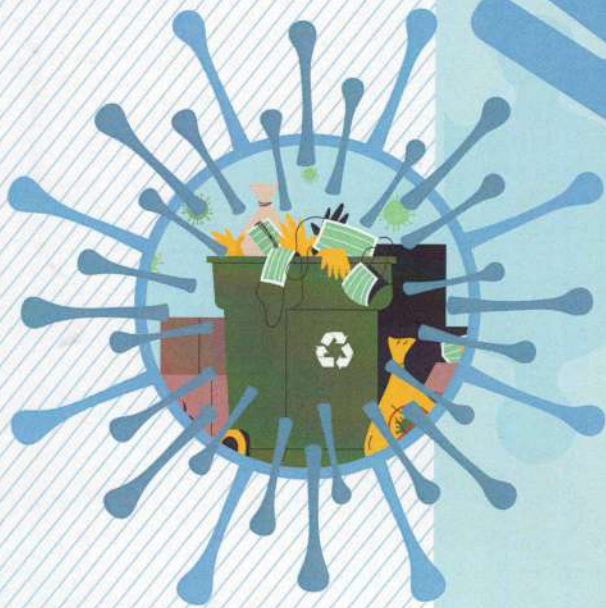




NEWSLETTER



Mr. S.P. Subudhi (I.F.S.),
Member Secretary

Dr. Ankur Kansal
Environment Engineer

Ms. Littlelta Mittal
Junior Research Fellow

UTTARAKHAND POLLUTION CONTROL BOARD
Gaura Devi Paryawaran Bhavan,
46B, IT Park, Sahasradhara Road, Dehradun
Website: <https://ueppcb.uk.gov.in/>

COVID BIO MEDICAL WASTE MANAGEMENT IN UTTARAKHAND STATE

BIO MEDICAL WASTE MANAGEMENT IN PANDEMIC COVID-19

What is COVID Waste?

Waste generated during diagnostics and treatment of COVID-19 suspected/confirmed patients are considered as COVID waste.

(Source: - Guidelines for Handling, Treatment and Disposal of Waste Generated during Treatment/ Diagnosis/Quarantine of COVID-19 patients (Rev. 4) by CPCB)

What are the sources of COVID waste generation?

In order to deal with COVID-19 pandemic, State and Central Governments have initiated various steps, which include setting up of quarantine centres/camps, isolation wards, sample collection centres, laboratories, dedicated COVID hospitals, dedicated COVID health centre and dedicated COVID centre.

(Source: - Guidelines for Handling, Treatment and Disposal of Waste Generated during Treatment/ Diagnosis/Quarantine of COVID-19 patients (Rev. 4) by CPCB)

There are 11 dedicated COVID Hospitals (DCH), 108 dedicated COVID Health centre (DCHC) and 233 dedicated COVID Centre (DCCC), 79 sample testing centre and 62 laboratories in the Uttarakhand State.

(Source: - Department of Medical health and Family Welfare, <https://health.uk.gov.in/pages/view/118-dedicated-covid-health-facility>)

Person taking care of Home quarantined patients should deposit bio-medical in yellow bags at designated deposition centres established by Urban Local Body.

How much quantity is being generated?

The total waste being generated since May, 2020 to June, 2021 is as follows:

S.No.	Month wise	Total Waste generated (kg/month)
1.	Upto May, 2020	44863.2
2.	June, 2020	49171.728
3.	July, 2020	81755.423
4.	August, 2020	129211.671
5.	September, 2020	172808.707
6.	October, 2020	136447.533
7.	November, 2020	63422.895
8.	December, 2020	76221.89
9.	January, 2021	56794.467
10.	February, 2021	27293.644
11.	March, 2021	14716.007
12.	April, 2021	62507.918
13.	May, 2021	192500.476
14.	June, 2021	85858.907



