mob no 7007721331	Tehsil Sarila Chanduat Dariya Khand no 22/14 gata no 35/1 area 24.291 hec	21,54,44,276/-	17.01.2025

Annexure- 6

List of 06 Letter of Intent Issued to the Intending Lease Holders

SL No	LOI Holders name and address	Detail of Mining Area	Amount to be Deposited (50 % of total)	Date of LOI
1	M/s Panchmani Greens pvt ltd Dir Tanveer Nagpal S/o Shri Jagdeep nagpal Address Jai Hind School ke pass 166 VV giri ward pipariya Houshangabad MP Mob No-9113636127	Tehsil Hamirpur, sarila village Beri, Kupra khand no 10/36 gata no 897/931/01, 01/7, 02/11 area 30.00 acre.	4,02,20,928/-	13.02.2025
2	M/s Amrit Phosphate pvt ltd Address Nehru ward pipariya District pipariya M.P Dir Shri Trilok singh Rathor S/o Shri Makhan Singh Rathor House no 270/25 Bank coloni guru tegbahadur school ke paas tehsil pipariya Bijanwada Pipriya Haushangabad M.p Mob No-7898345516	Tehsil Hamirpur, sarila village Beri, Kupra khand no 23/30 gata no 897/931/01, 01/7, 02/11 area 24.34 acre.	2,45,17,219/-	13.02.2025
3	M/s Maa Akshara Construction Pro. Shri Chandan Singh S/o Shripati singh Address 471 Rajendra Nagar Orai Jalaun Mob No-9450296161	Tehsil Maudaha Village Bakchhakhadar, Bakchhabangar Khand no 29/1 Gata no 49/7, 94, 95/1, 87mi, 89, 90, 91, 92, 93, 803 area 30.00 acre	14,86,42,560/-	13.02.2025
4	Shri Omendra Yadav S/o Shri Lalla Ji Address 767 Police Line Baghoura Orai District Jalaun U.P. Mob No 8423285190	Tehsil Sarila Village Kupra Khand no 23/28 Gata No-01/7, 02/11 area 18.03 acre	5,16,43,274/-	13.02.2025
5	M/s Maa Akshara Construction Pro. Shri Chandan Singh S/o Shripati singh Address 471 Rajendra Nagar Orai Jalaun Mob No-9450296161	Tehsil Maudaha Village Bakchhakhadar Khand no 29/2 Gata no 49/7, 95/1, 38/1, 38/2/ 39, 47, 48/1, 46/2, 50, 51 area 30 acre	9,79,29,216/-	13.02.2025
6	Shri Sandeep Chandak S/o Shri Madan Lal Chandak Address 203 G block Shri Ganga nagar Rajsthan pincode 335001 Mob No 9667337511	Tehsil Hamirpur Village Patara Dariya, Sahurapur Dariya Khand no 8/4 gata no 107/83, 111/83, 85, 01mi, 02/4 area 83.56 acre	5,60,34,279/-	13.02.2025

Annexure-7

cmpdi
A Mini Ratna Company

सेन्ट्रल माइन प्लानिंग एण्ड डिजाइन इन्स्टीच्यूट लिमिटेड
(कोल इण्डिया लिमिटेड की अनुषंगी कम्पनी / भारत सरकार का एक लोक उपक्रम)
गोंडवाना प्लेस, काँके रोड, राँची - 834 031, झारखंड (भारत)
Central Mine Planning & Design Institute Limited
(A Subsidiary of Coal India Limited / Govt. of India Public Sector Undertaking)
Gondwana Place, Kanke Road, Ranchi - 834 031, Jharkhand (INDIA)
CORPORATE IDENTITY NUMBER - U14292JH1975GOI001223

EJ235374635 m
25-1-23

फैक्स / ई.–ऑफिस / स्पीड डाक द्वारा

पत्रांक : सीएमपीडीआई / बीडीडी / C-1036/ E-760656/38   622   दिनांक : 30.12.2022

ADM/MO
कृ० अ०का०करें।
DM
25/01/23

To,

The District Magistrate (Hamirpur)
District Magistrate Office
District Collectorate,
Hamirpur-210301
Uttar Pradesh
Mobile No: 9454417604
Email: dmham@nic.in

Subject: Regarding Sand Replacement Study of river present in Hamirpur, U.P.- Reg.- Submission of Report.

Ref.: i. Offer Letter No.CMPDI/B.D./A(003) OFFER/E-760656/I-14623, Dated 02.06.2022
ii. Your work order letter no: -445, dated. 15.06.2022

महोदय,

With reference to the above, enclosed please find herewith 03 (Three) copies of the report on " Sand Replacement Study of river present in Hamirpur, U.P." pertaining to the subject assignment.

धन्यवाद एवं सदैव अपनी सर्वोत्तम सेवाओं के आश्वासन सहित ।

भ व दी य,

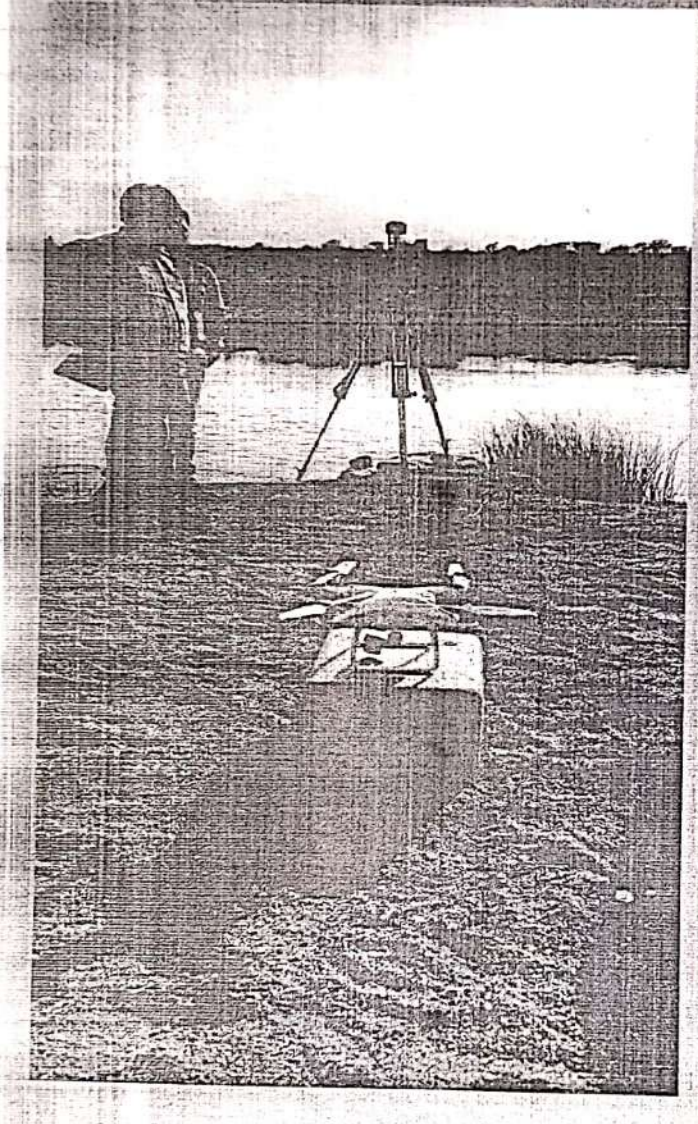
Encl : As above

30/12/2022
महाप्रबन्धक,
(व्यवसाय विकास)

Copy to :

i. The Director, Directorate of Geology &Mining, Gov. of U.P., Lucknow, U.P.

फोन नम्बर/Phone No. :
फैक्स नम्बर/Fax No. :
ई-मेल/E-mail:
वेब साईट/Website: www.cmpdi.co.in



Scientific Sand Replenishment Study-Hamirpur District

December, 2022

Prepared By
Central Mine Planning & Design Institute Limited

Contents

1.0 Sand Mining

Sand mining is a process of the actual removal of sand from the foreshore including rivers, streams and lakes. Sand is mined from beaches, inland dunes and dredged from river bed. The sand is dug up, the valuable minerals are separated in water by using their different density and the remaining ordinary sand is re-deposited. River sand is vital for human well-being and for sustenance of rivers. River sand is one of the world's most plentiful resources (perhaps as much as 20% of the earth's crust is sand) and can replenish itself. As a resource, sand is 'a loose, incoherent mass of mineral materials and is a product of natural processes. These processes are the disintegration of rocks and corals under the influence of weathering and abrasion.

1.1 Second-Most Exploited Natural Resource

Sand plays an important role in delivering ecosystem services across marine, delta, beach, river and underground environments. It helps in controlling erosion, delivering nutrients, contributing to food security, and regulating the quality of aquifers. It also provides habitats and breeding grounds for diverse flora and fauna, thus supporting biodiversity.

According to the United Nations environment program report on "Sand And Sustainability: 10 Strategic Recommendations To Avert A Crisis" (unep 2022), the sand, gravel, crushed stone and aggregates constitute the second-most exploited natural resource in the world after water. Their use has tripled in the last two decades to reach an estimated 40-50 billion metric tonnes per year. The demand is driven by factors such as urbanization, population growth, economic growth, and climate change.

Sand has become a very important mineral for society due to its many uses mainly in infrastructural activities. Sand and gravel have long been used as aggregate for construction of roads and buildings. Today, the demand for these materials continues to rise. In india, the main source of sand is from river flood plain sand mining, in-stream mining, coastal sand mining and palco channel sand mining.

River sand mining is a common practice as habitation concentrates along the rivers and

the mining locations are preferred near or along the transportation route, for reducing the transportation cost. River sand mining can damage private and public properties as well as aquatic habitats. Excessive removal of sand may significantly distort the natural equilibrium of a stream channel. The role of sand is very vital with regards to the protection of the coastal environment. It acts as a buffer against strong tidal waves and storm surges by reducing their impacts as they reach the shoreline. Sand is also a habitat for crustacean species and other related marine organisms.

1.2 Impact of Sand Mining

Bajri/sand mining has many positive impacts on the economy and on the quality of life of people. However, if extracted in excess amount beyond the replenishment rate, it has an adverse and destructive impact on the river system, making it unsustainable. The impacts of sand mining are as follows:

A. Positive Impacts

Sand deposition eventually leads to reduction in conveyance capacity of river leading to flood in rivers. Proper dredging of sand keeps the bed at the desired level. Thus, if dredging is not done, due to continuous deposition of sand, the depth of river may get reduced. This will result in flooding of water and loss of properties. It also facilitates the navigation in the channel. Moreover, sand mining improves the socio-economic profile of the region by providing employment opportunity, roads, development and livelihood for the local people in that region. Sand is the main fine aggregate in concrete. Riverbeds are major sources of clean sand. There is a change in traditional housing of people in india and sand has become one of the essential materials for construction. The sand mining helps to control the cost of construction and deployment activities by establishing a low-cost continuous supply chain.

B. Negative Impacts

Taking into consideration the places of occurrences of the adverse environmental impacts of river sand mining, kitetu and rowan (1997) classified the impacts broadly into two categories namely off-site impacts and on-site impacts. The off-site impacts are, primarily, transport related, whereas, the on-site impacts are generally channel related.

The on-site impacts are classified into excavation impacts and water supply impacts. The impacts associated with excavation are channel bed lowering, migration of excavated pits and undermining of structures, bank collapse, caving, bank erosion and valley widening and channel

instability. The impacts on water supply are reduced ground water recharge to local aquifers, reduction in storage of water for people and livestock especially during drought periods, contamination of water by oil, gasoline and conflicts between miners and local communities. Thus in-stream sand mining results in the destruction of aquatic and riparian habitat through large changes in the channel morphology. Impacts include bed degradation, bed coarsening, lowered water tables near the streambed, and channel instability.

It is well understood that mining changes the physical characteristics of the river basin, disturbs the closely linked flora and fauna, and alters the local hydrology, soil structure as well as the socio-economic condition of the basin. In general, it was reported that in-stream mining resulted in channel degradation and erosion, head cutting, increased turbidity, stream bank erosion etc. All these changes adversely affect fish and other aquatic organisms either directly by damage to organisms or through habitat degradation or indirectly through disruption of food web.

1.3 Enforcement & Monitoring Guidelines for Sand Mining (Moef&Cc), January 2020

The Ministry of Environment Forest & Climate Change Formulated the Sustainable Sand Management Guidelines 2016 which focuses on the management of sand mining in the country. But in the recent past, it has been observed that apart from management and systematic mining practices there is an urgent need to have a guideline for effective enforcement of regulatory provision and their monitoring.

Section 23 C of MMDR, act 1957 empowered the state government to make rules for preventing illegal mining, transportation and storage of minerals. But in the recent past, it has been observed that there were large number of illegal mining cases in the country and in some cases, many of the officers lost their lives while executing their duties for curbing illegal mining incidence. The illegal and uncontrolled mining leads to loss of revenue to the state and degradation of the environment.

Enforcement & Monitoring Guidelines for sand mining (2020) document will serve as a guideline for collection of critical information for enforcement of the regulatory provision(s) and highlights the essential infrastructural requirements necessary for effective monitoring for sustainable sand mining.

The document was prepared in consideration of various orders/directions issued by

Hon'ble ngt in matters pertaining to illegal sand mining and also based on the reports submitted by expert committees and investigation teams.

Further, this is supplemental to the existing "sustainable sand mining management guideline-2016" (ssmg-2016), and these two guidelines viz. "ENFORCEMENT & MONITORING GUIDELINES FOR SAND MINING" (EMGSM-2020) and SSMG-2016 shall be read and implemented in sync with each other. in case, any ambiguity or variation between the provisions of both this document arises, the provision made in "ENFORCEMENT & MONITORING GUIDELINES FOR SAND MINING-2020 "shall prevail.

1.3.1 Objective of Guidelines

- Identification and quantification of mineral resource and its optimal utilization.
- To regulate the sand & gravel mining in the country since its identification to its final end-use by the consumers and the general public.
- Use of it-enabled services & latest technologies for surveillance of the sand mining at each step.
- Reduction in demand & supply gaps.
- Setting up the procedure for replenishment study of sand.
- Post environmental clearance monitoring.
- Procedure for environmental audit.
- To control the instance of illegal mining.

1.3.2 Replenishment Study

The need for replenishment study for river bed sand is required in order to nullify the adverse impacts arising due to excessing sand extraction. Mining within or near riverbed has a direct impact on the stream's physical characteristics, such as channel geometry, bed elevation, substratum composition and stability, in-stream roughness of the bed, flow velocity, discharge capacity, sediment transport capacity, turbidity, temperature etc. alteration or modification of the above attributes may cause an impact on the ecological equilibrium of the riverine regime, disturbance in channel configuration and flow-paths. This may also cause an adverse impact on in-stream biota and riparian habitats. It is assumed that the riparian habitat disturbance is minimum if the replenishment is equal to excavation for a given stretch. Therefore, to minimize the adverse impact arising out of sand mining in a given river stretch, it is imperative to have a study of replenishment of material during the defined period.

1.3.3 Generic Structure of Replenishment Study

The sand replenishment study requires four surveys at different period. The first survey needs to be carried out in the month of April for recording the reduced level (RL) of mining lease before the monsoon. The second survey is to be carried out at the time of closing of mines for monsoon season. This survey will provide the quantity of the material excavated before the offset of monsoon. The third survey needs to be carried out after the monsoon to know the quantum of material deposited/replenished in the mining lease. The fourth survey to be carried out at the end of March to know the quantity of material excavated during the financial year. For the subsequent years, there will be a requirement of only three surveys. The results of year-wise surveys help the state government to establish the replenishment rate of the river. Based on the replenishment rate future auction may be planned.

The methodology suggested in the enforcement & monitoring guidelines for sand mining (2020) is followed in preparation of this sand replenishment study.

1.4 Sustainable Sand Mining Management Guidelines, 2016

Ministry of environment, forests & climate change (MOEF&CC), government of India, in the sustainable sand mining management guidelines, 2016 has identified the following impacts on account of sand and gravel mining:

i) Extraction of bed material in excess of replenishment by transport from upstream causes the bed to lower (degrade) upstream and downstream of the site of removal.

ii) In-stream habitat is impacted by increase in river gradient, suspended load, and Sediment transport and sediment deposition. Excessive sediment deposition for replenishment increases turbidity which prevents penetration of light required for photosynthesis and reduces food availability of aquatic fauna.

iii) Riparian habitat including vegetative cover on and adjacent to the river banks it controls erosion, provide nutrient inputs into the stream and prevents intrusion of pollutants in the stream through runoff. Bank erosion and change of morphology of the river can destroy the riparian vegetative cover.

iv) Bed degradation are responsible for channel shifting, causing loss of properties and degradation of landscape, it can also undermine bridge supports, pipe lines or other structures.

v) Degradation may change the morphology of the river bed, which constitutes one aspect of the aquatic habitat.

vi) Degradation can deplete the entire depth of gravelly bed material, exposing other substrates that may underlie the gravel, which could in turn affect the quality of aquatic habitat. Lowering of ground water table in the flood plain because of lowering of riverbed level as well as river water level takes place because of extraction and draining out of excessive ground water from the adjacent areas. So, if a floodplain aquifer drains to the stream, groundwater levels can be lowered as a result of bed degradation.

vii) Lowering of the water table can destroy riparian vegetation.

viii) Excessive pumping of ground water in the process of mining in abandoned channels depletes ground water causing scarcity of irrigation and drinking water. in extreme cases it may create ground fissures and subsidence in adjacent areas.

ix) Flooding is reduced as bed elevations and flood heights decrease, reducing hazard for human occupancy of floodplains and the possibility of damage to engineering works.

x) The supply of overbank sediments to floodplains is reduced as flood heights decrease.

xi) Rapid bed degradation may induce bank collapse and erosion by increasing the heights of banks.

xii) Polluting ground water by reducing the thickness of the filter material especially if mining is taking place at top of recharge fissures.

xiii) Choking of sand layer which acts as filter for ingress of ground water from river by dumping of finer material, compaction of filter zone due to movement of heavy vehicles. it also reduces the permeability and porosity of the filter material.

xiv) Removal of gravel from bars may cause downstream bars to erode if they subsequently receive less bed material than is carried downstream from them by fluvial transport.

xv) Ecological effects on bird nesting, fish migration, angling, etc.

xvi) Indiscrete mining activities lead to increased concentration of suspended sediment in the river which in turn causes siltation of water resources projects.

xvii) Un-scientific and unregulated sand and gravel mining leads to the severe health hazards like air quality degradation and dust fog.

xviii) Direct destruction from heavy equipment operation; discharges from equipment and refueling.

xix) Biosecurity and pest risks.

xx) Impacts on coastal processes.

1.4.1 The Other Deleterious Impacts Of Indiscrete Mining Include:

Loss of riparian habitat resulting from direct removal of vegetation along the stream bank to facilitate the use of a dragline or through the process of lowering the water table, bank undercutting, and channel incision. The physical composition and stability of substrates are altered as a result of in-stream mining and most of these physical effects may exacerbate sediment entrainment in the channel.

1.4.2 Sustainable Sand Mining Guidelines -MOEF&CC (2016)

Sand is naturally occurring granular material composed of finely divided rock and mineral particles between 150 micron to 4.75 mm in diameter (is 383-1970). Sand is formed due to weathering of rocks due to mechanical forces. in the process the weathered rocks forms gravel and then sand.

Sand and gravel together known as aggregate, represent the highest volume of raw material used on earth after water. The mining of aggregate has been continuing for many years. Now the mining of aggregates has reached a level threatening the environment and ecosystem besides also reaching a level of scarcity that would threaten the economy. it is recommended that sand & aggregate mining, and quarrying should be done only after sound scientific assessment and adopting best practices to limit the impact on the environment.

It is also felt that the greater use of substitute material (manufactured sand, artificial sand etc.) & construction technology, and sustainable use of the resource could drastically reduce adverse impact of mining on the environment.

1.4.3 The guideline has been based on the following principles:

- Uncontrolled sand mining is not sustainable.
- Compliance with present and future legislation and regulations on the subject is mandatory and not voluntary.

- Each lease holder should be given the opportunity to self-regulate to the extent that it can demonstrate compliance with legislation and regulations.
- Where self- regulation fails to deliver compliance with legislation and regulations, increased formal enforcement and monitoring should be implemented with punitive measures applied in line with the legal framework.
- There is a need to protect the environment and the right of the population to live in clean and safe surroundings, with the need to use natural resources in a way that will make a positive and sustainable contribution to the economy.

1.4.4 The main objectives of the guideline are:

- To ensure that sand and gravel mining is done in environmentally sustainable and socially responsible manner.
- To ensure availability of adequate quantity of aggregate in sustainable manner.
- To improve the effectiveness of monitoring of mining and transportation of mined out material.
- Ensure conservation of the river equilibrium and its natural environment by protection and restoration of the ecological system.
- Avoid aggradation at the downstream reach especially those with hydraulic structures such as jetties, water intakes etc.
- Ensure that the rivers are protected from bank and bed erosion beyond its stable profile.
- No obstruction to the river flow, water transport and restoring the riparian rights and instream habitats.
- Avoid pollution of river water leading to water quality deterioration.
- To prevent depletion of ground water reserves due to excessive draining out of ground water.
- To prevent ground water pollution by prohibiting sand mining on fissures where it works as filter prior to ground water recharge.
- To maintain the river equilibrium with the application of sediment transport principles in determining the locations, period and quantity to be extracted.
- Streamlining and simplifying the process for grant of environmental clearance (ec) for sustainable mining.

1.4.5 General Approach to Sustainable Sand and Gravel Mining:

Following considerations should be kept in mind for sand / gravel mining:

a) Parts of the river reach that experience deposition or aggradation shall be identified first. the lease holder/ environmental clearance holder may be allowed to extract the sand and gravel deposit in these locations to manage aggradation problem.

b) The distance between sites for sand and gravel mining shall depend on the replenishment rate of the river. Sediment rating curve for the potential sites shall be developed and checked against the extracted volumes of sand and gravel.

c) Sand and gravel may be extracted across the entire active channel during the dry season.

d) Abandoned stream channels on terrace and inactive floodplains be preferred rather than active channels and their deltas and flood plains. Stream should not be diverted to form inactive channel.

e) Layers of sand and gravel which could be removed from the river bed shall depend on the width of the river and replenishment rate of the river.

f) Sand and gravel shall not be allowed to be extracted where erosion may occur, such as at the concave bank.

g) Segments of braided river system should be used preferably falling within the lateral migration area of the river regime that enhances the feasibility of sediment replenishment.

h) Sand and gravel shall not be extracted within 200 to 500 meter from any crucial hydraulic structure such as pumping station, water intakes, and bridges. The exact distance should be ascertained by the local authorities based on local situation. The cross-section survey should cover a minimum distance of 1.0 km upstream and 1.0 km downstream of the potential reach for extraction. The sediment sampling should include the bed material and bed material load before, during and after extraction period. Develop a sediment rating curve at the upstream end of the potential reach using the surveyed cross- section. Using the historical or gauged flow rating curve, determine the suitable period of high flow that can replenish the extracted volume. Calculate the extraction volume based on the sediment rating curve and high flow period after determining the allowable mining depth.

i) Sand and gravel could be extracted from the downstream of the sand bar at river bends.

j) Retaining the upstream one to two thirds of the bar and riparian vegetation is accepted as a method to promote channel stability.

k) Flood discharge capacity of the river could be maintained in areas where there are significant flood hazard to existing structures or infrastructure. Sand and gravel mining may be allowed to maintain the natural flow capacity based on surveyed cross- section history.

l) Alternatively, off-channel or floodplain extraction is recommended to allow rivers to replenish the quantity taken out during mining.

m) The piedmont zone (Bhabhar area) particularly in the Himalayan foothills, where riverbed material is mined, this sandy-gravelly track constitutes excellent conduits and holds the greater potential for ground water recharge. Mining in such areas should be preferred in locations selected away from the channel bank stretches.

n) Mining depth should be restricted to 3 meter and distance from the bank should be 3 meter or 10 percent of the river width whichever less.

o) The borrow area should preferably be located on the river side of the proposed embankment, because they get silted up in course of time. For low embankment less than 6 m in height, borrow area should not be selected within 25 m from the toe/heel of the embankment. in case of higher embankment, the distance should not be less than 50 m. in order to obviate development of flow parallel to embankment, cross bars of width eight times the depth of borrow pits spaced 50 to 60 meters centre-to-centre should be left in the borrow pits.

p) Demarcation of mining area with pillars and geo-referencing should be done prior to start of mining.

1.5 Methodology for Sand Replenishment Study by CMPDI, 2022:

Hon'ble Supreme Court of India's order dated 11/11/2021 in S.L.P. (civil) no. 10587 of 2019 contains directive to MOEF&CC, to frame sand replenishment guidelines in consultation with CMPDI. Accordingly, CMPDI has prepared the methodology for sand replenishment study and presented before EAC, non-coal mining MOEF& CC on 13/01/2022. The detailed report has been enclosed as annexure-i and the observation of CMPDI for sand mining & replenishment is listed below.

- Sand mining should preserve the river eco-system and river morphology.
- In perennial rivers, the replenishment across the width of the river is not uniform due to variation in the flow.
- During mining, there are uneven excavations which has changed the river morphology and replenishment pattern.

- Pebbles, overburden material *etc.* are dumped at riverbed which further affects the river morphology.
- Effective enforcement and monitoring of the policy and program is key to promote sustainable sand mining
- There is need to consider the concept of ***resource accounting*** of sand in the rivers and take the replenishment as a measure for resource augmentation

Methodology Suggested by CMPDIL

The sand replenishment study can be broadly done using the following approaches:

- ❖ Approach 1: cross sectional study
- ❖ Approach 2: bed load transport study
- ❖ Approach 3: survey

- The replenishment studies should be compared and the lower value obtained from empirical equation /through cross sectional study /through remote sensing may be considered.
- Mine lease permit should be based on the minimum replenishment capacity.
- The mine plan should indicate the stretches of mining to be undertaken in each year in a particular leasehold area. Once the mining is completed on a particular stretch that stretch must be left undisturbed for replenishment of sand till the completion of mining lease period.

Methodology – Cross Sectional Study

1. The mine plans should incorporate relevant rl readings for realistic resource assessment.

   1.A For cross sectional survey, the reduced level (rl) measurement must be done across following locations:

   - ➢ 100 m upstream of the potential lease area,
   - ➢ Within the potential mine site and
   - ➢ 100 m downstream of the potential lease area

   1.B The above RL measurements must be carried out at minimum three locations equidistance across the riverbed/width.

   1.C For mine leases up to 10 Ha, RL measurement along the river channel/length should be at least at an interval of 100 m.

1.D For mine leases having area more than 10 Ha, such measurement should be at least at an interval of 200 m.

2. For the cross-sectional study, it is required to determine the base flow level/water level encountered before the onset of monsoon may be determined.
3. Mining should be permitted above 0.30 m to 1.00 m from the water level encountered. this will act as a sand blanket and buffer for the sub-surface flow regime and help in protection of river ecology and surrounding water regime.
4. Cross sectional study should be carried out every year and updated in the District Survey Report (DSR).

Methodology–Bed Load Transport:

I. Estimation of replenishment may be obtained from empirical equations like meyer-peter's formula for estimation of bed load transport.

II. For volumetric assessment, the encountered water level should be considered as the base level.

III. For each mine site upto 10 ha, at least two samples of mineral should be collected for the following analysis.

- Grain size distribution analysis should be undertaken for d_{10},d_{30}, d_{50}, d_{60}.
- uniformity coefficient,
- Coefficient of curvature and bulk density.
- samples must be collected from various depth like 0-30 cms, 30-90 cms, 90-150 cms and 150 cms and beyond for analysis in the laboratory to determine the reliable reserve of sand considering base flow level..
- In case of mines beyond 10 ha, for increase in every 5 ha, an additional sample must be collected for above mentioned analysis & tests

IV. Meyer-Peter's Formula , $Gb = 0.417[T_0 (H'/ H)1.5 - T_c]1.5$

Where,

Gb = Rate of bed load transport (by weight) in n per m width of channel per second

H' = Manning's coefficient pertaining to grain size on an unrippled bed and strickler

formula *i.e.*

H' = (1/24) X $D^{(1/6)}$ where D is the median size (d50) of the bed sediment in M.

H = The actual observed value of the *rugosity coefficient* on rippled channels. Its value is generally taken as 0.020 for discharges of more than 11 Cumecs, and 0.0225 for lower discharges.

T_c = Critical shear stress required to move the grain in n/m2 and given by equation $\tau c = 0.687$ da, where DA is mean or average size of the sediment in mm. This arithmetic average size is usually found to vary between d50 and d60.

T_0 = Unit tractive force produced by flowing water *i.e.* γwrs. Truly speaking, its value should be taken as the unit tractive force produced by the flowing water on bed = $0.97\gamma wrs$. R is the hydraulic mean depth of the channel (depth of flow for wider channel) and s is the bed slope.

Methodology –Survey:

The survey can be done through any of the following approaches:

- Electronic total station (ETS) &/or differential global positioning system (DGPS).
- Differential global positioning system (DGPS)/ satellite based augmentation system (SBAS).
- Unmanned Aerial Vehicle (UAV)

General

There are 4 numbers of tehsils, 7 numbers of revenue divisions, 19 numbers of erstwhile taluks, 62 numbers of rural revenue mandals and 2 numbers of urban revenue mandals, 62 numbers of mandal praja parishads. 1069 numbers of gram panchayats, 7 numbers of municipalities and 2 numbers of municipal corporations, 168 numbers of villages, 7 numbers of development blocks, 14 numbers of police stations and 2 numbers of district constituencies. At present 16 courts are running in Hamirpur judgeship which includes two outlying courts.

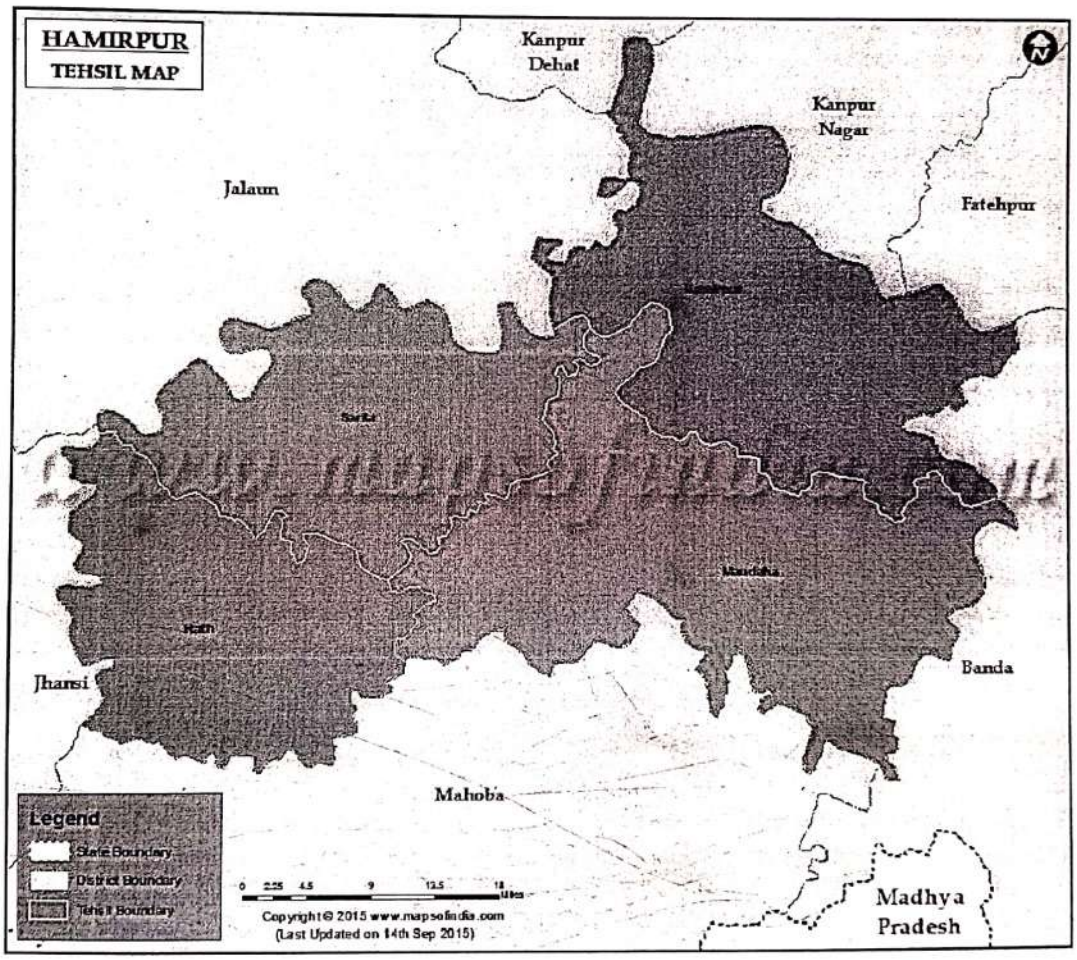


Figure 2.1: MAP OF HAMIRPUR DISTRICT (SOURCE DISTRICT SURVEY REPORT, HAMIRPUR)

2.1 District Profile:

Hamirpur district is a part of Chitrakoot Dham division of Uttar Pradesh state of India. Hamirpur town is the district headquarters. It consists of four tehsil namely Hamirpur, Maudaha, Rath, Sarila and seven blocks namely Gohand, Kurara, Maudaha, Muskara, Rath, Sarila, Sumerpur. Hamirpur District lies between Lattitude 25.7913° N and Longitude 80.0088° E. Hamirpur is bounded by districts Jalaun (Orai), Kanpur and Fatehpur in North, Banda in East, Mahoba in south and districts of Jhansi and Jalaun on the west. The district occupies an area of 4,121.9 km². The district has a population of 1,104,285 (2011 census). As of 2011, it is the third least populous district of Uttar Pradesh (out of 71), after Mahoba and Chitrakoot. Two major rivers yamuna and betwa meet here. On the banks of river betwa lies the "coarse sand" which is exported to many parts in Uttar Pradesh. Total area of Hamirpur tehsil is 1,105 km² including 1,089.51 km² rural area and 15.82 km² urban area. Hamirpur tehsil has a population of 3,64,464 peoples, out of which urban population is 88,015 while rural population is 2,76,449. Hamirpur has a population density of 330 inhabitants per square kilometre. There are about 68,440 houses in the sub-district, including 16,528 urban houses and 51,912 rural houses.

2.2 Climate Condition:

May is the hottest month with mercury shooting upto 47.0 °c. with the advance of monsoon by mid-June, temperature starts decreasing. January is usually the coldest month with temperature going upto 2.6 °c in the district.

2.3 Rainfall & Humidity:

The average annual rain fall 864mm. the climate is typical subtropical, characterized by prolonged summer, mild winter and moderately heavy rain fall during monsoon season. About 90% of which received from south west monsoon. May is hottest month with temperature. 47°c January is usually coldest month with the temperature 2.6°c. The relative humidity is highest south west monsoon ranging between 70% to 80% with lowest around 40% during peak summer month of April & May.

2.4 Topography and Terrain:

It is not a typical "hilly & chilly" type of climate in district Hamirpur, as it is closer to the plains. During winter, the climate is cold but pleasant when woolens are required. During summer the temperature is hot and cottons are recommended. Temperature does sometimes cross the 40 degree Celsius mark in summers. The southern part of district between latitude 250 30'00" and 250 42'00" of is mainly plain area with average elevation of 250 MAMSL. The region is under lain by then alluvial cover. (b) The northern part of district that is north latitude 250 42'00" N this part of district represent flat topography. The average elevation of the region 120m. above mean sea level. the district chiefly constitute drainage basic of river betwa and ken which are two important right bank tributaries of river Yamuna, river Dhasan also drain major western part of district.

The district is characterized by mainly three unit (I) recent alluvium plain (ii) bundelkhand gneiss and (iii) flood plains.

Recent alluvial plain: the area occupied by the recent alluvium can be delineated all along betwa and ken river. These recent alluvium are semi confined. bundelkhand granite gneiss: the isolated hillocks and interrupt to topography of the regions.

Soil:

The district comes under the doab region of ken and betwa covered by the recent alluvium, the development of soil in the district can be ascribe to different erosion and depositional agencies. Different morphological unit have different type of soil, the soil ranges from pure to stiff clay and including all combination of the two extreme litho units. The pure sand is called bhur and clay is called matiar.

