



CALL FOR PAPERS

International Conference **DAM SAFETY-2025**

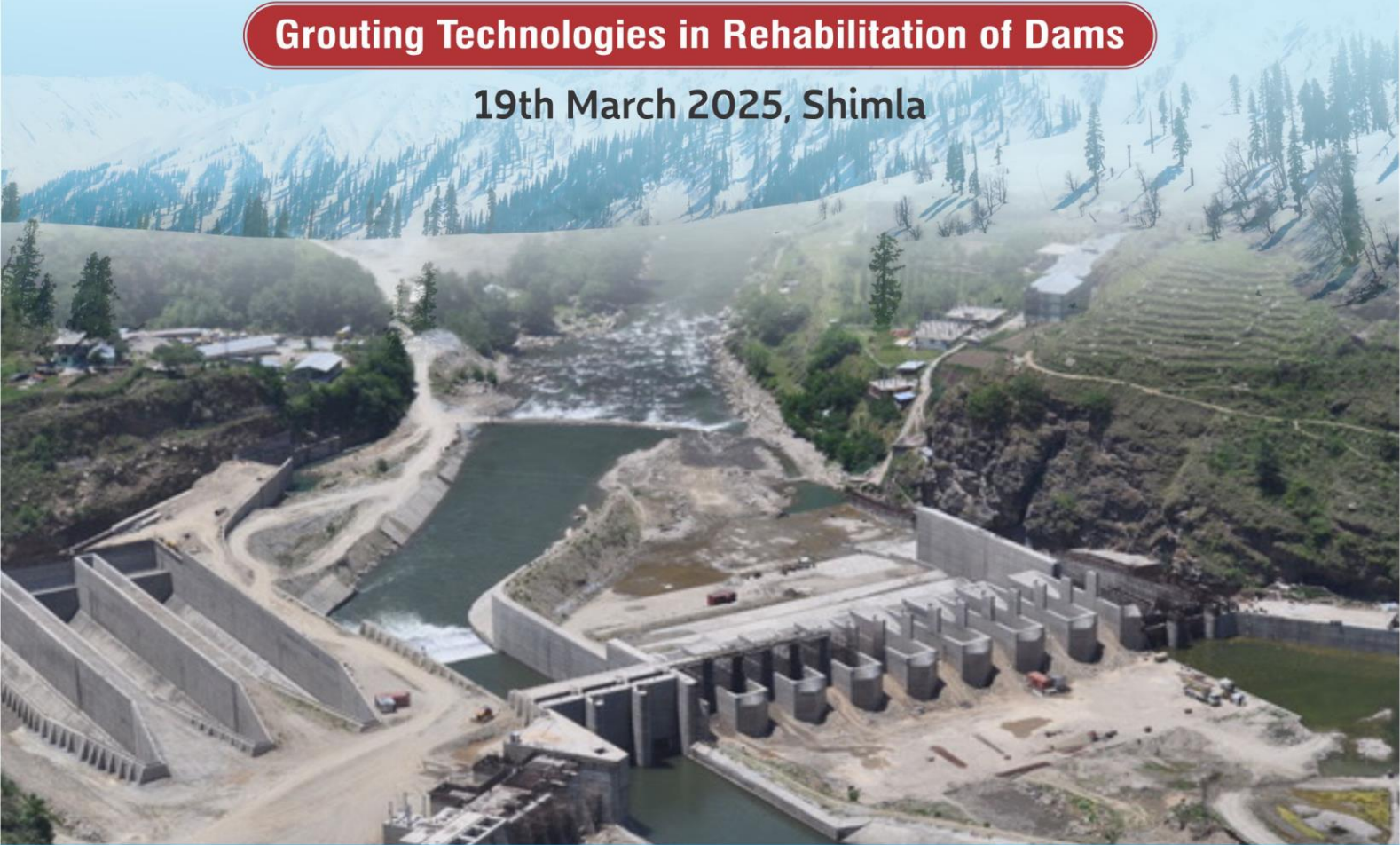
Latest Technologies for Rehabilitation and Dam Safety

20-22 March 2025, Hotel Peterhoff, Shimla (H.P.), India

Workshop on

Grouting Technologies in Rehabilitation of Dams

19th March 2025, Shimla



Knowledge Partners



ICID-CIID



Central Water Commission



Dam Rehabilitation & Improvement Project



आपको हिंसा नसोभुवः
NIH



CSMRS



FORUM OF THE HYDRO POWER PRODUCERS



CWPRS



International Centre of Excellence for Dams



Department of Water Resources Development & Management - IIT Roorkee



Dept. of Hydrology, IIT Roorkee



भारतीय विज्ञान संस्थान
IISc, Bangalore



MNIT, JAIPUR

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Organised by :
Dam Safety Society
New Delhi

