BEFORE NATIONAL GREEN TRIBUNAL, PRINCIPAL BENCH, AT NEW DELHI

IN

OA NO 102/2023

In the matter of:

NEERAJ CHHACHHAR & ORS. ...APPLICANT

VERSUS

STATE OF UTTARAKHAND & ORS. ...RESPONDENTS

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(OMJEE GUPTA)
Executive Engineer
Irrigation Division Haridwar

SE

Engineer in Chief
Irrigation Department
Uttarakhand, Dehradun

	Copy of the letter 12.02.26	
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Dated:21/02/2026

Adv Anjali Rajput
Counsel for State of Uttarakhand.

SE

(OMJEE GUPTA)
Executive Engineer
Irrigation Division Haridwar

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STATUS REPORT IN FORM OF AFFIDAVIT ON BEHALF OF SECRETARY, IRRIGATION DEPARTMENT, STATE OF UTTARAKHAND IN COMPLIANCE OF THE ORDER DATED: 10.12.2025.

MOST RESPECTFULLY SHOWETH:

I Yugal Kishore Pant Aged about 54 yrs S/O Gopal Dutt Pant currently posted Secretary, Irrigation Department State of Uttarakhand, do hereby solemnly affirm and declare as follows:

1. That I am currently posted as Secretary, Irrigation Department, State of Uttarakhand, and I have made myself acquainted with the facts and circumstances of the instant case and have gone through the documents and reports pertaining to the subject matter and annexed herewith, hence I am competent to affirm the instant affidavit before this Hon'ble Tribunal.

(OMJEE GUPTA)
Executive Engineer
Irrigation Division naridwar

SE

Engineer in Chief
igation Department
arakhand, Dehradun

2. That the present issue relates to alleged illegal construction of residential apartment at Beliram Ashram, Kankhal, Haridwar, Uttarakhand, polluting river Ganga through discharge of sewage and dumping of construction waste. That Hon'ble Tribunal was pleased to take suo-moto legal action upon letter petition by the applicant. That during proceedings the Hon'ble tribunal observed that demarcation of the flood plain is necessary to determine whether the alleged construction falls within the flood plain area and, consequently, whether it is illegal or not.

3. That the matter was again listed for hearing on 10.12.2025, The Hon'ble tribunal was pleased to pass following order:

"7. In terms of the earlier order and the stand of the State of Uttarakhand, the demarcation of the flood plain is to be done taking into 1 meter contour, but now minutes of the meeting relating to the demarcation of the flood plain have been placed on record on page 713 which though quote the order of the Tribunal passed earlier, but decides to demarcate the flood plain with 1 meter DEM instead of 1 meter contour.

8. The exercise of the demarcation of the flood plain in terms of the River Ganga (Rejuvenation Protection and Management) Authorities Order 2016 and in terms of the direction of the Tribunal, has not yet commenced at the ground level, though the matter has been pending since March 2023 and it has been listed as many as 13 times.

10. In such circumstances, we implead the Chief Secretary, State of Uttarakhand as the Respondent No. 14 and direct the

NOTARY Vijay Pal Singh (Advocate) District Dehra Dun Uttarakhand Reg.No.-20935/2024 Valid upto- 03-12-2029 GOVT. OF INDIA

(OMJEE GUPTA)
Executive Engineer
Irrigation Division Haridwar

Engineer in Chief
Irrigation Department
Uttarakhand, Dehradun

Chief Secretary, State of Uttarakhand to look into this entire issue, take appropriate disciplinary action against the officers who are responsible in causing the delay and to ensure that the paucity of fund does not result in the delay. The Chief Secretary, State of Uttarakhand is directed to do the needful within eight weeks and file action taken report before the Tribunal immediately thereafter.

11. List on 23.02.2026."

A copy of the order is annexed herewith as Annexure 1.

4. It is submitted that the State Government respectfully acknowledges the directions passed by this Hon'ble Tribunal from time to time and is fully committed to ensure strict adherence to the environmental laws.

5. That in compliance with the directions issued by Hon'ble Tribunal Department, has carried out hydraulics study and modelling exercise corresponding to 1.0 m contour interval for stretch of Haridwar to Laksar (50 Km Stretch). That upon completion of the same, the co-ordinates corresponding to the 25 year and 100-year flood frequency lines have been established. And to confirm accuracy, field verification is also completed. Copy of the study maps and methodology is annexed herewith as Annexure 2.

6. It is respectfully submitted that, the Department has completed exercise of updating the demarcation of the flood plain for the stretch from Haridwar to Laksar (50 km stretch) using 1 mtr contour interval, whereas the study completed in year 2016 was based on a 10 m contour interval.

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Engineer in Chief
Irrigation Department
Uttarakhand, Dehradun

7. That the maps showing 100 -year flood frequency line based on 10m contour interval (as demarcated earlier) is shown in red color and the 100-year flood plain frequency line based on 1 m contour interval (updated demarcation) is shown in green color is annexed herewith in KML file. (as Annexure 3). The photographs of few stretches are being attached for your kind perusal as annexure 4.
8. It is submitted that the process of physical demarcation of flood plain boundary on ground through erecting permanent pillars has also been initiated and is presently in progress. That as of today permanent pillar installation work in a stretch of 7.00 kms has been completed. Photographs of the pillars erected at various sites for a stretch of 7 kms are annexed herewith as Annexure-5.
9. That on 12.02.2026, mapping of the demarcation data was sent by Executive Engineer Hydraulics Division, Bahadrabad to the Irrigation Division, Haridwar. A copy of the letter is annexed as Annexure 6.
10. It is humbly submitted that the alleged construction is located at a distance of 24.65 meters from the 100-year flood frequency line area of the Active Flood Plain Zone, which is, outside the restricted area specified in notification no. 381/11-2017/06(65)/2016 dated 28.02.2017 issued by of Uttarakhand Government, Irrigation Section-2. Google Earth image showing the distance of the alleged construction from the river Ganga is annexed herewith as Annexure 7.

NOTARY Vijay Pal Singh (Advocate) Distt. Dehra Dun Uttarakhand Regd.No.-26935/2024 Valid upto- 03-12-2029 GOVT. OF INDIA

(OMJEE GUPTA)
Executive Engineer
Irrigation Division Haridwar

SE

Engineer in Chief
Irrigation Department
Uttarakhand, Dehradun

11. That this reply is submitted for kind perusal of this Hon'ble Tribunal.

Deponent

Verification:

I, Yugal Kishore Pant, posted as Secretary, Irrigation Department, State of Uttarakhand, do hereby verify that the contents of this affidavit are true and correct to the best of my knowledge and belief. No part of this affidavit is false, and nothing material has been concealed therefrom.

Deponent

NOTARY
Vijay Pal Singh
(Advocate)
Uttarakhand
Regd. No. 935/2024
Valid upto- 03-12-2029
GOVT. OF INDIA

(OMJEE GUPTA)
Executive Engineer
Irrigation Division Haridwar

SE

Engineer in Chief
Irrigation Department
Uttarakhand, Dehradun

SR. No. 218
Date 20/2/25

This affidavit is sworn, before
Shri Yugal Kishore Pant
who is identified by Shri
at Dehradun on 20/2/25

VIJAY PAL SINGH
Advocate & Notary Public
Dehra Dun (U.K.) INDIA

ANNEXURE-1

Item No. 03 Court No. 1

BEFORE NATIONAL GREEN TRIBUNAL
PRINCIPAL BENCH, NEW DELHI

Original Application No. 102/2023
(IA No 91/2025, IA No 413/2025, IA No 432/2024)

Neeraj Chhachhar & Ors. Applicant(s)

Versus

State of Uttarakhand & Ors. Respondent(s)

Date of hearing: 10.12.2025

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

Applicant: None Present

Respondents: Ms. Anjali Rajput, Adv. for R - 3 & 12
Mr. Omjee Gupta, Executive Engineer, Irrigation Division, Haridwar (Through VC)
Mr. Ankur Khandelwal, Adv. for R - 10 (Through VC)
Mr. Gigi. C. George, Adv. for NMCG
Mr. Mukesh Verma & Ms. Vatsala Tripathi, Advs. For UKPCB (Through VC)
Mr. S.S. Pardang & Ms. Ayushi Mishra, Advs. for R - 4 to 8

ORDER

1. In this Original Application, the grievance relates to the construction of residential apartments at Beliram Ashram, Kankhal, Haridwar in the flood plain of river Ganga and consequential pollution to river Ganga.

2. In terms of Clause 3(l) of the River Ganga (Rejuvenation Protection and Management) Authorities Order 2016, the flood plain of river Ganga is required to be demarcated keeping in view 1:100 years flood level.

3. The Tribunal in the proceedings dated 16.04.2025 had taken note of this and had also considered that in other stretches falling in the States other than Uttarakhand, the flood plain of river Ganga are being uniformly demarcated with 1 (one) meter contour. The relevant part of the order dated 16.04.2025 is as under:

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"xxx .....xxx.....xxx

3. River Ganga (Rejuvenation, Protection and Management) Authorities Order, 2016 was notified on 07.10.2016.

4. In terms of the directions of the Tribunal, all other States from where river Ganga or its Tributaries are flowing are taking a step to demarcate flood plain zone of river Ganga, in terms of the 2016 Notification with highest flood level of 1: 100 years.

5. The other States are uniformly demarcating it with 01 meter contour but in the case of State of Uttarakhand, Counsel for State has pointed out that demarcation of flood plain zone is done taking into account with 10 meter contour.

6. Sh. Mr. A.K. Lohani (Through VC), Scientist G, NIH, Roorkee appearing virtually has informed that when demarcation was done in 2016, 10 meter contour was available but now 01 meter contour interval is available which is more accurate. He has submitted that in view of the fact that all other relevant data is available, the exercise of completing the demarcation with 01meter contour taking into account 1: 100 years highest flood level can be completed within one or two months."