Geological Setup:

The district, part of bundelkhand plateau region is underlain by granites and basic intrusive. The quaternary alluvial material overlies the granite. The thickness of alluvial varies from few meter to 150.00 mts in the district. The general geological sequence of the formation present in the district is as under.

Age	Formation	Lithology
Quaternary Recent To Sub Recent	Alluvium	Sand, Silt, Clay
----------	----------Unconformity--	----------
Precambrian		Bundelkhand Massif

2.5 Water Course & Hydrology:

Hydrogeologically, the district falls in southern peninsular zone. The water table in the district ranges between 5 m to 10 m. the yield of tube wells in the project area ranges between 35 m^3/hr to 70 m^3/hr. water table fluctuates in response to recharge of the aquifer and withdrawal from the aquifer. The quantum of fluctuation is a direct impact of the water level of the area. Recharge takes place mainly during rainy season. The minimum depth to water level in area is expected sometime at the close of monsoon or in the middle of monsoon period depending upon the intensity and duration of rainfall along with soil characteristics. Maximum depth to water level is related to the rainfall.

2.6 Ground Water Quality:

The specific conductance ranges from 550 to 1400 pm/cm at 25°c. It is observed that ground water is suitable for drinking and domestic uses in respect of all parameters.

2.7 Ground Water Development:

Ground water withdrawal in district is mainly through dug well, handpumps (India mark -ii) and tube wells. The gross ground water draft for irrigation in the district on 31.03.2009 was 20612.16 ham whereas the ground water draft for the domestic and industrial was 2225.61 ha-m. Hence the existing gross ground water draft for all uses in district was 022837.77 ha-m and net ground water availability for future and irrigation development in the district is 23393.51 ha-m. a quantum of 23393.51 ha-m has been allocated for domestic and industrial requirement for next 25 years. Net ground water availability in the district is 49001.60 ha-m. the stage of ground water development of district is 46.61 %. All the blocks of the district are safe. u.p. jal nigam is the govt. agency responsible for providing drinking water supplies to the urban and rural population in the district. The water requirements of the inhabitants are met with through surface water sources, through various mini water supply schemes or integrated water supply scheme utilizing the available ground water resources. There are many shallow and deep tube wells from which water is supplied through pipe lines/taps in the urban areas of district. In the rural areas of the district, water is supplied by tap/hand pumps (India mark - ii) benefiting the population

2.8 Topography & Slope:

The southern part of district between latitude 250 30'00" and 250 42'00" of is mainly plain area with average elevation of 250 mamsl. The region is under lain by then alluvial cover and the northern part of

district that is north latitude 250 42'00" N this part of district represent flat topography. The average elevation of the region 120m. above mean sea level. the district chiefly constitute drainage basic of river betwa and ken which are two important right bank tributaries of river Yamuna, river Dhasan also drain major western part of district.

2.9 Drainage System:

Drainage of Hamirpur district is quite unique in characteristic because of diversified geological formation with lithological and chronological formations, complex tectonic frame work, climatological dissimilarities and various hydro-chemical conditions. Studies have revealed that aquifer groups of alluvial soil/ soft rocks even transcend the surface drainage boundaries. These are ravenous terrain and drainage density is very high and various small streams flow into the major rivers.

Table 1: DRAINAGE SYSTEM WITH DESCRIPTION OF MAIN RIVERS

Sl. No.	Name Of River	Area Covered (Sq. Km.)	% Area Covered
1	Yamuna	56	1.43%
2	Betwa	94.6	2.42%
3	Dhasan	23.2	0.59%
4	Ken	8.87	0.23%

Due to the small streams flowing in major rivers of Hamirpur, drainage of the district has become very dense. To support the irrigation system of Hamirpur more than 25 minors, 10 canals and 5 distributaries are functional in Hamirpur. These drains are periodically cleaned for silt removal which is further used for filling purpose. District contains more than 15 tals (ponds) which help in ground water recharge and its clay may be used by local people.

2.10 Description of Rivers:

The main rivers running through the district are Yamuna, Betwa, Dhasan and Ken river. A brief description of rivers of Hamirpur district is provided below:

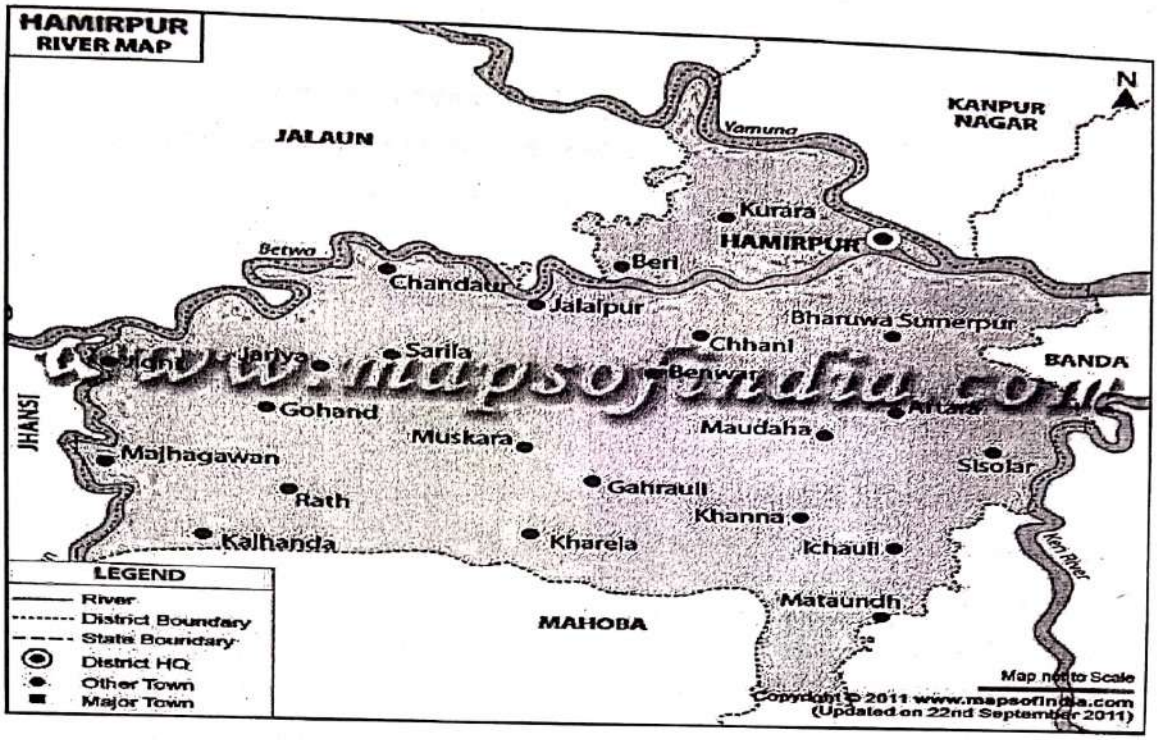


Fig 2.2 River Map Of Hamirpur District (Source: DSR Report Of Hamirpur District)

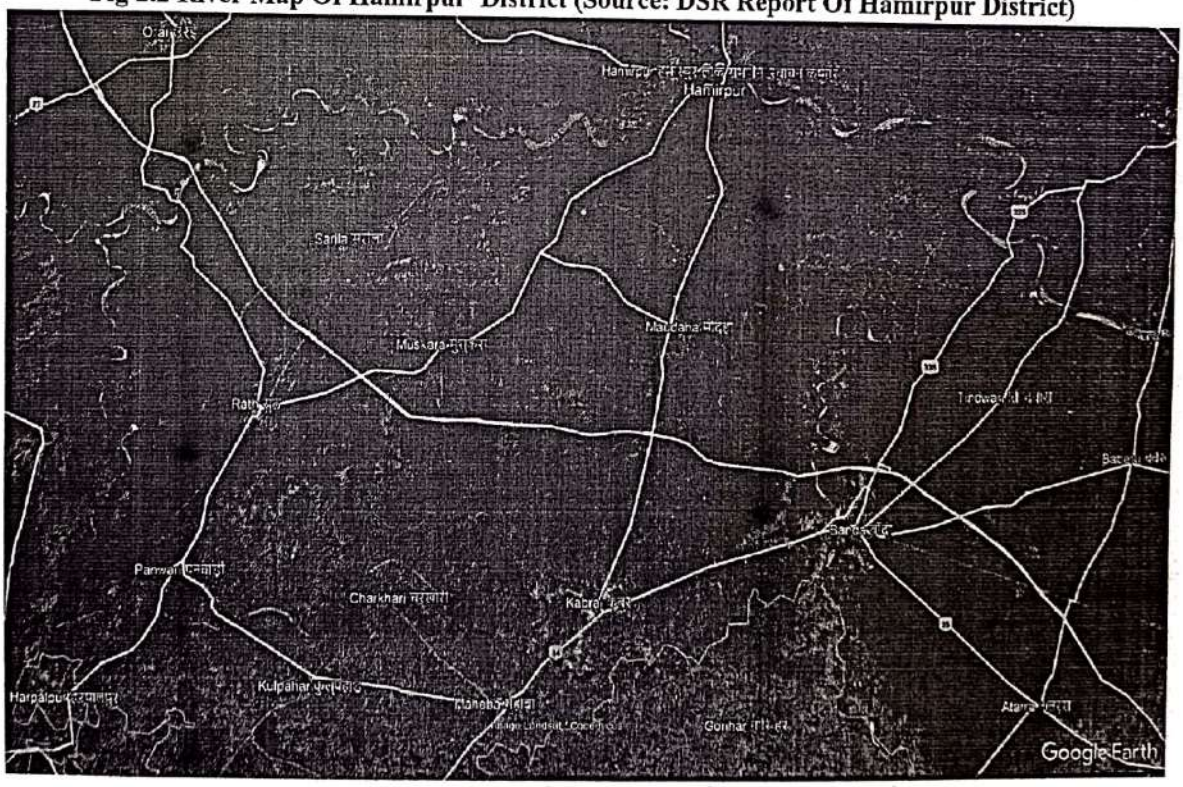


Fig 2.3 River Map Of Hamirpur District

Yamuna River:

The Yamuna river is one of the important and sacred rivers of India. It is the largest tributary of the river Ganga. It originates from Yamunotri glacier in the Mussoorie range of the lower Himalayas, and after traversing 1,376 km joins the river Ganga at Allahabad. The drainage area of the Yamuna basin is 366,220 sq km, which comprises part of seven states, viz. Uttarakhand, Himachal Pradesh, Uttar Pradesh, Haryana, Delhi, Rajasthan and Madhya Pradesh. The Yamuna river has four main tributaries in the Himalayan region: rishi Ganga, Hanuman Ganga, Tons, and Giri. In the plains, the main tributaries are the Hindon, Chambal, Sind, Betwa and Ken. The river water is generally used for irrigation, drinking and industries as well as for mass bathing, laundry, cattle bathing, and secretion of the cremation ash. The construction of diversion structures at regular intervals (Hathinikund, Wazirabad, Okhla, Gokul, etc.) for irrigation, domestic and industrial water supply, has largely modified the flow regime of the river. The inflow of wastewater either treated or partially treated in the river further aggravates the water quality problem of the river. Though the green revolution was important for food security, but lack of regulation in the groundwater abstraction has led to ground water table depletion causes damage in causal linkage between surface and ground water, resulting change in surface water dynamics during the lean season of the river. This is the main reason of dry river segments observed between Hathinikund and Palla (Delhi). This river forms north boundary of the district. The river first touches the district at the village Haraulipur in tehsil Hamirpur, where it forms a sudden loop. Flowing then east to Jamrehi Tir, it curves abruptly south to sikrohi and then continues south-east part Hamirpur to Baragaon where the Betwa joins it. Its length in Hamirpur district is approximately 56 km. the river originated from Yamunotri glacier, lower Himalaya in uttarakhand. Yamuna river enters in Hamirpur district near Misripur reserved forest then passes through Haraulipur village. Subsequently, river passes through Manki Kalan, Manki Khurd, Dadri, Misripur, and Bhaura in the last census village through which Yamuna river passes in district Hamirpur.

Betwa:

The Betwa is a river in central and northern India, and a tributary of the Yamuna. it rises in the vindhya range (raisen) just north of Narmadapuram in Madhya Pradesh and flows northeast through Madhya Pradesh and Orchha to Uttar Pradesh. Nearly half of its course, which is not navigable, runs over the Malwa Plateau. The confluence of the Betwa and the Yamuna rivers is in Hamirpur district in Uttar Pradesh the length of the river from its origin to its confluence with Yamuna is 590 kilometres (370 mi), out of which 232 kilometres (144 mi) lies in Madhya Pradesh and the balance of 358 kilometres (222 mi) in Uttar Pradesh this river flows along the north-western border of the district from the point where the Dhasan joins it to the village of Kuprat separating tehsil Rath from district Jalaun. It enters the district near the village of Beri and flows separating tehsils Rath and Maudaha from tehsil Hamirpur. Its length in Hamirpur district is approximately 65 km. other rivers lying in the district are Dhasaan, Barma, Ken,

Chandraval and Pandwaha. These rivers are used for irrigation purpose. River Betwa enters in Hamirpur in Chandawari Danda reserved forest. And subsequently passes through Ghuraull and Mangrauth villages. In Chandwari Danda, river Dhasan meets with river Betwa. In between village Baragaon and Sultanpur, Betwa joins Yamuna river.

Dhasan River:

The Dhasan river is a river in central India. a right bank tributary of the Betwa River, it originates in Begumganj tehsil (Raisen District, Madhya Pradesh). The river forms the southeastern boundary of the Lalitpur District of Uttar Pradesh state. Its total length is 365 km, out of which 240 km lies in Madhya Pradesh, 54 km common boundary between Madhya Pradesh and Uttar Pradesh, and 71 km in Uttar Pradesh. Bela, Kathan, Mangrar, Bachneri and Rohni are among its tributaries. River Dhasan enters in Hamirpur district near Jhinna Bira reserved forest then passes through Kuchhechha r.f. subsequently river pasess through Derra Khurd and Ramgarh r.f. and Chandawari Danda is the last village after which Dhasan river meet with Betwa river.

Ken River:

The ken river is one of the major rivers of the Bundelkhand region of central India, and flows through two states, Madhya Pradesh and Uttar Pradesh. It is a tributary of the Yamuna. The ken river originates near village Ahirgawan on the north-west slopes of Barner range in Jabalpur district and travels a distance of 427 km, before merging with the Yamuna at Chilla village, district Banda in Uttar Pradesh at 25°46'n 8o°3fe.

Ken has an overall drainage basin of 28,058 km , out of which 12,620 km" belong to sonar river its largest tributary, whose entire basin lies in Madhya Pradesh; and along its 427 kilometres (265 mi) course it receives water from its own tributaries such as Bawas, Dewar, Kaith and Baink on the left bank, and Kopra and Bearma of the right. out of its total length of 427 kilometres (265 mi) it flows for 292 kilometres (181 mi) in madhya pradesh, 84 kilometres (52 mi) in Uttar pradesh, and 51 kilometres (32 mi) forms the boundary between the two states. River ken enters in Hamirpur district near reserved forest before Khairthen passes through various villages and exit after Garha village of Hamirpur.

3.0 Introduction

As per Enforcement and Monitoring Guidelines for Sand Mining, 2022 the estimation of sand replenishment is based on empirical formula with the estimation of bedload transport. The Iso-Pluvial maps of IMD may be used for estimation of rainfall. Catchment yield is computed using different standard empirical formulas relevant to the Geographical and channel attributes. eg. Strange's monsoon runoff curves for runoff coefficient). Peak flood discharge for the study area can be calculated by using Dickens, Jarvis and rational formula at 25, 50 and 100 years return period. The estimation of bed load transport using ackers and white equation or similar can be made. A simulation model are also available which use the basic data generated from the field at different period. (Pre-Monsoon and post-monsoon) to estimate the volume of replenished material.

3.1 Estimation of Surface Runoff / River Flow

The importance of estimating runoff is very vital for determination of replenishment. Many empirical formulae are available for estimation of run off. These are essentially rainfall-runoff relations with additional third or fourth parameters to account for climatic or catchment characteristics. Some of the empirical relations which are site specific to different part of India are given below.

- **Binnie's Percentages**

Sir Alexander Binnie measured the runoff from a small catchment near Nagpur (area of 16 km2) during 1869 and 1872 and developed curves of cumulative runoff against cumulative rainfall. The two curves are found to be similar. From these curves he established the percentage of runoff from the rainfall data. These percentages have been used in Madhya Pradesh and Vidarbha region of Maharashtra for the estimation of yield.

Serial no.	Average annual rainfall in the catchment (mm)	Runoff % of annual rainfall
1	500	15
2	600	21
3	700	25
4	800	29
5	900	34
6	1000	38
7	1100	40

❖ **Barlows Tables**

Barlow, the first chief engineer of the Hydro-Electric survey of India (1915), on the basis of his study in small catchments (area–130 km2) in Uttar Pradesh expressed runoff R As:

$$R = Kbp$$

Where KB is the runoff coefficient which depends upon the type of catchment and nature of monsoon and p is the rainfall.

Table-3.1: Barlow's Runoff Coefficient Kb In Percentage (Developed For Use In UP) Class

Class	Description Of Catchment	Value Of Kb (Percentage)		
		Season I	Season II	Season III
A	Flat, Cultivated And Absorbent Soils	7	10	15
B	Flat, Partly Cultivated And Stiff Soils	12	15	18
C	Average Catchment	16	20	32
D	Hills And Plains With Little Cultivation	28	35	60
E	Very Hilly, Steep And Hardly Any Cultivation	36	45	81

Season I: Light Rain, No Heavy Downpour
Season II: Average or Varying Rainfall, No Continuous Downpour
Season III: Continuous Downpour

❖ **Strange's Tables**

Strange (1928) studied the available data on rainfall and runoff on the border areas of present day Maharashtra and Karnataka and obtained the values of runoff coefficient as,

$$Ks = R/P$$

As a function of the catchment character. For purpose of calculating the yield from the total monsoon rainfall, the catchments were characterized as "good", "average" and "bad". Value of the

Ks for these catchments is shown in table-3.2. Strange also gave a table for calculating the daily runoff from daily rainfall. In this, the run-off coefficient depends not only on the amount of rainfall but also on the state of the ground. Three categories of the original ground state as "dry", "damp" and "wet" are used by him.

Table-3.2: Extract of Strange's Table of Run-Off Co-Efficient Ks in Percent

Total Monsoon Rainfall (Cm)	Run-Off Co-Efficient Ks In Percent		
	Good Catchment	Average Catchment	Bad Catchment
25	4.3	3.2	2.1
50	15.0	11.3	7.5
75	26.3	19.7	13.1
100	37.5	28.0	18.7
125	47.6	35.7	23.8
150	58.9	44.1	29.4

❖ **Inglis And De'Souza Formula:**

After careful stream gauging in 53 sites in western India, Inglis and DE'SOUZA (1929) evolved two regional formulae between annual runoff R in cm and annual rainfall P in cm as follows:

For Ghat regions of western India, $R = 0.85 P - 30.5$

For Deccan Plateau, $R = (1/254) P (P-17.8)$

❖ **Khosla Formula**

Khosla (1960) analyzed the rainfall, runoff and temperature data for various catchment in India and USA to arrive at an empirical relationship between runoff and rainfall. The time period is taken as a month. His relationship for monthly runoff is

$Rm = Pm - Lm$

And $Lm = 0.48Tm$ for $Tm > 4.5^oc$

Where Rm= Monthly Runoff in Cm

$Rm \geq 0$ Pm= Monthly Rainfall in Cm

Lm= Monthly Losses in Cm

Tm= Mean Monthly Temperature of The Catchment In ^oc

For $Tm \leq 4.5^oc$, The Loss Lm May Provisionally Be Assumed As:

T Oc	4.5	-1	-6.5
Lm (Cm)	2.17	1.78	1.52

Annual run-off = σ rm

Khosla's formula is indirectly based on the water balance concept and the mean monthly catchment temperature is used to reflect the losses due to evapotranspiration. The formula has been tested on a number of catchments in India and is found to give fairly good results for the annual yield for use in preliminary studies. This formula can also be used to generate synthetic run-off data from historical rainfall and temperature data.

All the above empirical formulae have been developed for a particular region of India and have their own limitations. For the present study, the area of the watershed for the river has been estimated using remote sensing satellite data. This estimation has also helped in determining the river parameters and soil erosion from the catchment area.

Computing Run-Off by Using Run-Off Coefficient

The Volume of Run-Off Can Be Directly Computed Approximately, By Using An Equation Of The Form; Q = K.P

Where Q = Run-Off, P = Precipitation, And

K = Is A Constant, Depending Upon Imperviousness Of The Drainage Area.

Various Values Of K, Which Are Commonly Used, Are Shown In Table-3.3 Below.

Table-3.3: Values of Run-Off Coefficient K

Sl. No.	Type of Area	Value of K		
		Flat land 0-5% slope	Rolling land 5-10% slope	Hilly land 10-30% slope
1. (a)	**Urban areas**			
	30% area impervious (paved)	0.40	0.50	--
	50% area impervious (paved)	0.55	0.65	--
	70% area impervious (paved)	0.65	0.80	--
(b)	**Single family residence in urban areas**	0.30		
2.	**Cultivated areas**			
	Open sandy loam	0.30	0.40	0.52
	Clay and silt loam	0.50	0.60	0.72
	Tight clay	0.60	0.70	0.82
3.	**Pastures**			
	Open sandy loam	0.10	0.16	0.22
	Clay and silt loam	0.30	0.36	0.42
	Tight clay	0.40	0.55	0.60
4.	**Wooded land or Forested Areas**			
	Open sandy loam	0.10	0.25	0.30
	Clay and silt loam	0.30	0.35	0.50
	Tight clay	0.40	0.55	0.60

(Source: Irrigation Engineering & Hydraulic Structures By S.K. Garg)

3.2 Estimation of Bed Load :

The transport of sediment by rivers has been studied extensively by engineers and earth scientists for more than a century. Estimation of bed load transport is based on an Analytical Approach. The first bed load equation was developed by du boys in 1879. Since then, several equations have been proposed for the prediction of bed load transport. One of the major models among them was Mayer- Peters and Muller Model(1948) which is widely used for the prediction of bed load transport. The other models include Stochastic model (1962),Changmodel (1939) and Shamove (1962). Each model fit into different scenario. Bagnold (1980), Parker et.al. (1982) were the major works carried out for the Mayer- Peter equations giving an empirical correlation of bed load transport rates in flumes and natural rivers. There were different reported studies which use the same model indifferent types of rivers. Dietrich and Smith (1984) studied the behavior of bed load transport in meandering river.

Another scientist Bathurst and Graf (1987) developed a bed load discharge equation for steep mountain rivers which are appropriate for course sediment. Carson and Griffiths (1987) had given a review on the behavior of the bed load transport in gravel channels. Meade et.al.(1990) has made a detailed study on movement and storage of sediment of the rivers of united states and Canada. Parker (1990) made a study of bed load transport of Gravel Rivers. The study indicates

that the bed load transport rate of mixtures should be based on the availability of each size range in the surface layer. Parker (1991) put forward a theory on selective sorting and abrasion of river gravel.

Recent studies on bed load transport incorporated the stochastic nature of the river sand inflow. habibiet.al. (1994) developed a new formulation for estimation of bed load transport. Zhilin sun and Donahue (2000) developed a statistical based bed load formula for non-uniform sediment. Maarten Klienhans and Rijn (2002) introduced another stochastic model for bed load transport prediction. Nian-Sheng Cheng (2002) developed another exponential formula for the bed load transport which does not involve the concept of critical shear stress. Jaberalmedeij and Diplas (2003) worked on bed load transport in gravel bed streams with Uni-model sediment. strom et.al (2004) studied about the cluster formation and evolution by tackling the aspects associated with micro- topography and the bed load transport. Yantao and Parker (2005) presented a new numerical model for the simulation of gravel bed load transport and pulse evolution in mountain rivers.

The study of Darren et al.(2005) is an important one in the model study of bed load transport, which gave more attention and increases the applicability of Meyer–Peter's equation. Hyung et.al (2008) reported a study on sediment transport processes over a sand bank in macro tidal Garolim bay, west coast of Korea. In India there are only a few studies on sand mining. Chandrakanthet.al (2005) studied the effect of sand mining on ground water depletion in Karnataka by investigating the field data and comparing it with a non-sand bearing area. Rajendraet.al.(2008) reported a detailed study on sand extraction from agricultural fields around Bangalore. Several such studies related to river sand mining have been reported for the rivers of Kerala also. raj Bhattacharya,et all (2018) have studied the relationship river water flows, sediment transport regime in bedload transport and tries to determine how instream mining affect the sediment inflow.

The following equations have been used in the study to estimate the bedload and the sediment concentration.

bedload (qb)

Prediction of bedload transport of a particular channel or effects of critical threshold condition on bed sediment transport is done on basis of Meyer-Peter and Muller method (1948).

$$Q\,B = 0.253\,(T0 - Tcr)^{3/2}$$

Sediment Concentration (X)

Computation of sediment concentration (X) (in parts per million) considered some fluid weight was done by using Ackers and White (1973) method, to predict the relationships between Sandchar stability and mining intensity:

$$X = G_{gr}\frac{d}{h}\frac{\gamma_s}{\gamma}\left(\frac{V}{U_*}\right)^{C_1}$$

Total sediment load (QT) is given by sediment concentration (X) and water discharge (Q) as follow.

$$Q(T) = Q \,.\, X$$

In instream sand mining is the major responsible factor for the significant changes in the natural system of the upper, middle, and lower courses. Intense mining plays a significant role through the fluctuation in the flow and sediment regimes to change the motion of sediment loads (suspension and bedload).

D.Padmalal and K.Maya , (2014) have discussed various procedures employed in sand auditing of the small rivers of Kerala (Southwest India), Periyar river to know how the mining processes and its execution would minimize the negative effects of sand mining on one hand and maximize positive effects on the other. The sand audit methodology developed and adapted by Padmalal et al. (2010) for the Manimala river draining into the Vembanad lagoon in the southwest coast of India has three major components.

Component I: Resource Estimation

Component II: Resource Allocation

Component III: Performance Evaluation of Sand Mining.

Resource Allocation

Let 'X' be the total quantity of mineable sand in million Cubic Meters (MM3), 'Y' the annual replenishment of river sand in mm3, and 'n' the time span in years during which mining of river sand can be permitted in the entire river or that part of the river under examination.

Quantity of mineable sand in a year (Qm) can be estimated as

$$Qm = (X/N)+Y$$

Note 'N' should be fixed only after taking into account the physical, chemical and biological status of the river environment by the expert group. 'Y' can be calculated by subtracting quantity of sand output (Qo) from the quantity of sand input (Qi).

Performance Evaluation/Sand Resource Accounting:

It is based on the assumption that sand mining is uniform throughout the river stretch or riverbed is leveled after every peak flow season (Monsoon). Then,

$$\text{Quantity of Sand Mining, } Qm = (Qi - Qo) + Qc$$

Where, Qc is the quantity of sand mined from the deposit other than natural replenishment in the given stretch of river under investigation

$$Qc = Qm - (Qi - Qo)$$

Mining of Qc from the rivers will be reflected in the seasonal cross-profile measurements as channel incision/riverbed lowering. The expected riverbed lowering (Te) due to mining of Qc from the river segment under examination can be calculated as

$$Te = Qc/LW$$

Apply the value of Qc in Eq. $Te = (Qm - (Qi - Qo))/LW$

Ideally, The computed Te will be equal to the actual riverbed lowering (ta) obtained from river cross-profile measurements, provided there is no unauthorized mining in the river stretch. In other words, a situation in which TA> TE indicates prevalence of unauthorized

Mining in the stretch, the quantity of which (i.e., QUM) can be calculated as:

$$Qum = Lwta - Qm$$

Qi quantity of sand input into the river/river segment under examination, Qo quantity of sand output from the river/river segment, l length of the channel occupied by sand, W width of the channel occupied by sand, ta actual river bed lowering.

Binoy Aliya Mattamana et al.(2013)" examined the sand inflow in different stretches of the Periyar river and to optimize the sand removal by considering several socio-economic and topographical features. For the determination of sand inflow, Mayer-Peter's formula is used, which is an analytical method for estimation of bed load transport model. The paper describes certain uncertainties in determining the actual bed load, for which some assumptions are made like, during the monsoon season, the velocity of flow is high with turbulence and is observed around 0.6m/s which tend to be more scouring than deposition. Hence the deposition is comparatively low. So, the study assumed that 70% of the sand transported is deposited during high flow period.

The paper suggests that there is seasonal variational of sand inflow and monsoon period shows more sand inflow than summer.

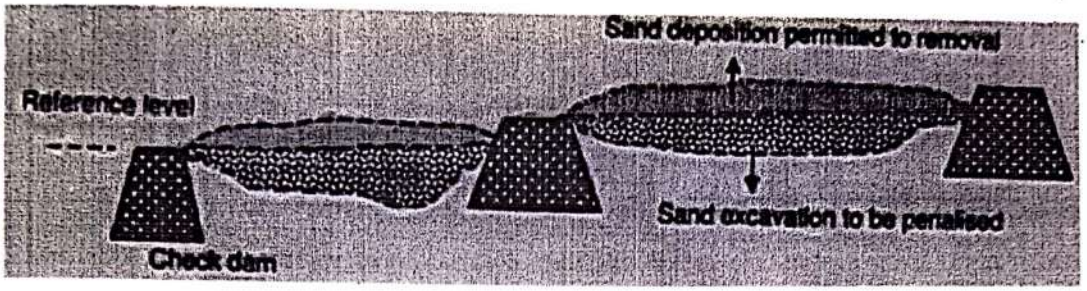


Fig No: 3.1 River Cross Section with Check Dams and Bench Mark

The major recommendation of this project study was to build check dams at regular intervals of each stretch of the river, that enables to determine a specific reference line for the bed profile. The sand deposition above this check dam may be permitted for sand mining. And the local authorities should take the responsibility of maintenance of this reference line strictly and should be penalized for sand mining below this check dam or reference line.

3.3 Methodology for Estimation of Sediment Load

The quantity of sand to be mined must be optimized for sustainable mining. Knowledge of sand inflow is vital for optimal sand removal. Sand inflow study may be performed using bed load transport models like Meyer-Peter's, Einstein's model, shield's formula, du-boy's formula etc. in this study, the most scientifically accepted Meyer-Peter's equation for bed load transport is used.

- ***At First***, Preliminary study with field data collection was done. The grain size analysis i.e. d_{10}, d_{30}, d_{50} and d_{60}, uniformity coefficient and coefficient of curvature was performed in lab to estimate Bajri/Sand replenishment of rivers.
- Digital survey by drone was carried out for the study of replenishment of sand/bajri.
- Further the study also incorporates the use of analytical model for bed load transport from the rivers flowing through the mining lease area.

- **Meyer – Peter's Equation:**

The present study used the Meyer-Peter's model for the estimation of bed load transport

because of its wide acceptance and simplicity.

Meyer-Peter's equation is based on experimental work carried out at federal Institute of Technology, Zurich. Mayer-Peter gave a dimensionless equation based, , on rational laws. the simplified Meyer Peter's Equation(source: irrigation engineering & hydraulic structures by s.k. Garg) is as follows:

$$g_b = 0.417[\tau_0 (\eta'/\eta)^{1.5} - \tau_c]^{1.5}$$

Where,

G_b = Rate of Bed Load Transport (By Weight) in N Per M Width of Channel Per Second

H' = Manning's Coefficient Pertaining to Grain Size on an Unrippled Bed and Strickler Formula *I.E.* H' = (1/24) X D1/6 Where D Is The Median Size (D_{50}) Of The Bed Sediment In M.

H = The Actual Observed Value of The *Rugosity Coefficient* on Rippled Channels. Its Value is Generally Taken as 0.020 for Discharges of More Than 11cumecs, And 0.0225 for Lower Discharges.

Tc= Critical Shear Stress Required to Move the Grain in N/M2 and Given By Equation

Tc= 0.687 Da, Where Da is Mean or Average Size of the Sediment in Mm. This Arithmetic Average Size is Usually Found to Vary Between D_{50} And D_{60}.

T0= Unit Tractive Force Produced by Flowing Water *I.E.*Γwrs. Truly Speaking, its Value Should be Taken as the Unit Tractive Force Produced by the Flowing Water on Bed = 0.97γwrs.

R is the Hydraulic Mean Depth of the Channel (Depth Of Flow For Wider Channel) and S is The Bed Slope

The Value of Manning's Coefficient (H) Depends upon channel condition and also upon Discharges. The Recommended Values are provided in Table-3.3 and Table-3.4.

Table-3.4: Recommended Values of Manning's Coefficient (H) For Unlined Channels

Sl. No.	Condition Of Channel	Value Of H
1	Very Good	0.0225
2	Good	0.025
3	Indifferent	0.0275
4	Poor	0.030

Central Board of Irrigation has recommended the Following Values of H for different Discharges:

Table-3.5: Recommended Values of Manning's Coefficient (H) for Different Discharge

Sl. No.	Discharge In Cumecs	Value Of H
1	14 To 140	0.025
2	140 To 280	0.0225
3	280 And Above	0.020

In the study the estimation of replenishment using Meyer-Peter's equation has been calculated based on the following assumptions

- Rainfall data is taken for an average period of 60 days.
- Bedload deposition is considered as 60% of bedload transport.

❖ **Universal Soil Erosion Equation:**

Soil Erosion Equation is Defined as, A = KR(LS)C
Where, A = Estimate of Soil Loss Rate in Tons/Hectare/Year
K = Soil Erodibility Factor
R = Rainfall Factor LS = Slope Factor
C = Crop Management Factor
This will help us to determine the soil loss from the catchment area that finds place in the rivers.

Fig. 3.2 : Reconnaissance Field Visit by CMPDIL Team.

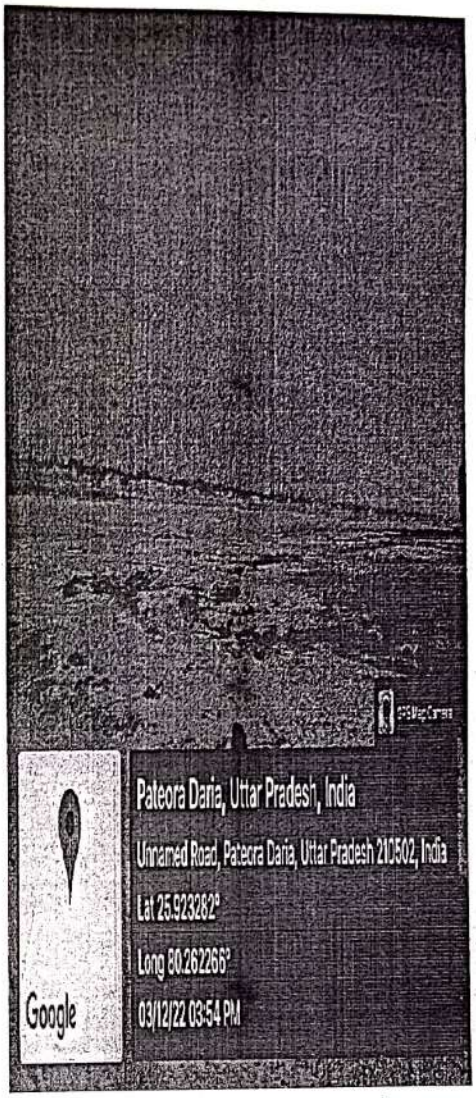


Fig. 3.3 & 3.4 : Data Collection And Field Visit by CMPDIL Team.

Chapter 4: Data Collection, Analyses and Estimation of Replenishment

4.0 General:

Replenishment rate is the rate at which bajri is transported into the river channel, which is under examination or subjected to sand extraction. This volume is often considered as sustainable yield of that river. Estimation of bajri discharge through stream bed and its residence period (temporary deposition) is a difficult task in sediment budgeting. It is axiomatic that during high flow period, bajri which is otherwise moved by siltation (i.e., partially suspension and partially bed load) will completely be in suspension in the overlying waters.

Estimation of annual sediment yield produced from a rainfall event requires applying many approaches to get acceptable and valid results. These approaches require quantitative estimation of the transported sediment volumes resulting from a rainfall event. There are many sediment transport equations which are suitable for use in the prediction of the replenishment rate of rivers/ watershed. The present study used the Meyer-Peter's model for the estimation of bed load transport because of its wide acceptance and simplicity in computation.