Co-Organised by :



Directorate of Energy
Government of Himachal Pradesh



SJVN Limited



NHPC Limited

www.damsafetyociety.org

INVITATION FROM PRESIDENT DAM SAFETY SOCIETY



A.B. Pandya

Dams are increasingly occupying our attention as a reliable measure of water management and energy transition all across the world. The importance of the reservoir storage created by the dam increases over the times and the resultant water supplies form the kingpin of the economy and well-being of the beneficiary communities. Dams, therefore have to retain their designed operations over multiple generations. It is in this context that dam safety has emerged as a discipline in its own right to ensure that our water resources assets continue to provide the benefits to the society for a long period of time.

In view of the innovative technological development in the field of dam safety, there is a need to update the knowledge of dam safety professionals, dam owners, contractors, consultants and the agencies involved in dam safety

discipline. It has been recognized that dam safety aspects particularly of the existing dams, are not receiving much attention as they should be, especially in view of the fact that a number of these old/existing dams are ageing, leading to gradual natural degeneration. Even safety of some of the dams which have been constructed in the recent past may become questionable, if the flood characteristics or seismicity of the area has changed. These old dams may need a research under today's technology.

The Dam Safety Society will provide a forum to deliberate on the unique challenges posed by existing dams for evolving unique solutions in order to ensure their safety. Dam safety touches many unique aspects of technology, economy and disaster management. There are multiple stakeholders involved in the dam safety activities namely, regulators, dam owners, service providers and researchers to name a few. However, there is no common platform where the mutual concerns of various stakeholders can be articulated. The Dam Safety Society will focus on such unique aspects and attempt to generate common knowledge base utilizable by the professionals.

On behalf of Dam Safety Society, I take great pleasure in inviting professionals and agencies associated with dam safety and related disciplines to the International Conference on Dam Safety 2025 on theme "Latest Technologies for Rehabilitation and Dam Safety" 20-22 March 2025 preceded by a one day workshop on 'Grouting Technologies in Rehabilitation of Dams' on 19 March 2025 at Shimla (H.P.). The Conference will provide a forum for exchange of knowledge from leading professionals, an exhibition of latest products and processes.

A handwritten signature in blue ink, appearing to read "A.B. Pandya".

A.B. Pandya
President, Dam Safety Society &
Former Chairman, Central Water Commission





ABOUT THE ORGANIZERS

Dam Safety Society in association with Directorate of Energy, Govt. of Himachal Pradesh, SJVN & NHPC is organizing International Conference: **Dam Safety - 2025** on the theme "Latest Technologies for Rehabilitation and Dam Safety" on 20-22 March 2025 at Shimla Before the conference a one day Workshop on **Grouting Technologies in Rehabilitation of Dams** will be Organized on during 19 March 2025 at the same venue.

Dam Safety Society

Dam Safety Society is established in 2023 at New Delhi with the aim to cover all the scientific, technological and managerial aspects of dam safety. The society provides a forum to deliberate on the unique challenges posed by existing dams for evolving unique solutions in order to ensure their safety. With long experience it has been realized that the approach to dam safety related works is having its distinct characteristics. The Dam Safety Society focuses on such unique aspects and attempt to generate common knowledge base utilizable by the professionals. Reaching out across the boundaries of interests and concerns amongst the stakeholders is of utmost importance if we have to implement the dam safety paradigms in the countries and regions across the world. It is in this context that a group of eminent experts and individuals have come forward and have set up "Dam Safety Society" to serve the purpose.

Directorate of Energy, Govt. of Himachal Pradesh

Himachal Pradesh has emerged as one of the most advanced State of the Country with excellent Socio-Economic Indicators. The State is projected as Power State in the Country and Directorate of Energy is instrumental in achieving this milestone. Directorate of Energy was created during the year 2009. Prior to this it was a part of Himachal Pradesh State Electricity Board. The Directorate is headed by the Director (Energy) and this Directorate looks after the work of Allotment of Hydroelectric Projects above 5MW capacity, Monitoring of Hydro Power Projects above 5 MW, Grant of Techno Economic Clearance (TEC), Issues related to Hydro Power Safety, Environmental Issues, Social Issues, Monitoring and Management of Local Area Development Fund, Quality Control, Management of Power Flow, Sale of GoHP Power share received from various Central, State & Private Hydro Electric Projects, Implementation of Energy Conservation activities in the state as per mandate given by BEE, MoP in the capacity of State Designate Agency (SDA), DAM Safety aspects for all Large Dams in the capacity of DAM Safety Organisation for State of Himachal Pradesh. Directorate of Energy is nodal office of Departments of MPP & Power GoHP, it work for effective and prompt coordination between all power utilities of power sector of the state of H.P.