4. When the matter was taken up on 18.08.2025, a statement was made by Counsel for State of Uttarakhand that the demarcation of flood plain with 1 meter contour will be done within six months. The said statement in the order dated 18.08.2025 was recorded as under:

"xxx .....xxx.....xxx
3. The Learned Counsel for the State of Uttarakhand on the previous date had sought time to obtain instructions in this regard. The communication dated 12.08.2025 (pg710) has now been sent by the Irrigation Department, State of Uttarakhand disclosing that in terms of the order of the Tribunal dated 16.04.2025, a three-member committee was constituted which had found that the demarcation of the flood plain with 01m contour is more appropriate and accordingly 06 months' time has been sought to take steps to demarcate the flood plain with 01m contour.

4. Learned Counsel appearing for the State of Uttarakhand has also submitted that the flood plain for the stretch of river Ganga under consideration in the OA from Chandipur to Uttar Pradesh border will be demarcated taking into account 01m contour with 1:100 years highest flood within 06 months."

5. There was no progress in the demarcation of the flood plain of river Ganga in Uttarakhand. On 13.11.2025 when the matter was taken, learned Counsel for the State of Uttarakhand had stated that the above statement was made before the Tribunal on instructions from Shri Omjee Gupta,

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Executive Engineer, Irrigation Division, Haridwar, Uttarakhand. The said statement of the Counsel was recorded in the order dated 13.11.2025 as under:

> *"xxx .... xxx .... xxx*
> *4. Learned counsel for the State of Uttarakhand has disclosed that the above statement was made by her on instructions from Shri Omjee Gupta, Executive Engineer, Irrigation Division, Haridwar, Uttarakhand. Therefore, we require Shri Omjee Gupta, Executive Engineer, Irrigation Division, Haridwar to appear virtually on the next date of hearing and disclose the manner in which the demarcation of flood plain of river Ganga in the concerned stretch will be completed within six months from 18.08.2025 that is by 17.01.2026."*

6. In pursuance to the above, Shri Omjee Gupta, Executive Engineer, Irrigation Division, Haridwar, Uttarakhand has appeared virtually today. Since the funds have not been allocated, therefore, the work of demarcation of the flood plain could not be completed till now. We find that no such disclosure of non-availability of fund was made by him when he had made a statement before the Tribunal on 18.08.2025 that the work will be completed within six months.

7. In terms of the earlier order and the stand of the State of Uttarakhand, the demarcation of the flood plain is to be done taking into 1 meter contour, but now minutes of the meeting relating to the demarcation of the flood plain have been placed on record on page 713 which though quote the order of the Tribunal passed earlier, but decides to demarcate the flood plain with 1 meter DEM instead of 1 meter contour.

8. The exercise of the demarcation of the flood plain in terms of the River Ganga (Rejuvenation Protection and Management) Authorities Order 2016 and in terms of the direction of the Tribunal, has not yet commenced at the ground level though the matter is pending since March 2023 and it has been listed as many as 13 times.

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9. Counsel for the Respondent - Project Proponent has submitted that on account of delay caused, the general public is suffering and State is not showing any sensitivity to the problems faced by them.

10. In such circumstances, we implead the Chief Secretary, State of Uttarakhand as the Respondent No. 14 and direct the Chief Secretary, State of Uttarakhand to look into this entire issue, take appropriate disciplinary action against the officers who are responsible in causing the delay and to ensure that the paucity of fund does not result in the delay. The Chief Secretary, State of Uttarakhand is directed to do the needful within eight weeks and file action taken report before the Tribunal immediately thereafter.

11. List on 23.02.2026.

Prakash Shrivastava, CP

Dr. A. Senthil Vel, EM

December 10, 2025
Original Application No. 102/2023
(IA No 91/2025, IA No 413/2025, IA No 432/2024)
dv

FLOOD PLAIN ZONING METHODOLOGY ADOPTED FOR RIVER SYSTEMS OF UTTARAKHAND

CLIENT

Superintending Engineer, Hydraulic Circle, Bahadarabad

(IRI Roorkee), Haridwar Uttarakhand

Submitted by

VISIONTEK CONSULTANCY SERVICES

(Committed for Better Environment)

Plot No-M22 and 23 Chandaka, Industrial Estate Patia, Bhubaneswar, Distt- Khurda

State – Odisha India Pin code- 751024

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Singh
(Advocate)
Jharkhand
Reg.No.-26035/2024
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1. Flood Plain Zoning

Flood plain management aims to regulate land use in flood-prone areas to minimize damage while maximizing benefits. By identifying areas at risk from floods of different magnitudes, development can be planned to reduce potential damage. Flood plain zoning disseminates information on flood risk to prevent unplanned development in both protected and unprotected areas. Recognizing that floodplains belong to rivers, it promotes development that aligns with flood risks. The Central Water Commission (CWC) first issued floodplain zoning guidelines in 1973-74, followed by a model draft bill in 1975. The Uttarakhand Government enacted the Flood Plain Zoning Act in 2012, and following the 2013 Kedarnath floods, the Supreme Court and National Green Tribunal emphasized the importance of defining river boundaries to regulate land use. The scope of work provided above and the expected deliverables are inline to meet the guidelines provided by national Disaster Management Act Jan 2008

2. Objective of Study

Flood-plain zoning is a flood management approach that respects a river's natural flow and limits development within its floodplain. It involves mapping areas affected by floods of varying magnitudes and frequencies, and regulating permissible developments in these zones. The goal is to define floodplain boundaries based on river geometry and hydraulic characteristics for major rivers in Uttarakhand. It also aims to identify areas at risk from high discharges during floods and flash floods, using modeling results for different flood frequencies, such as 5, 25, 50, and 100-year return periods.

3. Methodology:

Whenever we are going for the flood Plain zoning works so in that case, we have two types of catchments first one is gauged catchment and the other one is ungauged catchment. To Determine the flood plains for 5yr, 25yr, 50yr & 100yr return period, discharge calculation needs to be done as per the availability of the data, so the discharge calculation will depend on the type of catchment weather it is gauged or ungauged. Here discharge preparation steps for different return period and modeling steps for gauged catchment and ungauged catchment mentioned separately.

3.1 For Gauged Catchment:

To estimate the design flood using flood frequency approach, the following procedures shall be adopted:

EE SE CE

(a) The flood peak series shall be checked for randomness, homogeneity, trend, jump, outliers etc using appropriate statistical methods.

(b) Flood frequency analysis shall be carried out using time series of instantaneous annual flood peak. Based on the hourly gauge data the observed annual flood peak shall be converted into instantaneous flood peak.

(c) Using the instantaneous annual flood peak time series, the flood frequency analysis shall be carried out using standard frequency distributions such as Gumbel, log Pearson type-III and Log Normal distributions etc. to estimate the desired return period flood.

(d) Goodness of fit test for the frequency distribution shall be carried out using standard statistical tests such as Chi Square, D-Index etc. to assess the appropriate frequency distribution for the data set and decide the appropriate design flood.

a) Normal Distribution

Analysis by using the Normal distribution uses the formula as below:

$Q_T = \underline{Q} + K_T\sigma$

Where:

Q_T = the probable discharge with a return period of T years

$\bar{Q}$ =mean flood (for n years)

K_T= frequency factor

σ = Standard deviation of data

The tables presented below summarize calculated discharges for different return period based on the Normal distribution.

b) Log-Normal Distribution

The formula used for estimation of discharges for any return period in the method is written

$$\log Q_T = \log(Q)_{avg} + K_T\sigma$$

Where,

Q_T = the probable discharge with a return period of T years

$\log(Q)_{avg}$ = average of the log Q discharge values

K_T= frequency factor (referred from for return period)

σ = the standard deviation of the log Q values

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c) Log Pearson Type III Distribution

The formula used for estimation of discharges for any return period in the method is written as:

$$logQ_T = log\ (\underline{Q}) + K_T\sigma$$

Where:

Q_T = the probable discharge with a return period of T years

log($\underline{Q}$) = average of the log Q discharge values

K_T= frequency factor (referred from standard table based on skewness coefficient Cs and return period)

σ = the standard deviation of the log Q values

d) Gumbel Extreme Value Type 1 Distribution (GEVT – 1)

The formula used for estimation of discharges for any return period in the method is written as:

$$Q_T = \underline{Q} + K_T\sigma$$

Where:

Q_T= the probable discharge with a return period of T years

$\bar{Q}$ = mean flood (for n years)

K_T= frequency factor = $(Y_T - Y_n)/\ \sigma_n$

σ_n = Standard deviation of data

Y_T = - Ln (Ln (T/T- 1))

Y_n, σ_n = expected mean and standard deviations of reduced extremes to be found from Gumbel's table based on number of year of data available.

Here also mentioning below the flow chart which explains the holistic approach for flood plain zoning works for Gauged catchments

To estimate the design flood using flood frequency approach, the following procedures shall be adopted:

(a) The flood peak series shall be checked for randomness, homogeneity, trend, jump, outliers etc using appropriate statistical methods.

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(b) Flood frequency analysis shall be carried out using time series of instantaneous annual flood peak. Based on the hourly gauge data the observed annual flood peak shall be converted into instantaneous flood peak.

(c) Using the instantaneous annual flood peak time series, the flood frequency analysis shall be carried out using standard frequency distributions such as Gumbel, log Pearson type-III and Log Normal distributions etc. to estimate the desired return period flood.

(d) Goodness of fit test for the frequency distribution shall be carried out using standard statistical tests such as Chi Square, D-Index etc. to assess the appropriate frequency distribution for the data set and decide the appropriate design flood.