4.1 Grain Size Data Analysis:

Soil Classification

Soils can behave quite differently depending on their geotechnical characteristics. In coarse-grained soils, where the grains are larger than 0.075 mm (or 75 μm), the engineering behavior is influenced mainly by the relative proportions of the different sizes present, the shapes of the soil grains, and the density of packing. These soils are also called granular soils. In fine-grained soils, where the grains are smaller than 0.075 mm, the mineralogy of the soil grains, water content, etc. Have greater influence than the grain sizes, on the engineering behaviour. The borderline between coarse and fine-grained soils is 0.075 mm, which is the smallest grain size one can distinguish with naked eye.

In Unified Soil Classification System (USCS), the border line between sands and gravels is 4.75 mm.

Indian Standard Soil Classification System (ISSCS) is the same as USCS with one modification the fine-grained soils are subdivided into 3 subgroups of low, medium, and high compressibility, whereas, in USCS, fine-grained soils are subdivided into 2 subgroups of low and high compressibility. 4 major groups and their symbol are given below:

Boulder (Mm)	Cobble (Mm)	Coarse-Grained Soil					Fine-Grained Soil	
Gravel		Sand			Silt (Mm)	Clay (Mm)		
Coarse (Mm)	Fine (Mm)	Coarse (Mm)	Medium (Mm)	Fine (Mm)	2-0.425	0.425-0.075		
>300	300-80	80-20	20-4.75	4.75-2			0.002-0.075	<0.002

Classification of Coarse-Grained Soil (Based On ISSCS)

According to the IS soil classification system, coarse-grained soil is graded based on particle size, gradation characteristics (cu and cc), and percentage fineness. The uniformity coefficient (cu) and the coefficient of gradation (cc) are the measures of soil gradation. These coefficients help to classify the soil as well-graded or poorly graded ones.

The soil in which 50% or more soil particles are retained on a 75-micron sieve (0.075 mm) is classified as coarse-grained soil

The coarse-grained soils are classified as gravel (g) if more than 50% of the coarse fraction of the soil is retained on a 4.75 mm sieve; otherwise, it is classified as sand (s). They are further divided based on their gradation characteristics.

In The Cases %Fineness < 5% By Weight

Gravel: Coarse Fraction Retained On 4.75 Mm > 50%

1. GW ⇒ Well-Graded Gravel

   $Cu \geq 4$ And $1 \leq Cc \leq 3$

2. GP ⇒ Poorly Graded Gravel

   $Cu < 4$, Or $1 > Cc$, Or $Cc > 3$

Sand: Coarse Fraction Retained On 4.75 Mm < 50%

1. SW ⇒ Well-Graded Sand

   $Cu \geq 6$ And $1 \leq Cc \leq 3$

2. SP ⇒ Poorly Graded Sand

   $Cu < 6$, Or $1 > Cc$, Or $Cc > 3$

In all the cases %fineness < 5% by weight and in all the cases coarse fraction retained on 4.75 mm < 50%. For all the cases, cu< 4 and 1≤cc<3, and this summarizes the soil as poorly graded sand (SP).

Grain Size Analysis:

During the surveying phase and site reconnaissance, sand samples from the two rivers-Ganga and Yamuna were collected. Sieve analysis was carried out on the sand sample for determination of their classification and coefficient of uniformity and curvature.

500 gm of oven-dried sand sample from various ghats from Hamirpur district were taken in the sieve analysis. Sieves as per is standards (sieve 4.75mm, 2 mm, 1mm, 600μ,425 μ, 300μ,212 μ, 150μ, 75 μ) were used for the test. The sieves were arranged such that at top 4.75mm, 2 mm, 1mm, 600μ,425 μ, 300μ,212 μ, 150μ, 75 μ at the bottom, and last pan. The sieve set was placed on the mechanical shaker and shaken vigorously for at least 2 minutes. Then the weight of aggregate retained on each sieve was measured and expressed it as the percentage of passing. Plots were made for percentage finer and sieve size and the summary of the results is given below.

Soil Classification

Soils can behave quite differently depending on their geotechnical characteristics. In coarse-grained soils, where the grains are larger than 0.075 mm (or 75 μm), the engineering behavior is influenced mainly by the relative proportions of the different sizes present, the shapes of the soil grains, and the density of packing. These soils are also called granular soils. In fine-grained soils, where the grains are smaller than 0.075 mm, the mineralogy of the soil grains, water content, etc. Have greater influence than the grain sizes, on the engineering behavior. The borderline between coarse and fine-grained soils is 0.075 mm, which is the smallest grain size one can distinguish with naked eye.

In unified soil classification system (USCS), the border line between sands and gravels is 4.75 mm.

Indian standard soil classification system (ISSCS) is the same as USCS with one modification the fine-grained soils are subdivided into 3 subgroups of low, medium, and high compressibility, whereas, in USCS, fine-grained soils are subdivided into 2 subgroups of low and high compressibility. 4 major groups and their symbol are given below:

Boulder (Mm)	Cobble (Mm)	Coarse-Grained Soil					Fine-Grained Soil	
Gravel		Sand			Silt (Mm)	Clay (Mm)		
Coarse (Mm)	Fine (Mm)	Coarse (Mm)	Medium (Mm)	Fine (Mm)	2-0.425	0.425-0.075		
>300	300-80	80-20	20-4.75	4.75-2			0.002-0.075	<0.002

Grain Size Analysis:

During the surveying phase and site reconnaissance, sand samples from the three rivers were collected. Sieve analysis was carried out on the sand sample for determination of their classification and coefficient of uniformity and curvature. 500 gm of oven-dried sand sample from various ghats from 25 districts of up were taken in the sieve analysis. Sieves as per is standards (sieve 4.75mm, 2 mm, 1mm, 600μ,425 μ, 300μ,212 μ, 150μ, 75 μ) were used for the test. The sieves were arranged such that at top 4.75mm, 2 mm, 1mm, 600μ,425 μ, 300μ,212 μ, 150μ, 75 μ at the bottom, and last pan. The sieve set was placed on the mechanical shaker and shaken vigorously for at least 2 minutes.Then the weight of aggregate retained on each sieve was measured and expressed it as the percentage of passing.

Plots were made for percentage finer and sieve size and the summary of the results is given below.

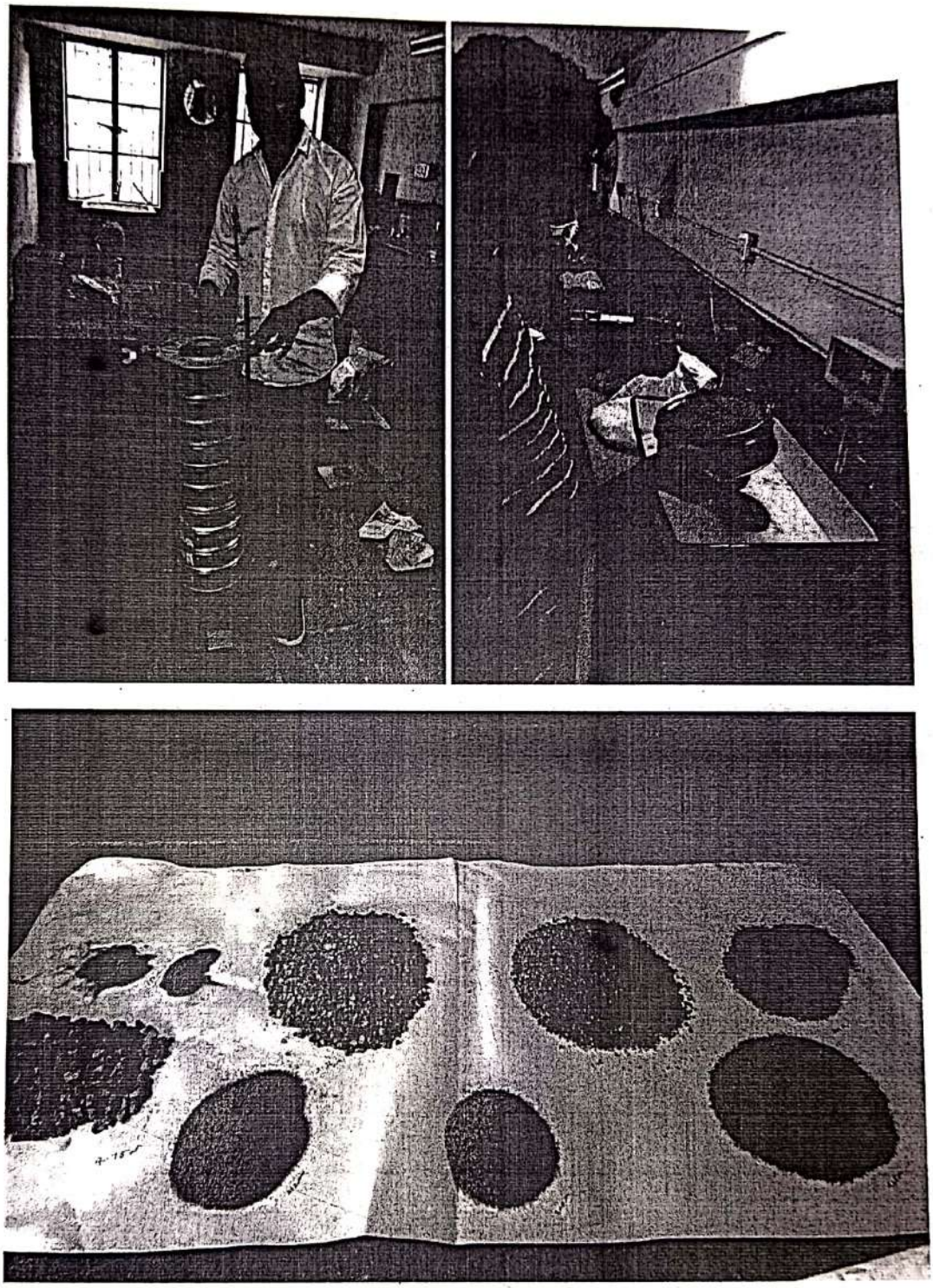
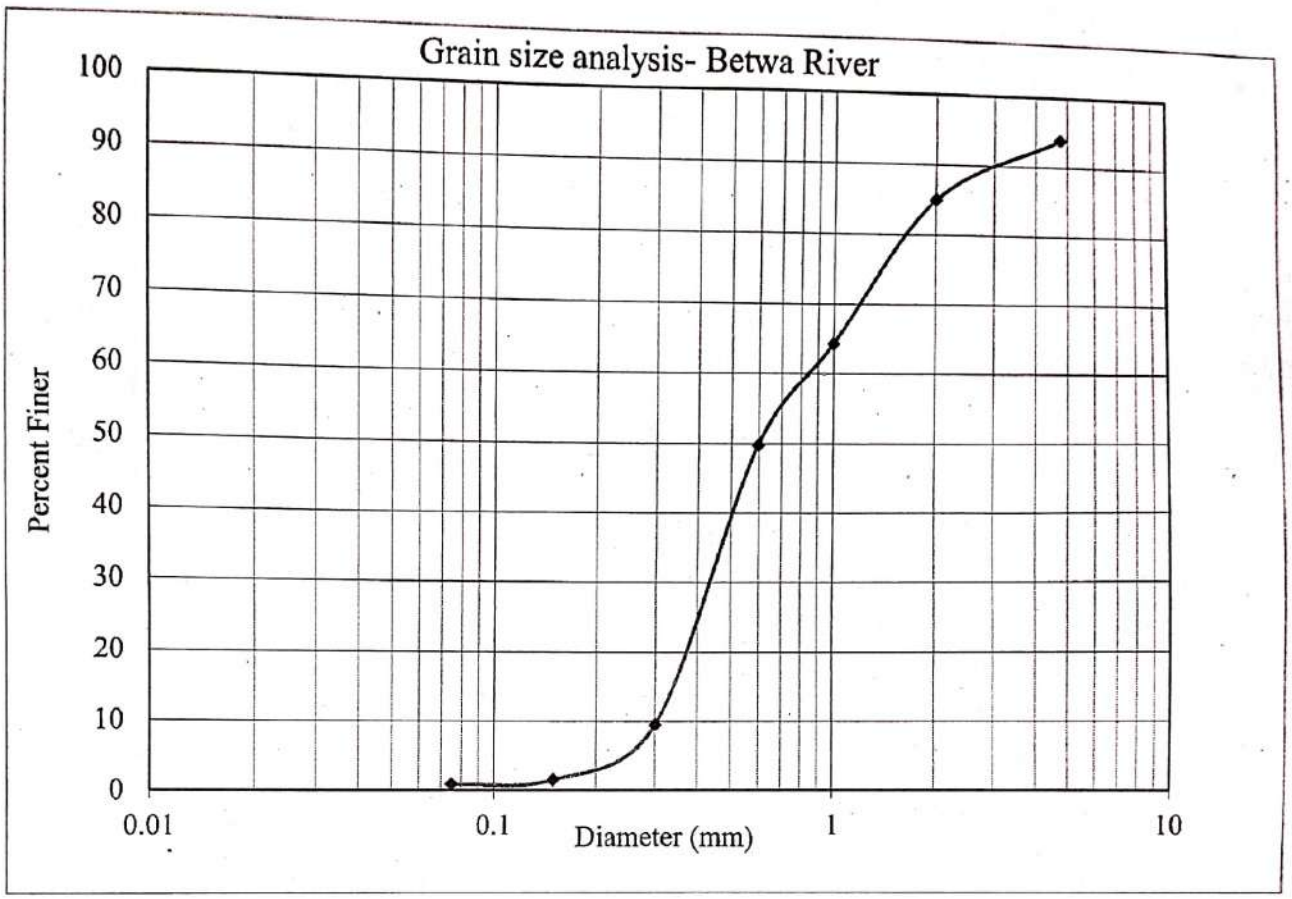


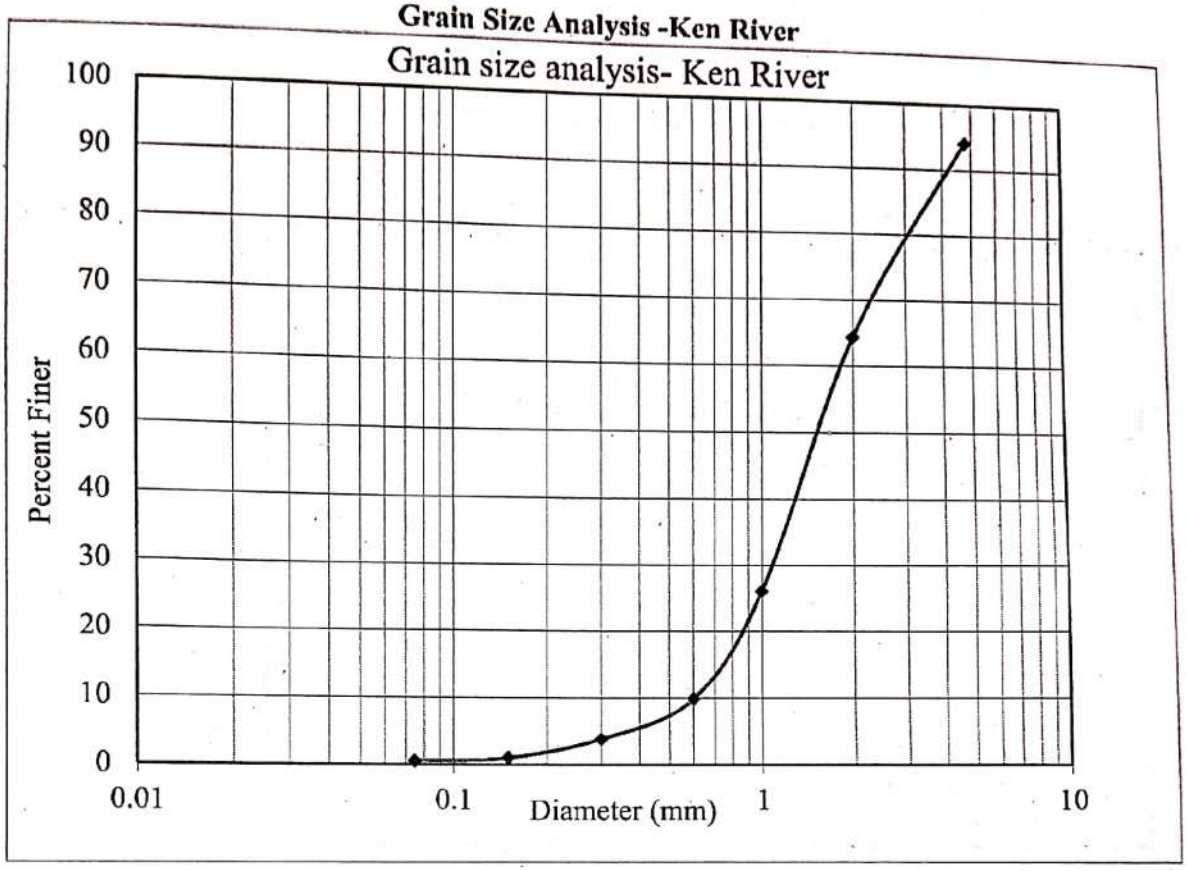
Figure 4.1: Grain Size Analysis at CMPDIL Lab, HQ, Ranchi

Grain Size Analysis -Betwa River



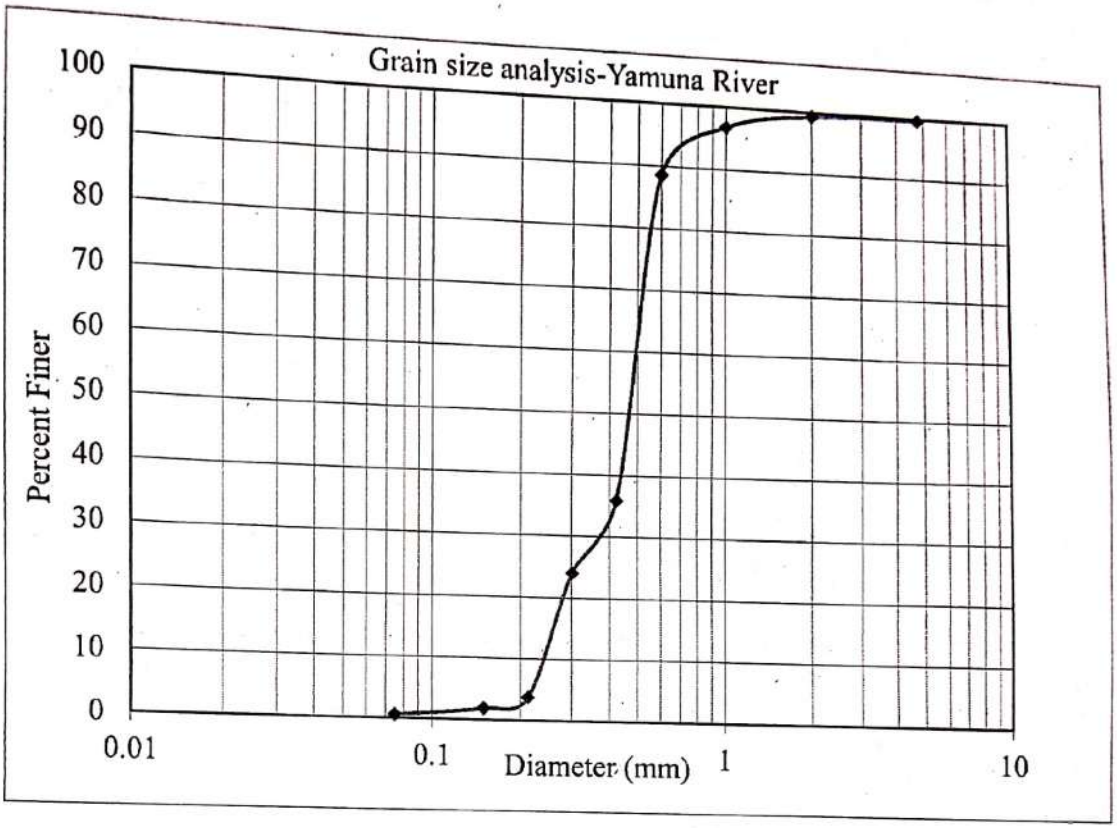
Gravel (%)	-
Sand (%)	99.10
Silt+Clay (%)	0.50
D_{60}	0.85mm
D_{50}	0.6mm
D_{30}	0.45mm
D_{10}	0.31mm
C_u	2.74
C_c	0.77
Class	SP
Remark	Poorly Graded Sand

Grain Size Analysis -Ken River



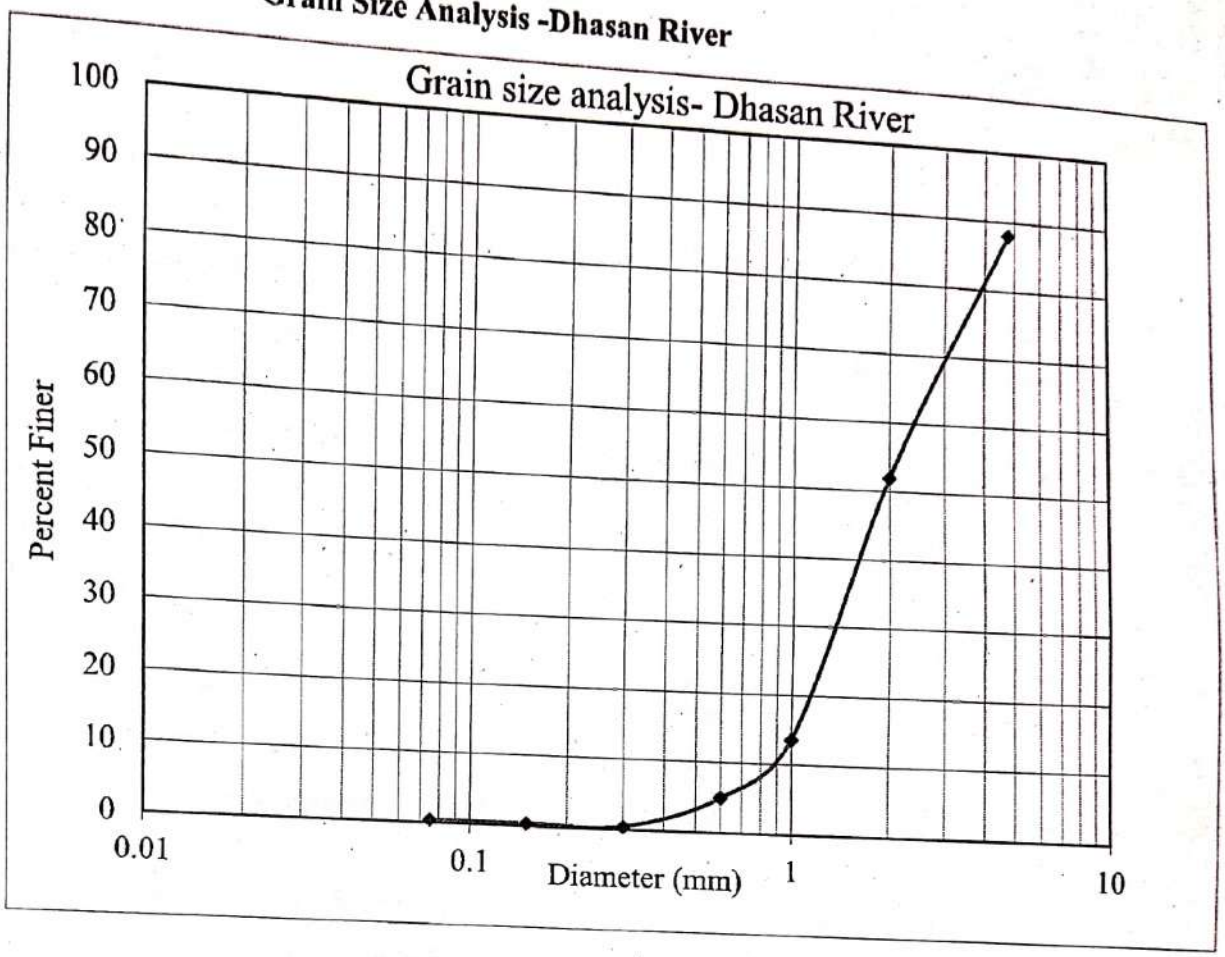
Gravel (%)	-
Sand (%)	99.50
Silt+Clay (%)	0.10
D_{60}	1.8mm
D_{50}	1.6mm
D_{30}	1.2mm
D_{10}	0.6mm
C_u	3.00
C_c	1.33
Class	SP
Remark	Poorly Graded Sand

Grain Size Analysis -Yamuna River



Gravel (%)	-
Sand (%)	99.45
Silt+Clay (%)	0.45
D_{60}	0.49mm
D_{50}	0.46mm
D_{30}	0.38mm
D_{10}	0.24mm
C_u	2.04
C_c	1.23
Class	SP
Remark	Poorly Graded Sand

Grain Size Analysis -Dhasan River



Gravel (%)	-
Sand (%)	99.70
Silt+Clay (%)	0.00
D_{60}	2.4mm
D_{50}	1.9mm
D_{30}	1.4mm
D_{10}	0.9mm
C_u	2.67
C_c	0.91
Class	SP
Remark	Poorly Graded Sand

4.2 DGPS/Drone Survey Details:

Photogrammetry is a process by which information is extracted from photographs to create accurate three-dimensional maps and models. Drone based photogrammetry is a modern state of the art technology for generation of ortho-photomosaic, Digital Terrain Model (DTM), Point cloud data and contours. The photos are timed with a percentage of overlap so that they can be stitched together for a continuous image map containing digital information.

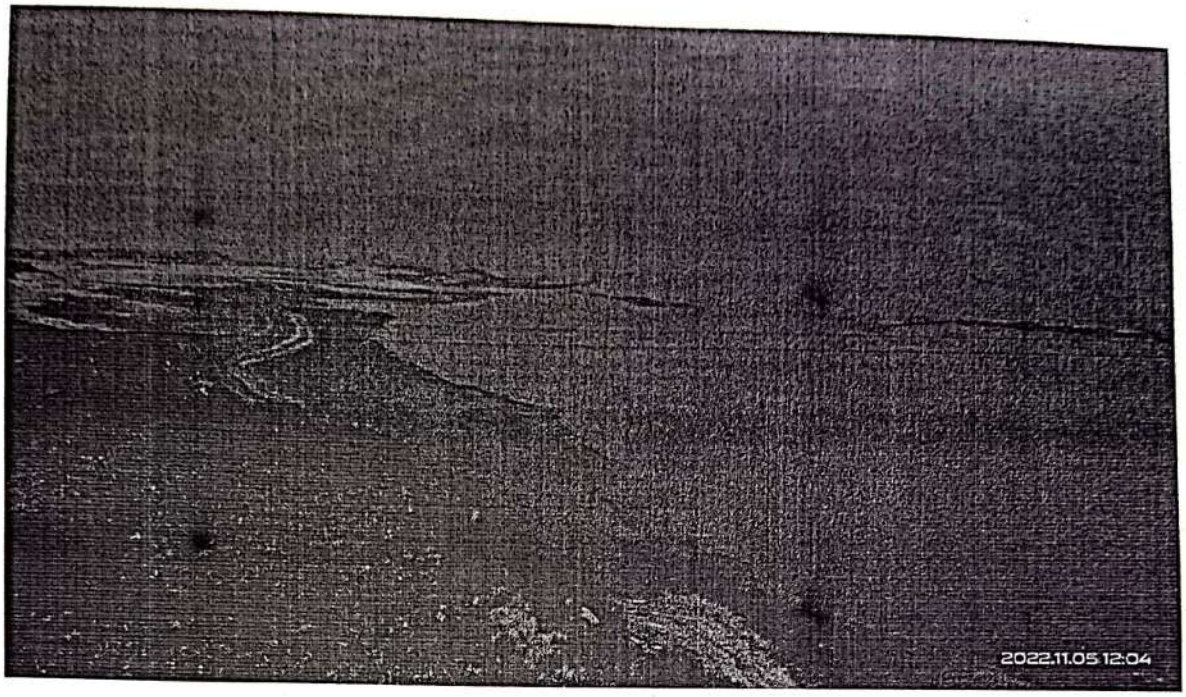
Reconnaissance survey must be carried out to rectify the location values by arranging ground control points (GCPS) appropriately to improve the accuracy of uav-based 3d topographic maps of the sites. Accordingly, GCPS of suitable size, which are visible from flying drone, are placed/ marked on the ground. For the survey, post processed kinematic (PPK)-enabled drones are used, which reduces the requirement of placing gcps.

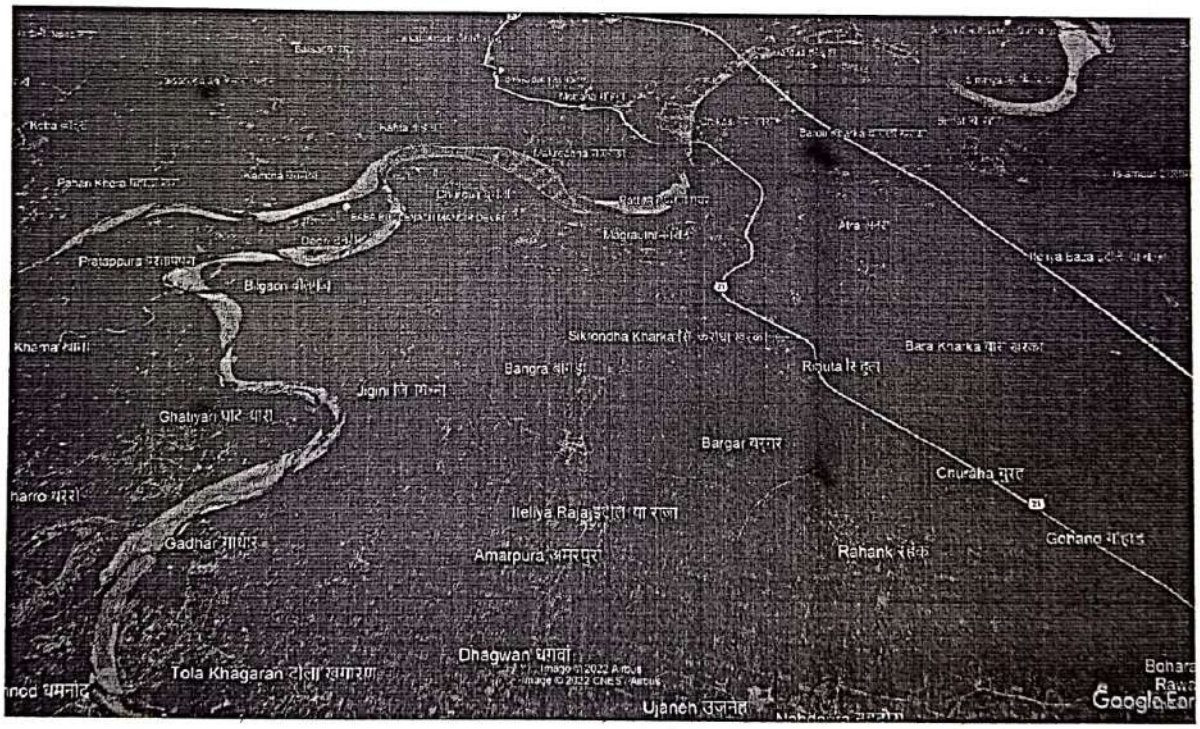
Differential global positioning system (DGPS) survey is done on each GCP wrt. base station for which one unit f dgps is kept stationery at base station and rover unit of dgps is kept at each gcp, one by one for at least 10 minutes. Then the photographs from the drone mounted camera are taken with sufficient overlap, longitudinally as well as laterally.

After field survey work, data of DGPS as well as drone-based camera are downloaded and processed in their respective software. Coordinates of GCPS are utilized for geo-tagging and geo-referencing of the photographs/ orthophoto mosaic. DTM is prepared in the software. Above procedure is done in pre-monsoon and post-monsoon period respectively and corresponding dtm are prepared. With the help of data processing software, the volume computation/replenishment quantity is estimated.

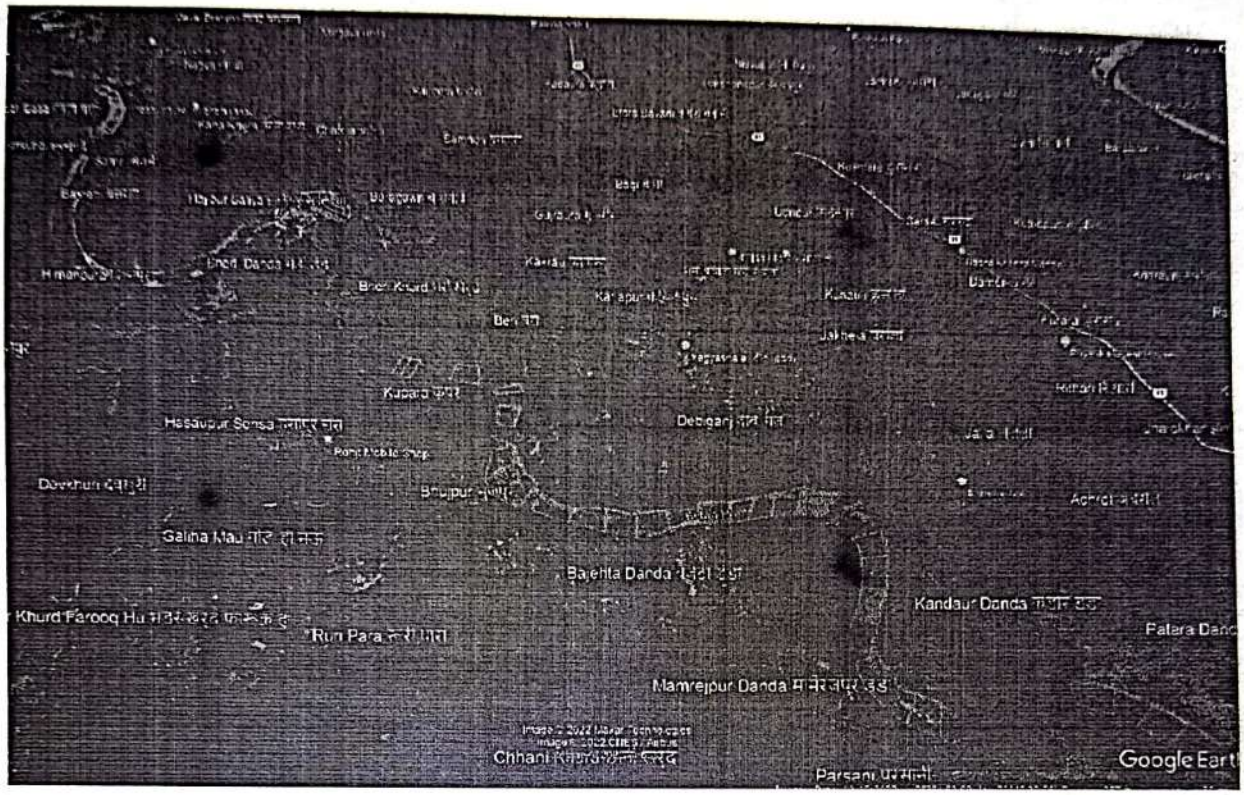
4.2.1 Estimation of Resource Quantity:

The quantity of sand pre-existing before the start of survey was estimated by taking the difference between average RL of the river bed and the maximum RL obtained from the DTMs. The quantity estimates are given in section 4.3.