SJVN

SJVN, formerly known as Satluj Jal Vidyut Nigam, is a Central Public Sector Undertaking (CPSU) in the Navratna Category which is involved in hydro, thermal, solar, wind power generation and transmission. It was incorporated in 1988 as Nathpa Jhakri Power Corporation, a joint venture between the Government of India and the Government of Himachal Pradesh. The company has a total operating hydropower capacity of 1972 MW through its three hydropower plants Nathpa Jhakri, Rampur and Naitwar Mori. In addition, it has an installed capacity of 97.6 MW of wind power and 396.9 MW of solar power.

NHPC

NHPC Limited is the largest hydropower development organization in India, with capabilities to undertake all the activities from conceptualization to commissioning of hydro projects. NHPC has also diversified in the field of Solar & Wind energy development etc. NHPC's total installed capacity as on 31 October,2024 is 7232.90 MW including 1681.70 MW in Joint Venture, comprising 6971.20 MW from 22 Hydro Power Stations, 211.70 MW from five Solar Power Project and 50 MW from a Wind Power Project.

NHPC including its JVs/ Subsidiaries is presently engaged in the construction of 15 projects aggregating to a total installed capacity of 10604 MW, which includes two of the largest hydropower project of India i.e. 2000 MW Subansiri Lower Project and 2880 MW Dibang Multipurpose Project. In addition Ten projects aggregating to a total installed capacity of 4491 MW are Under Clearance Stage which includes four hydro & two solar projects by NHPC on his own and Four projects (1 in hydro & 3 in solar) in JV mode. Further, 5 Hydroelectric projects and 4 Pumped Storage Project aggregating to a total installed capacity of 9255 MW are in Survey & Investigation Stage being undertaken by NHPC.

ABOUT THE VENUE

The Peterhoff is a building in Chaura Maidan, Shimla which housed at least seven Viceroys and Governors General of India during the British Raj. It was built in the Tudor style, with wooden frames and shingled eaves. The building is situated in Annadale, in the ward of Shimla. Its first occupant was James Bruce, 8th Earl of Elgin, who moved into the building in 1863



About the Conference “Dam Safety 2025”, 20-22 March, 2025

Dams being a major infrastructure component of water resources, play a vital role in providing significant benefits to humankind and also overall water security to the country. Most of the existing dams were built at a time when the technology of dam designs and construction were at a developing stage. If these were to be reviewed as per current practices and standards, they may not fulfil the criteria such dams may be potentially hazardous. In view of this, dam safety evaluation of existing dams needs greater attention. Dam safety is, therefore, considered as an extremely important aspect not only to safeguard the national interest and benefits derived from it but also to ensure the safety of human lives and properties in the downstream reaches of the dams.

In view of the innovative technological development in the field of dam safety, there is a need to update the knowledge of dam safety professionals, dam owners, contractors, consultants and the agencies involved in dam safety discipline. It has been recognized that dam safety aspects particularly of the existing dams, are not receiving much attention as they should be, especially in view of the fact that a number of these old/existing dams are ageing, leading to gradual natural degeneration. Even safety of some of the dams which have been constructed in the recent past may become questionable, if the flood characteristics or seismicity of the area has changed. These old dams may need a research under today's technology.

Dam Safety Society (DSS) in collaboration with Directorate of Energy, Govt. of Himachal Pradesh, NHPC, SJVNL, and HPPPF is organizing the 2nd International Conference on “**Latest Technologies for Rehabilitation and Dam Safety**” on 20-22nd March 2025 in Hotel Peter-off at Shimla, Himachal Pradesh. Prior to the conference, a workshop on “Grouting Technology in Rehabilitation of Dams” is also being organized on 19th March 2025 at the venue of the conference. The Conference will offer a good scope for exchange of experiences to facilitate exposure of state of art technology in all aspects of dam safety management.

