

Deputy Chief Engineer (W.S.P.) CC

Introduction :

This department was formed in the Year 1970 for augmenting the water supply to Mumbai City by developing new water sources and then was called as the Project Department. From 1972 onwards, the same department was being called as Water Supply Project Department (W.S.P. Dept.).The objective of this department is to identify the various water sources for augmentation of Mumbai's water supply and to develop the same as well as strengthening / replacing existing utilities such as pipelines, water treatment plants, reservoirs etc.

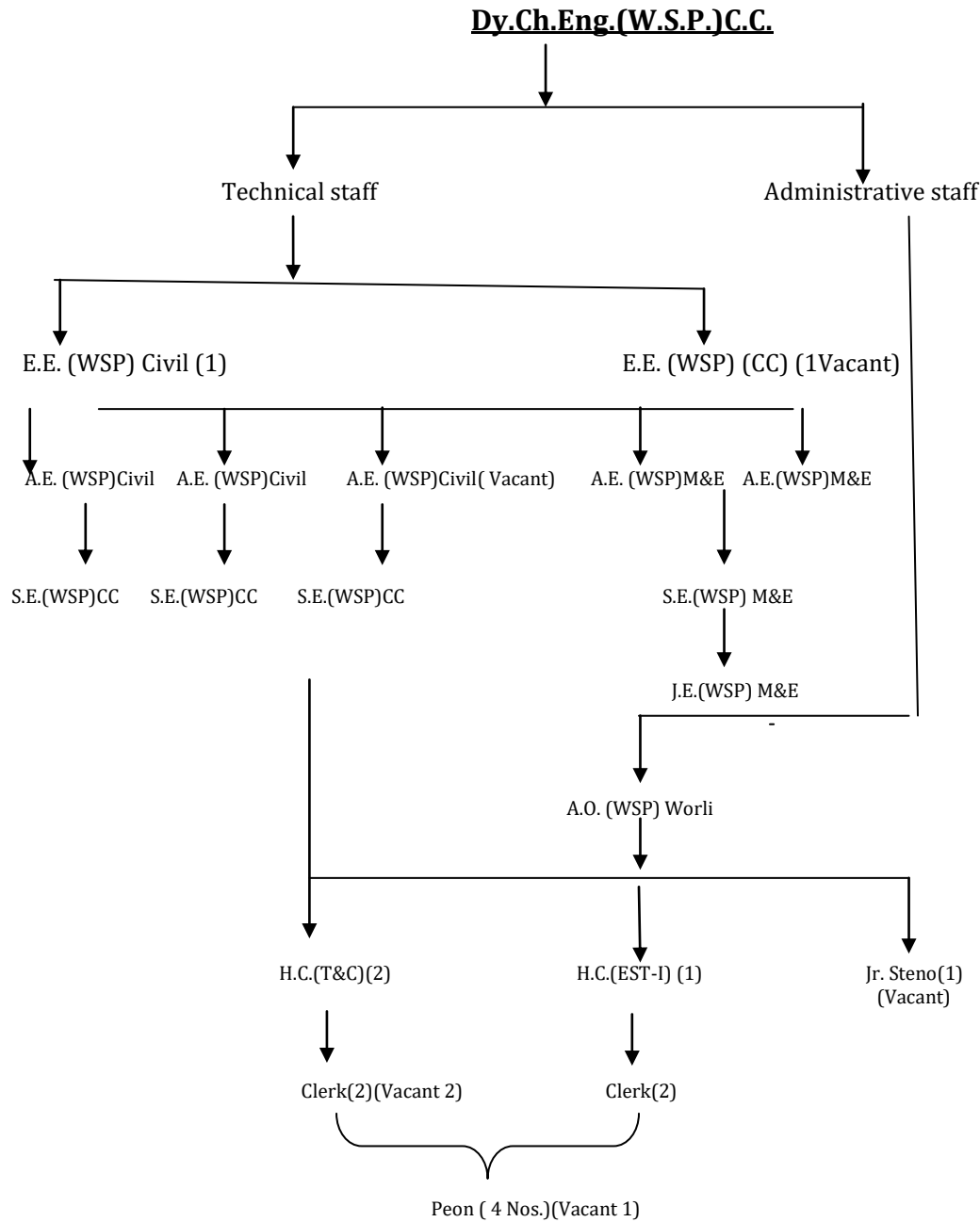
The "Consultancy Cell" in Water Supply Projects department plans various projects, carries their feasibility studies and appoints contractors for executing the projects. As per the recommendation given by Dr. Chitale Committee, various projects to augment the water supply of Mumbai City are planned such as Middle Vaitarna Project, Gargai Project and Pinjal Project. Desalination project at Manori, etc. Among these projects, Middle Vaitarna Water Supply Project has already been completed, thereby augmenting Mumbai city's water supply by 455 MLD per day.