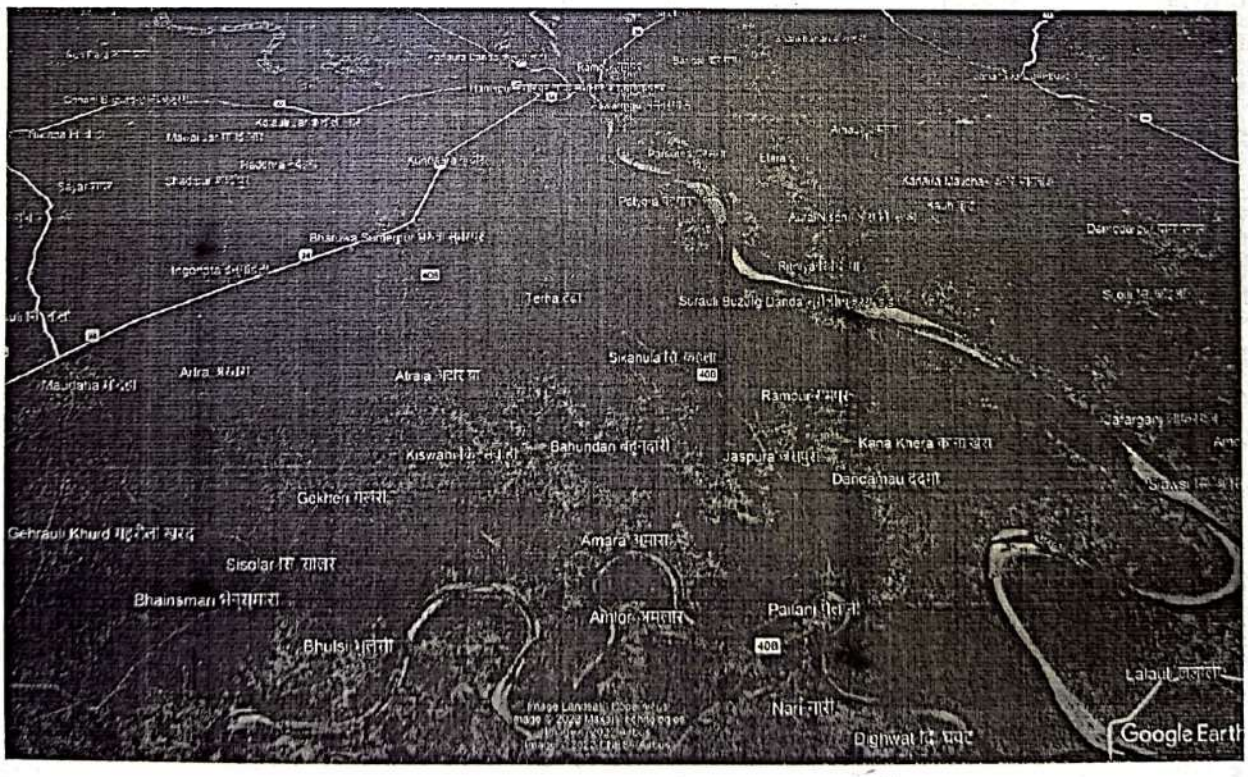




Khands At Dhasan and Betwa River Hamirpur



Khands At Betwa River Hamirpur



Khands At Yamuna,Betwa And Ken River Hamirpur

4.3 Estimation of Mineral Resources:

The amount of replenishment is calculated based on the digital terrain model i.e dtm through drone survey in pre-monsoon and post-monsoon seasons over the area of consideration. The same has been represented in the table 4.1 and 4.2.

Pre-monsoon resources i.e. Before the start of survey, the sand resource available has been computed based on rl (which is 0.3mt above the water level) of pre-monsoon during june, 2022. The same has been represented in the table 4.2. Resource available at mine lease has been calculated as sum of resource available at pre-monsoon level and sand replenished after post-monsoon.

Table 4.1 Calculation of Sand Replenishment

Sr. no.	River	Village	Ghat No./Khand	Area of Mine Lease (Ha)	Replenished Quantity (Cum) in Mine Lease
1	Betwa	Beri	Beri 10/33	20.242	80199.95
2		Beri	Beri 10/1	36.437	191272.8
3		Beri	Beri 10/22	32.2	532671
4		Beri	Beri 10/5	36.437	208769.4
5		Beri	Beri 10/29	12.145	25036.84
6		Beri	Beri 10/2	36.437	54300.21
7		Beri	Beri 10/26	36.437	54300.21
8		Beri	Beri 10/6	36.437	212709.8
9		Beri	Beri 10/21	31.578	72119.33
10		Beri	Beri 23/30	12.145	28413.16
11		Beri	Beri 10/3	36.437	183676.6
12		Beri	Beri 10/30	12.145	50333.05
13		Beri	Beri 10/20	30.364	49786.65
14		Beri	Beri 10/4	36.437	187720.2
15		Beri	Beri 23/27	24.291	130778.7
16		Kandour	Kandour 9/1	30.769	43731.36
17		Kandour	Kandour 9/3	30.769	154530.4
18		Kandour	Kandour 9/2	29.149	68479.04
19		Sahurapur	Sahurapur 18/1	36.437	193586.5
20		Sahurapur	Sahurapur 18/3	36.437	179269.7
21		Tikapur	Tikapur 20/1	12.145	36927.72
22		Tikapur	Tikapur 19/6	36.437	630647.9
23		Tikapur	Tikapur 20/4	33.198	637554.3
24		Tikapur	Tikapur 20/7	24.291	331555.5
25		Tikapur	Tikapur 20/6	24.291	133839.2
26		Tikapur	Tikapur 20/5	36.347	242315.3
27		Bhedi kharka	Bhedi kharka 23/13	12.145	56247.73
28		Bhedi kharka	Bhedi kharka 23/7	12.145	58610.4

Sr. no.	River	Village	Ghat No./Khand	Area of Mine Lease (Ha)	Replenished Quantity (Cum) in Mine Lease
29		Bhedi kharka	Bhedi kharka 23/14	24.291	148189.1
30		Bhedi kharka	Bhedi kharka 23/20	12.145	22515.16
31		Bhedi kharka	Bhedi kharka 23/19	12.145	26074.95
32		Bhedi kharka	Bhedi kharka 23/16	36.437	199294
33		Bhedi kharka	Bhedi kharka 23/8	24.291	126576.2
34		Bhedi kharka	Bhedi kharka 23/21	24.291	136715.1
35		Riruaa Basriya	Riruaa Basriya 22/5	23	118177.4
36		Riruaa Basriya	Riruaa Basriya 22/14	24.291	118385.5
37		Riruaa Basriya	Riruaa Basriya 22/4	22	204690.7
38		Riruaa Basriya	Riruaa Basriya 22/6	23	206002.5
39		Riruaa Basriya	Riruaa Basriya 22/7	12	51686.07
40		Riruaa Basriya	Riruaa Basriya 22/12	12.145	36232.46
41		Riruaa Basriya	Riruaa Basriya 22/2	14	119187.1
42		Chikasi	Chikasi 24/9	36.4371	248198
43		Chikasi	Chikasi 24/18	36.437	310742.9
44		Chikasi	Chikasi 24/13	36.437	436596.2
45		Chikasi	Chikasi 24/17	36.437	221215.2
46		Chikasi	Chikasi 24/8	36.437	220161.4
47		Chikasi	Chikasi 24/14	36.437	274977
48		Chikasi	Chikasi 24/12	8.316	87444.33
49		Chikasi	Chikasi 24/15	36.437	242338.3
50		Chandwari Ghurouli	Chandwari Ghurouli 26/5	36.437	233041.1
51		Chandwari Ghurouli	Chandwari Ghurouli 26/3	24.291	157839
52		Chandwari Ghurouli	Chandwari Ghurouli 26/6	36.437	224338.8
53		Chandwari Ghurouli	Chandwari Ghurouli 26/8	36.437	217085.8
54		Chandwari Ghurouli	Chandwari Ghurouli 26/7	36.437	229991.3
55		Chandwari Ghurouli	Chandwari Ghurouli 26/1	24.291	154466.1
56		Chandout	Chandout 21/1	16	86608.36
57		Badera Khalsa	Badera Khalsa 9	24.291	162695.8
58	Dhasan	Tola Khangaran	Tola Khangaran 4	21	291952.1
59		Tola Khangaran	Tola Khangaran 5	13	140272.3
60		Tola Khangaran	Tola Khangaran 6	21	201225.2
61	Ken	Bhulsi	Bhulsi 30/2	36.437	302521.3
62		Bhulsi	Bhulsi 30/3	36.437	310945.6

Sr. no.	River	Village	Ghat No./Khand	Area of Mine Lease (Ha)	Replenished Quantity (Cum) in Mine Lease
63		Bhulsi	Bhulsi 30/10	36.437	306285.6
64		Bakshakhadar	Bakshakhadar 29/3	12.145	102867
65	Yamuna	Patyoura	Patyoura 31/3	36.437	240573.4
66		Patyoura	Patyoura 31/4	36.437	229727.3
67		Patyoura	Patyoura 31/5	36.437	263110.6
68		Patyoura	Patyoura 31/7	36.437	238599
69		Patyoura	Patyoura 31/8	36.437	234371.1

Table No: 4.2 Estimated Volume of Mine Leases of Hamirpur District for season ending 2022

Sr. no.	River	Village	Ghat No./Khand	Area of Mine Lease (Ha)	Replenished Quantity (Cum) in Mine Lease	Resource quantity Pre-Monsoon in Mine Lease (Cum)	Total quantity in Mine Lease (Cum)
1	Betwa	Beri	Beri 10/33	20.242	80199.95	250519.1	330719
2		Beri	Beri 10/1	36.437	191272.8	398518.2	589791
3		Beri	Beri 10/22	32.2	532671	430098	962769
4		Beri	Beri 10/5	36.437	208769.4	381021.7	589791.1
5		Beri	Beri 10/29	12.145	25036.84	54706.16	79743
6		Beri	Beri 10/2	36.437	54300.21	77578.79	131879
7		Beri	Beri 10/26	36.437	54300.21	77578.79	131879
8		Beri	Beri 10/6	36.437	212709.8	377081.2	589791
9		Beri	Beri 10/21	31.578	72119.33	187354.7	259474
10		Beri	Beri 23/30	12.145	28413.16	75617.87	104031
11		Beri	Beri 10/3	36.437	183676.6	406114.4	589791
12		Beri	Beri 10/30	12.145	50333.05	150850	201183
13		Beri	Beri 10/20	30.364	49786.65	108913.3	158700
14		Beri	Beri 10/4	36.437	187720.2	402070.8	589791
15		Beri	Beri 23/27	24.291	130778.7	264708.3	395487
16		Kandour	Kandour 9/1	30.769	43731.36	97317.64	141049
17		Kandour	Kandour 9/3	30.769	154530.4	344584.6	499115
18		Kandour	Kandour 9/2	29.149	68479.04	171565	240044
19		Sahurapur	Sahurapur 18/1	36.437	193586.5	396204.5	589791

Sr. no.	River	Village	Ghat No./Khand	Area of Mine Lease (Ha)	Replenished Quantity (Cum) in Mine Lease	Resource quantity Pre-Monsoon in Mine Lease (Cum)	Total quantity in Mine Lease (Cum)
20		Sahurapur	Sahurapur 18/3	36.437	179269.7	410521.3	589791.1
21		Tikapur	Tikapur 20/1	12.145	36927.72	164255.3	201183
22		Tikapur	Tikapur 19/6	36.437	630647.9	246447.9	877095.7
23		Tikapur	Tikapur 20/4	33.198	637554.3	240363	877917.4
24		Tikapur	Tikapur 20/7	24.291	331555.5	63931.51	395487
25		Tikapur	Tikapur 20/6	24.291	133839.2	261647.8	395487
26		Tikapur	Tikapur 20/5	36.347	242315.3	347475.7	589791
27		Bhedi kharka	Bhedi kharka 23/13	12.145	56247.73	144935.3	201183
28		Bhedi kharka	Bhedi kharka 23/7	12.145	58610.4	142572.6	201183
29		Bhedi kharka	Bhedi kharka 23/14	24.291	148189.1	247297.9	395487
30		Bhedi kharka	Bhedi kharka 23/20	12.145	22515.16	65329.84	87845
31		Bhedi kharka	Bhedi kharka 23/19	12.145	26074.95	77956.05	104031
32		Bhedi kharka	Bhedi kharka 23/16	36.437	199294	390497	589791
33		Bhedi kharka	Bhedi kharka 23/8	24.291	126576.2	268910.8	395487
34		Bhedi kharka	Bhedi kharka 23/21	24.291	136715.1	258771.9	395487
35		Riruaa Basriya	Riruaa Basriya 22/5	23	118177.4	256655.6	374833
36		Riruaa Basriya	Riruaa Basriya 22/14	24.291	118385.5	277101.5	395487
37		Riruaa Basriya	Riruaa Basriya 22/4	22	204690.7	154144.3	358835
38		Riruaa Basriya	Riruaa Basriya 22/6	23	206002.5	126198.6	332201.1
39		Riruaa Basriya	Riruaa Basriya 22/7	12	51686.07	147192.9	198879
40		Riruaa Basriya	Riruaa Basriya 22/12	12.145	36232.46	67796.54	104029
41		Riruaa Basriya	Riruaa Basriya 22/2	14	119187.1	111691.9	230879

Sr. no.	River	Village	Ghat No./Khand	Area of Mine Lease (Ha)	Replenished Quantity (Cum) in Mine Lease	Resource quantity Pre-Monsoon in Mine Lease (Cum)	Total quantity in Mine Lease (Cum)
42		Chikasi	Chikasi 24/9	36.4371	248198	487321	735519
43		Chikasi	Chikasi 24/18	36.437	310742.9	424776.1	735519
44		Chikasi	Chikasi 24/13	36.437	436596.2	298922.8	735519
45		Chikasi	Chikasi 24/17	36.437	221215.2	514303.8	735519
46		Chikasi	Chikasi 24/8	36.437	220161.4	515357.6	735519
47		Chikasi	Chikasi 24/14	36.437	274977	460542	735519
48		Chikasi	Chikasi 24/12	8.316	87444.33	44174.67	131619
49		Chikasi	Chikasi 24/15	36.437	242338.3	493180.7	735519
50		Chandwari Ghurouli	Chandwari Ghurouli 26/5	36.437	233041.1	502477.9	735519
51		Chandwari Ghurouli	Chandwari Ghurouli 26/3	24.291	157839	334787	492626
52		Chandwari Ghurouli	Chandwari Ghurouli 26/6	36.437	224338.8	511180.2	735519
53		Chandwari Ghurouli	Chandwari Ghurouli 26/8	36.437	217085.8	518433.2	735519
54		Chandwari Ghurouli	Chandwari Ghurouli 26/7	36.437	229991.3	505527.7	735519
55		Chandwari Ghurouli	Chandwari Ghurouli 26/1	24.291	154466.1	343441	497907.2
56		Chandout	Chandout 21/1	16	86608.36	211134.1	297742.4
57		Badera Khalsa	Badera Khalsa 9	24.291	162695.8	142681.3	305377.1
58	Dhasan	Tola Khangaran	Tola Khangaran 4	20.670	405366	135197	540562
59		Tola Khangaran	Tola Khangaran 5	13	140272.3	132300.6	272572.9
60		Tola Khangaran	Tola Khangaran 6	21	201225.2	140156.7	341382
61	Ken	Bhulsi	Bhulsi 30/2	36.437	302521.3	353205.1	655726.4
62		Bhulsi	Bhulsi 30/3	36.437	310945.6	523620.3	834565.9
63		Bhulsi	Bhulsi 30/10	36.437	306285.6	282256.5	588542.2
64		Bakshakhadar	Bakshakhadar 29/3	12.145	102867	201646	304513
65	Yamuna	Patyoura	Patyoura 31/3	36.437	240573.4	328790.5	569363.9
66		Patyoura	Patyoura 31/4	36.437	229727.3	299265.2	528992.5
67		Patyoura	Patyoura 31/5	36.437	263110.6	366941.1	630051.7
68		Patyoura	Patyoura 31/7	36.437	238599	436800.2	675399.2
69		Patyoura	Patyoura 31/8	36.437	234371.1	453354.8	687725.9

5.0 Summary and Conclusions

i. To determine sand replenished in two rivers (Betwa,Yamuna,Ken And Dhasan) of Hamirpur district i.e. measurement of river bed level at 08 no's locations were undertaken both in pre- monsoon and post-monsoon seasons. The sand samples were collected for grain size distribution analysis.

ii. The estimation of sand deposit is based on the difference between pre-monsoon and post monsoon RL and river level recorded in the area.

iii. The summary of drone survey is as given under:

a) Highest percentage of sand replenishment is observed in Tola Khangaran 4 mine lease at Dhasan river.
b) Lowest percentage of sand replenishment is observed in Kandour 9/1, at Betwa River.

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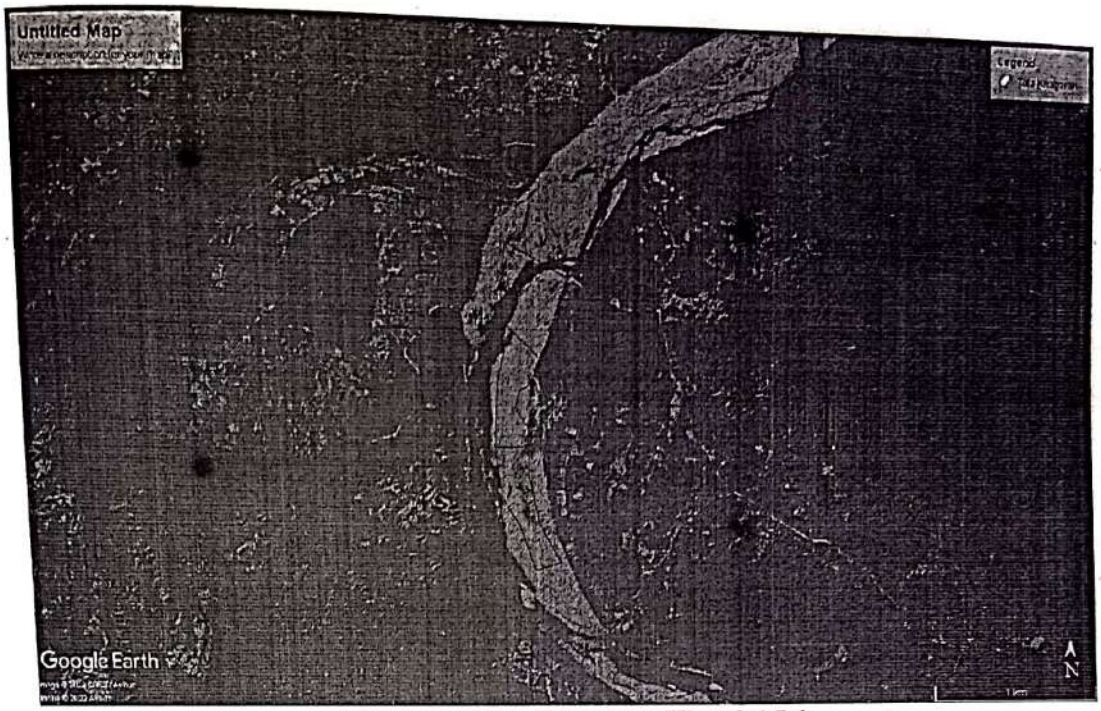
Annexure I: Satellite Imagery Of 69 Strategic Mine Leases In Hamirpur District

SL No.	District	River	Village	khand	Area(Ha)	Anual capacity (Cub. meter)
1	Hamirpur	Betwa	Beri	10/33	20.242	305573
2	Hamirpur	Betwa	Beri	10/1	36.437	5,82,912
3	Hamirpur	Betwa	Beri	10/22	36.437	5,82,913
4	Hamirpur	Betwa	Beri	10/5	36.437	5,82,914
5	Hamirpur	Betwa	Beri	10/29	12.145	183341
6	Hamirpur	Betwa	Beri	10/2	36.437	5,82,912
7	Hamirpur	Betwa	Beri	10/26	36.437	550053
8	Hamirpur	Betwa	Beri	10/6	36.437	5,82,912
9	Hamirpur	Betwa	Beri	10/21	31.578	5,05,190
10	Hamirpur	Betwa	Beri	23/30	12.145	1,94,304
11	Hamirpur	Betwa	Beri	10/3	36.437	5,82,912
12	Hamirpur	Betwa	Beri	10/30	12.145	1,94,304
13	Hamirpur	Betwa	Beri	10/20	30.364	4,85.760
14	Hamirpur	Betwa	Beri	10/4	36.437	5,82,912
15	Hamirpur	Betwa	Beri	23/27	24.291	3,88,608
16	Hamirpur	Betwa	Kandour	9/1	30.769	464489
17	Hamirpur	Betwa	Kandour	9/3	30.769	464489
18	Hamirpur	Betwa	Kandour	9/2	29.149	440033
19	Hamirpur	Betwa	Sahurapur	18/1	36.437	550053
20	Hamirpur	Betwa	Sahurapur	18/3	36.437	550053
21	Hamirpur	Betwa	Tikapur	20/1	12.145	1,94,304
22	Hamirpur	Betwa	Tikapur	19/6	36.437	5,82,912
23	Hamirpur	Betwa	Tikapur	20/4	33.198	5,31,098
24	Hamirpur	Betwa	Tikapur	20/7	24.291	3,88.608
25	Hamirpur	Betwa	Tikapur	20/6	24.291	3,88.608
26	Hamirpur	Betwa	Tikapur	20/5	36.347	5,82,912
27	Hamirpur	Betwa	Bhedi kharka	23/13	12.145	1,94,304
28	Hamirpur	Betwa	Bhedi kharka	23/7	12.145	1,94,305
29	Hamirpur	Betwa	Bhedi kharka	23/14	24.291	3,88,608
30	Hamirpur	Betwa	Bhedi kharka	23/20	12.145	1,94,304

31	Hamirpur	Betwa	Bhedi kharka	23/19	12.145	1.94,304
32	Hamirpur	Betwa	Bhedi kharka	23/16	36.437	5,82,912
33	Hamirpur	Betwa	Bhedi kharka	23/8	24.291	3.88,608
34	Hamirpur	Betwa	Bhedi kharka	23/21	24.291	3,88,608
35	Hamirpur	Betwa	Riruaa Basriya	22/5	23.000	367954
36	Hamirpur	Betwa	Riruaa Basriya	22/14	24.291	3,88,608
37	Hamirpur	Betwa	Riruaa Basriya	22/4	22.000	351956
38	Hamirpur	Betwa	Riruaa Basriya	22/6	23.000	367954
39	Hamirpur	Betwa	Riruaa Basriya	22/7	12.000	191976
40	Hamirpur	Betwa	Riruaa Basriya	22/12	12.145	1,94,304
41	Hamirpur	Betwa	Riruaa Basriya	22/2	24.291	388607
42	Hamirpur	Betwa	Chikasi	24/9	11.000	219967
43	Hamirpur	Betwa	Chikasi	24/18	36.437	728631
44	Hamirpur	Betwa	Chikasi	24/13	36.437	728631
45	Hamirpur	Betwa	Chikasi	24/17	36.437	728631
46	Hamirpur	Betwa	Chikasi	24/8	20.000	399940
47	Hamirpur	Betwa	Chikasi	24/14	36.437	728631
48	Hamirpur	Betwa	Chikasi	24/12	36.437	728631
49	Hamirpur	Betwa	Chikasi	24/15	36.437	728631
50	Hamirpur	Betwa	Chandwari Ghurouli	26/5	36.437	728631
51	Hamirpur	Betwa	Chandwari Ghurouli	26/3	24.291	485747
52	Hamirpur	Betwa	Chandwari Ghurouli	26/6	36.437	728631
53	Hamirpur	Betwa	Chandwari Ghurouli	26/8	36.437	728631
54	Hamirpur	Betwa	Chandwari Ghurouli	26/7	36.437	728631
55	Hamirpur	Betwa	Chandwari Ghurouli	26/1	24.291	485747
56	Hamirpur	Betwa	Chandout	21/1	16.000	255968
57	Hamirpur	Betwa	Badera Khalsa	9	24.291	388607
58	Hamirpur	Dhasan	Tola Khangaran	4	21.000	335958
59	Hamirpur	Dhasan	Tola Khangaran	5	13.000	207974
60	Hamirpur	Dhasan	Tola Khangaran	6	21.000	335958
61	Hamirpur	Ken	Bhulsi	30/2	36.437	5,82,912
62	Hamirpur	Ken	Bhulsi	30/3	36.437	5.82,912
63	Hamirpur	Ken	Bhulsi	30/10	36.437	3,23,840
64	Hamirpur	Ken	Bakshakhadar	29/3	12.145	1,94,304
65	Hamirpur	Yamuna	Patyoura	31/3	36.437	7,28,640
66	Hamirpur	Yamuna	Patyoura	31/4	36.437	7,28,640
67	Hamirpur	Yamuna	Patyoura	31/5	36.437	7,28,640
68	Hamirpur	Yamuna	Patyoura	31/7	36.437	7,28,640
69	Hamirpur	Yamuna	Patyoura	31/8	36.437	7,28,640



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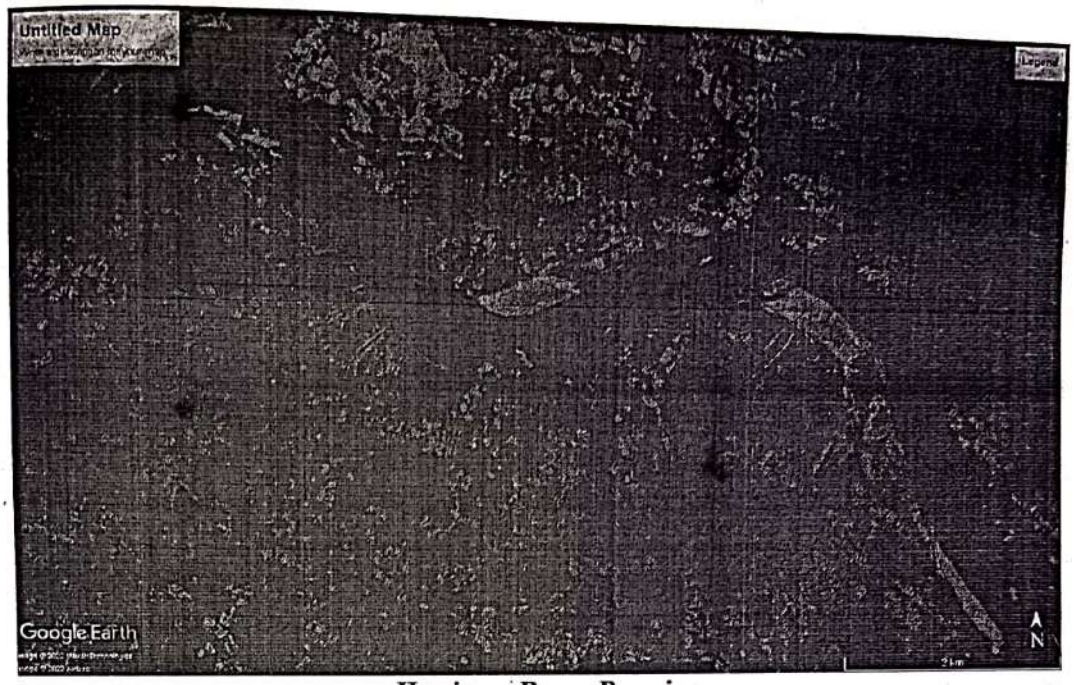
Hamirpur - Sahorapur



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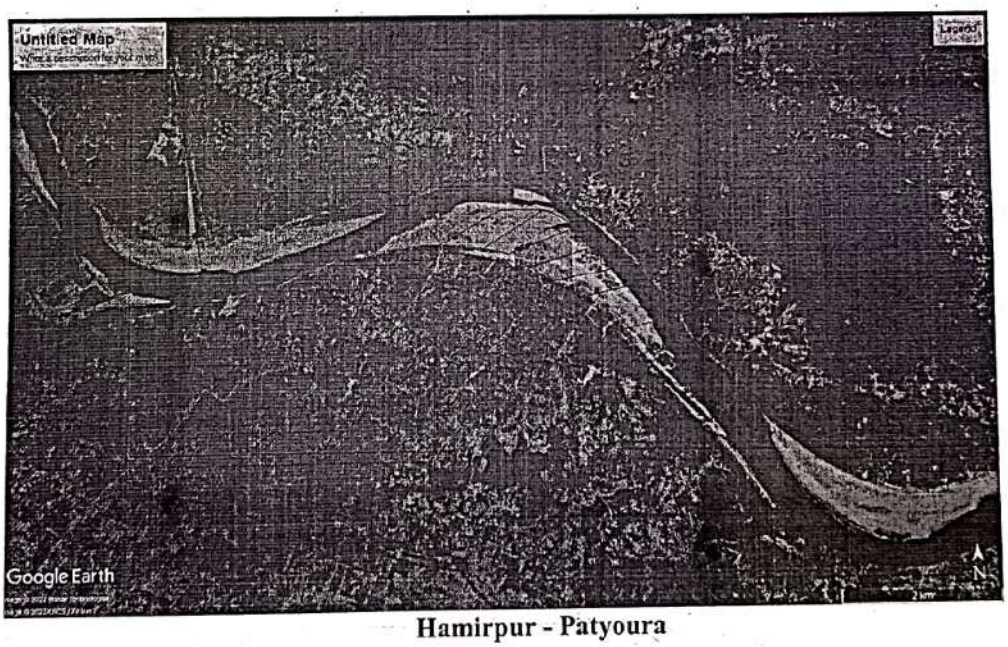

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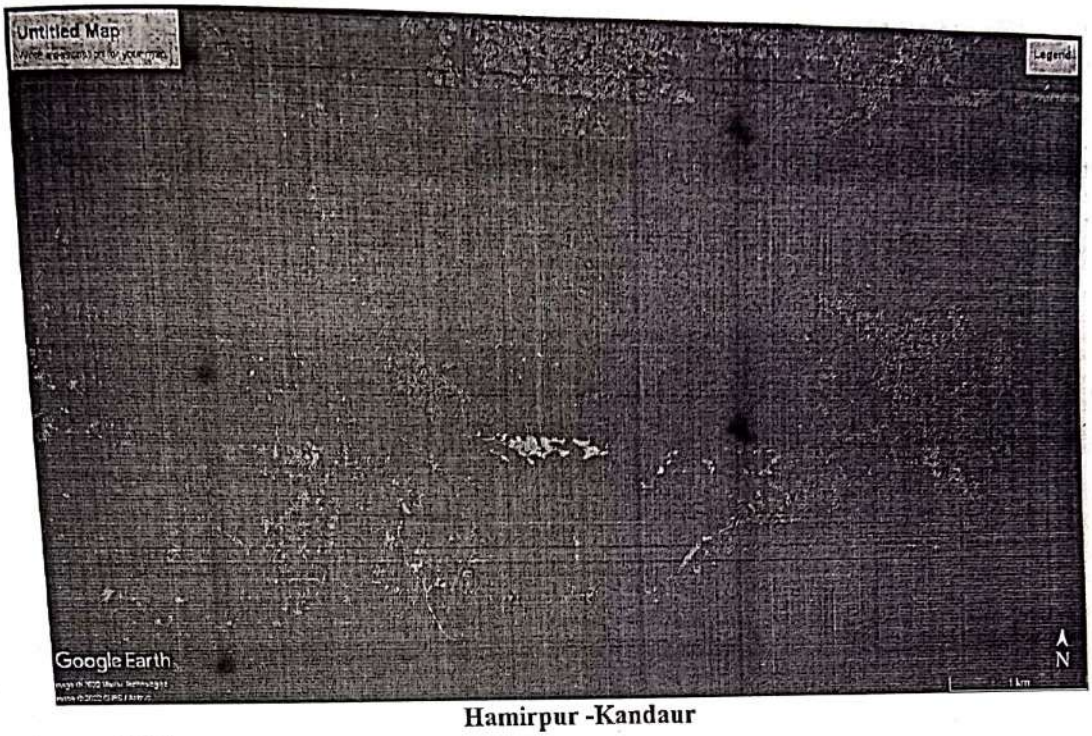

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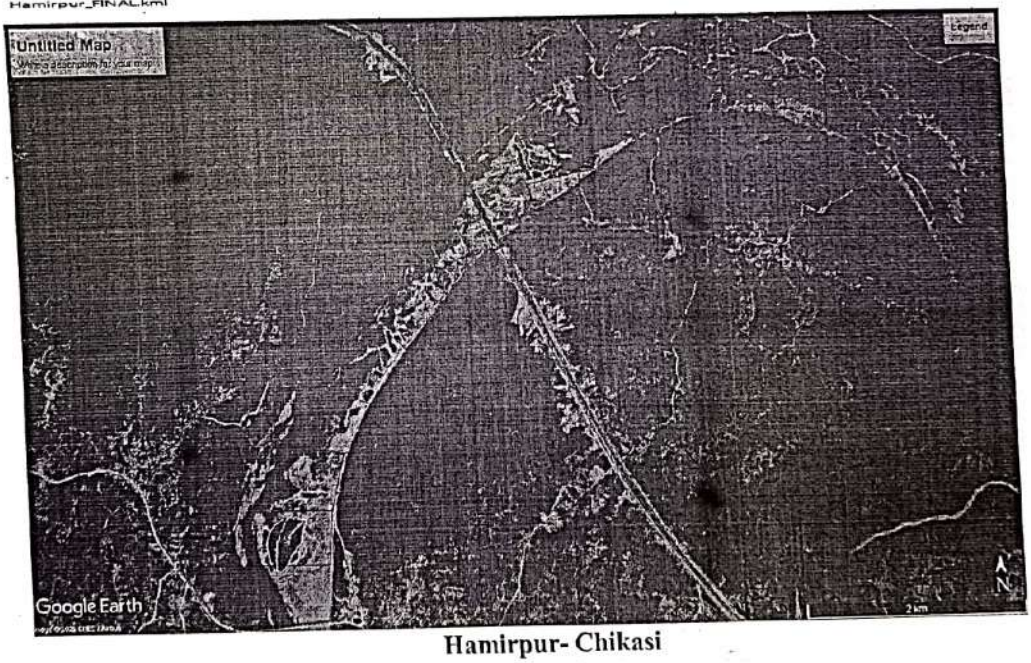

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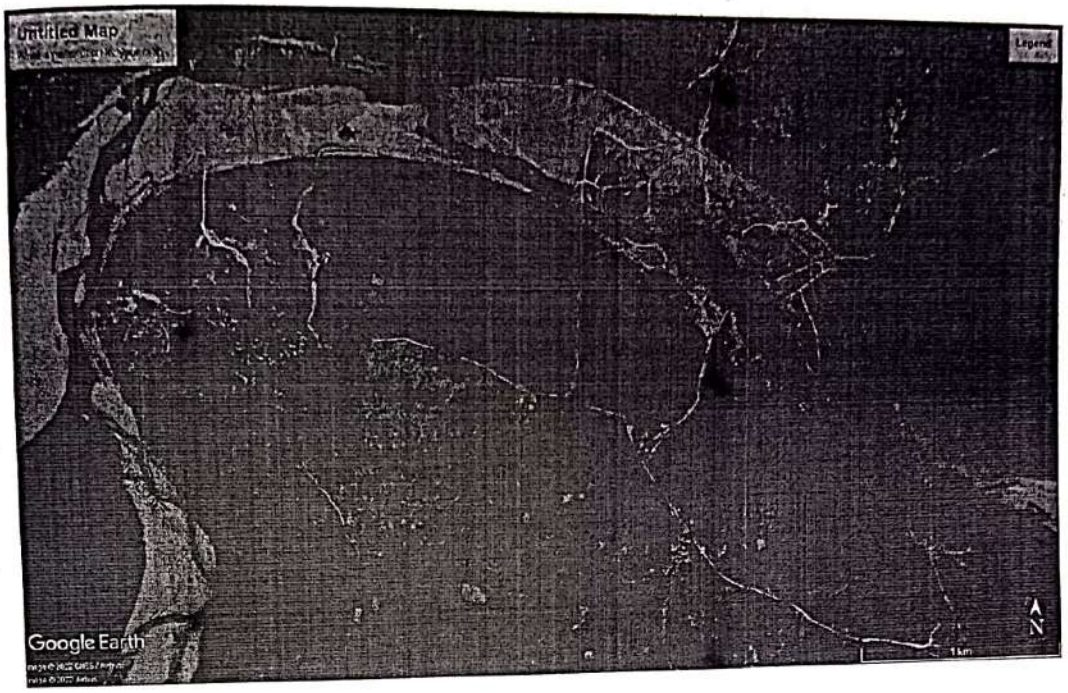