The conference brings together dam professionals and experts in the various inter-related disciplines, to discuss, reflect and share knowledge, technology and experience in addressing dam safety issues. The conference will have eight Technical Sessions, and one Session dedicated to Industry contributions. There will be valuable presentations during the different Technical Sessions by eminent dam safety professionals which will cover various facets of dam safety. National organizations will showcase contemporary developments in technologies, construction materials, products, instrumentation, and services in an exhibition to be organized at the Conference venue.

CONFERENCE THEMES AND TOPICS

The following topics will be deliberated during the three days conference:

THEME A : Latest technologies for dam health assessment

Dam Inspection, Geophysical and under water investigations, Seepage and Leakage Detection, Crack Mapping, Advancement in modern technology; Material testing and Investigations, Issues & challenges, Case Studies

THEME B : Dam Health Monitoring and Surveillance

Dam Health Monitoring, Data Acquisition and Processing; Dam Instrumentation for earthquake hazard assessment; Surveillance and monitoring by latest technologies (Satellite, terrestrial radar, laser based technologies); Real-time performance monitoring and analysis of data; Automation of instrumentation; Hydro-meteorological and Inflow forecasting systems; Communication and PA systems; Case Studies

THEME C : Latest technologies for repair and dam rehabilitation techniques

Dam rehabilitation techniques; Use of geo-membrane ; Dam Grouting – Cementitious and chemicals; Underwater works; Foundation grouting; Various aspects of rehabilitation- pre-rehabilitation investigations, technical regulations and current practices, institutional capacity building, project management, contractual challenges; Refurbishment of Gates; Dam Rehabilitation Case Studies; Reservoir De-sedimentation

THEME D : Dam safety assurance under climate change

Climate change impacts on dam safety; Flood risk management; Design flood review and managing revised floods; GLOF Management; Optimization of reservoir operation and integrated reservoir management

THEME E : Safety evaluation of existing dams

Comprehensive Safety Evaluation of Existing Dams - Structural, Hydraulic, Hydrologic and Geotechnical safety Assessments; Risk Analysis and Risk Management

THEME F : Safe operation and disaster management

Disaster and emergency management; Resources and capacity building for Emergency Management; EAP; Integration of Operation, Maintenance and Emergency Management

THEME G : Lessons learnt from dam failure incidents Causes of dam failures; case histories of dam failures incidents; lessons learnt

Special Session (Half Day)

A Special Session focusing on benefits of dam and hydropower development as well as its impact on environment and socio-economic upliftment of the region will be organized for public awareness.

CALL FOR PAPERS

Technical Papers reflecting the developments in technology, materials, instrumentation, and methods including case histories of dam safety and management issues and solutions, relevant to the Session Themes and Topics are invited for presentation in the technical sessions. Full papers, including main body, figures, and tables, should not be more than 6 pages on the A4 format; Guidelines to Authors published on the website may be referred to for more details on formatting. All the papers received will be reviewed by a panel of experts for the quality of contents and their relevance to the themes of the Sessions and compliance with the Guidelines before acceptance. Authors of accepted papers will be requested to submit presentation slides. Authors of papers not included for oral presentation, may make a poster presentation of their papers. Soft copies of all the accepted papers will be distributed to the participants during the Conference.

TIME LINES

The timeline for submission and acceptance of papers is as follows:

- Full papers: 31st January, 2025
- Communication of accepted papers: 15th February 2025
- Submission of PowerPoint slides (limited to 12) for oral presentation: 10th March 2025

Workshop on Grouting Technologies in Rehabilitation of Dams

19th March 2025 at Shimla

Introduction

Grouting techniques in dams is one of the most practiced commonly used technique now a days for rehabilitation / repairing of dams. For strengthening of dams, various methods are used depending upon requirement. Dam grouting improves the situation spillage anticipation and leakage control. Grouting is consistently considered to restore water ingress through cracks and repair of cracks itself. Grouting is commonly used to reduce permeability, which might be necessary for reducing rates of seepage or leakage through or into new or existing structures and foundations, reducing hydrostatic forces acting on structures, altering flow gradients or flow paths to achieve specific design objectives, inhibiting internal erosion of foundation and embankment materials. For any critical hydraulic application, grouting is normally among one of the several lines of defence.