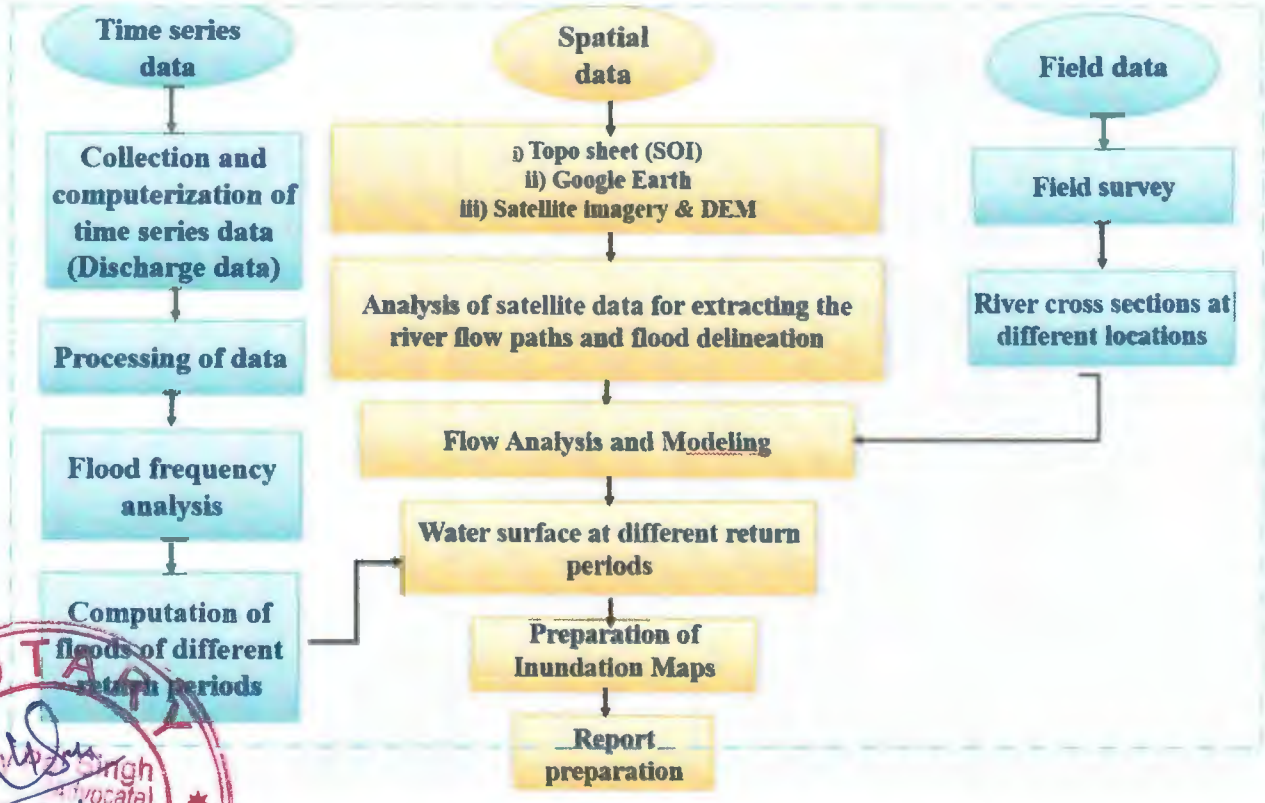

Fig.1 Flowchart of methodology of Flood Plain Zoning

4. Design Flood Estimation

4.1 Flood Frequency Analysis for Ganga River (Chandipul to Laksar)

Flood frequency analyses are used to predict design floods for sites along a river. The technique involves using observed annual peak flow discharge data to calculate statistical information such as mean values, standard deviations, skewness and recurrence intervals. Subsequently those statistics are applied to the equations of different distributions in order to find the resultant estimated floods with respect to different return periods.

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The reach of this part of Ganga is mostly controlled by the discharge of Bhimgouda barrage as it starts just downstream of it. The reach has very less chance of lateral inflows. The escape from Ganga canal is opened to this reach. However, in this part the lateral inflows are taken as negligible and thus the discharge from Bhimgouda is considered for subsequent frequency analysis and modelling. The maximum discharge data of 107 years (1918-2025) is received on which frequency analysis is carried out.

is Before starting the hydrological and hydraulic modelling for discharge calculations, flood frequency analysis (FFA) has been carried out for four sites which are Haripur, Naugaon, Tons & Tons Pabar. All these four sites are located in Yamuna basin River stretch in Uttarakhand State; hence the results would give a good indication later for calibrating the H & H model. Daily discharge data is available for 44 years for Tons & Tons Pabar and 42 years data for Naugaon and 39 years data for Haripur and 31 years for Bausan and these data has been used for FFA. To get the instantaneous maximum discharge values from the daily discharge values, annual maximum daily discharge values have been multiplied by a factor of 1.2 i.e.,20% higher than the daily discharge values. The CWC in GUIDELINES FOR PREPARATION OF DPR FOR FLOOD MANAGEMENT WORKS - April 2018, prescribes a factor of 1.15. However, to be on safer side, a factor for 1.2 is considered.

For the purpose of flood estimation, the Normal distributions, Log normal distribution, Log Pearson type III and the Gumbel extreme value distribution seem to have found a wider applicability than many other distributions. Hence in this project, all four distributions have been used for carrying out the flood frequency analysis. The following section explains in brief about all the methodologies used for flood frequency analysis. An outlier analysis of the discharge values has also been carried out to ascertain the consistency of the discharge values using quartile deviation method and the discharge values are found to be within the lower limit and upper limit ranges.

4.1.1 Discharge from Bhimgauda barrage

The release from Bhimgouda barrage is considered as the major flow input for our study. The total reach of 50 km is having very less lateral impact and in major times the releases from Bhimgouda is considered as the prime and deciding factor for the flow in this part of the Ganga system. Hence the subsequent analyses are made basing on the annual maximum of the discharge data available.

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The tables presented below summaries the maximum discharge observed for 107 years from 1918 – 2025 and calculated discharges for different return period based on different distribution. A time series of the flow release data at barrage site is prepared for better understanding of the year wise flow conditions.

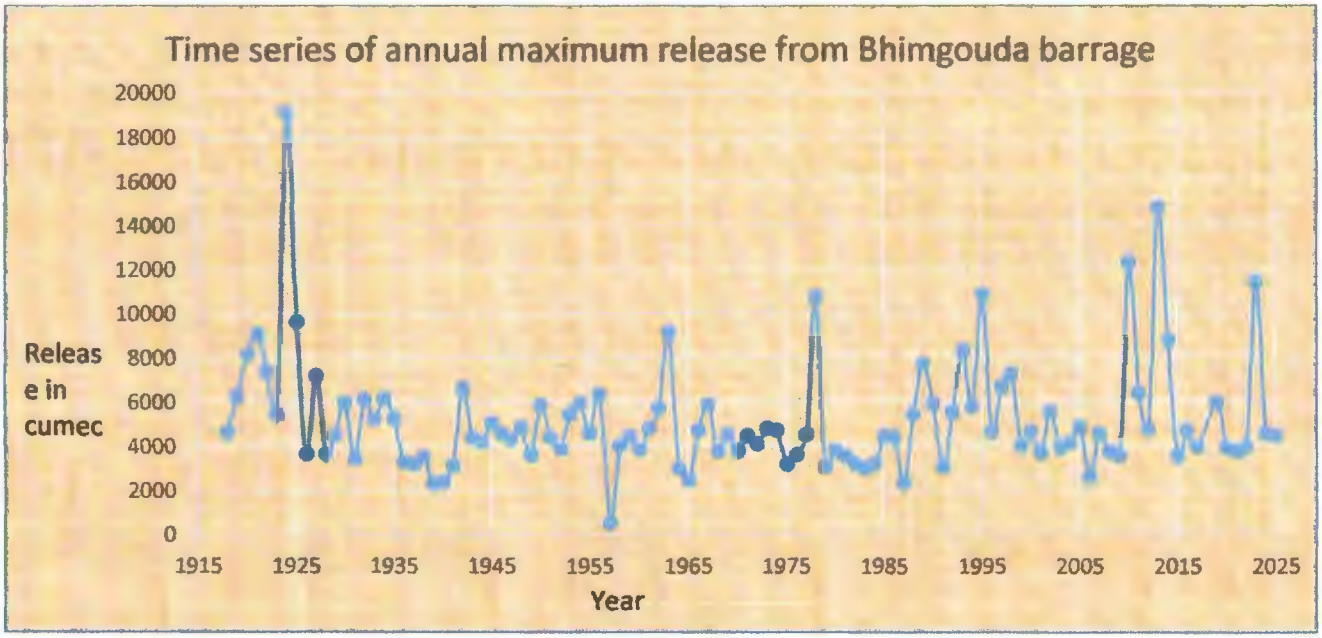

Figure 19: Time series of annual maximum release from Bhimgouda barrage

It is seen from the time series that, the maximum flow from barrage release is 19136 m^3/s at year 1924 and minimum flow value is 548 m^3/s at year 1957. The average release is 5257.89 and standard deviation is 2606.34 m^3/s with coefficient of skewness as 2.433. However, the barrage release is mostly around the average values and crossed six times 10000 m3/s range out of this 107 years' values.

The observed data is first arranged in sequence of maximum to minimum. Further the values are ranked as per their magnitude and their probability of exceedance is tested as per Weibull plotting position formula. The return periods of the existing values are also calculated and shown in Table 6.