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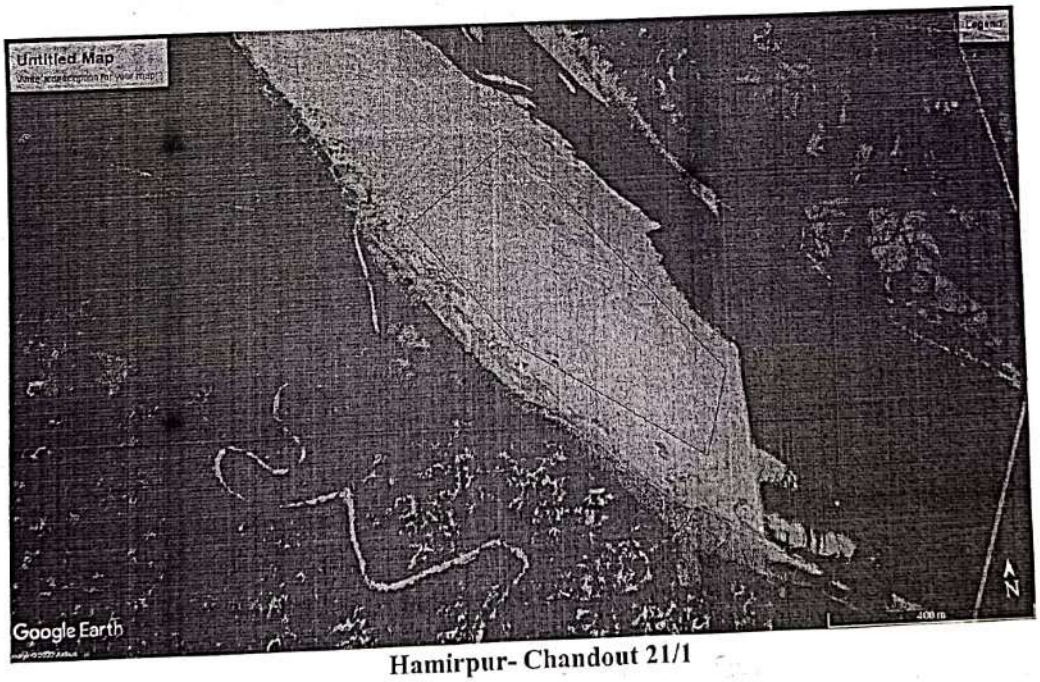
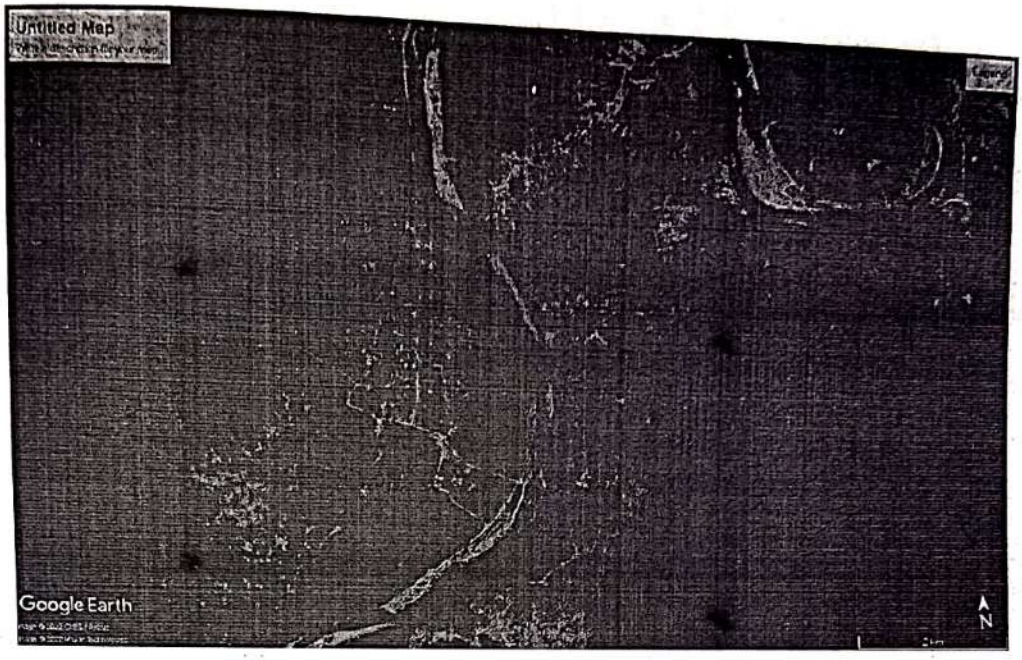


Hamirpur- Chandout 21/1



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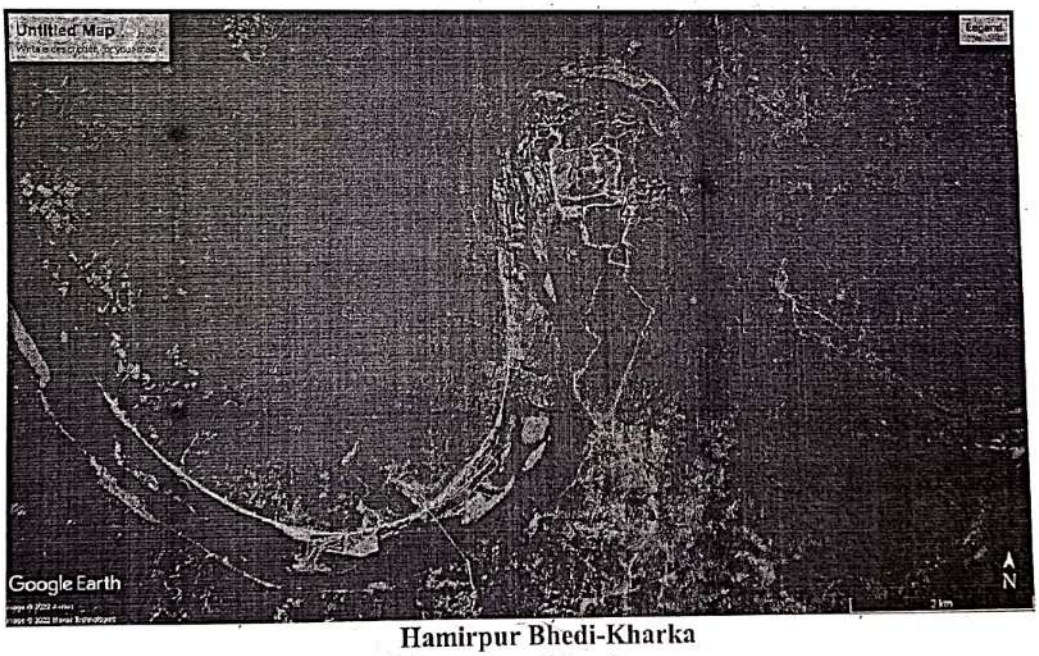

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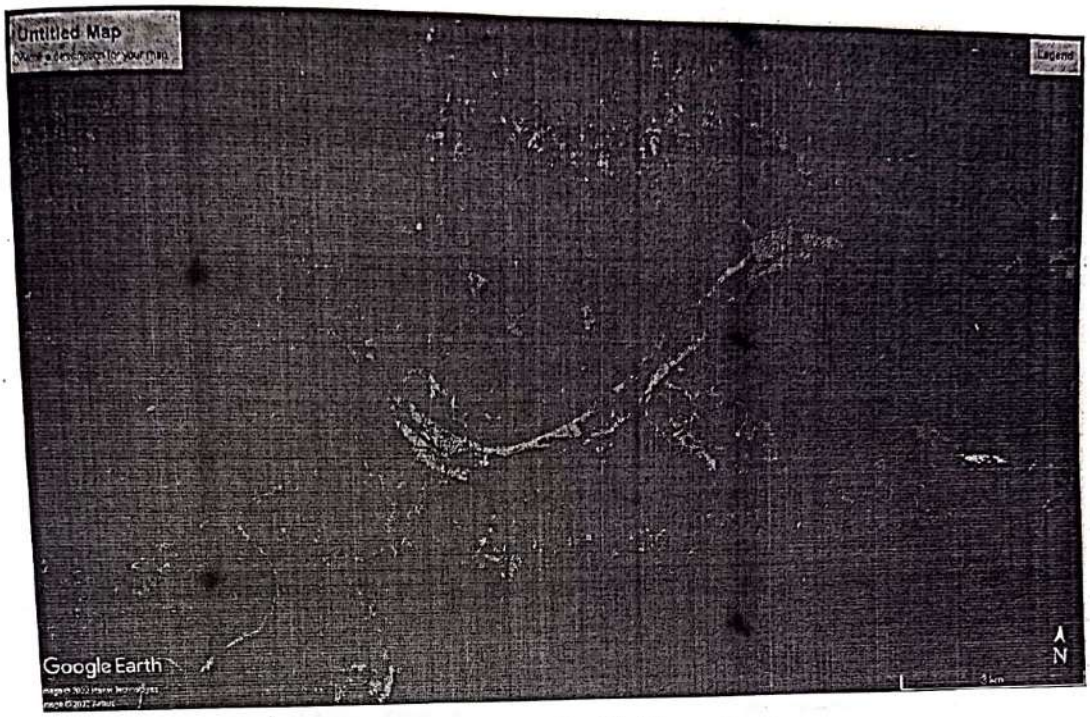
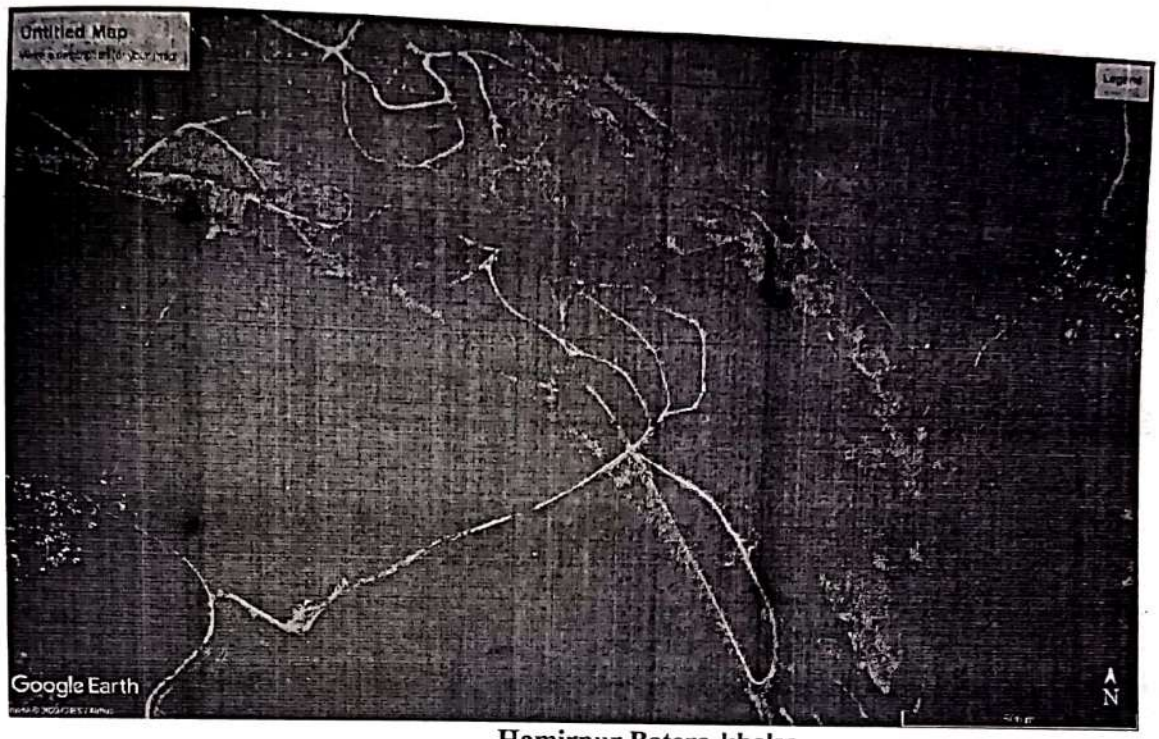


Hamirpur_Beri & Tikapur

Hamirpur Bhaksha-Khadar



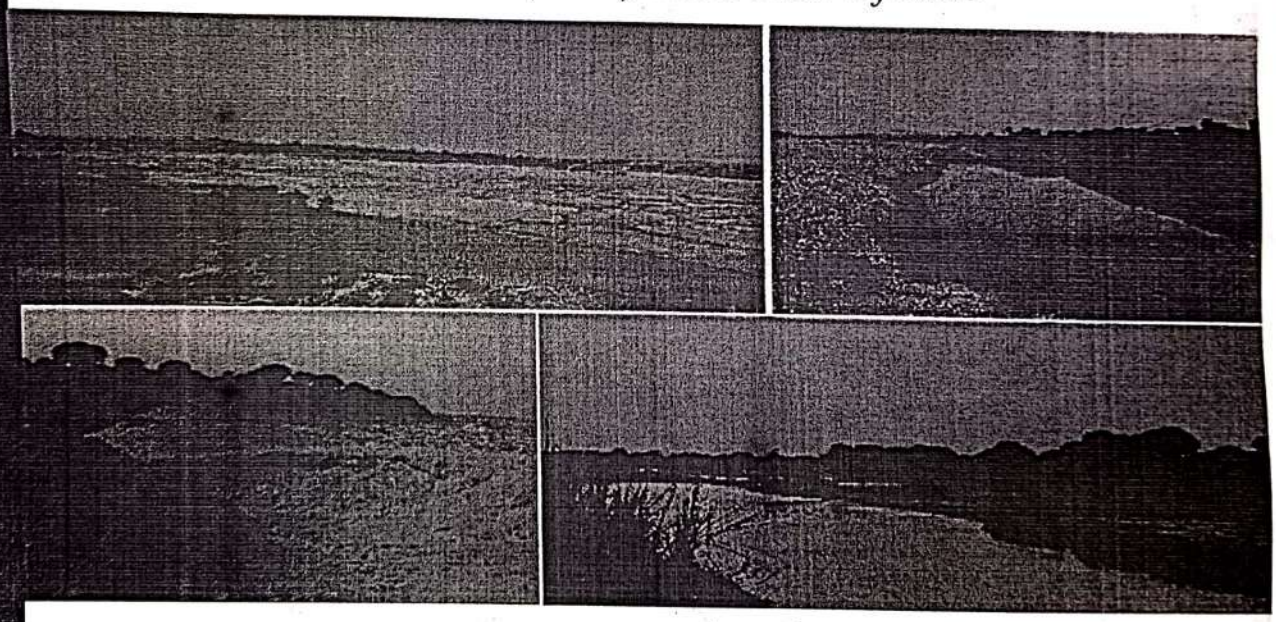
Hamirpur Batera-khalsa

Annexure II:

Proposed Methodology For Sand Replenishment-CMPDI

Methodology for Sand Replenishment Study

In Pursuance To Hon'ble Supreme Court Of India's Order Dated 11/11/2021 In S.L.P. (Civil) No. 10587 Of 2019



Prepared By
Central Mine Planning & Design InstituteLimited

January, 2022

cmpdi
A Mini Ratna Company

METHODOLOGY FOR SAND REPLENISHMENT STUDY

1. PREAMBLE

Moefcc, Government Of India, Has Requested CMPDI Vide Its Letter No. L-11011/119/2019-IA.II(M) Dated 30/11/2021, To Furnish The Detailed Methodology For Replenishment In Pursuant To Hon'ble Supreme Court Of India's Order Dated 11/11/2021 In
S.L.P. (Civil) No. 10587 Of 2019 In The Matter Of Bajri Lease Loi Welfare Society *Vs.* StateOf Rajasthan And Others. The Copy Of The Letter Is Attached As Annexure-I. CMPDI Has Undertaken Sand Replenishment Study For Several Rivers In The State Of Rajasthan And ForOne Mine Lease In Yamuna River In The State Of UP. It Has Also Undertaken Sand Replenishment Study In The Banda District Of UP For Ken, Bagein & Yamuna Rivers And The Study Is Under Progress.

The Observations Of CMPDI, Based On The Experience Gathered During Fieldwork, Are As Under:

i. The Sand Mining In The Rivers Should Be Solely Based On The Criteria Of Protecting TheRiver Eco-System And Preservation Of The River Morphology Because Rivers Are The Lifeline Of The Area Through Which They Pass.
ii. Due To Erratic Rainfall, The Rivers Are Ephemeral In Nature And Therefore There Is NeedTo Look At The Issue Of Replenishment Of These Rivers From Different Perspective. The Rivers Are Not Replenished Annually As Is The Case Of Perennial Rivers And Therefore The Concept Of Annual Replenishment Based Mine Capacity Does Not Apply For Such Rivers. There Is A Need To Consider For Change Of The Policy Appropriately Applicable For Annual Replenishment Of Rivers *Vis-À-Vis* Mine Capacity Permits. The Mine Capacity Should Be Based On The Sand Replenishment Studies.
iii. There May Be Appreciable Variation In The Amount Of Replenishment Of The Rivers In The State Of Rajasthan. This Is Primarily Due To Erratic And Uncertainty In The Occurrence Of Rainfall In The State. Thus, The Replenishment Achieved At One Point OfTime May Not Be Utilized Over More Than A Year. This Factor Needs To Be Considered While Planning For The Capacity Of Mines In The State. Linking To Annual Production With Annual Replenishment Of The Rivers In The State Of Rajasthan May Not Be A Practical Approach. In Addition, The Type Of Replenishment Is Not Same For All The Rivers, Which Also Needs To Be Accounted For.
iv. In Case Of Perennial Rivers As Well, The Replenishment Across The Width Of The River IsNot Uniform Due To Variation In The Flow. Flow Is Restricted To Certain Deeper Portion Of The River And Most Part Of River Remains As Dry Riverbed. This Also Needs To Be Accounted For.
v. During Mining, There Are Uneven Excavations Which Has Changed The River Morphology And Replenishment Pattern. In Addition, The Pebbles, Overburden Material *Etc.* Are Dumped At Riverbed, Which Further Affects The River Morphology AndAffects Replenishment And Flow Pattern.

vi. Due To Non-Availability Of Sand, There Is Possibility That Many Mine Leaseholders May Withdraw Themselves From Mining Thus Affecting The Business And Revenue To The State Exchequer. This Will Also Affect The Country's Requirement Of Sand For Various Purposes.

vii. The Riverbed Sand Helps In Protection Of The Sub-Surface Flow, Which Supports The Ground Water Recharge And Helps To Maintain The Sub-Surface Water Regime EssentialFor The River Ecology. The Planning For Sand Mining Should *Interalia* Take Into AccountThe Protection Of Sub-Surface Flow For All The Projects.

viii. The Transportation Of Sand Poses Additional Load On The Traffic Density Of Existing Transportation Routes, Leading To Air Pollution And Traffic Congestion. Study Of Traffic Density Of Transportation Road And Alternate Transportation Routes Needs To Be Considered.

ix. Sand Extraction Takes Place From Various Stretches Of The River And Is Not Uniform Across The Width Of The River. Choice Of Mining Locations Depends On Sand AvailabilityAnd Convenience For Transportation Without Taking Care Of Its Effects On River EcologyOr Nearby Human Habitation. Sand Mining Affects The Riparian Community And This Needs To Be Accounted For.

x. There Is A Need To Consider The Concept Of ***Resource Accounting*** Of Bajri/Sand In TheRivers And Take The Replenishment As A Measure For Resource Augmentation. The Permissible Level Of Bajri/Sand In Each Stretch Needs To Be Identified Every Year. TheResource Augmentation Based On The Replenishment Of The River Should Be Added Into It For Updating The Bajri/Sand Stock. Based On This Estimation, Quantum Of Further Permits May Be Decided By Government.

xi. Effective Enforcement And Monitoring Of The Policy And Program Is Key To Promote Sustainable Sand Mining. The State DMG Need To Be Properly Staffed And Capacity Building Undertaken.

2. METHODOLOGY FOR SAND REPLENSIHMENT STUDY

Based On The Above Observations, The Following Methodology Is Being Suggested For TheSand Replenishment Study:

i. For All The Proposed Potential And Existing Sand Mining Stretches, There Is A Need To Determine The Base Flow Water Level/Saturation Level (Phreatic Line) Before The Onset Of Monsoon. It Is Suggested That Mining Should Be Permitted Above 0.30 M To 1.00 M From The Saturation Level. Dry Sand, 0.3 To 1 M Above The Saturation Zone (Where Sand Is Wet) Can Be Permitted To Be Excavated In The Demarcated Area For A Year In 5-Year Life Span. *For Example, If The Depth OfSand Is 1.3 M Above Saturation Level In The River, Then Mining Upto 1.0 M From The Surface May Be Allowed.* If This Zone (Saturation) Is Less Than 1.3 M From TopOf The Surface, Permission Be Restricted To Less Than 1 M Or Less According To Saturation Zone Availability Leaving Clear Margin Of 0.3 M Above Saturation Zone. This Will Act As A Sand Blanket And Buffer For The Sub-Surface Flow Regime And Help In Protection Of River

Ecology And Surrounding Water Regime.

ii. One Approach To Determine Sand Replenishment Is To Measure Pre-Monsoon And Post-Monsoon RL Of The River Bed Level Cross-Section And Estimate The NetDeposition. For Cross Sectional Survey, The Reduced Level (RL) Measurement MustBe Done Across Following Locations:

- 100 M Upstream Of The Potential Lease Area,
- Within The Potential Mine Site, And
- 100 M Downstream Of The Potential Lease Area

Iii. The Above RL Measurements Must Be Carried Out At Minimum Three Locations Equidistance **Across The Riverbed/Width**

- For Mine Leases Up To 10 Ha, RL Measurement **Along The River Channel/Length** Should Be At Least At An Interval Of 100 M.
- For Mine Leases Having Area More Than 10 Ha, Such Measurement Should BeAt Least At An Interval Of 200 M

The RL Should Be Recorded Using Differential GPS (DGPS) Survey Instrument. Based On The Profile Of The Area Obtained, The Volumetric Assessment Of The MineralDeposited Within The Area Should Be Estimated.

iv. There Could Be Appreciable Variation In The Type Of Material Getting Deposited On The River Bed. It Is Therefore Recommended That Sample From Various Depth Like 0- 30 Cms, 30-90 Cms, 90-150 Cms And 150 Cms And Beyond Should Be Taken And Analyzed In The Laboratory To Determine The Reliable Reserve Of Sand For Mining. TheLithology Of The Area Will Enable To Plan For Disposal Of Other Material That Has BeenDeposited Over The Sand Bed. For Each Mine Site Upto 10 Ha, At Least Mineral Samples From Two Locations Should Be Collected For The Analysis For The Following Parameters:

i. Grain Size Distribution Analysis Should Be Undertaken For D_{10},D_{30}, D_{50}, D_{60},
ii. Uniformity Coefficient,
iii. Coefficient Of Curvature And Bulk Density.
iv. Samples Must Be Collected From Various Depth Like 0-30 Cms, 30-90 Cms, 90-150 Cms And 150 Cms And Beyond For Analysis In The Laboratory To DetermineThe Reliable Reserve Of Sand Considering Base Flow Level.

In Case Of Mines Beyond 10 Ha, For Increase In Every 5 Ha, An Additional Sample Must Be Collected For Above Mentioned Analysis & Tests.

v. The Empirical Equations Offers Another Approach For Determination Of Replenishment. The Flow Data Of The River Should Be Collected From Government Departments, Using Current Meters Or Through Other Means.

The Estimation Of Replenishment May Be Carried Out Based On Meyer-Peter's Formula Or Some OtherEmpirical Equations For Estimation Of Bed Load Transport. The Simplified Meyer Peter'S Equation (*Source: Irrigation Engineering & Hydraulic Structures By S.K. Garg)* For Reference Is As Follows:

$$g_b = 0.417[\tau_0 (n'/n)^{1.5} - \tau_c]^{1.5}$$

Where,

G_b = Rate Of Bed Load Transport (By Weight) In N Per M Width Of Channel Per Second

H' = Manning's Coefficient Pertaining To Grain Size On An Unrippled Bed And Strickler Formula *I.E.* H' = (1/24) X $D^{1/6}$ Where D Is The Median Size (D_{50}) Of The Bed Sediment In M.

H = The Actual Observed Value Of The *Rugosity Coefficient* On Rippled Channels. Its Value Is Generally Taken As 0.020 For Discharges Of More Than 11 Cumecs, And 0.0225 For Lower Discharges.

τ_c = Critical Shear Stress Required To Move The Grain In N/M^2 And Given By Equation $\tau_c = 0.687\ D_a$, Where D_a Is Mean Or Average Size Of The Sediment In Mm. This Arithmetic Average Size Is Usually Found To Vary Between D_{50}And D_{60}.

τ_0 = Unit Tractive Force Produced By Flowing Water *I.E.* Γ_{wrs}. Truly Speaking, Its Value Should Be Taken As The Unit Tractive Force Produced By The Flowing Water On Bed = $0.97\gamma_{wrs}$. R Is The Hydraulic Mean Depth Of The Channel (Depth Of Flow For Wider Channel) And S Is The Bed Slope

The Value Of Manning's Coefficient (H) Depends Upon Channel Condition And AlsoUpon Discharges. The Recommended Values Are Provided Hereunder.

Table-1: Recommended Values Of Manning's Coefficient (H) For UnlinedChannels

Sl. No.	Condition Of Channel	Value Of H
1	Very Good	0.0225
2	Good	0.025
3	Indifferent	0.0275
4	Poor	0.030

vi. Replenishment Study Through ETS/DGPS/Satellite Data/Drone Survey Is AnotherApproach That May Be Considered For Macro-Level Study Based On Feasibility. The Methodology For The Same Is Provided In Section-3 Of The Guidelines.

However, This Needs To Be Validated Against The Physical Observations And Replenishment Through Cross-Sectional Method.

vii. Due To Erratic Rainfall Pattern, The Expected Annual Replenishment May

Not Occur. The Mine Lease Permit Therefore, Should Be Given Based On The Minimum Replenishment Capacity And Not On The Maximum To Provide Sustainable Mineral Extraction. For Example, If The Replenishment Annually Varies From 2 M–4 M, Then The Capacity Allowed For Mineral Extraction Should Be Based On Replenishment Rate Of 2 M And Not 4 M For Allowing Extraction In A Phased And Sustainable Manner. This Will Allow Return Of Investment For Mine Leaseholder And Sustainable Source Of Revenue For The State Government.

viii. The Mine Plan Should Indicate The Stretches Of Mining To Be Undertaken In EachYear In A Particular Leasehold Area. This Shall Allow Mining Operations In A Phased And Systematic Manner. The Stretch Of The River Where Mining Has BeenUndertaken Should Be Left Untouched During The Balance Life Of The Mine For Replenishment.

ix. UN Has Come Up With The *System Of Environmental-Economic Accounting 2012-Central Framework (SEEA-Central Framework)* Which Is A StatisticalFramework Consisting Of A Comprehensive Set Of Tables And Accounts, Which Guides The Compilation Of Consistent And Comparable Statistics And Indicators For Policy Making *Etc.* It Is A Tool That Helps In Tackling Natural Resource Depletion And Environmental Degradation. For Sand Mining Projects, Physical Supply Use Tables (PSUT) As Provided In SEEA-Central Framework Of UN May Be Utilized For Sustainable Use Of Sand Mining And Grant Of Mining Permits. The Mining Leases In The State Of Rajasthan Occur In Paleo Sand Deposits And Use Of PSUTWill Be Appropriate In This Case As Well.

Table-2: Format For PSUT

Sl. No.	Particulars	Sand Resources (In '000 Tonnes)
1	**Opening Stock Of Sand**	
2	**Addition Of Stock**	
2.1	-Discoveries	
2.2	-Upward Reappraisals	
2.3	-Reclassification	
3	**Total Addition Of Stock**	
4	**Reduction In Stock**	
4.1	-Extractions	
4.2	-Catastrophic And Other Losses	
4.3	-Downward Reappraisals If Any	
4.4	-Reclassification	
5	**Total Reduction In Stock**	
6	**Closing Stock Of Sand**	

x. For Planning, Enforcement And Monitoring Of Sand Mining Projects, The CapacityOf The Sate DMG (Directorate Of Mines & Geology) May Be Inadequate. In Order To Ensure Effective Implementation Of Applicable Guidelines, Reputed Resource Institutions May Be Appointed At Central Ministry Of Mines And State Level. Technical Institutions And Reputed

Government Agencies May Act As ResourceInstitutions To Central/State Governments. They Will Also Help In River Rejuvenation And Improving The River Morphology; Which Are Essential ForImproving The Ecology Of The Rivers.

xi. The Leasehold Areas For Which Permit Is Given To Carry Out Sand/Bajri Mining Should Be Annually Inspected Preferably In The Post Monsoon Season Taking Help Of Reputed Empanelled Institutes And Accordingly The Permit Should Be Modified Especially For Areas Where Mining Is Not Possible Due To Water Logging,Change In Riparian Ecosystem *Etc.*

xii. For The Mining Lease, Various Co-Ordinates Of Lease Should Be Established AndA Kml File Of The Lease Should Be Created On Google Earth. This Will Help In Monitoring Of The Advancement Of Mining Operations On Routine Basis And DataIn This Regard Should Be Available With District Mining Office.

xiii. For Undertaking Replenishment Studies Of The Rivers On Regular Basis, Reputed Technical Institutions And Government Agencies Should Be Empanelled In Each State. They Will Help In Providing Routine Information And Resource Estimation For Decision-Making And Facilitation Of Work Related To Sand Mining, EnforcementOf Guidelines And Monitoring.

xiv. Leasehold Areas For Which Permit Is Given To Carry Out Sand/Bajri Mining ShouldBe Annually Inspected Preferably Immediately After The Post Monsoon Season For Assessing The Feasibility Of Mining.

xv. Since Mining Is Restricted In The Non-Monsoon Period For About 8-9 Months, It IsSuggested That Riverbed Levels Prior To Start Of Mining And At The Time Of Onset Of Monsoon (Temporary Stoppage Of Mining Operations) Should Be Maintained.The Number Of Points For Recording Of RL Should Be 04 For Each Hectare Of TheArea And Representing The Entire Lease Area.

xvi. The Disposal Of Pebbles, Stone And Other Material That Are Deposited On The River Bed And Get Segregated During Mining Process Has Been Observed To Be Dumped Without Any Consideration Of River Flow, Its Morphology And Other Factors. This Leads To Degradation Of River Channels And Are Not Conducive For The Protection Of River Ecology. Mechanism For Instream Utilization Within The River Bed For Reclamation Of Excavated Stretches, Disposal Into Low Lying Areas Nearby Or Other Forms Of Gainful Utilization Need To Be Established For Conservation Of Rivers. The Reclamation Of Voids Created On Account Of Mining With Pebbles Will Help In Replenishment And Improvement Of River Ecology.

xvii. It Is Proposed That About 50% Of The Fund Deposited In District Mineral Foundation (DMF) From Sand Mining Should Be Utilized For Conservation And Improvement Of River Eco-System. For This Purpose, The Degraded Stretches Of The River Should Be Identified And An Action

Plan May Be Prepared To Take Up Activities For Restoration Of River Morphology And River Aquatic Eco-System.The Mining Plan Should Clearly Come Out With The Estimate Of Usable Sand AndGravel In The Mineral Stock Deposited In The Lease Area. This Should Also Specify Reuse/Disposal Practice To Be Adopted For Gravels/Pebbles.

xviii. The Suggested Guidelines Will Supplement The **"Sustainable Sand Mining Management Guidelines, 2016"** And **"Enforcement & Monitoring Guidelines For Sand Mining, 2020"** Issued By Moefcc, Government Of India.

xix. For Enforcement Of Sand Mining Guidelines, Monitoring Of Mining Activities AndPromoting Sustainable Sand Mining, Capacity Building Of Directorate Of Mines And Geology Of Each State With Adequate Staffing And Training Is Essential. ThisMay Be Taken Up In A Phased Manner.

xx. The DSR Of Each District Should *Interlia* Incorporate Data Of Watershed Of Rivers,Rainfall Pattern And Estimate Of Replenishment At **Macro-Level.** This Should Come Out With An Approximate Estimate For Capacity Additions Of The Reserve OfSand And The PSUT. There Are Two Sets Of Surveys That Need To Be Done For Sand Replenishment:

a. Replenishment At Macro Level At An Interval 5-10 Kms Along The River Course.For Smaller Stretches, This Can Be Reduced To 1 Km.

b. Micro-Level Replenishment Through Data Of Pre-Monsoon And Post-Monsoon Level. For Mine Leases Up To 10 Ha, RL Measurement Along The River Channel/Length Should Be At Least At An Interval Of 100 M. For Mine Leases Having Area More Than 10 Ha, Such Measurement Should Be At Least At An Interval Of 200 M. This Should Be Essential For Preparation Of Mine Plans.

xxi. *To Start With, The Replenishment Study Be Carried Out Using **Cross-Sectional Method** And **Remote Sensing Survey**. The Replenishment Assessed Through Cross-Sectional Study And Remote Sensing Survey (Differential Global Positioning System) Should Be Compared, And Minimum Of The Two Should Be Considered For Planning Purpose. However, The Mining Permits Should Be Accorded For 60% Of The Minimum Value So Obtained. Based On The ExperienceGained Through Validation Exercise In Future, This Factor Of Safety I.E. 60% May Be Further Revised For Resource Assessment.*

xxii. For Validation Of The Data Obtained Through **Remote Sensing Survey (Differential Global Positioning System)**, Two Stretches Of River; The First OneOf 2 Ha Size And Another Stretch Of More Than 5 Ha Size Should Be Selected. The Cross-Sectional Study In Both The Stretches In Pre-Monsoon And Post-MonsoonShould Be Undertaken At 100 M Grid For Estimation Of The Volume Of Sand Replenishment. The Aforesaid Stretches For Validation Study, Should Simultaneously Be Monitored Through Remote Sensing Survey (Differential Global Positioning System) And Replenishment Obtained Through Both TheAbove Methods Should

Be Compared For Determination Of Factor To Be Considered For Estimation Of Realistic Replenishment.

xxiii. It Is Further Recommended That Estimation Of **Bed Load Transport** Through Use Of Empirical Equation Is Another Approach That Provides Scientific Estimation Of Replenishment. The Feasibility Of Using Empirical Equation May Be Studied At One Or Two Locations In Different River Stretches And The Replenishment Obtained Through Empirical Equation And Through Cross-Sectional Survey Be Compared For Validation. This May Be Undertaken Jointly Through CMPDI And Central Water Commission And Help Of Technical Institutions Like IIT, Delhi/IIT, Roorkee,National Institute Of Hydrology *Etc.* May Be Taken. Central Ministry Of Mines MayTake Lead In This Regard For Validation Of The Study And Feasibility Of Using Empirical Equations. *This Approach May Suitably Be Added In Future For Replenishment Study Based On Outcome Of Validation Exercise.*

xxiv. The **Validation Exercise** Should *Interalia* Consider The Rainfall Data, Catchment Area Of The River, Annual Replenishment, Grain Size Distribution And Amount Of Sand Deposition And Saturation Level In The Mine Lease.

xxv. Validation Of Such Methodologies Should Be Undertaken At Least In Two States Say The State Of Bihar And Rajasthan. The Central Ministry Of Mines/ConcernedDirectorate Of Mines & Geology Should Get This Study Undertaken And The ReportMay Be Submitted To Moefcc For Further Consideration.

xxvi. Central Water Commission And The Concerned State Departments Should Identify The Control Stations In Rivers Stretches That Have Potential Sand Mining Sites And Collect And Maintain Data Pertaining To Flow, Depth Of Flow, SuspendedSolids In River Flow *Etc.* On Regular Basis. This Will Help In Realistic ReplenishmentIn River Stretches.

xxvii. The Demand For Minerals, Including Sand And Gravels, Is Expected To Significantly Increase In The Coming Decades, Posing Serious Supply Risks, As Well As Environmental, Economic And Social Challenges At Local, Regional And Global Scales, The Mining Of Sand From The Rivers May Be Restricted At LocationsWhere Possibility Of Manufacturing Sand Exists.

xxviii. To Promote Sustainable Mining, Minimum Lease Area Of 10 Ha Should Be Granted. Issue Of Permits To Areas Less Than 10 Ha For Sand Mining Should Be Avoided. The Minimum Period Of Lease Should Be 5 Years And The Short-Term Permits (I.E. < 5 Years) *Should Not To Be Granted.*