While grouting as a technique adopted for dam rehabilitation is well recognized and adopted, the dam professionals have to keep pace with continual evolution of new materials and techniques. Unless the professionals and decision makers are not aware, the full potential of the techniques cannot be realized in the field. This workshop will create awareness, to provide the baseline for selection of appropriate materials for grout depending on the requirements. It will also cover the technologies and criteria involved for executing a successful grouting programme on a dam. The workshop covers grouting as a method to improve strength properties of the concrete/ masonry dams and geotechnical properties of soils and rock masses, with special focus on mechanisms, theories, and practical applications of grouting to strengthening, permeability reduction and groundwater cut-offs. The workshop will be beneficial for Dam and hydropower project owners, Regulators, Consultants and Contractors etc. having interest in grouting for as a technique for dam rehabilitation.

This workshop will create awareness, to provide the baseline for selection of appropriate materials for grout depending on the requirements. It will also cover the technologies and criteria involved for executing a successful grouting programme on a dam. The workshop covers pressure grouting as a method to improve strength properties of the concrete/ masonry dams and geotechnical properties of soils and rock masses, with special focus on mechanisms, theories, and practical applications of grouting to ground densification and strengthening, permeability reduction and groundwater cut-offs. The workshop will be beneficial for Dam and hydropower project owners, Regulators, Consultants and Contractors etc. having interest in pressure grouting for a broad array of geo-structural construction and remediation applications.

Workshop Topics : The following topics will be deliberated during the workshop:

- ⇒ Need of grouting in existing dams and barrages – An overview
- ⇒ Planning, design and execution of grouting programme for dam rehabilitation
- ⇒ Latest Investigations Techniques for establishing the requirements of grouting in existing dams
- ⇒ Grout materials, mixes and their properties and quality control
- ⇒ Grouting techniques - issues and challenges – Case studies
- ⇒ Under water grouting - Leakage control in structures – Leakage routes, Locating the source
- ⇒ Grouting Under High-Head and High-Flow Conditions for dam rehabilitation
- ⇒ Grouting in extreme environments
- ⇒ Advance grouting techniques for Dam Rehabilitation – Case studies
- ⇒ Embankment Dams; Concrete Dams and Stone Masonry Dams
- ⇒ Role of contractor in execution of grouting techniques

Interactive Session with the individual professionals and agencies for addressing specific queries and questions. Since the workshop will be preceding the conference, the participants will get opportunities to continue their interactions on the subject post the conclusions also.

EXHIBITION - (19-22 March 2025)

Exhibition Booth of 3m x 3m will be provided at the venue of the Conference. The exhibition will provide a scope to present the new technologies, materials and mechanisms including software. Participants will enjoy sufficient time and opportunity to inspect the exhibition, and exhibitors will have an excellent opportunity of accessing a large number of potential buyers/decision makers each day. This opportunity will be allotted on first-cum-first served basis. **The Charges for one Booth will be Rs. 2.00 lacs.**

WHO SHOULD ATTEND?

The conference will be of interest to Dam Designer & Operators, Engineers, Geologists, Regulatory Bodies, Government Departments, Dam Building Contractors & Consultants, Suppliers of Products & Services for Rehabilitation of Dams, instrumentation Companies, Technical and Research Institutes, Universities dealing with the Dam, Organization & Associations active in the supply of Dam Repairs Chemicals Companies and Funding Agencies.

OFFICIAL LANGUAGE

The official language of the Conference is English.

REGISTRATION FEE The registration fee payable by the delegates, including authors of papers, for participation in the Workshop and/or Conference is as follows:

Delegates	Workshop only	Conference Only	Both Workshop & Conference
India	INR 5,000	INR 15,000	INR 18,000
Other Countries	US \$ 100	US \$ 200	US \$ 300

Notes:

- a) **The Fee for Full-Time Students is 50% of Delegate Registration Fee.**
- b) A discount of 10% will be given to Life members of Dam Safety Society.
- c) Earlybird discount in registration fee of 10% if payment made on or before 20th January 2025

SPONSORS OPPORTUNITIES

Opportunities Available	Platinum	Golden	Silver	Bronze	Supporter	Kit / Lunch & Dinner Sponsor
Investment	INR 10.00 Lakh	INR 7.00 Lakh	INR 5.00 Lakh	INR 3.00 Lakh	INR 2.00 Lakh	INR 5.00 Lakh
Benefits	2 delegates and 1 double booth or 10 delegates	2 delegates and 1 single booth or 7 delegates	1 delegates and 1 single booth or 5 delegates	04 delegates	03 delegates	05 delegates
Logo on home Page website	✓	✓	✓	✓	✓	
Presentation Opportunity	✓	✓				
Event Specific Recognition Logo on Promo materials	✓	✓	✓	✓	✓	
Use of logo on promo materials	✓	✓	✓	✓	✓	✓
Exhibition booth	✓	✓	✓			
Pamphlet Insertion in Delegate Bag	✓	✓	✓	✓	✓	✓
Logo on Backdrop & other signages	✓	✓	✓	✓	✓	✓
Sponsor Logo page on Proceedings Volume	✓	✓	✓	✓	✓	✓