Table 1 Annual Maximum observed releases from Bhimgouda barrage site

Sl. No.	Year	Annual max release Qmax (Cumecs)	Q max arranged	Corresponding year	Probability of Occurrence in %	Return period in years	Log transformed series
1	1918	4668	19136	1924	0.93	108	8.4485
2	1919	6296	14875	2013	1.85	54	8.7477
3	1920	8174	12400	2010	2.78	36	9.0087
4	1921	9079	11494.49	2023	3.70	27	9.1137
5	1922	7407	10875	1995	4.63	21.6	8.9102
6	1923	5482	10798	1978	5.56	18	8.6092
7	1924	19136	9680	1925	6.48	15.4	9.8593
8	1925	9680	9192	1963	7.41	13.5	9.1778
9	1926	3698	9079	1921	8.33	12.0	8.2155
10	1927	7241	8827	2014	9.26	10.8	8.8875
11	1928	3698	8345	1993	10.19	9.8	8.2155
12	1929	4545	8174	1920	11.11	9.0	8.4218
13	1930	5998	7747	1989	12.04	8.3	8.6992
14	1931	3470	7407	1922	12.96	7.7	8.1519
15	1932	6155	7291	1998	13.89	7.2	8.7250
16	1933	5267	7241	1927	14.81	6.8	8.5692
17	1934	6193	6721	1997	15.74	6.4	8.7312
18	1935	5289	6650	1942	16.67	6.0	8.5734
19	1936	3320	6452	2011	17.59	5.7	8.1077
20	1937	3232	6381	1956	18.52	5.4	8.0809
21	1938	3525	6296	1919	19.44	5.1	8.1676
22	1939	2341	6193	1934	20.37	4.9	7.7583
23	1940	2429	6155	1932	21.30	4.7	7.7952
24	1941	3154	5998	1930	22.22	4.5	8.0564
25	1942	6650	5997.27	2019	23.15	4.3	8.8024

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26	1943	4442	5978	1954	24.07	4.2	8.3989
27	1944	4229	5962	1990	25.00	4.0	8.3497
28	1945	5101	5919	1967	25.93	3.9	8.5372
29	1946	4629	5899	1950	26.85	3.7	8.4401
30	1947	4345	5829	1994	27.78	3.6	8.3768
31	1948	4890	5760	1962	28.70	3.5	8.4949
32	1949	3619	5591	2002	29.63	3.4	8.1940
33	1950	5899	5583	1992	30.56	3.3	8.6825
34	1951	4458	5482	1923	31.48	3.2	8.4025
35	1952	3919	5470	1953	32.41	3.1	8.2736
36	1953	5470	5454	1988	33.33	3.0	8.6070
37	1954	5978	5289	1935	34.26	2.9	8.6958
38	1955	4644	5267	1933	35.19	2.8	8.4433
39	1956	6381	5101	1945	36.11	2.8	8.7611
40	1957	548	4890	1948	37.04	2.7	6.3063
41	1958	4056	4873	1973	37.96	2.6	8.3080
42	1959	4493	4866	2005	38.89	2.6	8.4103
43	1960	3884	4855	1961	39.81	2.5	8.2646
44	1961	4855	4787	2012	40.74	2.5	8.4878
45	1962	5760	4785	1974	41.67	2.4	8.6587
46	1963	9192	4764	2016	42.59	2.3	9.1261
47	1964	3024	4741	1966	43.52	2.3	8.0143
48	1965	2509	4717	2000	44.44	2.3	7.8276
49	1966	4741	4684	1996	45.37	2.2	8.4640
50	1967	5919	4668	1918	46.30	2.2	8.6859
51	1968	3798	4644	1955	47.22	2.1	8.2422
52	1969	4546	4629	1946	48.15	2.1	8.4220
53	1970	3842	4618.81	2024	49.07	2.0	8.2537
54	1971	4542	4614	2007	50.00	2.0	8.4211
55	1972	4160	4583	1977	50.93	2.0	8.3333

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56	1973	4873	4546	1969	51.85	1.9	8.4915
57	1974	4785	4545	1929	52.78	1.9	8.4732
58	1975	3235	4542	1971	53.70	1.9	8.0818
59	1976	3680	4502.3	2025	54.63	1.8	8.2107
60	1977	4583	4493	1959	55.56	1.8	8.4301
61	1978	10798	4482	1985	56.48	1.8	9.2871
62	1979	3116	4458	1951	57.41	1.7	8.0443
63	1980	3844	4442	1943	58.33	1.7	8.2543
64	1981	3584	4432	1986	59.26	1.7	8.1842
65	1982	3232	4345	1947	60.19	1.7	8.0809
66	1983	3027	4229	1944	61.11	1.6	8.0153
67	1984	3238	4186	2004	62.04	1.6	8.0827
68	1985	4482	4160	1972	62.96	1.6	8.4078
69	1986	4432	4056	1958	63.89	1.6	8.3966
70	1987	2348	4054	1999	64.81	1.5	7.7613
71	1988	5454	4007	2017	65.74	1.5	8.6041
72	1989	7747	4006.87	2022	66.67	1.5	8.9551
73	1990	5962	3964	2003	67.59	1.5	8.6932
74	1991	3086	3963.31	2020	68.52	1.5	8.0346
75	1992	5583	3919	1952	69.44	1.4	8.6275
76	1993	8345	3884	1960	70.37	1.4	9.0294
77	1994	5829	3844	1980	71.30	1.4	8.6706
78	1995	10875	3842	1970	72.22	1.4	9.2942
79	1996	4684	3798	1968	73.15	1.4	8.4519
80	1997	6721	3775.02	2021	74.07	1.4	8.8130
81	1998	7291	3764	2008	75.00	1.3	8.8944
82	1999	4054	3707	2001	75.93	1.3	8.3075
83	2000	4717	3698	1926	76.85	1.3	8.4589
84	2001	3707	3698	1928	77.78	1.3	8.2180
85	2002	5591	3680	1976	78.70	1.3	8.6289

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86	2003	3964	3619	1949	79.63	1.3	8.2850
87	2004	4186	3595	2015	80.56	1.2	8.3395
88	2005	4866	3586	2009	81.48	1.2	8.4900
89	2006	2646	3584	1981	82.41	1.2	7.8808
90	2007	4614	3525	1938	83.33	1.2	8.4369
91	2008	3764	3470	1931	84.26	1.2	8.2332
92	2009	3586	3320	1936	85.19	1.2	8.1848
93	2010	12400	3238	1984	86.11	1.2	9.4255
94	2011	6452	3235	1975	87.04	1.1	8.7721
95	2012	4787	3232	1937	87.96	1.1	8.4737
96	2013	14875	3232	1982	88.89	1.1	9.6074
97	2014	8827	3154	1941	89.81	1.1	9.0856
98	2015	3595	3116	1979	90.74	1.1	8.1873
99	2016	4764	3086	1991	91.67	1.1	8.4688
100	2017	4007	3027	1983	92.59	1.1	8.2958
101	2019	5997.27	3024	1964	93.52	1.1	8.6991
102	2020	3963.31	2646	2006	94.44	1.1	8.2848
103	2021	3775.02	2509	1965	95.37	1.0	8.2362
104	2022	4006.87	2429	1940	96.30	1.0	8.2958
105	2023	11494.49	2348	1987	97.22	1.0	9.3496
106	2024	4618.81	2341	1939	98.15	1.0	8.4379
107	2025	4502.3	548	1957	99.07	1.0	8.4123
	Average	**5257.89**					**8.4718**
	St.Dev	**2606.34**					**0.439**
	Cs	**2.433**					**-0.436**

The mean and standard deviations are also obtained for the log transformed series are 8.4718 and 0.439 cumecs respectively with coefficient of skewness as -0.439, basing on which the discharge values for different return periods are obtained and mentioned respectively.

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A. Normal Distribution: The normal distribution is applied to the given data series. The frequency factor is obtained from the probability chart corresponding to coefficient of skewness = 0 and different return periods. The calculations of estimated peaks as per normal distributions are mentioned in Table.

Table 2: Discharges at different return period as per Normal distribution

T	K_T	Q_{mean}	S.D.	$Q_T = Q_{mean} + K_T * SD$
5	0.84162	5257.89	2606.34	7451.45
25	1.75069	5257.89	2606.34	9820.79
50	2.05375	5257.89	2606.34	10610.67
100	2.32635	5257.89	2606.34	11321.16

Note: The values of mean and standard deviation will remain same for all the distribution.

Log Normal Distribution:

The original data series is log transformed and its mean and standard deviations are obtained from that log transformed series. **Mean= 8.4718**

St. Dev= 0.439

Coefficient of skewness (Cs) = -0.436

The frequency factors remained same as that of Normal distributions considering coefficient of skewness= 0. The derived forecasted floods are mentioned in Table

Table: Discharges for different return periods from Log - Normal distribution

T	K_T	Q_{mean}	S.D.	$Q_T = \exp(Q_{mean} + K_T * SD)$
5	0.84162	8.4718	0.439	6913.78
25	1.75069	8.4718	0.439	10304.67
50	2.05375	8.4718	0.439	11771.02
100	2.32635	8.4718	0.439	13267.43

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PT-III Distribution:

The Pearson type-III distribution is applied to the data series corresponding to the mean and standard deviation obtained from the normal series. The frequency factors for different return periods are obtained as per the coefficient skewness values available in standard frequency factor tables and it is same as that for normal distribution.

The mean, standard deviations and coefficient of skewness obtained for the normal series are 5257.89, 2606.34 and 2.433 respectively basing on which the discharge values for different return periods are obtained and mentioned in Table after retrieving the normal values out of the log transformed series.

Discharges for different return periods from PT-III distribution with Cs= 2.433

T	K_T	Q_{mean}	S.D.	$Q_T = Q_{mean} + K_T * SD$
5	0.53058	5257.89	2606.34	6640.76
25	2.257909	5257.89	2606.34	11142.77
50	3.031408	5257.89	2606.34	13158.77
100	3.815069	5257.89	2606.34	15201.26

Log PT-III Distribution:

The Log Pearson type-III distribution is applied to the data series corresponding to the mean and standard deviation obtained from the log transformed series. The frequency factors for different return periods are obtained as per the coefficient skewness values available in standard frequency factor tables.