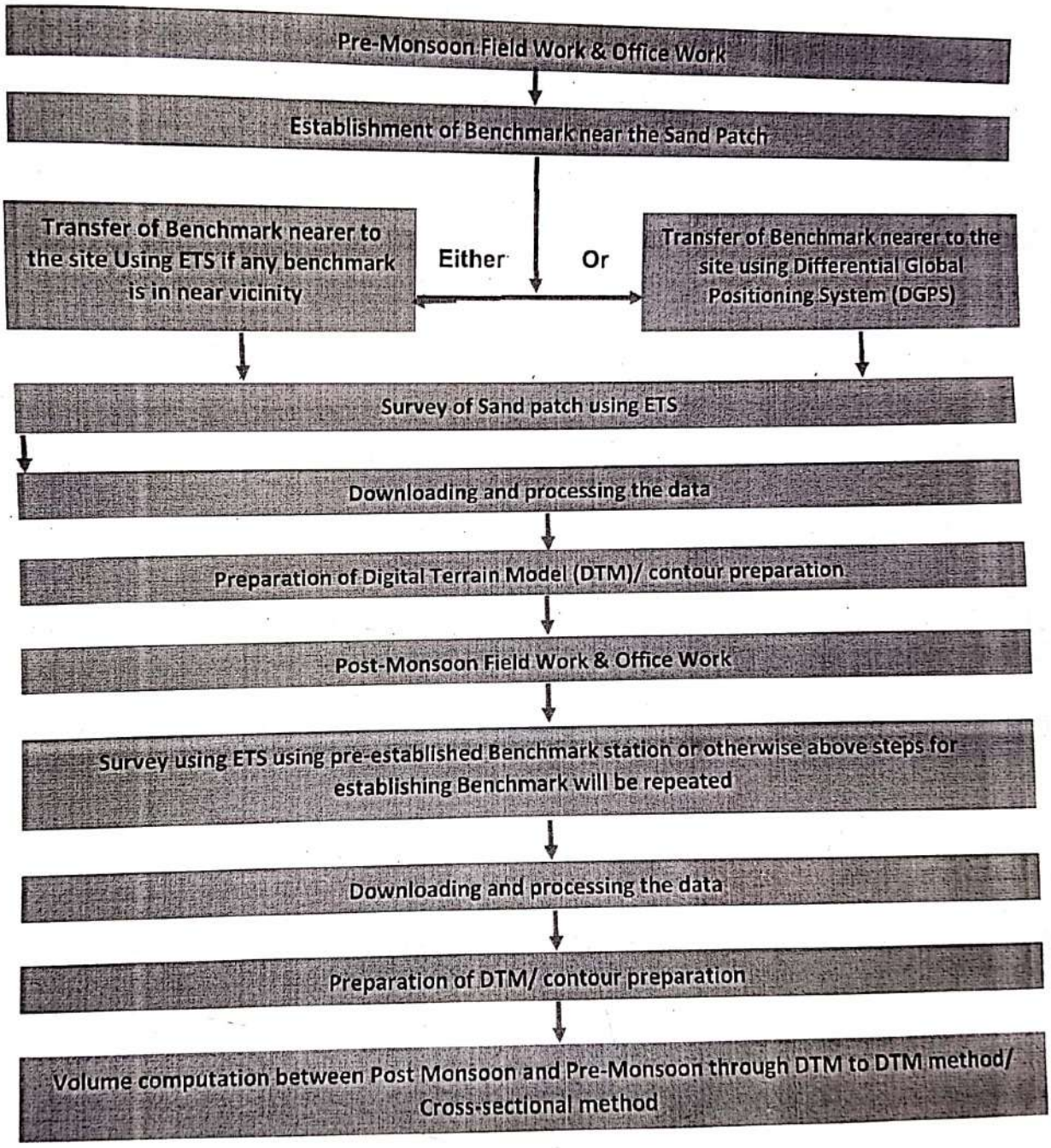
xxix. The Mine Plan Must Clearly Incorporate Phase-Wise Mining Stretches For EachYear During The Mine Lease Period To Enable Replenishment In Each Stretch. The Following Guidelines Are Suggested For Sustainable Sand Mining:

a. *Leasehold Areas For Which Permit Is Given To Carry Out Sand/Bajri Mining Should Be Annually Inspected Preferably During The Start Of Post Monsoon Season.*
b. *In Post Monsoon Season, Prior To Commencement Of Mining, If The MiningCannot Be Carried Out Due To Any Technical Reasons (Like Water Logging OfThe Area Or Non-Availability Of Replenished Sand, Etc.) The Same May Be Reported By The Mine Lease Holder To DMG. The DMG Must Inspect TheSame And Take A Decision Within The 1st Month Of The Post-Monsoon Season.*
c. *Mining Lease Once Granted Should Continue With The Same Capacity Of Excavation Throughout The Life Of The Lease.*
d. *Mining Plan Should Clearly Come Out With The Estimate Of Usable Sand And Gravel In The Mineral Stock Deposited In The Lease Area.Additional Resources Added, Due To Replenishment, During The Lease Period, Should Be Left Undisturbed In The Leasehold Area.*
e. *Reclamation Of Voids Created On Account Of Mining With Pebbles Will HelpIn Replenishment And Improvement Of River Ecology. These By-MaterialsMay Be Used For Filling Of Low-Lying Areas And For Other Gainful Utilization.*
f. *Riverbed Levels Should Be Monitored Annually Prior To Onset Of Monsoon. The Monitoring Should Be Jointly Recorded By Mine Leaseholder In The Presence Of Authorized DMG Personnel And Record Of The Same Should Be Maintained With DMG.*
g. *Vegetation Of Barren River Banks With Native Tree Species Should Be Undertaken Every Year*
h. *Some Of The Rivers May Be Under The Jurisdiction Of Two Or More States. The DSR And Sand Replenishment Study Should Therefore Be Focused On The Respective Jurisdiction Areas. However There Should Be Joint Management Of Mining Leases By The DMG To Avoid Illegal Mining UnderSuch Cases. DSR And Replenishment Data Must Be Shared With Between States To Promote Sustainable Sand Mining*

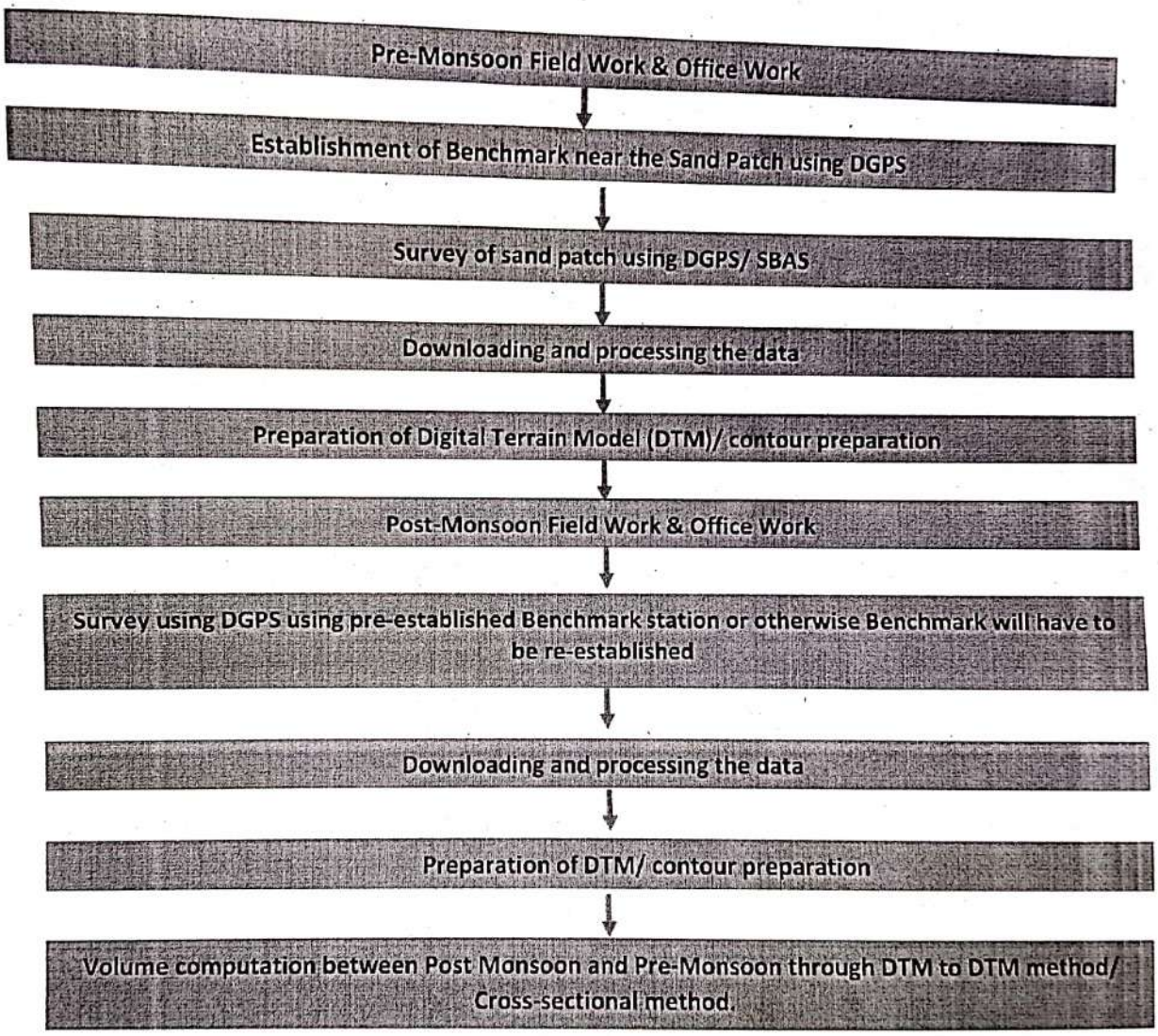
3. METHODS PROPOSED TO BE USED FOR DATA COLLECTION AND PREPARATION OF DIGITAL TERRAIN MODEL (DTM)

The Major Input For This Project Will Be Survey Data From Which Digital Terrain Model (DTM)Could Be Prepared. The Following Three Methodologies Using UAV, DGPS And ETP Is Proposed. The Selection Of Methodology Will Depend On The Technical Suitability.

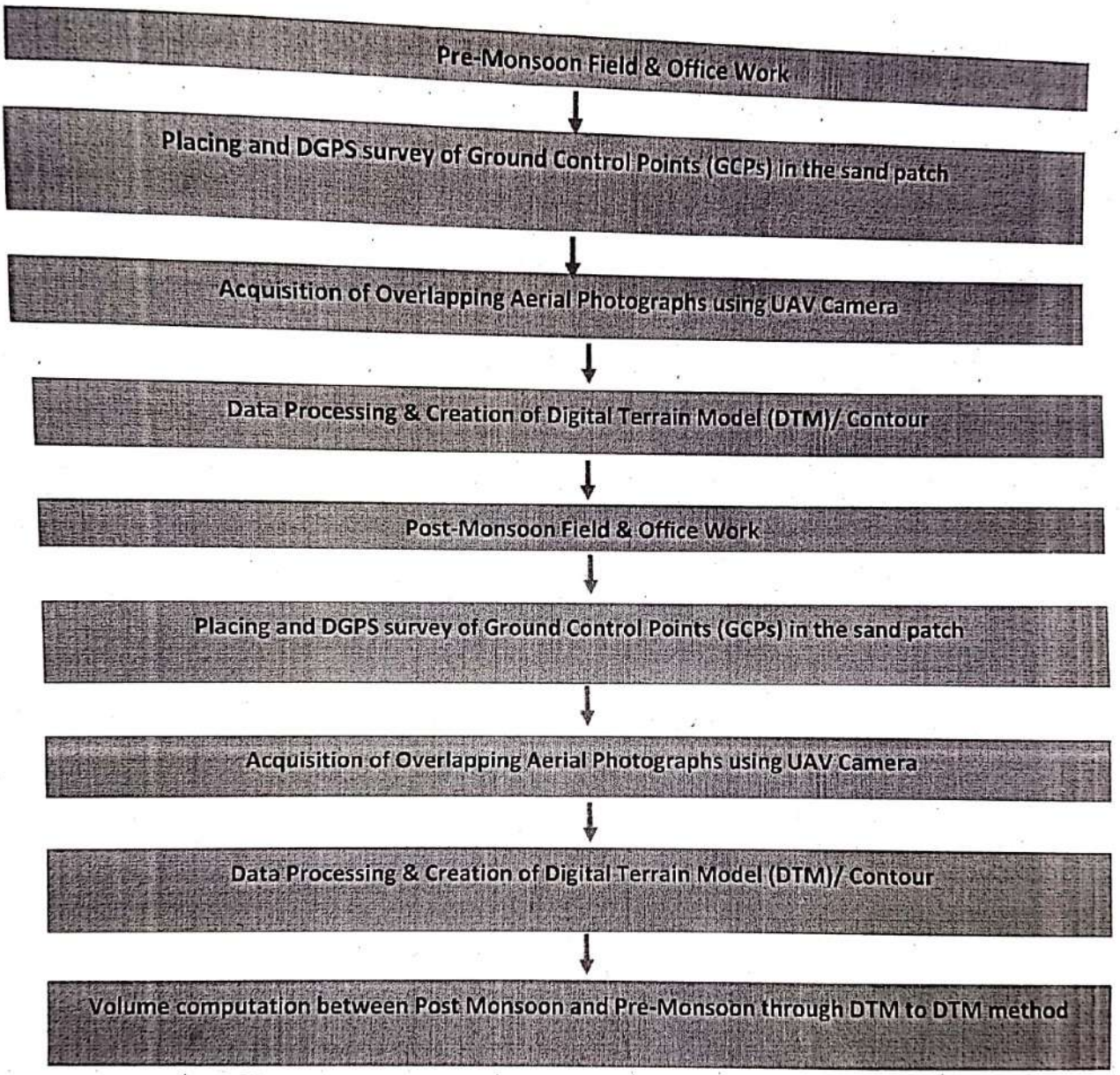
3.1 Flow Chart Of Sand Volume Calculation Using Electronic Total Station (ETS)&/Or Differential Global Positioning System (DGPS)



3.2 Flow Chart Of Sand Volume Calculation Using &/Or Differential Global Positioning System (DGPS)/ Satellite Based Augmentation System (SBAS)



3.3 Flow Chart Of Sand Volume Calculation Using Unmanned Aerial Vehicle (UAV)



4. LIMITATIONS FOR USE OF SATELLITE DATA

For Assessment Of Different In Volume, Satellite Data May Be Used But In This Case ThereAre Certain Limitations For Its Use:

- Stereo Satellite Imagery Is Required Which Are Provided By Various Foreign SatelliteOperators. At Present, The Minimum Resolution Of Such Satellite Data Is 15 Cm, 30 Cm And 50 Cm, Etc. In The Case Of 15 Cm Data There Will Be A Difference In Z Values
  = 3 Pixels Approximately Which Is About 45 Cm To 50 Cm. In The Case Of This Study The RL Difference Will Be In The Range Of 30 Cm To 45 Cm. Therefore, It Is Not Advisable To Use Satellite Data For This Purpose. Even If Satellite Data Is To Be Used, There Will Be An Additional Field Survey Requirement For Generating Gcps (Ground Control Points) For Correlating The Satellite Data With These Gcps For Better Accuracy.

5. Additional EC Conditions Proposed For Sand Mining Projects

It Is Suggested That Following Conditions May Be Incorporated In The EC Conditions Of TheSand Mining Projects:

i. The Number Of Points For Recording Of RL Should Be 04 For Each Hectare Of The AreaAnd Representing The Entire Lease Area In Pre-Monsoon And Post-Monsoon SeasonEvery Year.
ii. The Production From The Mine Will Be As Per EC Accorded And In No Case, It Shall Exceed The EC Capacity.
iii. The Mining Should Be Carried Out Above 0.30 M To 1.00 M From The Saturation Level.Dry Sand, 0.3 To 1 M Above The Saturation Zone (Where Sand Is Wet) Can Be Permitted To Be Excavated In The Demarcated Area For A Year In 5-Year Life Span.
iv. The PP Shall Maintain The River Water Quality Data *I.E.* Total Suspended Solids (TSS)Present In It On Quarterly Basis (Every Three Months Period).
v. The Data Of Opening Stock Of Sand Should Be Maintained Before Start Of The MiningDuly Certified By District Mining Officer Of The State.
vi. The Depressions Created On Account Of Mining Should Be Leveled By Filling The Stones/Pebbles Etc. Each Year After The Mining Is Over In The Month Of June/July. The Balance Materials May Be Used For Filling Of Low-Lying Areas, And Other GainfulUtilization.
vii. Vegetation Of Barren River Banks With Native Tree Species Should Be Undertaken Every Year.

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जनपद हमीरपुर की तहसील सरीला में उपखनिज बालू/मौरम के विधिमान्य खनन क्षेत्रों की स्थलीय निरीक्षण/जॉच आख्या।

जनपद हमीरपुर की तहसील सरीला में उपखनिज बालू/मौरम के विधिमान्य खनन क्षेत्रों को मानचित्र एवं अभिलेखनीय विवरण के अनुसार खनन क्षेत्रों की वर्तमान अद्यतन स्थिति यथा जियो–कोडिनेट्स, खनन योग्य बालू/मौरम की उपलब्धता, खनन परिहार पर व्यवस्थापन की स्थिति आदि के सम्बन्ध में स्थलीय निरीक्षण दिनांक–30.04.2024 को किया गया था। जिला सर्वेक्षण रिपोर्ट के अपडेशन की कार्यवाही पूर्ण करने हेतु अपर निदेशक के पत्र सं0–687/डी0एस0अर0/2024 दिनांक 18.06.2024 के क्रम में निम्न सभी खण्डो का गाटा संख्या व रकबा निर्धारित किया गया, जिसका विवरण निम्नवत है :–

क्रम सं0	नदी का नाम	तहसील	उप खनिज का नाम	ग्राम	खण्ड संख्या	खसरा खतौनी के अनुसार खण्ड की स्थिति				कुल क्षेत्रफल हे0 में	मात्रा घनमी0 में	पिलर	कोडिनेट्स		वन अनापत्ति की स्थिति पत्र सं0 व दिनांक	खनन क्षेत्र से 500 मी0 के अन्दर कोई बांध/जलाषय स्थित है (हॉ/न ही)	खनन परिहार पर व्यवस्थापन किये जाने हेतु उपयुक्त है अथवा नही
						तहसील	ग्राम	गाटा सं0	खण्ड में निहित गाटा का हे0				अक्षांष	देशान्तर			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	देतदा	सरीला	बालू/मौरम	भेंठी खरका	23/7	सरीला	भेंठी दरिया	63/1	11.100	11.100	1,77,578	A	25°54'29.35" N	79°48'39.88" E	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
												B	25°54'31.40" N	79°48'58.80" E			
												C	25°54'38.24" N	79°49'00.74" E			
												D	25°54'36.82" N	79°48'43.39" E			
												E	25°54'31.40" N	79°48'39.41" E			
2	देतदा	सरीला	बालू/मौरम	गेंठी खरका	23/8	सरीला	भेंठी दरिया	63/1	15.788	19.370	3,09,882	A	N-25°54'38.24	E-79°49'0.74"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								64/1	2.133			B	N-25°54'36.95	E-79°48'45.12			
								67	0.571			~~C~~	~~N-25°54'47.18~~	~~E-79°48'46.28~~			
								68	0.878			C'	N-25°54'48.70	E-79°48'49.06			
												D	N-25°54'52.73	E-79°48'56.96			
												E	N-25°54'53.92	E-79°49'6.64			
												F	N-25°54'39.81	E-79°49'01.25			
3	देतदा	सरीला	बालू/मौरम	भेंठी खरका	23/12	सरीला	भेंठी दरिया	63/1	11.888	12.145	1,94,304	A	N-25°54'38.25	E-79°49'1.50"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								64/1	0.257			B	N-25°54'40.50"	E-79°49'29.40"			
												C	N-25°54'36.30"	E-79°49'32.50"			
												D	N-25°54'33.20"	E-79°49'0.20"			
4	देतदा	सरीला	बालू/मौरम	भेंठी खरका	23/13	सरीला	भेंठी दरिया	63/1	11.592	12.145	1,94,304	A	25°54'33.20" N	79°49'00.20" E	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								64/1	0.553			B	25°54'36.30" N	79°49'32.50" E			
												C	25°54'32.70" N	79°49'34.20" E			
												D	25°54'29.10" N	79°48'59.70" E			

5	बेतवा	सरीला	बालू/मौरम	भेडी खरका	23/14	सरीला	भेडी दरिया	63/1	24.291	24.291	3,88,604	A	N-25°54 29.1"	E-79°48 59.7"	प्राप्त है। पत्र सं0-412 दिनांक 24.08.2024	नही	उपयुक्त है।
												B	N-25°54 31.6"	E-79°49 24.0"			
												C	N-25°54 19.5"	E-79°49 19.6"			
												D	N-25°54 16.95"	E-79°48 56.20"			
6	बेतवा	सरीला	बालू/मौरम	भेडी खरका	23/16	सरीला	भेडी दरिया	63/1	25.351	36.437	5,82,912	A	N 25°53'56.55"	E 79°48'59.35"	प्राप्त है। पत्र सं0-412 दिनांक 24.08.2024	नही	उपयुक्त है।
							भेडी डाडा	8/3, 8/8, 8/13, 8/10, 8/7, 8/5, 8/14, 8/9, 8/25, 8/12, 8/6, 8/2	4.976			B	N 25°53'56.70"	E 79°49'15.31"			
								10/2	1.473			C	N 25°54'19.50"	E 79°49'19.60"			
								11	1.358			D	N 25°54'16.95"	E 79°48'56.20"			
								12/6	0.198								
								13	0.044								
								14/1	0.660								
								14/5	1.011								
								15	0.085								
								16	0.931								
								113	0.350								
7	बेतवा	सरीला	बालू/मौरम	भेडी खरका	23/19	सरीला	भेडी दरिया	63/1	0.735	12.145	1,94,304	A	25°54'3.10" N	79°49'17.90" E	प्राप्त है। पत्र सं0-412 दिनांक 24.08.2024	नही	उपयुक्त है।
								64/1	0.862			B	25°53'59.30" N	79°49'17.20" E			
								70	0.725								
								71	0.1700								
								72/1	0.0970								
								73	0.035								
								74	0.134								
							भेडी डाडा	20	0.177								
								21मि	0.020			C1	25°54'00.30" N	79°49'42.30" E			
								21/2	0.138								
								22	0.154								
								23	0.307			C	25°54'0.45" N	79°49'47.80" E			
								24/1	0.587								
								25/1	0.060			D	25°54'0.19" N	79°49'46.32" E			
								26मि	0.619								
								27	0.473			D1	25°54'6.50" N	79°49'40.10" E			
								28	0.252								
								29	0.071								
								30मि	0.024								
								31मि	1.101								
								32/2	0.698								
								32/1	0.617								
								33	0.045								
								8/3, 8/8	4.046								

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8	बेलवा	चरौंदा	ग्राम/मौजा	भेड़ी खरका	23/20	चरौंदा	भेड़ी दरिया	8/13 8/10 8/7 8/5 8/14 8कि0 8कि0 8कि0 8/20	63/1	7.121	12.145	1,94,304	A	N-25°54'03.10"	E-79°49'17.90"	प्राप्त है। पत्र सं0-412 दिनांक 24.08.2024	नहीं	उपयुक्त है।
									64/1	1.665								
									69	0.2790								
									70	0.263								
							भेड़ी जाडा		21कि0	0.020			B1	N-25°54'5.50"	E-79°49'40.10"			
									24/2	0.134			B	N-25°54'6.36"	E-79°49'47.97"			
									25/2	0.121			C	N-25°54'11.71"	E-79°49'44.37"			
									26कि	0.087			C1	N-25°54'10.40"	E-79°49'37.60"			
									31कि	0.182			D	N-25°54'7.98"	E-79°49'19.03"			
									8/3	2.273								
									8/8									
									8/13									
									8/10									
									8/7									
									8/5									
									8/14									
									8/9									
									8/25									
									8/12									
									8/6									
									8/2									
									8कि0									
									8/20									
9	बेलवा	चरौंदा	ग्राम/मौजा	भेड़ी खरका	23/21	चरौंदा	भेड़ी दरिया		63/1	20.697	24.291	2,59,104	A	N-25°54'21.71"	E-79°49'21.70"	प्राप्त है। पत्र सं0-412 दिनांक 24.08.2024	नहीं	उपयुक्त है।
									64/1	3.394			B	N-25°54'23.86"	E-79°49'39.55"			
													C	N-25°54'11.71"	E-79°49'44.37"			
													C1	N-25°54'10.40"	E-79°49'37.60"			
													D	N-25°54'7.98"	E-79°49'19.03"			
10	बेलवा	चरौंदा	ग्राम/मौजा	भेड़ी खरका	23/23	चरौंदा	भेड़ी दरिया		63/1	8.770	11.00	1,94,304	A	N-25°54'25.68"	E-79°49'22.91"	प्राप्त है। पत्र सं0-412 दिनांक 24.08.2024	नहीं	उपयुक्त है।
									64/1	2.230			B	N-25°54'31.73"	E-79°49'25.19"			
													C	N-25°54'32.70"	E-79°49'34.20"			
													D	N-25°54'23.86"	E-79°49'39.55"			
													E	N-25°54'21.71"	E-79°49'21.70"			
11	बेलवा	चरौंदा	ग्राम/मौजा	रिरिया बसरिया	22/2	चरौंदा	रिरिया पुर्वा दरिया		47/13	13.697	14.000	2,24,000	A	25°53'23.91" N	79°45'20.18" E	प्राप्त है। पत्र सं0-412 दिनांक 24.08.2024	नहीं	उपयुक्त है।
									57	0.303			B	25°53'15.48" N	79°45'28.11" E			
													C	25°53'7.80" N	79°45'33.71" E			
													D	25°53'2.02" N	79°45'26.37" E			

												E	25°53'11.89" N	79°45'19.87" E			
												F	25°53'22.24" N	79°45'17.16" E			
12	बेतवा	सरीता	बालू/ मौरम	रिरूवा बसरिया	22/4	सरीता	रिरूआ बुजुर्ग दरिया	02	22.00	22.000	3,51,956	A	N-25°54'15.85"	E-79°44'56.10"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
												B	N-25°54'12.50"	E-79°44'59.20"			
												C	N-25°54'6.22"	E-79°45'3.59"			
												D	N-25°53'57.17"	E-79°45'6.56"			
												E	N-25°53'53.85"	E-79°44'53.38"			
												F	N-25°54'8.12"	E-79°44'46.60"			
13	बेतवा	सर्पेता	बालू/ मौरम	रिरूवा बसरिया	22/5	सरीला	रिरूआ बुजुर्ग दरिया	02	23.00	23.000	3,67,954	A	N 25°54'30.75"	E 79°44'38.38"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
												B	N 25°54'28.44"	E 79°44'43.59"			
												C	N 25°54'15.85"	E 79°44'56.10"			
												D	N 25°54'08.12"	E 79°44'46.60"			
												E	N 25°54'21.33"	E 79°44'34.59"			
												F	N 25°54'23.75"	E 79°44'29.70"			
14	बेदवा	तर्पता	बालू/ मौरम	रिरूवा बसरिया	22/6	सर्वला	रिरूआ बुजुर्ग	02	19.517	23.000	3,67,000	A	N-25°54'40.41"	E-79°44'7.20"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								03	0.253			B	N-25°54'40.77"	E-79°44'14.91"			
							बसरिया	336	3.230			C	N-25°54'30.75"	E-79°44'38.38"			
												D	N-25°54'23.75"	E-79°44'29.70"			
												E	N-25°54'30.86"	E-79°44'15.97"			
												F	N-25°54'30.75"	E-79°44'07.96"			
15	बेदवा	बर्दता	बालू/ मौरम	रिरूवा बसरिया	22/7	शरीला	बसरिया	336	12.00	12.000	1,92,000	A	N-25°54'39.66"	E-79°43'53.62"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
												B	N-25°54'40.41"	E-79°44'07.20"			
												C	N-25°54'30.75"	E-79°44'07.96"			
												D	N-25°54'30.15"	E-79°43'52.57"			
16	बेदवा	नर्वला	बालू/ मौरम	रिरूवा बसरिया	22/10	सरीता	चण्डौत दरिया	35/1	11.373	24.291	3,88,608	A	N-25°54'52.84"	E-79°41'54.51"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								65/35	1.272			B	N-25°55'03.51"	E-79°41'39.13"			
								39	0.121			C	N-25°55'17.91"	E-79°41'48.08"			
								40/1 42/2 40/5	3.065			D	N-25°54'59.33"	E-79°42'02.75"			
								56/2	0.344								
								37/1	3.209								
								38/1	1.921								
							चण्डौत डांडा	509/1 509/2	1.634								
								862/1	0.374								
17	बेदवा	सर्वला	बालू/ मौरम	रिरूवा बसरिया	22/12	सरीला	चण्डौत दरिया	37/1	1.879	12.145	1,94,304	A	25°55'8.33" N	79°41'32.47" E	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								65/35	1.567			B	25°55'3.51" N	79°41'39.13" E			
								35/1	8.567			C	25°55'17.91" N	79°41'48.08" E			
							चण्डौत डांडा	507	0.132			D	25°55'23.32" N	79°41'41.98" E			
18	बेतवा	मर्वला	बालू/ मौरम	रिरूवा दसरिया	22/14	सरीला	चण्डौत दरिया	35/1	24.291	24.291	3,88,608	A	N-25°55'18.78"	E-79°41'14.23"	प्राप्त है। पत्र	नही	उपयुक्त है।
												B	N-25°55'39.25"	E-79°41'18.67"			

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												C	N-25°55'36.31"	E-79°41'02.93"	सं0–412 दिनांक 24.08.2024		
												D	N-25°55'13.20"	E-79°41'03.23"			
19	बेतवा	सरीला	बालू/ मौरम	रिरूवा ससरिया	22/15	सरीला	घण्डात दरिया	35/1	14.693	24.291	3,88,608	A	N-25°55'22.57"	E-79°40'47.08"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								27/1	0.426			B	N-25°55'36.31"	E-79°41'02.93"			
							घण्डात डांडा	439/3	0.752			C	N-25°55'13.20"	E-79°41'03.23"			
								445/34	8.420			D	N-25°55'06.26"	E-79°40'54.41"			
20	बेतवा	सरीला	बालू/ मौरम	मडेरा खालसा	9	सरीला	हरदुआ	06	24.291	24.291	3,88,553	A	N-25°50'47.98"	E-79°30'57.85"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
												B	N-25°50'50.98"	E-79°31'9.14"			
												C	N-25°50'30.33"	E-79°31'25.19"			
												D	N-25°50'27.30"	E-79°31'14.14"			
21	बेतवा	सरीला	बालू/ मौरम	चन्दवारी पुरौली	26/1	सरीला	मगरोठ	01क	3.00	17.262	1,72,620	A	N-25°47'41.77"	E-79°26'9.74"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								02	2.158			B	N-25°47'29.44"	E-79°26'14.96"			
							पुरौली	01	4.647								
								05	0.547								
								06/2	6.910			C	N-25°47'18.70"	E-79°26'29.20"			
												D	N-25°47'16.39"	E-79°26'28.17"			
												E	N-25°47'17.16"	E-79°25'24.62"			
												F	N-25°47'20.45"	E-79°26'17.92"			
												G	N-25°47'32.37"	E-79°26'1.11"			
22	बेतवा	सरीला	बालू/ मौरम	चन्दवारी पुरौली	26/2	सरीला	पुरौली	01	4.377	19.363	1,93,630	A	N-25°47'41.77"	E-79°26'09.74"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								05	0.819			B	N-25°47'32.37"	E-79°26'01.11"			
								04मि0	0.870			C	N-25°47'42.59"	E-79°25'50.41"			
								06/2	14.697			D	N-25°47'56.70"	E-79°26'2.93"			
												E	N-25°47'50.50"	E-79°26'04.35"			
23	बेतवा	सरीला	बालू/ मौरम	चन्दवारी पुरौली	26/3	सरीला	पुरौली	01	1.512	21.843	2,18,430	A	N-25°48'6.75"	E-79°25'54.91"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								02	0.246			B	N-25°47'51.09"	E-79°25'41.63"			
								03	0.016			C	N-25°47'42.59"	E-79°25'50.41"			
								06/2	20.069			D	N-25°47'56.70"	E-79°26'02.93"			
												E	N-25°48'4.26"	E-79°25'58.82"			
24	बेतवा	सरीला	बालू/ मौरम	चन्दवारी पुरौली	26/5	सरीला	पुरौली	01	1.800	30476	4,87,555	A	N-25°48'28.72"	E-79°25'19.42"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								06	25.214			B	N-25°48'17.86"	E-79°25'37.72"			
							चन्दवारी पुरौली दरिया	11/1	3.146			C	N-25°48'2.50"	E-79°25'28.50"			
								01	0.310			D	N-25°48'12.06"	E-79°25'12.66"			
25	बेतवा	सरीला	बालू/ मौरम	चन्दवारी पुरौली	26/7	सरीला	चन्दवारी दरिया	01	8.217	29930	5,38,740	A	25°48'31.92" N	79°24'15.47" E	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								11/1	21.713			B	25°48'17.97" N	79°24'18.13" E			
												C	25°48'20.43" N	79°24'38.13" E			
												D	25°48'18.41" N	79°24'50.02" E			
												E	25°48'28.82" N	79°24'51.05" E			
												F	25°48'27.67" N	79°24'47.43" E			
26	बेतवा	सरीला	बालू/	चन्दवारी	26/8	सरीला	चन्दवारी	01	5.060	31.362	5,64,516	A	25°48'31.92" N	79°24'15.47" E	प्राप्त है।	नही	उपयुक्त है।

			मौरम	पुरैली			दरिया	02	0.250			B	25°48'17.97"N	79°24'18.13" E	पत्र सं0–412 दिनांक 24.08.2024		
								03	0.282			C	25°48'17.72"N	79°24'11.25" E			
								05	0.025			D	25°48'13.85"N	79°23'58.90" E			
								11/1	25.745			E	25°48'3.39"N	79°23'51.70" E			
												F	25°47'59.31"N	79°23'50.29" E			
												G	25°47'59.66"N	79°23'47.15" E			
												H	25°48'6.47"N	79°23'49.72" E			
												I	25°48'18.41"N	79°23'51.09" E			
												J	25°48'26.57"N	79°23'59.84" E			
27	बेतवा	सरीला	बालू/मौरम	घण्डौत डांडा	21/1	सरीला	घण्डौत दरिया	02/1मि0	14.925	16.000	2,40,000	A	N-25°54'51.78"	E-79°38'47.31"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								23/2	1.075			B	N-25°54'35.37"	E-79°39'0.98"			
												C	N-25°54'30.42"	E-79°38'59.06"			
												D	N-25°54'38.49"	E-79°38'46.41"			
												E	N-25°54'46.81"	E-79°38'39.62"			
28	बेतवा	सरीला	बालू/मौरम	चिकासी	24/8	सरीला	हरदुआ	06	20.00	20.000	3,60,000	A	25°51'1.53" N	79°30'2.16" E	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
												B	25°51'13.55" N	79°30'1.09" E			
												C	25°51'18.39" N	79°30'20.75" E			
												D	25°51'3.59" N	79°30'18.23" E			
29	बेतवा	सरीला	बालू/मौरम	चिकासी	24/9	सरीला	हरदुआ	01	1.541	12.145	1,45,740	A	N-25°51'1.53"	E-79°30'2.16"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								02	0.134			B	N-25°51'13.55"	E-79°30'1.09"			
								03	0.478			C	N-25°51'6.24"	E-79°29'48.56"			
								04	0.243			D	N-25°50'57.48"	E-79°29'47.35"			
								05	0.0810								
								06	3.200								
							सुजगवा	01	4.659								
								10	0.097								
								11	0.344								
								12	0.125								
								13	0.101								
								14	0.142								
								15	1.00								
30	बेतवा	सरीला	बालू/मौरम	चिकासी	24/12	सरीला	सुजगवा	01	4.456	8.316	1,24,740	A	N-25°50'41.93"	E-79°29'3.52"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								02	0.50			B	N-25°50'34.32"	E-79°29'5.90"			
								03	1.090			C	N-25°50'42.29"	E-79°29'20.71"			
								04	0.470			D	N-25°50'45.53"	E-79°29'20.34"			
								05	0.090								
								06	0.080								
								07	1.00								
								08	0.180								
								323/214	0.450								
31	बेतवा	सरीला	बालू/मौरम	चिकासी	24/13	सरीला	चिकासी	01	0.870	14.000	2,52,000	A	N-25°50'19.24"	Ez-79°28'45.87"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								02	0.413			B	N-25°50'32.11"	Ez-79°28'38.88"			
							सुजगवा	323/214	12.717			C	N-25°50'23.34"	Ez-79°28'28.31"			
												D	N-25°50'13.44"	Ez-79°28'38.82"			
32	बेतवा	सरीला	बालू/	चिकासी	24/14	सरीला	चिकासी	01	6.382	33.382	4,00,584	A	25°49'55.02" N	79°28'21.52" E	प्राप्त है।	नही	उपयुक्त है।