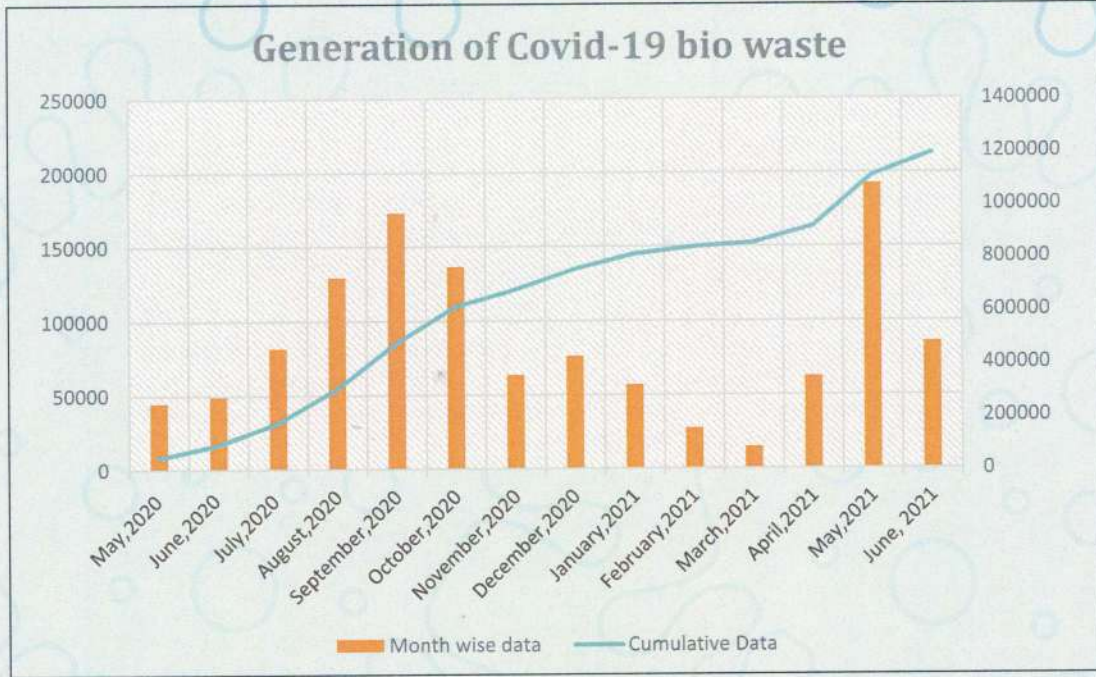


Fig.1
Graph depicting covid-19 bio waste generated cumulative as well as month wise

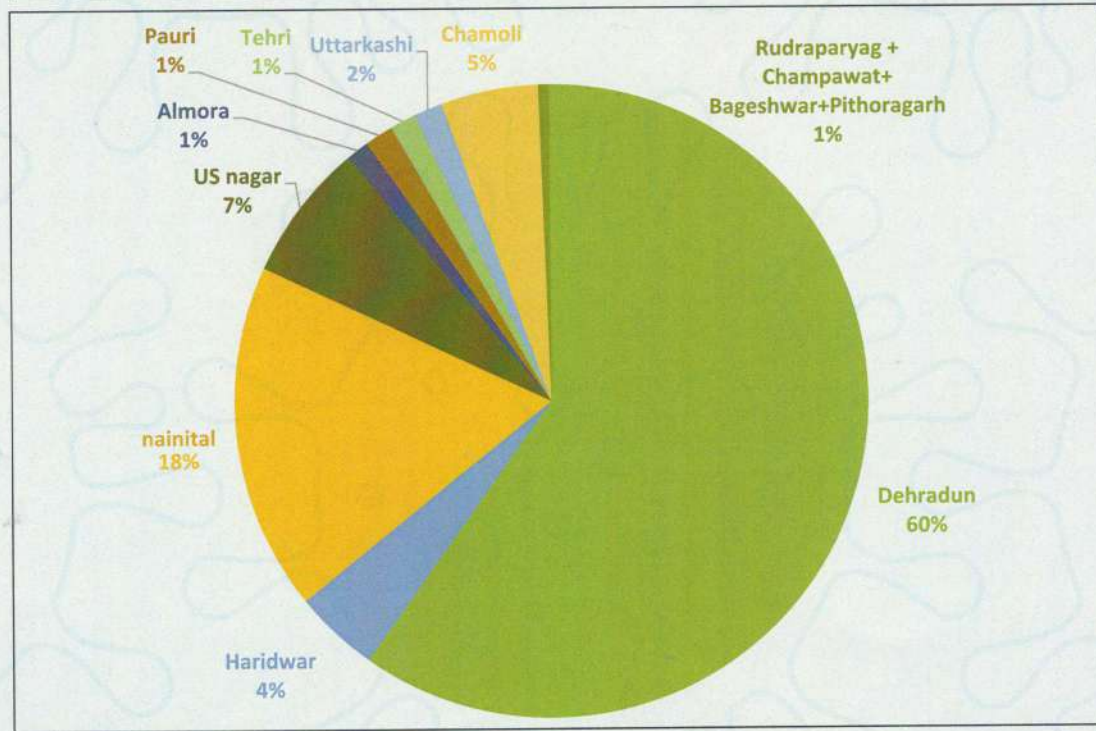


Fig.2
Graph depicting district-wise generation of Covid-19 bio waste



COVID-19 BIO-MEDICAL WASTE DISPOSAL

The cumulative capacity of Uttarakhand State for Bio-Medical Waste disposal is 8 MT/day. Common-Bio Medical Waste Treatment Facility has permission to operate for 16 hrs, but in the wake of Covid-19, time is extended to 20 hrs., which cumulate to 8MT/day.