Particulars of Organization, Functions and Duties :

To carry out the planning activities and back office technical support for construction and commissioning activities of water supply projects for the purpose of bringing water to Mumbai City from distant sources, and to carry out necessary treatment operations on it so as to make it suitable for drinking. This work involves, Planning activities for development of new sources of water, construction of tunnels and laying new water mains for its conveyance, construction of new pumping stations, substations, treatment plants (including chlorination plants) and all the related works required to supply quality water including service reservoirs in city and laying of water mains network for improvement in equitable distribution of water to citizens of Mumbai.

The work involves lot of activities like seeking different permissions from state and central governments, acquisition of land, design of complete system starting from development of source upto bringing the water of the highest quality standards up to service reservoirs in the City, Eastern suburbs and Western suburbs. The present water supply projects involve many complex technological processes. The up to date knowledge of these technologies may not be necessarily available with the staff of BMC, hence the services of experts and/or services of consultants are required be taken for execution of projects. The section of Dy.Ch.E.(WSP) (CC) is involved in checking the feasibility, planning and design of all works starting from the source, which are required for augmentation of water supply. This section is also involved in water resources development activities. These works are carried out either entirely with the help of staff or in association with the project consultants/experts as the case may be.

Organizational Structure



Functions :

To conceptualize and finalize the scheme for implementation of various projects in phased manner related to water supply of quality standards.

Duties :

Following duties are performed either independently by BMC staff or through project consultants/experts. Appointment of consultant as and when required. Preparation of Feasibility Reports, Planning, Design, Estimation, Preparation of Tender documents, Invitation of tenders, Tenders Scrutiny, Award of work after getting approval through Standing Committee, coordination with other sections/ departments of BMC and outside agencies such as Govt. of Maharashtra, Govt. of India, Ministry of Environment & Forests, Ministry of Urban development, Highway authorities, financial institutions like World Bank, Mumbai Metropolitan Region Development Authority etc. to fulfill the requirements arose during the execution of the project. To complete all these works/activities within the time frame as planned and as per the standard specified in contract conditions. The staff also has to monitor and maintain records of progress of work of consultants/experts, and make appropriate budget provision for these works.

Present Scenario :

Government of Maharashtra has allocated Gargai & Pinjal sources to BMC for development. Brihanmumbai Municipal Corporation (BMC) is carrying out the work of preliminary engineering for development of Gargai source after implementation of the Middle Vaitarna Project. National Environmental Engineering Research Institute (NEERI) have completed the work of Environmental Impact Assessment Studies for Gargai & Pinjal Projects. Also Bombay Natural History Society have completed the Bio-diversity studies for both the projects. However, as per the order of priority laid down by Chitale Committee, Gargai source has been taken up for development first. The demarcation and demographic survey work regarding submergence area of Gargai Project is completed. Final DPR for Gargai Dam Project prepared by M/s WAPCOS Ltd. has been submitted for vetting by CDO, Nashik, GoM. Vetting of Geotechnical Investigation Report as well as the Hydrological Study Report is completed. Hydrology Directorate of Central Water Commission (CWC) has approved the hydrological studies for Gargai Project. The NCSDP (National Committee on Seismic Design Parameter) has approved the Site Specific Seismic Study Report

prepared by CWPRS, Pune The work of vetting the Design Component of DPR is in progress and is expected to be completed shortly. Proposal with necessary corrections for Wild Life Clearance has been put up for approval. Suitability certificate for 657 hectare. Compensatory afforestation land abutting to Tadoba-Andhari Tiger Reserve has been obtained. Revised Forest clearance proposal has been submitted. MoTA clearance proposal has been cleared by Tribal Development Department. GoM, and MoTA, GoI has accorded final approval. Which is being communicated by GoM to BMC. The process of Private Land acquisition by direct Negotiation has been initiated. Joint measurement survey of private land and proposed rehabilitated land at Devali is completed. Also preparation of field data is completed. Tree valuation by forest department is in progress.

According to Chitale Committee Report BMC after Gargai would develop 'Pinjal' as the next source of augmentation of water for Mumbai city. The Water Resources Department, GOM has once again allowed BMC to take the work of preparation of DPR for Pinjal Project accordingly NOC from WRD, GOM is received on 25.06.2019. BMC has decided to take the work of preparation of DPR after EIA studies of Pinjal project after ascertaining the EIA of the same. As such consultant for the work of obtaining Environmental, Forest/Wildlife clearances from Competent Authorities including Socio and Environmental Impact Assessment Studies and Enumeration of trees for proposed Pinjal Project has been appointed and is in progress.

The consultants M/s SMEC International Pty ltd have been appointed for the work of Detailed Engineering & Construction Supervision (PMC Services) for Gargai Dam and Tunnel Project. The work order has been issued.