The mean, standard deviations and coefficient of skewness obtained for the log transformed series are 8.4718, 0.439 and -0.436 respectively basing on which the discharge values for different return periods are obtained and mentioned in Table after retrieving the normal values out of the log transformed series.

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Discharges for different return periods from Log PT-III distribution with Cs = -0.439

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T	K_T	Q_{mean}	S.D.	$Q_T = \exp(Q_{mean} + K_T * SD)$
5	0.855602	8.4718	0.439	6959.296
25	1.591938	8.4718	0.439	9618.566
50	1.813288	8.4718	0.439	10601.31
100	2.00247	8.4718	0.439	11520.44

Gumbel Distribution: The Gumbel distribution has been applied to the same data series and frequency factors are calculated from the equations. The forecasted floods for different return periods are estimated and mentioned in Table.

Discharges for different return periods from Gumbel distribution

T	Alpha (α)	u	$Yt=(-\ln(-\ln(1-1/T))$	$Q_T = u+\alpha(-\ln(-\ln(1-1/T))$
5	2033.187	4084.333	1.49994	7133.99
25	2033.187	4084.333	3.198534	10587.55
50	2033.187	4084.333	3.901939	12017.70
100	2033.187	4084.333	4.600149	13437.29

Discharge value from Gumbel Distribution has been considered as design discharge.

6. Hydraulic Modelling

Hydraulic characteristics like water surface elevation are crucial for understanding floodplain behavior in response to flow. Hydrodynamic models, now primarily computational, simulate water movement to study river hydrodynamics. HEC-RAS is one such tool used for modeling river channels and floodplains. Hydraulic modeling helps countries like the U.S. plan flood mitigation measures, including bridges, levees, and dams. Numerical models use mathematical equations to represent water movement, incorporating factors like land use, conveyance, and water volume to assess river impacts on surrounding areas.

6.1 HEC-RAS Model

HEC-RAS, developed by the USACE, is widely used for calculating river hydraulic characteristics through water surface profile modeling. It requires river cross-section data and upstream flow rates to compute water depth and velocity using the energy equation. The model

integrates with GIS to overlay water levels on a Digital Elevation Model (DEM) for flood extent and depth analysis. HEC-RAS supports both one-dimensional and two-dimensional models, recognized by FEMA for flood mitigation planning. However, India's challenge lies in the lack of gauged rivers and limited accessibility to high-quality hydrologic data for hydraulic modeling. HEC-RAS remains popular due to its reliability and free availability.

The general data required to build a hydraulic model are

1.) Surface roughness values typically derived from land use/land cover (LULC) data

2.) A digital elevation model (DEM) derived from topographic data, and computed hydraulic data (discharge and stage).

The surface roughness values can be estimated from satellite imagery if LULC datasets are not available. The DEM forms the conveyance area of the model, and thus, can greatly affect the output of hydraulic models.

6.2 Data Needed for Model Development

There are three main data inputs required to build a model.

- First is the **discharge or flow** of water entering and exiting the model. The discharge flowing into or out of the model and the corresponding locations along the outer perimeter of the flow area are referred to as boundary conditions.
- Second is the **Manning's "n" roughness** coefficients representing the land's frictional resistance to flow derived from land use data.
- Third is the **topography of the model** area in the form of a digital elevation model (DEM), which is for which 1 M DEM has been aquired from Survey of India, Dehradun.

6.3 Software Deployed

ArcMap 9.3, a GIS software from ESRI, was used in this study for most GIS tasks, with HEC-RAS to prepare input files for model and visualize hydraulic modeling results as inundation depth maps. HEC HMS was also deployed for determining catchments delineation & characterization. The final flood inundation maps were created in GIS.

7. Result Analysis and Physical Validation

For validation, the modeled flood extent of flood is to be verified physically with concerning engineers of the dept along with team of consultant and necessary changes were incorporated

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based on field inputs. Flood lines were also reviewed using software like google earth and various satellite imageries.

8. Sensitivity Waterway

The estimated discharge at 25-year return period for each flow change location have been considered to calculate the required channel width or Lacey's Waterway In boulder reach of the river, the practice of providing waterway varies a great deal. The waterway ranging from 0.25 to 0.9-time Lacey's Waterway shall be provided depending upon the topography prevailing at site. For present study, the areas where the natural waterway is less than 0.65 times the Lacey's Waterway has been considered as sensitive. (Source: Theory and Design of Irrigation Structures by Dr. Varshney)

9. Result & Findings

The flood inundation area map has been prepared using flood propagation modeling using the "optimal" values of the roughness parameters obtained from an automatic calibration performed with HEC-RAS in GIS environment.

The return period together with computed water depths and rate of flow are used to derive the hazard map. In this study, discharges at defined return periods were considered and average bed slope was used as boundary conditions for each cross-section. The modeled and actual flood lines of 2013 are matching and hence, the selection of normal depth as boundary condition is appropriate and reliable.

10. Flood Lines Demarcations

After conducting a joint field validation, the process of demarcating flood lines involves marking specific points along the river's floodplain at regular intervals of 50 meters. This is done using GPS devices, which provide accurate geographic coordinates for each point. The flood lines are marked for two specific return periods: the 25-year and the 100-year floods

11. Flood Protection Measures

The areas with settlement along the river has been considered as critical areas and the same has been analyzed for required minimum waterway. Critical areas are determined for analyzing the available and required waterway. The required minimum waterway as worked out above using Lacey's Equation was compared with the natural water at 25-year return period flood.

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4. Flood Estimation Report for Western Himalayan Zone-7.

5. PMP Atlas for Ganga River Basin Including Yamuna Final Report,2015.

6. "Regional Flood Frequency Estimation in India." by Rakesh Kumar.2009.

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Annexure -3

ANNEXURE-5

Annexure KML File

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Eastern Ganga Canal Rd, Haridwar, Uttarakhand 249408, India

Latitude
29.916548333333335°

Longitude
78.17323833333333°

Local 03:48:41 PM
GMT 10:18:41 AM

Altitude 291 meters
Saturday, 14.02.2026

Eastern Ganga Canal Rd, Haridwar, Uttarakhand 249408, India

Latitude
29.914336666666667°

Longitude
78.17328833333333°

Local 03:49:47 PM
GMT 10:19:47 AM

Altitude 289 meters
Saturday, 14.02.2026

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GPS Map
Camera Lite
Eastern Ganga Canal Rd, Haridwar, Uttarakhand 249408, India
Latitude
29.924146666666667°
Longitude
78.17323166666667°
Local 03:46:06 PM
GMT 10:16:06 AM
Altitude 281 meters
Saturday, 14.02.2026


GPS Map
Camera Lite
Eastern Ganga Canal Rd, Haridwar, Uttarakhand 249408, India
Latitude
29.927284999999998°
Longitude
78.17363333333333°
Local 03:43:31 PM
GMT 10:13:31 AM
Altitude 284 meters
Saturday, 14.02.2026

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GPS Map
Camera Lite
Eastern Ganga Canal Rd, Haridwar, Uttarakhand 249408, India
Latitude
29.929508333333334°
Longitude
78.17382666666667°
Local 03:42:10 PM
GMT 10:12:10 AM
Altitude 284 meters
Saturday, 14.02.2026


GPS Map
Camera Lite
W5HG+G56, Haridwar Rd, Pathari Forest Range, Haridwar, Uttarakhand 249408, India
Latitude
29.92906833333333°
Longitude
78.17379666666668°
Local 03:42:29 PM
GMT 10:12:29 AM
Altitude 284 meters
Saturday, 14.02.2026

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GPS Map
Camera Lite
Eastern Ganga Canal Rd, Haridwar, Uttarakhand 249408, India
Latitude
29.930793333333334°
Longitude
78.17374666666666°
Local 03:41:10 PM
GMT 10:11:10 AM
Altitude 285 meters
Saturday, 14.02.2026


GPS Map
Camera Lite
Eastern Ganga Canal Rd, Haridwar, Uttarakhand 249408, India
Latitude
29.93206°
Longitude
78.17358166666666°
Local 03:40:35 PM
GMT 10:10:35 AM
Altitude 285 meters
Saturday, 14.02.2026