As per NGT order 72/2020, if the capacity of CBWTF gets exhausted then Covid bio-waste can be directed towards incineration facility of Treatment, storage and disposal facility in the state. **M/s Bharat Oil and Waste Management Ltd** has the additional capacity to receive approximately 3 MT/day.

No. of CBWTF	2 no. <ul style="list-style-type: none"> • Medical Pollution Control Committee, Mandawar, Roorkee with incineration capacity of 2 no. of 100 kg/hr/each (1 working + 1 stand-by) • Global Environmental Solutions, Gadarpur with capacity of incineration 100 kg/hr
Captive Facility	1 no. at Rajkiya Medical College (Shushila Tiwari Hospital), Haldwani with incineration capacity of 100 kg/hr
Average Covid-19 waste generation per day (May, 2020-June, 2021)	202.5 kg/day
Disposal of Covid-19 waste Average per day	There are two ways to dispose off the bio-medical waste: - Incineration <ul style="list-style-type: none"> • CBWTF- 180.57 kg/day • Captive Facility- 21.1 kg/month Non-incineration <ul style="list-style-type: none"> • Deep-Burial – 0.73 kg/month

DISPOSAL OF COVID-19 BIO-WASTE

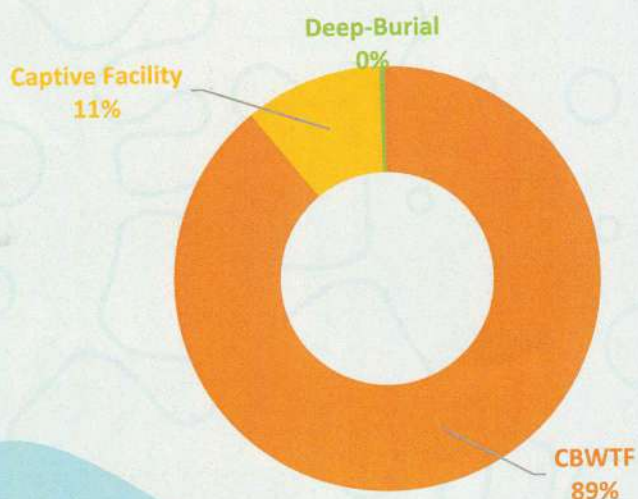


Fig. 3

Graph depicting disposal of Covid-19 bio waste



Directions/Guidelines issued by UKPCB for Management of Bio-Medical Waste generated from treatment and diagnose of COVID 19

S.No.	Date	Issued to	Directions/Guidelines
1	20.04.2020	1. Director General, Medical Health and Family, Uttarakhand 2. Director, Urban Dept. Directorate, Dehradun 3. All DMS, Uttarakhand 4. Director, AIIMS, Rishikesh	Emphasis on maintaining record of Covid-19 treatment wards/quarantine centers/ quarantine homes
2	18.05.2020	5. Director General, Medical Health and Family Welfare, Dehradun 6. All DMS, Uttarakhand 7. All CMOs, Uttarakhand	Direction under Section 5 of EPA Act to ensure that all Health Care Facilities shall use COVID19 BWM tracking app and feed daily data pertaining to generation of such waste.
3	27.05.2020	1. Director General, Medical Health and Family, Uttarakhand 2. Director, Urban Dept. Directorate, Dehradun 3. All DMS, Uttarakhand 4. All CMOs, Uttarakhand	Direction under Section 5 of EPA Act to: 1. Comply Guidelines for Handling, Treatment and Disposal of Waste generated during Treatment/ Diagnosis/ Quarantine of COVID 19 patients issued by CPCB 2. Ensure registration of all treatment wards/quarantine centers with the Mobile App as made by CPCB and also to ensure daily data in the app
4	29.07.2020	1. Director General, Medical Health and Family Welfare, Uttarakhand 2. Director, AIIMS, Rishikesh 3. CMS, Doon Hospital, Dehradun 4. Medical Superintendent, Dr. Shushila Tiwari med. College, Haldwani 5. Medical Superintendent, Coronation Hospital, Dehradun 6. Director, Urban Dept. Directorate, Dehradun 7. All DMS, Uttarakhand 8. Addl. Director, CPCB 9. Both CBWTF, Uttarakhand	Guidelines for Handling, Treatment and Disposal of Waste generated during Treatment/ Diagnosis/ Quarantine of COVID 19 patients- Revision-4 dated 21 st July 2020 issued by CPCB
5	04.09.2020	8. Director Urban Dept. Directorate, Dehradun 9. Director General, Medical Health and Family, Uttarakhand 10. All DMS, Uttarakhand 11. All CMOs, Uttarakhand	Direction under Section 5 of EPA Act to: 1. Use of COVID19BWM APP by all Municipal Corporations. 2. All Municipal Corporation that they shall educate households about segregation and ensure treatment of such BMW through Common Facility or deep burial
6	18.05.2021	1. Director General, Medical Health and Family, Uttarakhand 2. Director, Urban Dept. Directorate, Dehradun 3. All DMS, Uttarakhand 4. All CMOs, Uttarakhand	Direction under Section 5 of EPA Act to ensure the bio-medical waste generated from vaccination against Covid-19 and its disposal to be done in accordance with the bio-medical Waste Management and handling Rules