Further, Government of India has proposed to transfer surplus water from Damanganga basin to the extent of 1586 MLD. to proposed Pinjal reservoir for domestic water needs of Greater Mumbai. The Detailed Project Report for the same has been prepared by National Water Development Agency (NWDA) and the same has been accorded Techno-Economic Clearance by Central Water Commission (CWC). Water sharing Agreement between State Government of Maharashtra and Gujarat is awaited.

After completion of all the above projects, water supply to Mumbai is expected to be augmented by 2891 MLD. (i.e. 440 MLD from Gargai, 865 MLD from Pinjal and 1586 MLD from Damanganga.)

Desalination Project

- The proposal for erection of a Sea Water desalination project at Manori has received approval from the Standing Committee and the Municipal Corporation on 08.02.2021 and 09.02.2021 respectively. The proposal is in accordance with provision of MahaIdea Act 2018.
- Accordingly, a 200 MLD Desalination plant (expandable to 400 MLD) is proposed to be constructed at Manori.
- The project will be set up on land currently under the jurisdiction of Maharashtra Tourism Development Corporation at Manori, which will be handed over to BMC for the desalination project.
- The BMC committee formed under the chairmanship of The Hon. Municipal Commissioner vide GoM's Urban Department circular dated 22.04.2021 has been authorized to take decision regarding the unsolicited proposal received by BMC under section 5(3) of MahaIDEA Act 2018.
- The unsolicited proposal of M/s IDE Water Technologies Ltd. has been accepted and they have been declared as Original Project Proponent. BMC and M/s IDE Israel, thereafter, signed an agreement for preparation of Detail Project Report (DPR) for erection of 200 MLD (expandable to 400 MLD) SWRO Desalination plant at Manori on 28.06.2021.
- A Transaction advisor (consultant) has been appointed for vetting of the DPR & Draft tender and further bid process management followed by vetting of designs, drawing during construction stage and construction supervision by deployment of CRE(Civil) and Dy.CRE (Mech)
- Vetting of Tender & DPR for the work of construction of 200 MLD Desalination Plant (expandable to 400 MLD) for Mumbai is in the final stage.
- The water which will be available from the proposed desalination plant shall be of potable standards and will be injected into the existing water distribution network or by strengthening of the available distribution network, if required so.

12 MLD Advanced Tertiary Treatment Plant (ATTP) at Colaba

BMC has also proposed to construct and operate a 12 MLD Recycle & Reuse plant for direct potable reuse further treatment of tertiary treated wastewater from the Colaba WwTF by utilizing Advance Tertiary Treatment method. The testing of quality of water treated at the Colaba WwTF has commenced. The tender for appointing consultant for the

said work has been invited on 04.01.2023 and the financial packet has been opened on 03.05.2023 and M/s NJS Engineers India Pvt. Ltd has been recommended as lowest bidder.

Brihanmumbai Municipal Corporation has taken up the work of following two tunnels for strengthening the distribution system as well as for meeting the future increased water demand of M(East/West), F(South/North) and part E and L wards :

- 1) Tunnel from Amar Mahal to Trombay Reservoirs
- 2) Tunnel from Amar Mahal to Wadala & further upto Parel

The consultancy work of M/s Tata Consulting Engineers Ltd for these 2 works is in progress. Also the Remaining Works for Tunnel from Powai to Ghatkopar High Level Reservoir and further upto Ghatkopar Low Level Reservoir is in progress for which M/s Tata Consulting Engineers Ltd have been appointed as consultant.

Other works :-

The work of consultancy services for feasibility study of Transfer of Vehar lake overflow water to Bandup complex WTP and to Airoli Creek has. commenced by to M/s Tata Consulting Engineers Ltd. since 09.02.2021 and the same is completed. Tender process for the same is in progress.

The work of consultancy services for feasibility study Detailed Engineering and construction supervision for proposed water conveyance tunnel from Balkum (Thane) to Mulund is in progress by M/s Tata Consulting Engineers Ltd.

In order to augment the water supply of Mumbai it is proposed to carry out feasibility study of integrating potable water produced after advanced treatment to tertiary treated water from proposed 7 WWTF in Mumbai, into Mumbai water supply system. Tender process for the same is in progress.

The organizational set up of this department has been prepared and annexed herewith. The required detailed information called by the public can be made available by the respective Officer as per the manuals annexed herewith.

The monitoring of ongoing projects and under planning projects are being done at Chief Engineer (W.S.P.)s Office.

Sr. No.	Name of the Office	Name of the Sub-Office	Address of the office	Head of the Office & his Post	Head of the office & his Tel. No.
1.	Chief Engineer (Water Supply Project)	Deputy Chief Engineer (WSP) Consultancy Cell	Office of Dy.Ch.Engineer (WSP)CC, Engineering Hub Building,1st floor, Dr. E. Moses Road, Worli Naka, Worli, Mumbai-400 018	Shri. S. V, Patil Dy. Ch. Engineer i/c (WSP) C.C.	24958068

Sd/-
05/12/2023
Dy.Ch.Eng. (WSP) C.C.