			मौरम									B	25°50'13.44" N	79°28'38.82" E	पत्र		
								14/12	27.000			C	25°50'23.34" N	79°28'28.31" E	सं0–412 दिनांक		
												D	25°50'06.68" N	79°28'08.90" E	24.08.2024		
33	बेतवा	सरीला	बालू/ मौरम	चिकासी	24/15	सरीला	चिकासी	01	6.909	31.392	3,13,920	A	25°49'55.92" N	79°28'21.52" E	प्राप्त है।	नहीं	उपयुक्त है।
								02	0.413			B	25°49'40.80" N	79°28'9.56" E	पत्र		
								03	0.653			C	25°49'49.73" N	79°27'53.44" E	सं0–412 दिनांक		
								14/12	23.337			D	25°50'6.68" N	79°28'08.90" E	24.08.2024		
34	बेतवा	सरीला	बालू/ मौरम	चिकासी	24/18	सरीला	चिकासी	14/12	36.437	36.437	5,82,992	A	N-25°49'11.40"	E-79°27'29.20"	प्राप्त है। पत्र	नहीं	उपयुक्त है।
												B	N-25°49'10.70"	E-79°27'56.10"	सं0–412		
												C	N-25°48'55.70"	E-79°27'54.79"	दिनांक		
												D	N-25°48'53.70"	E-79°27'30.20"	24.08.2024		
												E	N-25°49'03.10"	E-79°27'29.31"			
35	बेतवा	सरीला	बालू/ मौरम	इछौरा जिटकरी	25/2	सरीला	इछौरा	04/1	11.682	18.370	2,93,884	A	N 25°51'53.00"	E 79°32'21.85"	प्राप्त है।	नहीं	उपयुक्त है।
								01	6.608			B	N 25°51'51.50"	E 79°32'42.98"	पत्र सं0–412		
												C	N 25°51'42.89"	E 79°32'39.43"	दिनांक		
												D	N 25°51'41.75"	E 79°32'17.77"	24.08.2024		
36	बेतवा	सरीला	बालू/ मौरम	इछौरा जिटकरी	25/3	सरीला	इछौरा	04/1	16.510	18.610	2,97,723	A	N25°51'53.00"	E 79°32'21.85"	प्राप्त है।	नहीं	उपयुक्त है।
								01	2.100			B	N25°51'53.66"	E 79°32'13.68"	पत्र		
												C	N25°51'56.20"	E 79°32'04.27"	सं0–412		
												D	N25°51'44.00"	E 79°31'59.48"	दिनांक		
												E	N25°51'41.75"	E 79°32'17.77"	24.08.2024		
37	बेतवा	सरीला	बालू/ मौरम	इछौरा जिटकरी	25/6	सरीला	इछौरा	01	5.120	31.120	4,97,858	A	N 25°52'06.54"	E 79°31'43.85"	प्राप्त है।	नहीं	उपयुक्त है।
								04/1	26.000			B	N 25°52'03.44"	E 79°31'47.05"	पत्र		
												C	N 25°51'56.20"	E 79°32'04.27"	सं0–412		
												D	N 25°51'44.00"	E 79°31'59.48"	दिनांक		
												E	N 25°51'54.15"	E 79°31'32.06"	24.08.2024		
38	बेतवा	सरीला	बालू/ मौरम	इछौरा जिटकरी	25/9	सरीला	इछौरा	01	1.474	20.030	3,20,440	A	N 25°52'17.10"	E 79°31'33.60"	प्राप्त है।	नहीं	उपयुक्त है।
								04/1	18.556			B	N 25°52'08.17"	E 79°31'23.61"	पत्र		
												C	N 25°51'54.15"	E 79°31'32.06"	सं0–412 दिनांक		
												D	N 25°52'06.54"	E 79°31'43.85"	24.08.2024		
39	बेतवा	सरीला	बालू/ मौरम	इछौरा जिटकरी	25/11	सरीला	इछौरा	01	0.290	27.350	4,37,546	A	N 25°52'17.10"	E 79°31'33.60"	प्राप्त है।	नहीं	उपयुक्त है।
								04/1	27.060			B	N 25°52'08.17"	E 79°31'23.61"	पत्र		
												C	N 25°52'17.30"	E 79°31'18.28"	सं0–412		
												D	N 25°52'38.50"	E 79°31'14.56"	दिनांक		
												E	N 25°52'39.94"	E 79°31'21.30"	24.08.2024		
												F	N 25°52'32.82"	E 79°31'25.13"			
40	बेतवा	सरीला	बालू/ मौरम	इछौरा जिटकरी	25/12	सरीला	इछौरा	04/1	19.70	19.700	3,15,161	A	N 25°53'05.58"	E 79°31'21.30"	प्राप्त है।	नहीं	उपयुक्त है।
												B	N 25°53'07.37"	E 79°31'13.67"	पत्र		
												C	N 25°52'55.79"	E 79°31'10.47"	सं0–412		

												D	N 25°52'38.50"	E 79°31'14.56"	दिनांक 24.08.2024		
												E	N 25°52'39.04"	E 79°31'21.30"			
												F	N 25°52'53.84"	E 79°31'19.88"			
41	बेतवा	सरीला	बालू/ मौरम	इछौरा जिटकरी	25/17	सरीला	इछौरा	04/1	11.503	12.145	1,94,296	A	N 25°53'05.58"	E 79°31'21.30"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								01	0.642			B	N 25°53'07.37"	E 79°31'13.67"			
												C	N 25°53'18.13"	E 79°31'18.10"			
												D	N 25°53'24.66"	E 79°31'22.73"			
												E	N 25°53'18.13"	E 79°31'29.47"			
												F	N 25°53'15.03"	E 79°31'26.10"			
												G	N 25°53'10.28"	E 79°31'23.22"			
42	बेतवा	सरीला	बालू/ मौरम	इछौरा जिटकरी	25/18	सरीला	इछौरा	04/1	8.18	8.180	1,30,864	A	N 25°53'18.13	E 79°31'29.47	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
												B	N 25°53'24.98	E 79°31'43.50			
												C	N 25°53'29.22	E 79°31'40.48			
												D	N 25°53'23.00	E 79°31'24.39			
43	बेतवा	सरीला	बालू/ मौरम	इछौरा जिटकरी	25/19	सरीला	इछौरा	03	2.046	7.730	1,23,556	A	N 25°53'27.75	E 79°31'54.86	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नहीं	उपयुक्त है।
								04/1	5.684			B	N 25°53'24.98	E 79°31'43.50			
												C	N 25°53'29.22	E 79°31'40.48			
												D	N 25°53'36.56	E 79°31'52.38			
44	बेतवा	सरीला	बालू/ मौरम	इछौरा जिटकरी	25/20	सरीला	इछौरा	01	0.672	22.410	3,58,516	A	N 25°53'27.75	E 79°31'54.86	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								03	0.484			B	N 25°53'28.74	E 79°32'9.60			
								04/1	21.254			C	N 25°53'27.92	E 79°32'22.92			
												D	N 25°53'37.22	E 79°32'24.62			
												E	N 25°53'36.56	E 79°31'52.38			
45	बेतवा	सरीला	बालू/ मौरम	इछौरा जिटकरी	25/21	सरीला	इछौरा	01	1.923	17.730	3,83,661	A	N 25°53'32.65	E 79°32'44.04	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नहीं	उपयुक्त है।
								04/1	15.807			B	N 25°53'21.39	E 79°32'41.20			
												C	N 25°53'27.92	E 79°32'22.92			
												D	N 25°53'37.22	E 79°32'24.62			
46	बेतवा	सरीला	बालू/ मौरम	इछौरा जिटकरी	25/22	सरीला	इछौरा	01	3.950	17.830	3,85,325	A	N 25°53'32.65"	E 79°32'44.04"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नहीं	उपयुक्त है।
								04/1	13.880			B	N 25°53'21.39"	E 79°32'41.20"			
												C	N 25°53'15.69"	E 79°32'57.36"			
												D	N 25°53'26.13"	E 79°33'01.92"			
47	बेतवा	सरीला	बालू/ मौरम	इछौरा जिटकरी	25/24	सरीला	बेदा दरिया	02/1	32.381	33.000	5,87,934	A	N 25°53'04.30	E 79°33'28.20	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
								2/3 2/4 2/5 2/6 2/7 2/8	0.619			B	N 25°53'12.75	E 79°33'06.77			
												C	N 25°53'15.69	E 79°32'57.36			
												D	N 25°53'26.13	E 79°33'01.92			
												E	N 25°53'21.07	E 79°33'11.75			
												F	N 25°53'18.13	E 79°33'34.29			
48	बेतवा	सरीला	बालू/ मौरम	इछौरा जिटकरी	25/25	सरीला	बेदा दरिया	2/1	17.260	17.260	2,76,126	A	N 25°53'04.30"	E 79°33'28.20"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नही	उपयुक्त है।
												B	N 25°53'01.89"	E 79°33'42.90"			
												C	N 25°53'13.67"	E 79°33'47.96"			
												D	N 25°53'18.13"	E 79°33'34.29"			
49	बेतवा	सरीला	बालू/	इछौरा	25/26	सरीला	बेदा	02/1	20.740	20.740	3,31,799	A	N 25°53'00.52	E 79°33'54.53	प्राप्त है।	नही	उपयुक्त है।

29

			मौरम	जिटकरी			दरिया					B	N 25°53'01.88"	E 79°33'42.90"	पत्र सं0–412 दिनांक 24.08.2024		
												C	N 25°53'13.57"	E 79°33'47.96"			
												D	N 25°53'06.68"	E 79°34'12.11"			
												E	N 25°53'03.46"	E 79°34'12.11"			
												F	N 25°53'01.18"	E 79°34'02.88"			
50	घसान	सरीला	बालू/मौरम	बिलगाँव	1/1 खण्ड नं0–1	सरीला	बिलगाँव	01/1	15.00	15.00	2,40,000	A	N -25°46'26.00"	E 79°22'17.26"	प्राप्त है। पत्र सं0–412 दिनांक 24.08.2024	नहीं	उपयुक्त है।
												B	N -25°46'30.40"	E 79°22'15.73"			
												C	N -25°46'32.19"	E 79°22'44.23"			
												D	N -25°46'28.21"	E 79°22'49.68"			
												E	N -25°46'26.52"	E 79°22'46.66"			
												E	N -25°46'25.34"	E 79°22'33.20"			

आख्या आवश्यक कार्यवाही हेतु प्रेषित है।

25/08/2024
खान निरीक्षक,
हमीरपुर

25.8.24
खान अधिकारी,
हमीरपुर

उपजिलाधिकारी,
सरीला

क्षेत्रीय अधिकारी,
उ0प्र0 प्रदूषण नियन्त्रण बोर्ड
बांदा

25/8/24
अधिशासी अभियन्ता,
सिचांई विभाग, मौदहा बांध
हमीरपुर

प्रभागीय वनाधिकारी,
हमीरपुर

25-8-24
अपर जिलाधिकारी (वि0/रा0)
हमीरपुर

जनपद हमीरपुर की तहसील हमीरपुर में उपखनिज बालू/मौरम के विधिमान्य खनन क्षेत्रों की स्थलीय निरीक्षण/जॉच आख्या।

जनपद हमीरपुर की तहसील हमीरपुर में उपखनिज बालू/मौरम के विधिमान्य खनन क्षेत्रों को मानचित्र एवं अभिलेखनीय विवरण के अनुसार खनन क्षेत्रों की वर्तमान अद्यतन स्थिति यथा जियो–कोडिनेट्स, खनन योग्य बालू/मौरम की उपलब्धता, खनन परिहार पर व्यवस्थापन की स्थिति आदि के सम्बन्ध में स्थलीय निरीक्षण दिनांक–30.04.2024 को किया गया था। जिला सर्वेक्षण रिपोर्ट के अपडेशन की कार्यवाही पूर्ण करने हेतु अपर निदेशक के पत्र सं0–687/डी0एस0अर0/2024 दिनांक 18.06.2024 के क्रम में निम्न सभी खण्डो का गाटा संख्या व रकबा निर्धारित किया गया, जिसका विवरण निम्नवत है :–

क्र0 सं0	नदी का नाम	तहसील	उपखनिज का नाम	ग्राम	खण्ड संख्या	खसरा खतौनी के अनुसार खण्ड की स्थिति				कुल क्षेत्रफल है0 में	मात्रा घनमी0 में	पिलर	कोडिनेट्स		खन अनापत्ति की स्थिति पत्र सं0 व दिनांक	खनन क्षेत्र से 500 मी0 के अन्दर कोई बांध/जलाषय स्थित है (हॉ/नही)	खनन परिहार पर व्यवस्थापन किये जाने हेतु उपयुक्त है अथवा नही
						तहसील	ग्राम	गाटा सं0	खण्ड मे निहित गाटा का क्षे0				अक्षांष	देशान्तर			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	यमुना	हमीरपुर	बालू/मौरम	पत्थोरा	31/3	हमीरपुर	सुरौली बुजुर्ग दरिया	01मि0	9.565	36.437	7,28,640	A	N-25°55'5.39"	E-80°16'27.13"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नही	उपयुक्त है
								02मि0	26.872			B	N-25°55'10.24"	E-80°16'52.21"			
												C	N-25°54'53.67"	E-80°17'03.02"			
												D	N-25°54'50.44"	E-80°16'47.46"			
2	यमुना	हमीरपुर	बालू/मौरम	पत्थोरा	31/4	हमीरपुर	सुरौली बुजुर्ग दरिया	01मि0	6.500	36.437	5,46,555	A	N-25°55'15.56"	E-80°16'15.02"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नही	उपयुक्त है
								02मि0	21.100			B	N-25°55'30.90"	E-80°16'32.78"			
							पत्थोरा डांडा	01	0.120			C	N-25°55'43.22"	E-80°16'20.68"			
								02	9.717			D	N-25°55'21.43"	E-80°16'00.11"			
												E	N-25°55'19.35"	E-80°16'06.70"			
3	यमुना	हमीरपुर	बालू/मौरम	पत्थोरा	31/5	हमीरपुर	पत्थोरा डांडा	01	6.556	36.437	5,46,555	A	N-25°55'26.65"	E-80°15'47.86"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नही	उपयुक्त है
								02	29.033			B	N-25°55'52.42"	E-80°16'10.60"			
							सुरौली बुजुर्ग दरिया	01मि0	0.248			C	N-25°55'43.22"	E-80°16'20.68"			
												D	N-25°55'21.43"	E-80°16'00.11"			
4	यमुना	हमीरपुर	बालू/मौरम	पत्थोरा	31/6	हमीरपुर	पत्थोरा डांडा	01.	6.437	36.437	5,46,555	A	N-25°55'26.65"	E-80°15'47.86"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नही	उपयुक्त है
								02	30.000			B	N-25°55'52.42"	E-80°16'10.60"			
												B'	N-25°55'55.47"	E-80°16'3.67"			
												C	N-25°55'56.33"	E-80°15'57.63"			
												D	N-25°55'30.73"	E-80°15'35.25"			
5	यमुना	हमीरपुर	बालू/मौरम	पाथोरा	31/7	हमीरपुर	पत्थोरा डांडा	01.	3.647	36.437	5,46,555	A	N-25°55'31.87"	E-80°15'28.86"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नही	उपयुक्त है
								02	32.890			B	N-25°55'31.87"	E-80°15'18.56"			
												C	N-25°55'54.86"	E-80°15'38.98"			

												D	N-25°55'56.33"	E-80°15'57.63"			
												E	N-25°55'30.73"	E-80°15'35.25"			
6	यमुना	हमीरपुर	बालू/ मौरम	पत्योरा	31/8	हमीरपुर	पत्योरा डाडा	01	7.082	30.437	5,46,555	A	N-25°55'27.06"	E-80°14'51.18"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
								02	27.725			B	N-25°55'46.89"	E-80°15'13.96"			
								03	1.63			C	N-25°55'51.11"	E-80°15'22.83"			
												D	N-25°55'54.86"	E-80°15'38.98"			
												E	N-25°55'31.87"	E-80°15'18.56"			
												F	N-25°55'32.20"	E-80°15'12.35"			
7	बेतवा	हमीरपुर	बालू/ मौरम	रमेडी दरिया	11/4	हमीरपुर	रमेडी दरिया	28/1	0.610	15.574	2,78,502	A	N-25°56'10.82"	E-80°09'49.44"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है।
								29	2.110			B	N-25°56'3.51"	E-80°09'56.05"			
								30	0.238			C	N-25°55'50.95"	E-80°9'47.91"			
								51	0.089								
								52	0.085			D	N-25°55'58.80"	E-80°9'37.51"			
								53	0.210								
								54	0.290								
								55	0.146								
								56	0.210								
								57	0.243								
								58	0.218								
								59	0.421								
								60मि0 60मि0	0.287								
								61	0.227								
								62/1 62/2 62/3 62/4 62/5	0.295								
								63	0.482								
								64	0.174								
								47/1	9.239								
8	बेतवा	हमीरपुर	बालू/ मौरम	रमेडी दरिया	11/5	हमीरपुर	रमेडी दरिया	28/1	1.500	12.145	1,94,304	A	N-25°56'21.78"	E-80°9'37.67"	प्राप्त है। पत्र सं0–4701 दिनांक 03.06.2017	नहीं	उपयुक्त है
								32	0.474								
								15	0.4200			B	N-25°56'13.73"	E-80°9'45.76"			
								16	0.102			C	N-25°56'5.87"	E-80°9'35.32"			
								17	0.292			D	N-25°56'14.90"	E-80°9'27.91"			
								18	0.083								
								19	0.060								
								20	0.068								
								21क	0.251								
								22	0.123								
								47/1	8.635								
							पारा आझी गुढाल दरिया	01	0.128								
9	बेतवा	हमीरपुर	बालू/ मौरम	शकरीपी पर	14/1	हमीरपुर	हेलापुर	43/9मि0	12.145	12.145	1,45,728	A	N-25°57'17.74"	E-80°8'11.90"	प्राप्त है। पत्र सं0–4701 दिनांक 03.06.2017	नहीं	उपयुक्त है
												B	N-25°57'16.90"	E-80°08'19.46"			
												C	N-25°56'57.91"	E-80°08'14.49"			
												D	N-25°56'59.13"	E-80°08'7.15"			

10	बेतवा	हमीरपुर	बालू/मौरम	कलौली तीर दरिया	16/2	हमीरपुर	कलौलीतीर दरिया	1	0.866	16.194	1,94,304	A	N-25°57'0.25"	E-80°07'37.41"	प्राप्त है। पत्र सं0–4701 दिनांक 03.06.2017	नहीं	उपयुक्त नहीं है
								2	0.421			B	N-25°56'58.06"	E-80°07'28.16"			
								3	0.214			C	N-25°57'16.00"	E-80°7'20.37"			
								4	0.077			D	N-25°57'18.52"	E-80°7'29.74"			
								5	0.930								
								6	0.1090								
								7	0.450								
								35/42	9.977								
							परदहा सहजना दरिया	01/1	0.870								
								02/11	0.930								
							बदनपुर	206	1.650								
11	बेतवा	हमीरपुर	बालू/मौरम	परदहा सहजना	17/5	हमीरपुर	परदहा सहजना	01/1	3.226	12.145	1,45,728	A	N-25°57'09.12"	E-80°6'57.02"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
								02/11	0.217			B	N-25°57'11.12"	E-80°7'3.14"			
								20/4	4.470								
							कनौटा दरिया	17/1	1.372			C	N-25°56'52.24"	E-80°7'15.18"			
								19/1	2.860			D	N-25°56'50.18"	E-80°7'8.87"			
12	बेतवा	हमीरपुर	बालू/मौरम	सहुरापुर दरिया	18/1	हमीरपुर	बहरौली दरिया	15	18.00	36.437	5,82,912	A	N-25°53'41.90"	E-80°2'43.07"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
							सहुरापुर दरिया	04मि0	0.947			B	N-25°53'52.17"	E-80°2'45.06"			
								18	0.077			C	N-25°53'55.20"	E-80°2'0.58"			
								19	0.028			D	N-25°53'45.86"	E-80°2'1.87"			
								20	0.032								
								17	0.019								
								21	0.113								
								22	0.227								
								23	0.559								
								24	0.297								
								28	0.361								
								29	0.949								
								30	0.619								
								31क	0.607								
								02/4	13.602								
13	बेतवा	हमीरपुर	बालू/मौरम	नैठी डांडा	8/4	हमीरपुर	पतारा दरिया	107/83	20.827	33.833	5,41,394	A	N-25°53'57.23"	E-80°03'27.70"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
								111/83	5.950			B	N-25°54'3.42"	E-80°03'40.58"			
								85	0.266			C	N-25°53'48.00"	E-80°03'56.64"			
							सहुरापुर दरिया	01मि0	4.890			D	N-25°53'44.25"	E-80°03'43.00"			
								02/4	1.900			E	N-25°53'42.85"	E-80°03'24.93"			
14	बेतवा	हमीरपुर	बालू/मौरम	कण्डौर दरिया	9/3	हमीरपुर	कण्डौर दरिया	79/1क	24.708	30.769	4,92,236	A	N-25°52'49.944"	E-79°59'59.568"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
								80/1	3.187			B	N-25°52'52.284"	E-80°0'16.848"			
								937क	0.537			C	N-25°52'35.22"	E-80°0'24.06"			
								951	2.337			D	N-25°52'31.33"	E-80°0'3.20"			
15	बेतवा	हमीरपुर	बालू/मौरम	धुंवा	10/1	हमीरपुर	बिन्दपुरी	250	1.732	21.718	3,71,502	A	N-25°53'32.33"	E-79°57'9.52"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
								251	0.337			B	N-25°53'42.44"	E-79°57'02.70"			
								232	2.020			B1	N-25°53'34.48"	E-79°56'52.86"			
								233	2.258								
								234/1	0.123			C	N-25°53'29.98"	E-79°56'43.31"			

								249	1.115			D	N-25°53'20.78"	E-79°56'50.06"			
						मौदहा	बजेहटा दरिया	01	5.339								
								42	8.794								
16	बेतवा	हमीरपुर	बालू/ मौरम	बेरी	10/2	हमीरपुर	विन्दपुरी	233	0.575	23.465	4,07,084	A	N-25°53'05.68"	E-79°56'37.38"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
								234/1 234/2	9.982			B	N-25°53'15.62"	E-79°56'26.58"			
												B1	N-25°53'28.28"	E-79°56'39.55"			
								249	4.358			C	N-25°53'29.98"	E-79°56'43.31"			
								235	4.800			D	N-25°53'20.78"	E-79°56'50.06"			
						मौदहा	बजेहटा	01	3.750			D1	N-25°53'08.26"	E-79°56'38.30"			
17	बेतवा	हमीरपुर	बालू/ मौरम	बेरी	10/3	हमीरपुर	विन्दपुरी	235	8.564	34.073	5,45,093	A	N-25°53'15.63"	E-79°56'26.58"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
								236	1.113								
								237	0.043			B	N-25°53'00.95"	E-79°56'10.57"			
								238	0.526								
								239	0.065			C	N-25°52'47.90"	E-79°56'22.11"			
								240	0.257								
								241	0.044			D	N-25°52'55.73"	E-79°56'32.87"			
								242,	11.380			E	N-25°53'05.68"	E-79°56'37.38"			
								243,	6.150								
								244	3.300								
								248	1.645								
						मौदहा	बजेहटा	01	0.380								
18	बेतवा	हमीरपुर	बालू/ मौरम	बेरी	10/4	हमीरपुर	विन्दपुरी	244	18.329	21.590	4,78,429	A	N-25°52'51.40"	E-79°55'56.44"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
								247	0.773								
								248	0.970			B	N-25°53'00.95"	E-79°56'10.57"			
						मौदहा	बजेहटा	01	1.518			C	N-25°52'47.90"	E-79°56'22.11"			
												D	N-25°52'42.03"	E-79°56'05.60"			
19	बेतवा	हमीरपुर	बालू/ मौरम	बेरी	10/5	हमीरपुर	विन्दपुरी	245	3.99	24.321	3,89,083	A	N-25°52'51.40"	E-79°55'56.44"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
								246,	1.238								
								247,	1.567			A'	N-25°52'45.62"	E-79°55'46.90"			
								244	1.666			B	N-25°52'39.48"	E-79°55'29.22"			
							इन्द्रपुरी	255/1	1.831			C	N-25°52'32.86"	E-79°55'31.64"			
												D	N-25°52'42.03"	E-79°56'05.60"			
								256	4.515								
								257	4.022								
						मौदहा	बजेहटा	01	4.692								
20	बेतवा	हमीरपुर	बालू/ मौरम	बेरी	10/19	हमीरपुर	इन्द्रपुरी	130/1	7.459	9.414	1,50,611	A	N-25°52'37.11"	E-79°55'01.59"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
								256	1.057			B	N-25°52'39.66"	E-79°54'54.48"			
												C	N-25°52'21.56"	E-79°54'54.02"			
						मौदहा	बजेहटा	01	0.898			D	N-25°52'22.91"	E-79°55'00.43"			
21	बेतवा	हमीरपुर	बालू/ मौरम	बेरी	10/20	हमीरपुर	इन्द्रपुरी	130/1	21.352	26.003	4,16,054	A	N-25°52'21.30"	E-79°54'38.53"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
								256	2.820			B	N-25°52'44.23"	E-79°54'41.09"			
												C	N-25°52'39.66"	E-79°54'54.48"			
						मौदहा	बजेहटा	01	1.880			D	N-25°52'21.56"	E-79°54'54.02"			
												D1	N-25°52'20.90"	E-79°54'47.41"			

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22	बेतवा	हमीरपुर	बालू/मौरम	बेरी	10/21	हमीरपुर	इन्दुपुरी	128/1	2.811	28.823	4,61,115	A	N-25°52'50.11"	E-79°54'29.67"	प्राप्त है। पत्र सं0—413 दिनांक 24.08.2024	नहीं	उपयुक्त है
								130/1	17.407			B	N-25°52'44.23"	E-79°54'41.09"			
								129	2.886			C	N-25°52'21.30"	E-79°54'38.53"			
								256	3.095			C1	N-25°52'21.82"	E-79°54'34.91"			
						मौदहा	बजेहटा	01	2.624			C2	N-25°52'24.82"	E-79°54'29.16"			
												D	N-25°52'29.58"	E-79°54'23.40"			
23	बेतवा	हमीरपुर	बालू/मौरम	बेरी	10/22	हमीरपुर	इन्दुपुरी	128/1	17.119	25.021	4,43,719	A	N-25°52'45.56"	E-79°54'09.13"	प्राप्त है। पत्र सं0—413 दिनांक 24.08.2024	नहीं	उपयुक्त है
								256	4.034			B	N-25°52'57.26"	E-79°54'17.08"			
												B1	N-25°52'53.66"	E-79°54'21.60"			
								129,	0.060			C	N-25°52'50.11"	E-79°54'29.66"			
						मौदहा	बजेहटा	01,	3.808			D	N-25°52'29.58"	E-79°54'23.40"			
24	बेतवा	हमीरपुर	बालू/मौरम	बेरी	23/26	हमीरपुर	इन्दुपुरी	60	2.822	17.366	2,77,821	A	N-25°53'7.53"	E-79°54'2.71"	प्राप्त है। पत्र सं0—413 दिनांक 24.08.2024	नहीं	उपयुक्त है
								61	3.743								
								62	1.518			B	N-25°53'03.93"	E-79°53'55.55"			
								128/1	0.566			C	N-25°52'53.10"	E-79°54'01.11"			
								256	0.570			D	N-25°52'52.74"	E-79°54'04.89"			
						सरीला	कुपरा	1077/3	0.539			E	N-25°52'51.41"	E-79°54'09.37"			
								1075/1 1075मि0 1075/3 1075/3मि 1075/3मि 1075/2 1075/3मि/1 1075/3मि/2 1075/3मि/3 1075/3मि/4	1.125			F	N-25°52'48.10"	E-79°54'10.85"			
												G	N-25°52'56.31"	E-79°54'16.45"			
												H	N-25°53'4.00"	E-79°54'08.52"			
												I	N-25°53'5.58"	E-79°54'4.52"			
								1076/3	0.214								
								1070/1	0.433								
								1/7	2.343								
						मौदहा	गुजपुर	01	1.454								
						मौदहा	बजेहटा दरिया	01	0.260								
25	बेतवा	हमीरपुर	बालू/मौरम	बेरी	23/27	हमीरपुर	इन्दुपुरी	60	1.680	12.00	1,94,304	A	N-25°53'7.53"	E-79°54'2.71"	प्राप्त है। पत्र सं0—413 दिनांक 24.08.2024	नहीं	उपयुक्त है
												B	N-25°53'03.93"	E-79°53'55.55"			
												C	N-25°53'09.28"	E-79°53'52.36'			
						सरीला	कुपरा	01/7	3.00			D	N-25°53'11.46"	E-79°53'59.64			
								07/11	6.086			E	N-25°53'16.51"	E-79°53'58.60'			
								1076मि	2.070			F	N-25°53'13.81"	E-79°53'49.34			

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								1075/3मि 1075/3मि /1									
								1076/2 /2	0.214			G	N-25°53'19.45"	E-79°53'45.40"			
												H	N-25°53'25.03"	E-79°53'56.23"			
												I	N-25°53'16.74"	E-79°53'59.29"			
26	बेतवा	हमीरपुर	बालू/मौरम	बेरी	23/28	सरीलर	कुपरा	01/7	0.154	7.300	1,28,947	A	N-25°53'21.40"	E-79°53'39.60"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
								02/11	7.146			B	N-25°53'18.20"	E-79°53'42.98"			
												C	N-25°53'23.70"	E-79°53'53.70"			
												D	N-25°53'31.60"	E-79°53'51.00"			
27	बेतवा	हमीरपुर	बालू/मौरम	बेरी	23/30	हमीरपुर	बेरी	897/931 /1	1.623	9.855	1,57,667	A	N-25°53'26.52"	E-79°53'31.17"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
												B	N-25°53'24.48"	E-79°53'36.62"			
						सरीला	कुपरा	01/7	1.624			C	N-25°53'36.93"	E-79°53'47.61"			
								02/11	6.608			D	N-25°53'41.71"	E-79°53'41.82"			
28	बेतवा	हमीरपुर	बालू/मौरम	बेरी	10/30	हमीरपुर	बेरी	730/932 /1	6.250	12.145	1,94,304	A	25°53'17.45" N	79°52'25.21" E	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
												B	25°53'14.46" N	79°52'16.86" E			
												C	25°52'57.66" N	79°52'24.36" E			
						सरीला	कुपरा	01/7	5.889			D	25°53'01.19" N	79°52'31.42" E			
29	बेतवा	हमीरपुर	बालू/मौरम	बेरी	10/33	हमीरपुर	बेरी	730/932 /1	5.658	20.242	3,23,840	A	N-25°53'40.22"	E-79°53'14.60"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
								897/931	3.093			B	N-25°53'27.20"	E-79°56'17.80"			
												C	N-25°53'24.86"	E-79°53'09.94"			
												D	N-25°53'20.81"	E-79°53'03.12"			
						सरीला	कुपरा	01/7	4.553			E	N-25°53'35.27"	E-79°52'57.46"			
								02/11	6.938								
30	बेतवा	हमीरपुर	बालू/मौरम	बेरी	10/29	हमीरपुर	बेरी	730/932 /1	6.036	12.145	1,94,304	A	N-25°53'12.78"	E-79°52'10.26"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
												B	N-25°53'14.46"	E-79°52'16.86"			
						सरीला	कुपरा	01/7	6.109			C	N-25°52'57.66"	E-79°52'24.36"			
												D	N-25°52'53.93"	E-79°52'17.47"			
31	बेतवा	हमीरपुर	बालू/मौरम	बेरी	10/36	हमीरपुर	बेरी	897/931/1	3.172	12.145	1,94,304	A	N-25°53'40.22"	E-79°53'14.60"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
						सरीला	कुपरा	01/7	2.707			B	N-25°53'27.20"	E-79°53'17.80"			
								02/11	0.266			C	N-25°53'26.61"	E-79°53'25.76"			
												D	N-25°53'42.75"	E-79°53'25.76"			
32	यमुना	हमीरपुर	बालू/मौरम	उगराहट	90/3 खण्ड सं0–2	हमीरपुर	उगराहट	90/3	24.00	24.00	4,00,000	A	N-26°06'38.09"	E 79°57'36.16"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
												B	N-26°06'36.42"	E 79°57'43.07"			
												C	N-26°06'56.04"	E 79°57'48.18"			

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												D	N-26°07'09.72"	E 79°57'52.54"								
												E	N-26°07'10.76"	E 79°57'42.11"								
												F	N-26°06'57.46"	E 79°57'38.94"								
												G	N-26°06'57.33"	E 79°57'41.38"								
33	चम्बल	इन्दौरपुर	मालू/मौरम	उपखाट	इन्दौरपुर	उपखाट	90/3	30.00	30.00	4,80,000		A	N-26°07'51.70"	E 79°57'47.64"	प्राप्त है। पत्र	नहीं	उपयुक्त है					
												B	N-26°07'51.19"	E 79°57'56.49"	क्रं0–413							
												C	N-26°07'20.24"	E 79°57'53.52"	दिनांक							
												D	N-26°07'09.72"	E 79°57'52.54"	24.08.2024							
												E	N-26°07'10.76"	E 79°57'42.11"								
												F	N-26°07'21.50"	E 79°57'46.47"								
34	चम्बल	इन्दौरपुर	मालू/मौरम	सिकरौदी नदिया	इन्दौरपुर	सिकरौदी नदिया	247	11.95	15.80	2,52,800		A	N-26°01'23.16"	E 80°05'54.44"	प्राप्त है। पत्र	नहीं	उपयुक्त है					
							255/1	0.520				B	N-26°01'12.22"	E 80°05'54.41"	क्रं0–413							
							254	3.33				C	N-26°00'53.52"	E 80°05'30.83"	दिनांक							
												D	N-26°00'54.93"	E 80°05'26.60"	24.08.2024							
												E	N-26°01'03.06"	E 80°05'37.13"								
												F	N-26°01'09.62"	E 80°05'41.69"								
35	चम्बल	इन्दौरपुर	मालू/मौरम	मनवीकला धोक दरिया	इन्दौरपुर	मनवी कला धोक नदिया	1/5	24.00	24.00	3,84,000		A	N-26°09'97.98"	E 79°56'21.18"	प्राप्त है। पत्र	नहीं	उपयुक्त है					
												B	N-26°09'26.84"	E 79°56'25.37"	क्रं0–413							
												C	N-26°09'31.41"	E 79°56'39.86"	दिनांक							
												D	N-26°09'31.75"	E 79°56'46.78"	24.08.2024							
												E	N-26°09'23.27"	E 79°56'50.31"								
												F	N-26°09'21.08"	E 79°56'39.67"								
												G	N-26°09'17.97"	E 79°56'31.59"								
36	चम्बल	इन्दौरपुर	मालू/मौरम	मनवीकला धोक दरिया	इन्दौरपुर	मनवी कला धोक दरिया	1/5	20.00	20.00	3,20,000		A	N-26°09'24.36"	E 79°57'21.43"	प्राप्त है। पत्र	नहीं	उपयुक्त है					
												B	N-26°09'27.45"	E 79°57'13.85"	क्रं0–413							
												C	N-26°09'31.34"	E 79°56'54.58"	दिनांक							
												D	N-26°09'31.75"	E 79°56'46.78"	24.08.2024							
												E	N-26°09'23.27"	E 79°56'50.31"								
												F	N-26°09'21.94"	E 79°57'04.68"								
												G	N-26°09'19.19"	E 79°57'16.55"								
37	चम्बल	इन्दौरपुर	मालू/मौरम	गोती दरिया	इन्दौरपुर	गोती दरिया	263/40	4.487	14.00	2,24,000		A	N-26°02'20.51"	E 80°06'23.64"	प्राप्त है। पत्र	नहीं	उपयुक्त है					
												B	N-26°02'31.71"	E 80°06'27.24"	क्रं0–413							
							264/1	9.513				C	N-26°02'30.61"	E 80°06'31.6"	दिनांक							
												D	N-26°02'42.26"	E 80°06'32.78"	24.08.2024							
												E	N-26°02'55.74"	E 80°06'35.22"								
												F	N-26°02'54.87"	E 80°06'38.45"								
												G	N-26°02'36.54"	E 80°06'35.51"								
												H	N-26°02'18.65"	E 80°06'29.69"								