Environmental Compensation imposed & Action taken against violators

S.No.	Date	Name of Violator	Violation	Environment Compensation/ Action taken
1.	06.08.2020	Executive Officer, Nagar Panchayat, Lalkuan, Nainital	Have not made any arrangement for Covid-19 Bio-medical Waste Management	Rs. 50,000/-
2.	06.08.2020	Station Superintendent, Lalkuan Railway Station, Nainital (For collection of EC from MK Enterprises, Bareilly)	M.K. Enterprises, who is contracted for Municipal Solid Waste Management by Railway, Lalkuan has not obtained any permission from the Nagar Panchayat for Municipal Solid Waste Disposal	Rs. 50,000/-
3.	06.08.2020	Chief Medical Officer, Nainital (For collection of EC from Superintendent/ Incharge of Quarantine Centre at Lalkuan Railway Station)	Disposal of PPE kits, burning of Covid-19 waste with Municipal waste	Rs. 50,000/-
4.	08.04.2021	Global Environmental Solutions, Gardarpura	The bio-medical waste was to be collected and transported in fully covered vehicle	Rs. 50,000/-

Steps taken for management of excess Covid waste

S.No.	Date	Issued to	Particular
1.	09.11.2020	Medical Pollution Control Committee	In the wake of increase in generation of Covid-19 waste, issued permission to install stand-by incinerator of capacity 100kg/hr
2.	06.05.2021	Regional Officers, UKPCB	To find out the capacity of incinerators installed in industries, which can be used if the capacity of CBWTFs gets exhaust
3.	18.05.2021	Rajkiya Medical College, Haldwani	To take necessary action for installation of incinerator in the wake of third wave of Covid-19
4.	18.05.2021	H.N.B. Medical College, Srinagar, Pauri	To renovate the existing incinerator in the premises of college
5.	21.05.2021	All District Magistrates	Ensure the provision of installation of incinerator in government hospital
6.	10.05.2021	Bharat Oil and Waste Management Ltd	To be on stand-by to receive Covid-19 waste for the treatment and disposal