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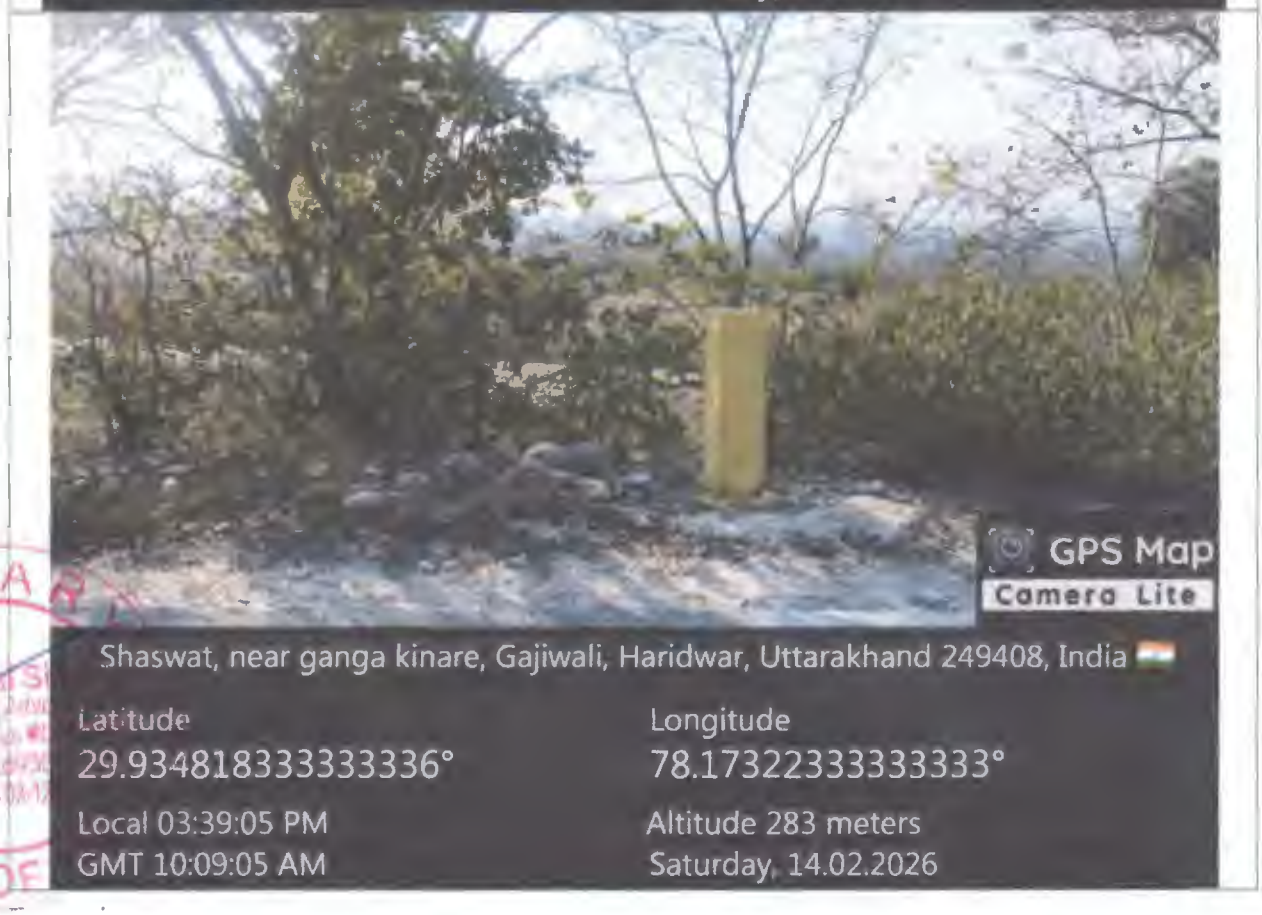

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Eastern Ganga Canal Rd, Haridwar, Uttarakhand 249408, India

Latitude
29.9343516666666664°

Longitude
78.17327666666667°

Local 03:39:23 PM
GMT 10:09:23 AM

Altitude 283 meters
Saturday, 14.02.2026

Shaswat, near ganga kinare, Gajiwali, Haridwar, Uttarakhand 249408, India

Latitude
29.935316666666667°

Longitude
78.173155°

Local 03:38:46 PM
GMT 10:08:46 AM

Altitude 285 meters
Saturday, 14.02.2026

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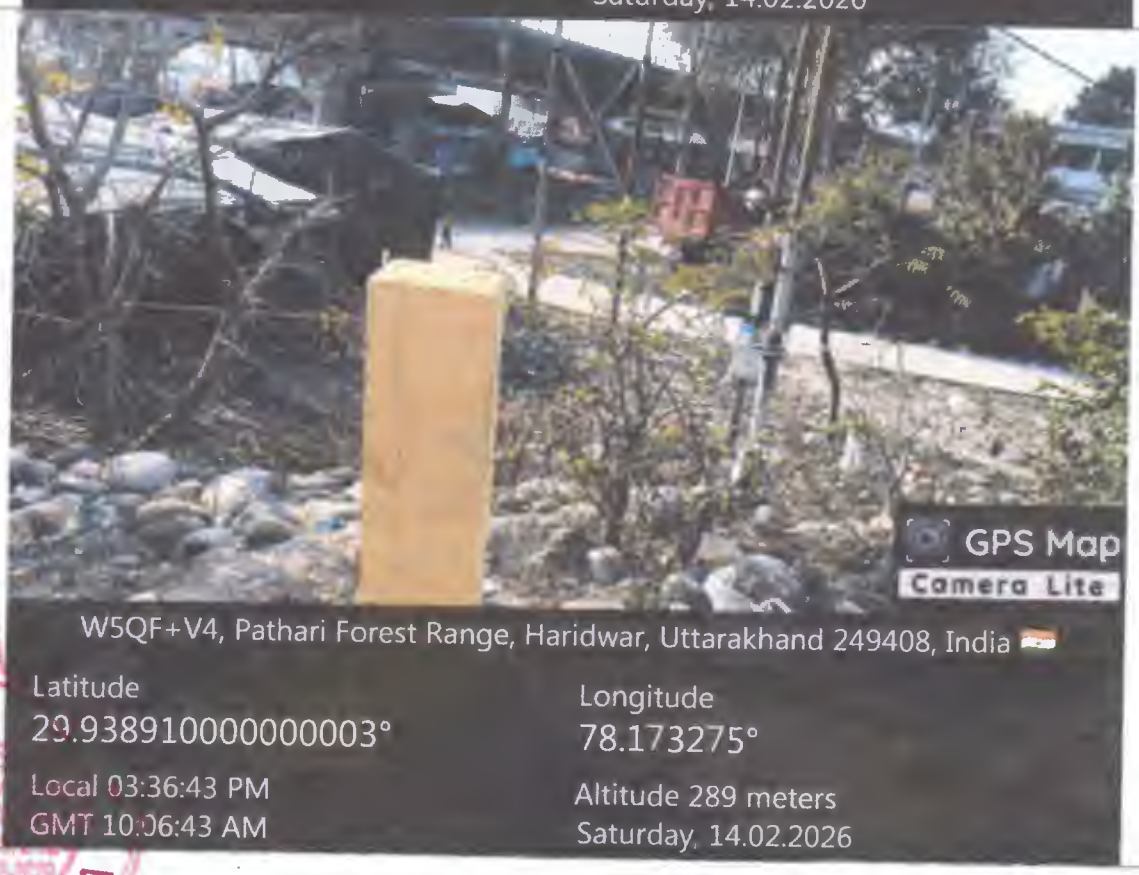

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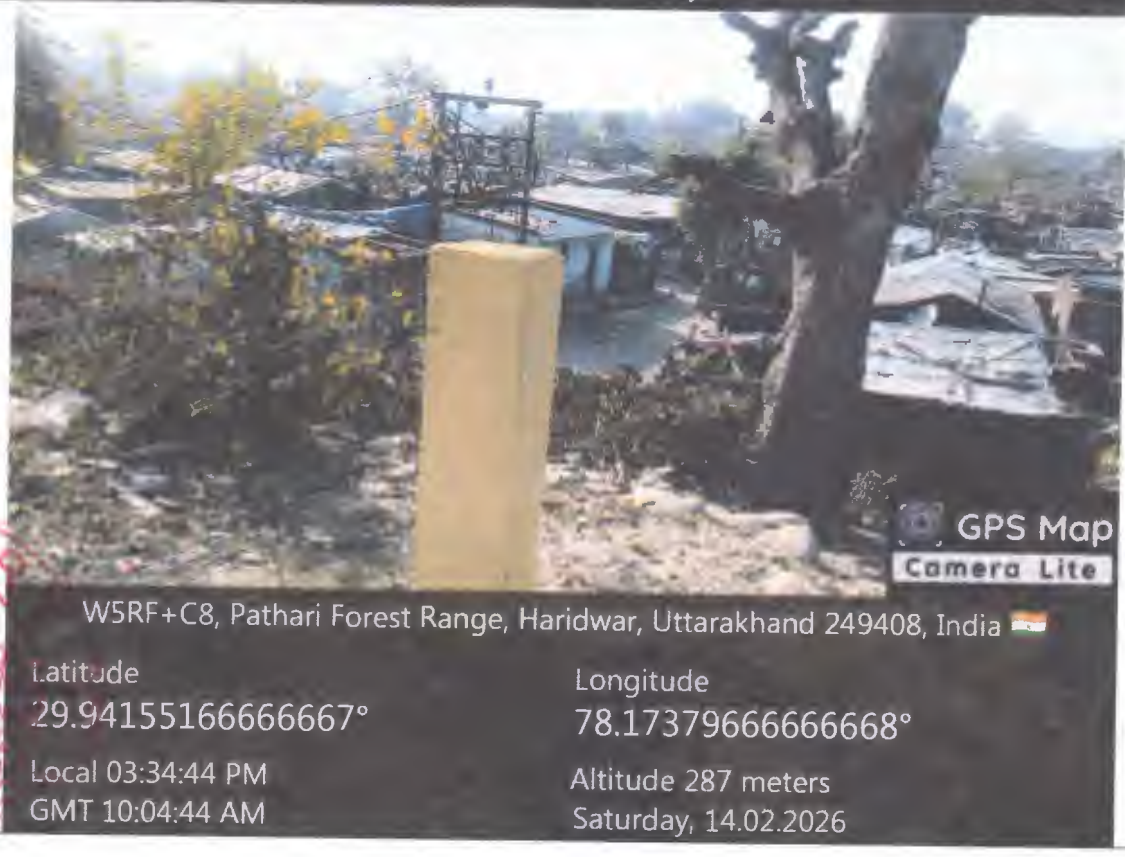

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कार्यालय (अति आवश्यक)