38	यमुना	हमीरपुर	बालू/मौरम	मिश्रीपुर	472	हमीरपुर	मिश्रीपुर	472	7.00	7.00	1,12,000	A	N-26°04'50.04"	E 79°57'14.48"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
												B	N-26°04'42.15"	E 79°57'15.28"			
												C	N-26°04'33.91"	E 79°57'21.31"			
												D	N-26°04'29.50"	E 79°57'25.41"			
												E	N-26°04'31.32"	E 79°57'29.12"			
												F	N-26°04'34.72"	E 79°57'24.09"			
												G	N-26°04'41.60"	E 79°57'20.60"			
												H	N-26°04'50.02"	E 79°57'17.41"			
39	यमुना	हमीरपुर	बालू/मौरम	मनकी खुर्द थोक दरिया	11, 52/3	हमीरपुर	मनकी खुर्द थोक दरिया	11	7.34	8.00	1,28,000	A	N-26°08'46.07"	E 79°57'42.04"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
								52/3	0.660			B	N-26°08'45.56"	E 79°57'42.30"			
												C	N-26°08'45.47"	E 79°57'43.93"			
												D	N-26°08'44.74"	E 79°57'44.12"			
												E	N-26°08'42.55"	E 79°57'48.69"			
												F	N-26°08'36.24"	E 79°57'49.18"			
												G	N-26°08'36.17"	E 79°57'46.91"			
												H	N-26°08'28.16"	E 79°57'48.60"			
												I	N-26°08'27.97"	E 79°57'51.35"			
												J	N-26°08'24.66"	E 79°57'50.81"			
												K	N-26°08'24.63"	E 79°57'53.10"			
												L	N-26°08'43.21"	E 79°57'50.96"			
												M	N-26°08'49.78"	E 79°57'48.89"			
40	यमुना	हमीरपुर	बालू/मौरम	मेरापुर दरिया	42/1	हमीरपुर	मेरापुर	42/1	33.00	33.00	5,28,000	A	N-25°56'48.95"	E 80°11'5.69"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
												B	N-25°56'48.91"	E 80°11'24.82"			
												C	N-25°56'39.85"	E 80°11'35.22"			
												D	N-25°56'18.07"	E 80°11'43.01"			
												E	N-25°56'18.91"	E 80°11'35.95"			
												F	N-25°56'29.73"	E 80°11'29.18"			
												G	N-25°56'43.18"	E 80°11'14.71"			
41	यमुना	हमीरपुर	बालू/मौरम	भटपुरा दरिया	73/16	हमीरपुर	भटपुरा दरिया	73/16	27.50	27.50	4,40,000	A	N-26°01'26.03"	E 80°05'58.43"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
												B	N-26°01'48.66"	E 80°06'11.64"			
												C	N-26°01'57.69"	E 80°06'16.92"			
												D	N-26°01'57.27"	E 80°06'19.87"			
												E	N-26°02'08.33"	E 80°06'22.85"			
												F	N-26°02'07.64"	E 80°06'26.42"			
												G	N-26°01'44.53"	E 80°06'17.98"			
												H	N-26°01'21.47"	E 80°06'05.69"			
42	यमुना	हमीरपुर	बालू/मौरम	चन्दुपुर दरिया	61/1, 62क	हमीरपुर	चन्दुपुर दरिया	61/1	21.270	24.240	3,87,840	A	N-25°58'39.68"	E 80°07'31.85"	प्राप्त है। पत्र सं0–413 दिनांक 24.08.2024	नहीं	उपयुक्त है
								62 क	2.970			B	N-25°58'44.85"	E 80°07'36.60"			
												C	N-25°58'55.02"	E 80°07'24.51"			

								D	N-25°59'4.55"	E 80°07'8.80"				
								E	N-25°59'9.54"	E 80°06'54.47"				
								F	N-25°59'6.61"	E 80°06'51.80"				
								G	N-25°58'58.96"	E 80°07'4.23"				
								H	N-25°59'1.45"	E 80°07'6.91"				
								I	N-25°58'53.54"	E 80°07'17.50"				
								J	N-25°58'52.06"	E 80°07'16.03"				
								K	N-25°58'44.23"	E 80°07'26.66"				

आप्या आवश्यक कार्यवाही हेतु प्रेषित है।

खान निरीक्षक,
हमीरपुर

खान अधिकारी,
हमीरपुर

उपजिलाधिकारी,
हमीरपुर

उपजिलाधिकारी,
सरीला

उपजिलाधिकारी,
मौदहा

क्षेत्रीय अधिकारी,
उ0प्र0 प्रदूषण नियन्त्रण बोर्ड
बांदा

अधिशासी अभियन्ता,
सिंचाई विभाग, मौदहा बांध
हमीरपुर

प्रभागीय वनाधिकारी,
हमीरपुर

अपर जिलाधिकारी (वि0/रा0)
हमीरपुर

जनपद हमीरपुर की तहसील मौदहा में उपखनिज बालू/मौरम के विधिमान्य खनन क्षेत्रों की स्थलीय निरीक्षण/जॉच आख्या।

जनपद हमीरपुर की तहसील मौदहा में उपखनिज बालू/मौरम के विधिमान्य खनन क्षेत्रों को मानचित्र एवं अभिलेखनीय विवरण के अनुसार खनन क्षेत्रों की वर्तमान अद्यतन स्थिति यथा जियो-कोडिनेट्स, खनन योग्य बालू/मौरम की उपलब्धता, खनन परिहार पर व्यवस्थापन की स्थिति आदि के सम्बन्ध में स्थलीय निरीक्षण दिनांक–30.04.2024 को किया गया था। जिला सर्वेक्षण रिपोर्ट के अपडेशन की कार्यवाही पूर्ण करने हेतु अपर निदेशक के पत्र सं0–687/डी0एस0अर0/2024 दिनांक 18.06.2024 के क्रम में निम्न सभी खण्डो का गाटा संख्या व रकबा निर्धारित किया गया, जिसका विवरण निम्नवत है :–

क्र0 स0	नदी का नाम	तहसील	उप खनिज का नाम	ग्राम	खण्ड संख्या	खसरा खतौनी के अनुसार खण्ड की स्थिति				पुल क्षेत्रफल है0 में	गाद्य घनमी0 में	विंदर	कोडिनेट्स		वन अनापत्ति की स्थिति पत्र सं0 व दिनांक	खनन क्षेत्र से 500 मी0 के अन्दर कोई बांध/ जलाषय स्थित है (हॉ/नही)	खनन परिहार पर व्यवस्थापन किये जाने हेतु उपयुक्त है अथवा नही
						तहसील	ग्राम	गाटा सं0	खण्ड मे निहित गाटा का है0				असाध	देशान्तर			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	बत्ता	मौदहा	बालू/ मौरम	टीकापुर	19/3	मौदहा	बहडोना अछपुरा दरिया	01	1.519	11.502	1,84,969	A	N-25°54 6.96	E-79°58 30.60	प्राप्त है। पत्र सं0–410 दिनांक 24.06.2024	नहीं	उपयुक्त है
								12	0.727			B	N-25°54 22.29	E-79°58 40.81			
								13	0.733			C	N-25°54 26.49	E-79°58 33.25			
								29/1मि	8.483			D	N-25°54 9.44	E-79°58 25.27			
2	बत्ता	मौदहा	बालू/ मौरम	टीकापुर	19/4	मौदहा	बहडोना अछपुरा दरिया	14	0.2670	25.028	4,00,398	A	N-25°54 6.96	E-79°58 30.60	प्राप्त है। पत्र सं0–410 दिनांक 24.06.2024	नही	उपयुक्त है
								15	0.510			B	N-25°54 22.29	E-79°58 40.81			
								16	0.332			C	N-25°54 16.86	E-79°58 45.10			
								17	0.882			D	N-25°54 5.17	E-79°58 53.15			
								18	0.388			E	N-25°53 54.86	E-79°58 42.85			
								19	0.458			F	N-25°54 3.56	E-79°58 37.20			
								20	0.332								
								21	0.040								
								01	3.691								
								29/1मि	19.128								
3	बत्ता	मौदहा	बालू/ मौरम	टीकापुर	19/5	मौदहा	बहडोना अछपुरा दरिया	21	0.280	25.203	4,04,158	A	N-25°53 38.07	E-79°58 53.15	प्राप्त है। पत्र सं0–410 दिनांक 24.06.2024	नही	उपयुक्त है
								20	0.040			B	N-25°53 42.96	E-79°59 4.94			
								22	0.429			C	N-25°54 5.17	E-79°58 53.15			
								23	0.421			D	N-25°53 54.86	E-79°58 42.85			
								24	0.134			E	N-25°53 44.60	E-79°58 49.74			
								24मि0	0.140								
								25	0.130								
								01	8.183								
								29/1मि0	15.500								

4	बेतवा	मौदहा	बालू/ मौरम	टीकापुर	19/6		पहडीना अछपुरा दरिया	01	8.370	23.709	1,45,372	A	N-25°53 38.07	E-79°58 53.15	प्राप्त है। पत्र सं0–410 दिनांक 24.08.2024	नहीं	उपयुक्त है
								28	0.512			B	N-25°53 42.96	E-79°59 4.94			
								26 26/18	1.104			C	N-25°53 29.07	E-79°59 8.70			
								27	0.963			D	N-25°53 18.60	E-79°59 13.64			
								29/1मि	12.790			E	N-25°53 16.26	E-79°59 2.96			
5	बेतवा	मौदहा	बालू/ मौरम	टीकापुर	19/13	मौदहा	पहडीना अछपुरा दरिया	01	1.163	8.353	1,33,631	A	N-25°53 18.60	E-79°59 13.64	प्राप्त है। पत्र सं0–410 दिनांक 24.08.2024	नहीं	उपयुक्त है
								28	0.303			B	N-25°53 10.84	E-79°59 17.37			
								29/1मि	1.803			C	N-25°53 7.30	E-79°59 5.52			
						हमीरपुर	मगरेजपुर	61	1.368			D	N-25°53 14.88	E-79°59 3.80			
								26/18	3.520			E	N-25°53 16.26	E-79°59 2.96			
6	बेतवा	मौदहा	बालू/ मौरम	टीकापुर	20/4	मौदहा	बजेहटा दरिया	53	0.673	33.198	1,77,200	A	N-25°54 20.59	E-79°57 39.13	प्राप्त है। पत्र सं0–410 दिनांक 24.08.2024	नहीं	उपयुक्त है
								54	0.016			B	N-25°54 2.52	E-79°57 45.60			
								45अ 45ब	0.570			C	N-25°54 9.62	E-79°57 59.62			
								01	1.145			D	N-25°54 32.00	E-79°58 1.05			
								42	30.794								
7	बेतवा	मौदहा	बालू/ मौरम	टीकापुर	20/5	मौदहा	बजेहटा दरिया	01	5.670	31.240	4,99,778	A	N-25°54 20.59	E-79°57 39.13	प्राप्त है। पत्र सं0–410 दिनांक 24.08.2024	नहीं	उपयुक्त है
								42	25.143			B	N-25°54 2.52	E-79°57 45.60			
								45स	0.427			C	N-25°53 59.84	E-79°57 40.55			
												D	N-25°53 51.75	E-79°57 30.68			
												E	N-25°53 2.84	E-79°57 21.31			
												F	N-25°53 12.70	E-79°57 28.98			
८	बेतवा	मौदहा	बालू/ मौरम	टीकापुर	20/6	मौदहा	बजेहटा दरिया	01	3.015	18.000	2,70,000	A	N-25°53 52.86	E-79°57 11.11	प्राप्त है। पत्र सं0–410 दिनांक 24.08.2024	नहीं	उपयुक्त है
								42	14.985			B	N-25°53 40.77	E-79°57 20.50			
												C	N-25°53 51.75	E-79°57 30.68			
												D	N-25°54 2.84	E-79°57 21.31			
												E	N-25°53 55.76	E-79°57 15.38			
9	बेतवा	मौदहा	बालू/ मौरम	टीकापुर	20/7	मौदहा	बजेहटा दरिया	01	3.580	16.650	2,49,750	A	N-25°53 52.86	E-79°57 11.11	प्राप्त है। पत्र सं0–410 दिनांक 24.08.2024	नहीं	उपयुक्त है
								42	13.070			B	N-25°53 40.77	E-79°57 20.50			
												C	N-25°53 31.11	E-79°57 10.34			
												D	N-25°53 42.44	E-79°57 2.70			
10	केन	मौदहा	बालू/ मौरम	भुतसी खादर	30/1	मौदहा	छानी	1389/4/309	31.116	36.437	5,46,555	A	N-25°38 00.15	E-80°17 36.60	प्राप्त है। पत्र सं0–410 दिनांक 24.08.2024	नहीं	उपयुक्त है
								1384/5मि	5.271			A'	N-25°38 05.19	E-80°17 43.22			
												B	N-25°38 08.20	E-80°17 55.10			
												C	N-25°38 10.80	E-80°18 02.30			
												D	N-25°38 14.00	E-80°18 08.60			
												E	N-25°38 19.90	E-80°18 16.40			
												F	N-25°38 13.70	E-80°18 22.20			
												G	N-25°37 59.50	E-80°18 02.70			
												H	N-25°37 56.30	E-80°17 51.90			
												I	N-25°37 55.90	E-80°17 36.60			

11	केन	मौदहा	बालू/मौरम	भुलसी खादर	30/2	मौदहा	भुलसी खादर	244,	6.442	30.437	5,46,555	A	N-25°38 51.60"	E-80°18 55.20"	प्राप्त है। पत्र सं0-410 दिनांक 24.08.2024	नहीं	उपयुक्त है
								237	0.053			B	N-25°38 49.86"	E-80°19 3.72"			
								238	0.845								
								239/1	0.520			C	N-25°38 31.71"	E-80°18 44.17"			
								240	0.061			D	N-25°38 13.70"	E-80°18 22.20"			
								241	0.757								
								242	0.275			E	N-25°38 19.90"	E-80°18 16.40"			
								243/1 243/2	0.36								
								48/124	25.941								
							छानी	1389/4/309	6.177								
12	केन	मौदहा	बालू/मौरम	भुलसी खादर	30/3	मौदहा	भुलसी खादर	40/50	2.487	30.437	5,46,555	A	N-25°39 38.8"	E-80°18 55.10"	प्राप्त है। पत्र सं0-410 दिनांक 24.08.2024	नहीं	उपयुक्त है
								50	0.382			B	N-25°39 40.20"	E-80°19 3.96"			
								51	0.350								
								52	0.154			C	N-25°38 49.86"	E-80°19 3.72"			
								53	0.263			D	N-25°38 51.6"	E-80°18 55.20"			
								54मि0	0.218								
								55	0.518								
								56	0.848								
								57/1 57/2	0.211								
								58	0.568								
								59मि0	0.208								
								60	0.352								
								61	0.400								
								63मि0	0.060								
								65/1	0.080								
								244	0.427								
								48/124	28.899								
13	केन	मौदहा	बालू/मौरम	भुलसी खादर	30/10	मौदहा	भुलसी खादर	40/50	19.604	20.242	1,21,452	A	N-25°39 38.80"	E-80°18 55.10"	प्राप्त है। पत्र सं0-410 दिनांक 24.08.2024	नहीं	उपयुक्त है
												B	N-25°39 50.00"	E-80°18 52.35"			
								47	0.638			C	N-25°40 1.98"	E-80°18 46.32"			
												D	N-25°40 6.39"	E-80°18 53.77"			
												D1	N-25°39 53.07"	E-80°19 0.83"			
												E	N-25°39 40.20"	E-80°19 3.96"			
14	केन	मौदहा	बालू/मौरम	बक्छा खादर	29/1	मौदहा	बक्छा खादर	49/7	5.086	12.145	1,94,304	A	N-25°36 29.95"	E-80°17 25.22"	प्राप्त है। पत्र सं0-410 दिनांक 24.08.2024	नहीं	उपयुक्त है
								94	3.847								
								95/1	2.398								
								87मि0	0.018			B	N-25°36 33.87"	E-80°17 25.17"			
								89	0.032			C	N-25°36 38.32"	E-80°17 23.61"			
								90	0.057			D	N-25°36 45.30"	E-80°17 18.12"			
								91	0.032			E	N-25°36 48.37"	E-80°17 27.35"			
								92	0.101			F	N-25°36 30.60"	E-80°17 34.05"			
								93	0.369								
							बक्छा बागर	803	0.205								
15	केन	मौदहा	बालू/मौरम	बक्छा खादर	29/2	मौदहा	बक्छा खादर	49/7	9.325	12.145	1,94,304	A	N-25°37 02.23"	E-80°17 12.62"	प्राप्त है। पत्र सं0-410	नहीं	उपयुक्त है
								95/1	2.330			B	N-25°36 58.32"	E-80°17 06.58"			

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								30/1 38/2	0.153			C	N-25°36'50.90"	E-80°17'14.22"	दिनांक 24.08.2024		
								39,	0.056			D	N-25°36'45.30"	E-80°17'18.12"			
								47,	0.056			E	N-25°36'48.37"	E-80°17'27.35"			
								48/1	0.025								
								46/2	0.049								
								50	0.087								
								51	0.004								
16	कैन	मौदहा	बालू/ मौरम	बरछा खादर	29/3	मौदहा	बरछा खादर	49/7	3.038	12.145	1,94,304	A	N-25°37'02.23"	E-80°17'12.62"	प्राप्त है। पत्र संo-410 दिनांक 24.08.2024	नहीं	उपयुक्त है
								95/1	3.719			B	N-25°36'58.32"	E-80°17'06.58"			
								2	0.252			C	N-25°37'14.60"	E-80°16'49.70"			
								3	1.125			D	N-25°37'16.25"	E-80°16'56.28"			
								11	1.179								
								8/1	0.081								
								25,	0.240								
								26, 26/1क	1.089								
								29क	0.235								
								30,	0.285								
								34	0.069								
								38/1	0.085								
								12/1	0.628								
								24/2 24/3	0.070								

आख्या आवश्यक कार्यवाही हेतु प्रेषित है।

खान निरीक्षक,
हमीरपुर

25.8.24
खान अधिकारी,
हमीरपुर

उपजिलाधिकारी,
हमीरपुर

उपजिलाधिकारी,
मौदहा

क्षेत्रीय अधिकारी,
उ0प्र0 प्रदूषण नियन्त्रण बोर्ड
बांदा

अधिशाषी अभियन्ता,
सिचांई विभाग, मौदहा बांध
हमीरपुर

प्रभागीय वनाधिकारी,
हमीरपुर

25.8.24
अपर जिलाधिकारी (वि0/रा0)
हमीरपुर

605

जनपद हमीरपुर की तहसील राठ में उपखनिज बालू/मौरम के विधिमान्य खनन क्षेत्रों की स्थलीय निरीक्षण/जॉच आख्या।

जनपद हमीरपुर की तहसील राठ में उपखनिज बालू/मौरम के विधिमान्य खनन क्षेत्रों को मानचित्र एवं अभिलेखनीय विवरण के अनुसार खनन क्षेत्रों की वर्तमान अद्यतन स्थिति यथा जियो–कोडिनेट्स, खनन योग्य बालू/मौरम की उपलब्धता, खनन परिहार पर व्यवस्थापन की स्थिति आदि के सम्बन्ध में स्थलीय निरीक्षण दिनांक–30.04.2024 को किया गया था। जिला सर्वेक्षण रिपोर्ट के अपडेशन की कार्यवाही पूर्ण करने हेतु अपर निदेशक के पत्र सं0–687/डी0एस0अर0/2024 दिनांक 18.06.2024 के क्रम में निम्न सभी खण्डो का गाटा संख्या व रकबा निर्धारित किया गया जिसका, विवरण निम्नवत है :–

क्र0 स0	नदी का नाम	तहसील	उप खनिज का नाम	ग्राम	खण्ड संख्या	खसरा खतौनी के अनुसार खण्ड की स्थिति				पुल क्षेत्रफल हे0 में	गाद्रा घनमी0 में	वितर	कोडिनेट्स		वन अनापत्ति की स्थिति पत्र सं0 व दिनांक	खनन क्षेत्र से 500 मी0 के अन्दर कोई बांध/ जलाषय स्थित है (हॉ/नही)	खनन परिहार पर व्यवस्थापन किये जाने हेतु उपयुक्त है अथवा नही
						तहसील	ग्राम	गाटा सं0	खण्ड में निहित गाटा का क्षे0				अक्षांष	देशान्तर			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	धसान	राठ	बालू/ मौरम	जिगनी	1271घ (खण्ड नं0–3)	राठ	जिगनी	1271घ	15.30	15.30	2,44,800	A	N-25°43'24.60	E 79°23'19.70	प्राप्त है। पत्र सं0–411 दिनांक 24.08.2024	नहीं	उपयुक्त है
												B	N-25°43'31.00	E 79°23'14.50			
												C	N-25°43'36.80	E 79°23'20.70			
												D	N-25°43'39.60	E 79°23'25.60			
												E	N-25°43'45.38	E 79°23'36.33			
												F	N-25°43'50.11	E 79°23'44.14			
												G	N-25°43'43.40	E 79°23'41.00			
												H	N-25°43'42.35	E 79°23'38.46			
												I	N-25°43'38.00	E 79°23'35.12			
												J	N-25°43'38.70	E 79°23'31.00			
												K	N-25°43'35.11	E 79°23'27.80			
												L	N-25°43'30.74	E 79°23'25.32			
2	धसान	राठ	बालू/ मौरम	जिगनी	780, 1271घ (खण्ड नं0–2)	राठ	जिगनी	780,	0.50	20.00	3,20,000	A	N 25°45'06.06	E 79°22'35.50	प्राप्त है। पत्र सं0–411 दिनांक 24.08.2024	नहीं	उपयुक्त है
												B	N 25°45'02.08	E 79°22'35.88			
												C	N 25°44'53.37	E 79°22'38.46			
												D	N 25°44'45.58	E 79°22'42.00			
												E	N 25°44'43.22	E 79°22'44.78			
												F	N 25°44'41.18	E 79°22'52.82			
												G	N 25°44'41.20	E 79°22'55.32			
								1271घ	19.50			H	N 25°44'35.23	E 79°23'4.01			
												I	N 25°44'36.18	E 79°22'52.16			
												J	N 25°44'38.73	E 79°22'44.90			
												K	N 25°44'42.71	E 79°22'36.43			
												L	N 25°44'53.19	E 79°22'31.49			
												M	N 25°45'01.34	E 79°22'31.81			
												N	N 25°45'07.10	E 79°22'32.24			

21	3	घसान	राठ	बालू/ मौरम	जिगनी	01 (खण्ड नं0–1)	राठ	जिगनी	01	25	25.00	4,00,000	A	N-25°46'36.98	E 79°23'47.13	प्राप्त है। पत्र सं0–411 दिनांक 24.08.2024	नहीं	उपयुक्त है
													B	N-25°46'41.17	E 79°23'42.78			
													C	N-25°46'57.87	E 79°23'55.93			
													D	N-25°47'05.31	E 79°23'58.70			
													E	N-25°47'3.60	E 79°24'09.31			
													F	N-25°46'57.93	E 79°24'06.53			
													G	N-25°46'48.86	E 79°24'01.04			
													H	N-25°46'41.23	E 79°23'54.53			
25	4	घसान	राठ	बालू/ मौरम	गढहर	01, 23/2 (खण्ड नं0–2)	राठ	गढहर	01,	23. 212	26.00	4,16,000	A	N-25°43'7.13	E 79°22'43.46	प्राप्त है। पत्र सं0–411 दिनांक 24.08.2024	नहीं	उपयुक्त है
													B	N-25°43'10.57	E 79°22'48.08			
													C	N-25°43'13.73	E 79°22'55.20			
													D	N-25°43'16.31	E 79°23'02.84			
													E	N-25°43'22.30	E 79°23'19.31			
													F	N-25°43'31.84	E 79°23'12.30			
													G	N-25°43'26.55	E 79°23'3.50			
													H	N-25°43'22.14	E 79°22'54.53			
													I	N-25°43'11.41	E 79°22'41.90			
24	5	घसान	राठ	बालू/ मौरम	गढहर	01, (खण्ड नं0–1)	राठ	गढहर	01	17.70	17.70	2,83,200	A	N-25°42'43.56	E 79°22'31.95	प्राप्त है। पत्र सं0–411 दिनांक 24.08.2024	नहीं	उपयुक्त है
													B	N-25°42'54.61	E 79°22'36.74			
													C	N-25°42'59.99	E 79°22'40.08			
													D	N-25°43'3.64	E 79°22'39.08			
													E	N-25°43'6.24	E 79°22'41.48			
													F	N-25°43'9.31	E 79°22'39.97			
													G	N-25°43'2.53	E 79°22'33.36			
													H	N-25°42'49.14	E 79°22'20.77			
24	6	घसान	राठ	बालू/ मौरम	तिघौरा	01क, 1118 (खण्ड नं0–2)	राठ	तिघौरा	01क,	1.80	16.50	2,64,000	A	N 25°34'52.14	E 79°23'01.35	प्राप्त है। पत्र सं0–411 दिनांक 24.08.2024	नहीं	उपयुक्त है
													B	N 25°34'54.23	E 79°23'04.90			
													C	N 25°35'03.84	E 79°22'58.11			
													D	N 25°35'10.49	E 79°22'52.28			
													E	N 25°35'15.65	E 79°22'49.37			
													F	N 25°35'31.56	E 79°22'43.85			
													G	N 25°35'36.23	E 79°22'42.84			
													H	N 25°35'41.24	E 79°22'41.62			
													I	N 25°35'41.24	E 79°22'36.73			
													J	N 25°35'28.70	E 79°22'39.78			
													K	N 25°35'22.43	E 79°22'44.97			
													L	N 25°35'14.21	E 79°22'48.80			
													M	N 25°35'11.08	E 79°22'47.85			

7	धसान	राठ	बालू/ मौरम	लिधौरा	1118 (खण्ड सं0-1)	राठ	लिधौरा	1118	18.00	18.00	2,88,000	A	N 25°34'52.14"	E 79°23'01.35"	प्राप्त है। पत्र सं0-411 दिनांक 24.08.2024	नहीं	उपयुक्त है
												B	N 25°34'54.23"	E 79°23'04.90"			
												C	N 25°34'47.12"	E 79°23'10.00"			
												D	N 25°34'41.51"	E 79°23'15.03"			
												E	N 25°34'36.75"	E 79°23'24.00"			
												F	N 25°34'35.25"	E 79°23'32.50"			
												G	N 25°34'34.79"	E 79°23'40.45"			
												H	N 25°34'28.81"	E 79°23'40.46"			
												I	N 25°34'34.53"	E 79°23'15.52"			
												J	N 25°34'44.18"	E 79°23'6.86"			
8	धसान	राठ	बालू/ मौरम	टोला खंगारन	6	राठ	टोला खंगारन	01	13.00	13.00	2,07,974	A	N-25°42'09.47"	E-79°22'11.96"	प्राप्त है। पत्र सं0-411 दिनांक 24.08.2024	नहीं	उपयुक्त है
												B	N-25°42'09.67"	E-79°22'19.80"			
												C	N-25°42'03.99"	E-79°22'19.93"			
												D	N-25°41'54.28"	E-79°22'22.33"			
												E	N-25°41'46.77"	E-79°22'27.16"			
												F	N-25°41'45.30"	E-79°22'21.32"			
												G	N-25°41'53.67"	E-79°22'18.06"			
												H	N-25°41'59.50"	E-79°22'13.77"			
9	धसान	राठ	बालू/ मौरम	टोला खगारन	4	राठ	टोला खगारन	01	21.00	21.00	3,35,959	A	N-25°42'51.6"	E-79°22'13.98"	प्राप्त है। पत्र सं0-411 दिनांक 24.08.2024	नहीं	उपयुक्त है
												B	N-25°42'44.10"	E-79°22'29.30"			
												C	N-25°42'27.50"	E-79°22'22.40"			
												D	N-25°42'35.62"	E-79°22'12.69"			
10	धसान	राठ	बालू/ मौरम	टोला खंगारन	5	राठ	टोला खंगारन	01	13.00	13.00	2,07,975	A	N-25°42'33.41"	E-79°22'15.17"	प्राप्त है। पत्र सं0-411 दिनांक 24.08.2024	नहीं	उपयुक्त है
												B	N-25°42'27.25"	E-79°22'22.76"			
												C	N-25°42'21.78"	E-79°22'19.90"			
												D	N-25°42'20.89"	E-79°22'17.65"			
												E	N-25°42'17.46"	E-79°22'16.77"			
												F	N-25°42'13.35"	E-79°22'19.73"			
												G	N-25°42'9.67"	E-79°22'19.80"			
												H	N-25°42'9.47"	E-79°22'11.96"			
												I	N-25°42'23.91"	E-79°22'12.74"			

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11	[illegible]	राठ	बालू/ मौरम	टोला खंगारन	01 (खण्ड नं0–7)	राठ	टोला खंगारन	01	10.00	10.00	1,60,000	A	N -25°41'38.96"	E 79°22'20.69"	प्राप्त है। पत्र सं0–411 दिनांक 24.08.2024	नहीं	उपयुक्त है
												B	N -25°41'33.34"	E 79°22'30.34"			
												C	N -25°41'34.02"	E 79°22'35.95"			
												D	N -25°41'40.87"	E 79°22'30.93"			
												E	N -25°41'46.77"	E 79°22'27.16"			
												F	N -25°41'45.30"	E 79°22'21.32"			
												G	N -25°41'44.85"	E 79°22'19.40"			

आख्या आवश्यक कार्यवाही हेतु प्रेषित है।

Pankaj 25/08/24
खान निरीक्षक,
हमीरपुर

खान अधिकारी,
हमीरपुर

उपजिलाधिकारी,
राठ

क्षेत्रीय अधिकारी,
उ0प्र0 प्रदूषण नियन्त्रण बोर्ड
बांदा

अधिशाषी अभियन्ता,
सिचांई विभाग, मौदहा बांध
हमीरपुर

प्रभागीय वनाधिकारी,
हमीरपुर

अपर जिलाधिकारी (वि0/रा0)
हमीरपुर

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Annexure-9

महत्वपूर्ण

संख्या– 1659 /86–2023

ADM(F/R)/MO
कृ० आ० का० करें।
DM
17.05.2023

प्रेषक,

डा० रोशन जैकब,
सचिव,
उ०प्र० शासन।

सेवा में,

समस्त जिलाधिकारी,
उत्तर प्रदेश।

भूतत्व एवं खनिकर्म अनुभाग

लखनऊ दिनांक: 17 मई, 2023

विषय–जनपद में विद्यमान खनन क्षेत्रों तथा नये चिन्हित खनन क्षेत्रों के डी०एस०आर० Updation/Modification एवं खनन क्षेत्रों की Replenishment Study कराये जाने के सम्बन्ध में।

महोदय,

उपर्युक्त विषय पर अवगत कराना है कि Sustainable Sand Mining Mangement Guidelines 2016 तथा Enforcement and Monitoring Guidelines for Sand Mining 2020 के अनुसार जनपद में उपखनिज के क्षेत्रों का जिला सर्वेक्षण रिपोर्ट बनाया गया है, जिसका प्रत्येक पाँच वर्ष पर Updation/Modification किया जाना है। इसके साथ ही नदी तल स्थित उपखनिज बालू/मोरम/बजरी/बोल्डर के क्षेत्रों की Replenishment Study भी कराया जाना है। उक्त कार्य हेतु जनपद स्तर पर निम्नवत् प्रक्रिया अपनाई जायेगी:–

(1) सम्बन्धित जिलाधिकारी द्वारा जिला सर्वेक्षण रिपोर्ट का (संलग्नक–1 के अनुसार) Updation/Modification करने हेतु विद्यमान डी०एस०आर० क्षेत्रों एवं नये क्षेत्रों का चिन्हांकन किया जायेगा।

(2) जिलाधिकारी द्वारा विद्यमान डी०एस०आर० क्षेत्रों एवं नये क्षेत्रों के डी०एस०आर० में Updation हेतु NABET/QCI Accredited Agencies का चयन किया जायेगा (सूची–संलग्नक–2)। भूतत्व एवं खनिकर्म निदेशालय, उ0प्र0 द्वारा RFP से एजेन्सी का Empanelment तथा Rate Discovery भी की गयी है, जनपद उक्त का प्रयोग भी कर सकते हैं। (संलग्नक-3)

(3) जिला सर्वेक्षण रिपोर्ट के Updation हेतु भुगतान जिला खनिज फाउण्डेशन न्यास नियमावली, 2017 के नियम–17 (ब) के अनुसार डी०एम०एफ० निधि से किया जायेगा ।

(4) अन्वेषण संस्थाओं द्वारा चिन्हित ब्लॉक का DGPS सर्वे करते हुए जियोकॉडिनेट निर्धारित किया जायेगा तथा क्षेत्र का कॉर्डिनेट एवं Route map दर्शाते हुए Enforcement and Monitoring Guidelines for Sand Mining 2020 के संलग्नक–I से VII में सूचना तैयार कर प्रस्तुत की जायेगी ।

(5) पट्टाधारक/परियोजना प्रस्तावक, क्षेत्र के Replenishment Study हेतु NABET/QCI Accredited Agencies अथवा विभाग द्वारा Empanelled Exploration Agencies का चयन करेगा तथा चयनित संस्था से पर्यावरण स्वच्छता प्रमाण पत्र की शर्तों के अधीन स्वयं के व्यय

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पर Enforcement and Monitoring Guidelines for Sand Mining 2020 के भाग–5 के अनुसार Replenishment Study का कार्य करायेगा ।

(6) सम्बन्धित जिलाधिकारी द्वारा जिला सर्वेक्षण रिपोर्ट तथा Replenishment Study के परीक्षण हेतु जनपद स्तर पर अपर जिलाधिकारी/प्रभारी अधिकारी खनिज की अध्यक्षता में एक समिति का गठन किया जायेगा जिसमें सिंचाई, वन तथा राजस्व विभाग के अधिकारी सदस्य होंगे। जनपदीय ज्येष्ठ खान अधिकारी/खान अधिकारी/खान निरीक्षक उक्त समिति के संयोजक सदस्य होंगे।

(7) बिन्दु संख्या–5 के अनुसार तैयार क्षेत्रवार जिला सर्वेक्षण रिपोर्ट तथा बिन्दु संख्या–6 के अनुसार तैयार Replenishment Study Report का परीक्षण बिन्दु सं0–6 के अनुसार गठित समिति द्वारा किया जायेगा ।

(8) विधिक्षित जिला सर्वेक्षण रिपोर्ट जनपदीय जिलाधिकारी द्वारा अनुमोदन हेतु निदेशालय को अग्रसारित किया जायेगा तथा जनपदीय ज्येष्ठ खान अधिकारी/खान अधिकारी/खान निरीक्षक द्वारा Mine Mitra Portal पर Real time में Update किया जायेगा।

(9) जिलाधिकरी द्वारा साप्ताहिक रूप से जिला सर्वेक्षण रिपोर्ट के Updation/ Modification की समीक्षा की जायेगी तथा अधिकतम तीन माह में इस कार्य को पूर्ण कर लिया जायेगा ।

2. इस सम्बन्ध में मुझे यह कहने का निदेश हुआ है कि कृपया जनपद में जिला सर्वेक्षण रिपोर्ट में विद्यमान उपखनिज के क्षेत्रों तथा नये क्षेत्रों के डी०एस०आर० में Updation/Modification एवं उपखनिज बालू/मोरम/बजरी/बोल्डर के क्षेत्रों के Replenishment Study हेतु उपरोक्तानुसार आवश्यक कार्यवाही सुनिश्चित करने का कष्ट करें।

संलग्नक–यथोक्त।

भवदीय,

(डा0 रोशन जैकब)
सचिव।

संख्या एवं दिनांकः उपरोक्तानुसार।

प्रतिलिपि निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

1. निदेशक, भूतत्व एवं खनिकर्म निदेशालय, उ0प्र0 को उनके पत्र संख्या–183/एम0–228/2017 खनन नीति(ix) के सन्दर्भ में।
2. समस्त मण्डलायुक्त, उ0प्र0।
3. समस्त ज्येष्ठ खान अधिकारी/खान अधिकारी/क्षेत्रीय कार्यालय, भूतत्व एवं खनिकर्म विभाग, उ0प्र0।

आज्ञा से,

(विपिन कुमार जैन)
विशेष सचिव।

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