GUIDELINES FROM CENTRAL POLLUTION CONTROL BOARD

- Keep separate color coded bins (with foot operated lids bags/containers in wards and maintain proper segregation of waste as per BMW Rules, 2016 as amended and CPCB guidelines for implementation of BMW Management Rules.
- As precaution double layered bags (using 2 bags) should be used for collection of waste from COVID-19 isolation wards so as to ensure adequate strength and no-leaks
- Collect and store biomedical waste separately prior to handing over the same CBWTF. Use a dedicated collection bin labelled as "COVID-19" to store COVID-19 waste and keep separately in temporary storage room prior to handing over to authorized staff of CBWTF. Biomedical waste collected in such isolation wards can also be lifted directly from ward into CBWTF collection van.
- In addition to mandatory labelling, bags/containers used for collecting biomedical waste from COVID-19 wards, should be labelled as "COVID-19 Waste". This marking would enable CBWTFs to identify the waste easily for priority treatment and disposal immediately upon the receipt
- General solid waste comprising of wrappers of medicines/syringes, fruit peel offs, empty juice bottles or tetra packs, used water bottles, discarded papers, carton boxes of medicines, empty bottles of disinfectants, left-over food, disposable food plates etc., should be collected separately as per SWM Rules, 2016. In order to minimize waste generation, as far as possible, non-disposable items must be used for serving food, which are to be handle with appropriate precautions and cleaned and disinfected as per hospital guidelines. If use of disposable items is inevitable, use bio-degradable cutlery. The wet and dry solid waste bags to be tied securely in leak-proof bags, sprayed with sodium hypo-chlorite solution and hand over to authorized waste collector of ULB's on daily basis. Yellow colored bags should not be used for collecting general solid waste. Compostable bags should be used for collecting wet-waste.
- Maintain separate records of waste generated from COVID-19 isolation wards
- Use dedicated trolleys and collection bins in COVID-19 isolation wards. A label "COVID-19 Waste" to be pasted on these items also
- The (inner and outer) surface of containers/bins/trolleys used for storage of COVID-19 waste should be disinfected with 1% sodium hypochlorite solution daily.
- Report opening or operation of COVID-19 ward and COVID-19 ICU ward to SPCBs/PCCs and respective CBWTF located in the area.
- Register in CPCB mobile application namely 'COVID19BMW' to update the details of COVID-19 biomedical waste
- Depute dedicated sanitation workers separately for biomedical waste and general solid waste so that waste can be collected and transferred timely to temporary waste storage area
- Feces from COVID-19 confirmed patient, who is unable to use toilets and excreta is collected in diaper, must be treated as biomedical waste and should be placed in yellow bag/container. However, if a bedpan is used, then faeces to be washed into toilet and cleaned with a neutral detergent and water, disinfected with a 0.5% chlorine solution, then rinsed with clean water
- Collect used PPEs such as goggles, face-shield, splash proof apron, Plastic Coverall, Hazmet suit, nitrile gloves into Red bag
- Collect used mask (including Triple layer mask, N95 mask etc.), head cover/cap, shoe-cover, disposable linen Gown, non-plastic or semi-plastic coverall in Yellow bags. Used masks, tissues and toiletries, of COVID-19 patient shall become biomedical waste and shall be segregated in yellow bag.
- Segregation of biomedical waste and general solid waste should be done at the point of generation in wards / isolation rooms. There should be no segregation of biomedical waste and solid waste at temporary waste collection / storage area of Healthcare Facility to ensure occupation safety
- Provide training to Waste handlers about infection prevention measures such as Hand hygiene, Respiratory etiquettes, social distancing, use of appropriate PPE, etc. via videos and demonstration in local language. Designated nodal officer for biomedical waste management in hospital shall provide training. Nodal officers, in turn, need to be trained by Health Departments / professional agencies in association with SPCB/ PCC of the States/
- Pre-treat viral transport media, plastic vials, vacutainers, eppendorf tubes, plastic cryovials, pipette tips as per BMW Rules, 2016 and collect in Red bags





उत्तराखण्ड प्रदूषण नियंत्रण बोर्ड



46बी, आई.टी. पार्क, सिडकुल, सहस्त्रधारा रोड, देहरादून, फोन: 0135-2658086,
वेबसाइट : www.ueppcb.uk.gov.in, utrenvis.nic.in

सार्वजनिक सूचना

सभी स्वास्थ्य देखभाल संस्थान (HCFs) और सर्वसाधारण जनता कृपया ध्यान दें।

कोविड-19 महामारी को ध्यान में रखते हुए सभी स्वास्थ्य देखभाल संस्थानों (HCFs) और कॉमन बायोमेडिकल वेस्ट ट्रीटमेंट फेसिलिटीज (CBWTFs) से अनुरोध किया जाता है कि वे कोरोना प्रभावित स्थानों/संदिग्ध व्यक्तियों के बायोमेडिकल कचरा इकट्ठा करने, लाने-ले जाने और निपटान के निर्धारित तरीके/दिशा निर्देशों का अनिवार्य रूप से पालन करें।

क्या करें?



क्या न करें?

- कोविड-19 कचरे को दूसरे कचरों के साथ न मिलाएं
- कोविड-19 कचरे को अन्य तरह के कचरों के साथ जमा करके न रखें
- कोविड-19 कचरे को नंगे हाथों से जमा न करें। इसके लिए निर्धारित पीपीई किट पहनें
- कोविड-19 कचरे को 24 घंटे से ज्यादा न रखें



इस सार्वजनिक सूचना के द्वारा HCFs, CBWTFs, दूसरे स्टेकहोल्डर्स और सर्वसाधारण जनता को सूचित किया जाता है कि बायोमेडिकल कचरे के निपटान के लिए बताए गए सभी निर्देशों का अनिवार्य रूप से पालन करें और कोविड-19 महामारी के दुष्प्रभावों से मानव जाति और पर्यावरण को बचाने में योगदान दें।