PAYMENT MODE: Demand draft in favour of Dam Safety Society, payable at New Delhi

ONLINE PAYMENT/NEFT

- Account Holder Name: "Dam Safety Society"
- Bank Name & Address : Canara Bank, Delhi Diplomatic Enclave, 7/48, Malcha Marg, Chanakyapuri, New Delhi-110021
- Saving Bank Account No. 110138299383
- IFSC Code: CNRB0000157 / • Swift Code: CNRBINBDFS MICR Code No. 110015007

GENERAL INFORMATION

How to reach Shimla

Shimla is 110 Km from Chandigarh and 90 Km from Kalka. It is well connected by road, rail and air. Shimla airport located in Jabarhatti, 22 kilometres (14 mi) from Shimla in the Indian state of Himachal Pradesh. The airport was constructed by cutting down a mountaintop and leveling the area to form the single runway.

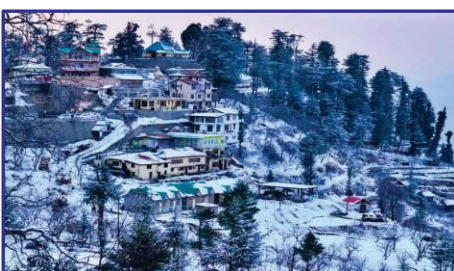
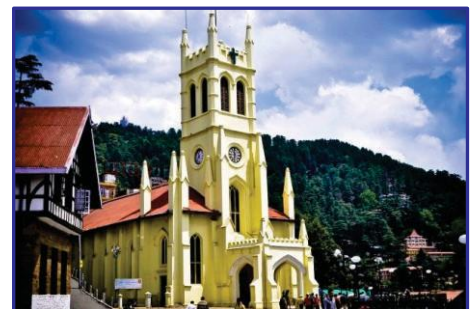
TOURIST ATTRACTION

Jakhoo Hills is the highest peak in Shimla. The hill is 8000 feet high and one of the most popular Shimla Attractions. A trip to Shimla is incomplete without a visit to the hill, so don't forget to include it in your list of Places to See in Shimla. You can't take your drive all the way up to the top of the hill. However, the short trek to the top is exhausting but fun. The winding walkway is amidst a thick forest lined with tall and beautiful pine trees.



Mall Road : Mall roads are synonymous with most Hill Station in North India. No matter where you go, you will always find one, and it will most likely spend all your spare time, walking, checking out the cute little stores and of course stuffing yourselves with delicious food. Shimla's mall road is no exception to this rule. In fact, the mall road in Shimla is very famous for selling woollen clothing, beautiful local handicrafts and many other local delights at reasonable prices.

Christ Church, Shimla needs no introduction. The church is the second oldest church in all of North India and hands down the most famous and popular tourist attraction in Shimla. It's easy to locate as its big yellow building located at the beginning of the infamous mall road. If you are looking for a few moments of total calm and peace, then visit the church. The church interiors are quite humble, but the church walls hold within them many tales of the forgotten time. You can sit on the benches and spend some time communing with God, meditating or simply spend time some quiet time with yourself and your thoughts.



Kufri : Commonly referred to as the winter sports capital of India and located 17 km from Shimla. Some of you may not know, but Kufri wasn't always a part of India and was formerly a part of the Kingdom of Nepal. During summers you can plan a day trip from Shimla to Kufri and enjoy some uninterrupted Panoramic views that do justice to the surreal beauty of the Himalayan mountain ranges. Make sure you carry your DSLR's, to capture the beautiful 360 degrees views of the surrounding mountains and valley.

Chadwick Waterfall (7km): which is located within the Glen Forests, is among the most beautiful sights of nature in Shimla. The waterfall descends over a wide canyon after diving from a height of 86 metres. This Shimla visiting place makes for an alluring appearance when surrounded by the deodar and pine trees' carpet of foliage. The monsoon season, which lasts from June to September, is the best time to go since Chadwick appears to have a life of its own and the water level rises. You can swim around if the thought of getting wet in the chilly water doesn't terrify you



CONFERENCE SECRETARIAT DAM SAFETY SOCIETY

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