अधिशासी अभियंता

जल विज्ञान खंड, बहादराबाद

पत्रांक -1309 / ज.वि.ख./FPZ दिनांक – 12.02.2026

विषय – गंगा नदी के चंडीपुल, हरिद्वार से लक्सर (उत्तराखंड राज्य की सीमा) तक बाढ़ मैदान परिक्षेत्रण अध्ययन कार्यो के भौगोलिक मानचित्र (Topographical Maps) की हार्ड कॉपी प्रेषण के सम्बन्ध में |

अधिशासी अभियंता, सिंचाई खंड, हरिद्वार |

उपरोक्त विषयक अवगत कराना है कि वाद संख्या OA No. 102/2023 नीरज छाछर वनाम उत्तराखंड राज्य व अन्य में मा० एनजीटी द्वारा दिनांक 16.04.2025 को गंगा नदी का हरिद्वार से लक्सर क्षेत्र में पुनः बाढ़ मैदान परिक्षेत्रण कराने हेतु निर्देश दिए गए थे | मा० एनजीटी ने उपरोक्त पारित आदेश के द्वारा हरिद्वार से लक्सर क्षेत्र में 1 मी. कंटूर इंटरवल का प्रयोग करते हुए पुनः बाढ़ मैदान परिक्षेत्रण करने के लिये निर्देशित किया गया था | जिसके क्रम में सर्वे ऑफ़ इंडिया से 1 मी. DEM प्राप्त कर एवं CWC से डिस्चार्ज आंकड़े लेकर बाढ़ मैदान परिक्षेत्रण अध्ययन कार्य पूर्ण कर लिया गया है | मॉडलिंग के उपरांत 100 वर्ष के बाढ़ फैलाव की KML file 6 जनवरी 2026 को सॉफ्ट कॉपी एवं 17 जनवरी 2026 को हार्ड कॉपी प्रेषित कर दी गयी थी |

अतः उक्त क्षेत्र के 25 वर्ष एवं 100 वर्ष के बाढ़ फैलाव का भौगोलिक मानचित्र (Topographical Maps) की हार्ड कॉपी इस पत्र के साथ संलग्न कर एवं सॉफ्ट कॉपी मेल के माध्यम से प्रेषित है |

संलग्नक – उपरोक्तानुसार |

अधिशासी अभियंता
जल विज्ञान खण्ड, बहादराबाद

पत्रांक - / ज.वि.ख./FPZ तददिनांक –

प्रतिलिपि निम्न को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित है –

1. प्रमुख अभियंता (नियोजन अनुभाग), सिंचाई विभाग, उत्तराखंड |
2. मुख्य अभियंता – II (परिकल्प) एवं निदेशक सिंचाई अनुसन्धान संस्थान, रूडकी |
3. अधीक्षण अभियंता, जल विज्ञान मंडल, बहादराबाद |
4. अधीक्षण अभियंता, सिंचाई कार्य मंडल, हरिद्वार |

अधिशासी अभियंता
जल विज्ञान खण्ड, बहादराबाद

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अपार शक्तेः स्त्रोतः गंगेयम्

कार्यालय सहायक अभियन्ता पंचम सिंचाई खण्ड हरिद्वार

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mail: idharidwar@gmail.com Website: www.uttarakhandirrigation.com

"निरीक्षण आख्या"

इं0 सुनील कुमार, सहायक अभियन्ता पंचम सिंचाई खण्ड हरिद्वार द्वारा कार्यालय अधिशासी अभियन्ता जल विज्ञान खण्ड बहादराबाद के पंत्राक 1147/ज0वि0ख0/FPZ दिनांक 01.01.2026 के अनुपालन में गंगा नदी के चण्डीपुल हरिद्वार से लक्सर तक बाढ मैदान परिक्षेत्रण का आज दिनांक 02.01.2026 के निरीक्षणोपरान्त निर्गत निरीक्षण टिप्पणी ।

निरीक्षण के समय उपस्थित अधिकारी/कर्मचारीगणः–

अधिशासी अभियन्ता	इं0 आर0 पी0 कुडियाल
अधिशासी अभियन्ता	इं0 एल0 एम0 कुडियाल
सहायक अभियन्ता	इं0 अमरजीत शाह
अपर सहायक अभियन्ता	इं0 जगदीश जोशी
अपर सहायक अभियन्ता :–	इं0 सतीश कुमार।

गंगा नदी के चण्डीपुल हरिद्वार से लक्सर तक बाढ मैदानी परिक्षेत्रण वाद सं0 OA No. 102/2023 नीरज छांछर बनाम उत्तराखण्ड राज्य व अन्य में मा0 एन0जी0टी0 द्वारा दिनांक 16.04.2025 को गंगा नदी का हरिद्वार से लक्सर तक क्षेत्र में पुनः बाढ मैदान परिक्षेत्रण कराने हेतु निर्देश दिये गये थे। मा0 एन0जी0टी0 के उपरोक्त आदेशों के क्रम में हरिद्वार से लक्सर क्षेत्र में 1 मीटर कंटूर इंटरवल का प्रयोग करते हुये पुनः बाढ मैदान परिक्षेत्रण सीमांकन हेतु प्राप्त आंकडों का भौतिक सत्यापन किया गया जिसमें श्री अमरजीत शाह सहायक अभियनता जल विज्ञान खण्ड बहादराबाद द्वारा अवगत कराया गया कि उक्त आंकडों की मैपिंग कर सीमांकन हेतु 02 दिवस के अन्तर्गत सम्बधित खण्डों को प्रेषित कर दी जायेगी।

सहायक अभियन्ता पंचम
सिंचाई खण्ड, हरिद्वार

10

अपार शक्तेः स्रोतः गंगेयम्

कार्यालय सहायक अभियन्ता पंचम
सिंचाई खण्ड हरिद्वार

उत्तराखण्ड शासन

mail: idharidwar@gmail.com Website: www.uttarakhandirrigation.com

(इं सुनील कुमार)
सहायक अभियन्ता पंचम
सिंचाई खण्ड हरिद्वार।

डाक 4955
दिनांक 02/01/26

पत्रांक– 423 / सहा0अभि0पं0 / निरीक्षण दिनांक 02 / 01 / 2026
प्रतिलिपि :–अधिशासी अभियन्ता, सिंचाई खण्ड हरिद्वार की सेवा में सादर सूचनार्थ प्रेषित।

2/1/2026
सहायक अभियन्ता पंचम
सिंचाई खण्ड, हरिद्वार

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जिला हरिद्वार के अन्तर्गत गंगा नदी बाढ़ मैदान परिक्षेत्रण के सीमांकन हेतु पिलर लगाने का कार्य की योजना लागत रू0 114.43 लाख के सम्बन्ध में विचार विमर्श हेतु दिनांक 23.01.2026 को सचिव महोदय की अध्यक्षता में विभागीय समिति की आहूत बैठक का कार्यवृत्त।

<u>उपस्थित अधिकारीगण</u> :–

1- श्री अरविन्द सिंह पांगती, संयुक्त सचिव, सिंचाई विभाग, उत्तराखण्ड शासन।
2- श्री विजय कुमार, संयुक्त सचिव, वित्त विभाग, उत्तराखण्ड शासन।
3- श्री कुन्दन सिंह, सलाहकार, नियोजन विभाग, राज्य योजना आयोग।
4- श्री डी0एस0 कछवाहा, वरिष्ठ स्टॉफ अधिकारी (बजट), सिंचाई विभाग, उत्तराखण्ड।
5- श्री ओमजी गुप्ता, अधिशासी अभियन्ता, सिंचाई खण्ड, हरिद्वार।

सर्वप्रथम सचिव महोदय से विभागीय समिति की बैठक को प्रारम्भ करने की अनुमति प्राप्त करते हुए प्रश्नगत योजना के सम्बन्ध में अधीक्षण अभियंता/अधिशासी अभियंता, सिंचाई विभाग, हरिद्वार द्वारा प्रस्तुतीकरण के माध्यम से योजना के सम्बन्ध में अवगत कराया गया कि नदी के दोनों किनारों पर स्थानीय काश्तकारों द्वारा खेती की जाती है। इस नदी का प्रवाह प्रतिवर्ष परिवर्तित होता रहता है तथा काश्तकारों द्वारा नदी के किनारे से लगे भाग में समय–समय पर निर्माण कार्य कराये जाते हैं। सोलानी नदी बिहारीगढ़ से ग्राम जौरासी नारसन तक कुल लम्बाई लगभग 50.00 कि0मी0 है। जिस पर सीमांकन पिलर 25 वर्ष एवं 100 वर्ष की आवृति सीमा पर 50–50 मी0 के अन्तराल पर लगाये जाने है। जिस हेतु इस योजना का गठन किया गया है। वर्तमान में राष्ट्रीय हरित प्राधिकरण में योजित मूल आवेदन सं0 632/2022 वी0के0 त्यागी बनाम उत्तराखण्ड राज्य व अन्य में वाद चल रहा है। जिसमें मा0 राष्ट्रीय हरित प्राधिकरण के द्वारा 31.03.2024 तक बाढ़ मैदानी परिक्षेत्रण के सीमांकन हेतु निर्देशित किया गया।

विभागीय समिति द्वारा योजना पर सम्यक् विचारोपरान्त उक्त योजना को व्यवहारिक/उपयोगी पाया गया है। समिति द्वारा योजना की गुणवत्ता एवं मितव्ययता का विशेष ध्यान रखते हुए कार्य समयबद्ध रूप से पूर्ण किये जाने हेतु निर्देशित करते हुये सहमति प्रदान की गयी।

अन्त में समस्त प्रतिभागी अधिकारियों का धन्यवाद कर बैठक समाप्त की गई।

Digitally signed by
GARIMA RAUNKALI
Date: 29-01-2026
14:14:58

(गरिमा रौंकली)
अपर सचिव।

उत्तराखण्ड शासन
सिंचाई एवं बाढ़ नियंत्रण अनुभाग–02
ई0 पत्रावली संख्या–97542/2026
देहरादून : दिनांक 29 जनवरी, 2026

<u>प्रतिलिपि निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित</u> :–

1. निजी सचिव, सचिव, सिंचाई विभाग, उत्तराखण्ड शासन।
2. तकनीकी परामर्शदाता, राज्य योजना आयोग, उत्तराखण्ड शासन।
3. प्रमुख अभियन्ता, सिंचाई विभाग, उत्तराखण्ड, देहरादून।
4. सम्बन्धित अधिकारीगण।
5. गार्ड फाईल।

NOTARY Vijay Pal Singh (Advocate) Uttarakhand Regd.No.-20835/2024 Valid upto-03-12-2029 GOVT. OF INDIA

आज्ञा से,

Digitally signed by
ARVIND SINGH PANGTEY
Date: 29-01-2026
16:42:13

(अरविन्द सिंह पांगती)
संयुक्त सचिव।

कार्यालय प्रमुख अभियन्ता,
(नियोजन अनुभाग)
सिंचाई विभाग, उत्तराखण्ड, देहरादून

पत्रांक - 799/प्र०अ०/सि०वि०/नि० अनु०/F.P.Z/दि०:

प्रतिलिपि निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित।

स्तर (F,D)

1. मुख्य अभियंता सिंचाई विभाग हरिद्वार
2. अधीक्षण अभियंता सिंचाई कार्यमण्डल हरिद्वार,
3. वरिष्ठ स्टाफ आधिकारी बजट अनुभाग देहरादून
4. आधिशासी अभियन्ता सिंचाई खण्ड, हरिद्वार।

[illegible] स्टाफ अधिकारी (नियोजन)
कृते प्रमुख अभियन्ता, सिंचाई विभाग
उत्तराखण्ड, देहरादून

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NOTARY
Vijay Pal Singh
Advocate
District Dehra Dun Uttarakhand
Reg.No.-26935/2024
Valid upto- 03-12-2029
GOVT. OF IND

उत्तराखण्ड शासन सिंचाई अनुभाग-2

संख्या 381/II-2017/06(65)/2016 देहरादून: दिनांक 28 फरवरी, 2017

अधिसूचना

यतः राज्य सरकार जिला हरिद्वार को चंडी घाट पुल से लक्सर के ग्राम कलसिया तक 50 किलोमीटर परिधि व अनुसूची एक और दो में उल्लिखित बाढ़ मैदान क्षेत्र को चिन्हित कर भूमि के उपयोग हेतु प्रतिषिद्ध या निर्बन्धित करने की घोषणा का आशय रखती है।

और चूंकि राज्य सरकार को ऐसे क्षेत्रों को बाढ़ परिक्षेत्रण प्राधिकारी की रिपोर्ट के आधार पर या अन्यथा बाढ़ मैदान क्षेत्रों को चिन्हित कर उनमें भूमि के उपयोग को प्रतिषिद्ध आधार पर या अन्यथा बाढ़ मैदान क्षेत्रों को चिन्हित कर उनमें भूमि के उपयोग को प्रतिषिद्ध या निर्बन्धित करने के आशय की घोषणा अधिसूचना द्वारा कर सकने की शक्ति है

अतएव, अब, राज्यपाल उत्तराखण्ड बाढ़ मैदान परिक्षेत्रण अधिनियम, 2012 की धारा 8 में प्रदत्त शक्तियों का प्रयोग करके इस अधिसूचना के संलग्नक अनुसूची एक और दो में उल्लिखित बाढ़ मैदान क्षेत्र को चिन्हित कर भूमि के उपयोग हेतु प्रतिषिद्ध या निर्बन्धित क्षेत्रों को भूमि के उपयोग हेतु प्रतिषिद्ध या निर्बन्धित करने की घोषणा सहित इन क्षेत्रों में निम्नलिखित कार्य सम्पादित किए जा सकने की सहर्ष स्वीकृति प्रदान करते है।

अनुमन्य कार्यों का विवरण

क्र सं	क्षेत्र	अनुमन्य कार्यों का विवरण
1	प्रतिषिद्ध	तटबन्ध/बाढ़ प्रबन्धन, खनन, वृक्षारोपण, कृषि, स्नान घाट निर्माण, नदी तटीय विकास, सिंचाई पेयजल योजना, अलक्रीड़ा, जल परिवहन, सेतु आदि से सम्बन्धित निर्माण कार्य।
2	निर्बन्धित क्षेत्र	पार्क, खेल का मैदान, मत्स्य पालन, कृषि आदि गतिविधियां, समय-समय पर होने वाले धार्मिक मेलों हेतु अस्थाई निर्माण इस प्रतिबन्ध के साथ अनुमन्य होंगे कि उक्त गतिविधियों द्वारा उत्सर्जित होने वाला जल-मल व ठोस अपशिष्ट का पूर्णतः समुचित प्रबन्धन सुनिश्चित करते हुये उक्त का परीक्षण उत्तराखण्ड पेयजल निगम से कराया जायेगा, इस क्षेत्र में पूर्व से विद्यमान निर्माण, जो जीर्ण-शीर्ण अवस्था में है, की विद्यमान भू-आच्छादन 35 प्रतिशत तल क्षेत्र अनुपात 1.5 व भवन की अधिकतम ऊंचाई 7.50 मी. अथवा दो मंजिल की सीमा तक पुनर्निर्माण इस प्रतिबन्ध के साथ अनुमन्य होगा कि क्षेत्र में सीवरेज व्यवस्था उपलब्ध हो। निर्माण अनुमन्य होने की स्थिति में **High Flood Level** से भवन का न्यूनतम **Plinth Level** 1.00 मीटर होगा एवं क्षेत्र की सीवरेज व्यवस्था का समुचित प्रबन्धन सुनिश्चित करने के साथ साथ उत्तराखण्ड पेयजल निगम से परीक्षण/अनापत्ति प्रमाण पत्र लिया जाना आवश्यक होगा।

राज्यपाल, यह भी निर्देश देते है कि राज्य सरकार उक्त अधिसूचना के समाचार पत्र में प्रकाशित होने की तारीख से 60 दिन के भीतर हितबद्ध व्यक्तियों से आपत्तियां एवं सुझाव जिलाधिकारी/बाढ़ परिक्षेत्रण प्राधिकारी, हरिद्वार के कार्यालय में किसी भी कार्य दिवस को लिखित रूप में दिए जाने और उन पर सम्यक् रूप से विचार करने के पश्चात प्रतिषिद्ध या निर्बन्धित करने की घोषणा की अंतिम अधिसूचना जारी कर सकेगी।

टिप्पणी - प्रतिषिद्ध या निर्बन्धित क्षेत्रों का विवरण हितबद्ध व्यक्तियों के निरीक्षण हेतु एनआईसी हरिद्वार एवं प्रमुख अभियन्ता, सिंचाई विभाग, उत्तराखण्ड, देहरादून की वेबसाइट क्रमशः **www.haridwar.nic.in** एवं **www.uttarakhandirrigation.com** के साथ-साथ अधिशासी अभियन्ता, सिंचाई खण्ड मायापुर, हरिद्वार एवं जिलाधिकारी, हरिद्वार के कार्यालय में भी उपलब्ध है।

उपरोक्त विवरण में जनपद हरिद्वार में सम्मिलित ग्राम का नाम, खाता खतौनी संख्या, खसरा/गाटा संख्या, भूमि का क्षेत्रफल, प्रकार, श्रेणी, भूमिधर का नाम सम्मिलित है।

आनन्द बर्द्धन
प्रमुख सचिव

पत्रांक 0035/सू.प.सिं.अ.वि./07.03.2017

EE

NOTARY
Vijay Pal Singh
Advocate
Distt. Distt. Dun Uttarakhand
R.J.No.-28935/2024
Valid upto- 03-12-2029
GOVT

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ANNEXURE-7

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उत्तराखण्ड शासन
सिंचाई एवं बाढ़ नियंत्रण अनुभाग–02
ई0पत्रावली संख्या–72509 / 300
देहरादूनः दिनांक, 21 फरवरी, 2026

कार्यालय ज्ञाप

मा0 एन0जी0टी0 में योजित मूल आवेदन संख्या–102/2022, नीरज छच्छर बनाम उत्तराखण्ड राज्य व अन्य के सम्बन्ध में पारित आदेश दिनांक 10.12.2025 के अनुपालन में दिनांक 23.02.2026 को निर्धारित सुनवाई के दृष्टिगत सीमांकन की वर्तमान स्थिति के सम्बन्ध में शपथ पत्र दाखिल किये जाने हेतु मुख्य सचिव, उत्तराखण्ड शासन की ओर से सचिव, सिंचाई विभाग, उत्तराखण्ड शासन को अधिकृत किया जाता है।

(सचिन कुर्वे)
सचिव/प्रभारी मुख्य सचिव।

ई0पत्रावली संख्या–72509, तद्दिनांकित।

प्रतिलिपि निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित :–

1. सचिव, सिंचाई विभाग को इस आशय से प्रेषित कि उपरोक्त वाद प्रकरण में निर्धारित सुनवाई की तिथि से पूर्व शपथ पत्र योजित करने का कष्ट करें।
2. सुश्री अंजली राजपूत, एस0ओ0आर0, मा0 उच्चतम न्यायालय, नई दिल्ली।
3. वरिष्ठ निजी–सचिव, मुख्य सचिव, उत्तराखण्ड शासन को मुख्य सचिव महोदय के संज्ञानार्थ।
4. प्रमुख अभियन्ता, सिंचाई विभाग, उत्तराखण्ड, देहरादून।

आज्ञा से,

(सचिन कुर्वे)
सचिव/प्रभारी मुख्य सचिव।