BRIHANMUMBAI MAHANAGARPALIKA

PROJECTS SANCTIONED UNDER JNNURM

A] **IV Mumbai - Middle Vaitarna Water Supply Project :-**

Municipal Corporation of Greater Mumbai (MCGM) has undertaken the Middle Vaitarna Water Supply Project, costing Rs.1583.97 crores in order to bring in additional 455 mld water to Mumbai. The Cabinet Committee on Economic Affairs (CCEA) of the Central Govt. has approved an expenditure of Rs.1329.50 crores as being admissible for Grant-in-Aid under the JNNURM. The Central and the State Govt. have released the first installment of Rs.33.23 crores for the Middle Vaitarna Water Supply Project. The execution period of the said project is from 2006-07 to 2010-11.

The works to be executed under the IV Mumbai Middle Vaitarna Water Supply Project are as follows:

1) **Construction of Dam**
   - The proposed Middle Vaitarna Dam on the Vaitarna River has an approximate length of 500 mtrs. and a height of about 100 mtrs.
   - This will be an R.C.C. (Roller Compacted Concrete) Dam
   - The water from the Middle Vaitarna Dam will be released into Vaitarna river and will be conveyed upto Modak Sagar Reservoir i.e. upto the Lower Vaitarna Reservoir, through river course.
   (Implementation status :- Tenders will be received on 15.12.2007)

2) **Conveyance and Treatment Works**
   - From Modak Sagar, water will be drawn through a new intake tower in a controlled manner and will be conveyed through a 7.5 km long tunnel upto the Intake Shaft at bell Nalla.
   (Implementation status :- Agency fixed. Work commenced on the 4th July 2007)
   - Thereafter water will be brought to the Bhandup Complex via a pipeline of 36 km, in parts, along with the existing 3000 mm. dia. M.S. pipeline.
   (Implementation status :- Agency fixed. Letter of Intent issued on the 16th July 2007)

3) **Treatment Plant at Bhandup Complex**
   - This additional water will be treated at Bhandup Complex by constructing a new Water Treatment Plant having a capacity of 900 Mld.
   (Implementation status :- Agency fixed. Letter of Intent issued on 19.11.2007).
4] **Pumping Station at Bhandup Complex**

- 900 mld capacity treated water pumping station will pump this additional water to new M.B.R.

  (Implementation status :- Tenders received on 4\(^{th}\) December 2007).

5] **M.B.R. at Bhandup Complex**

- From this 140 ML capacity M.B.R., water will be distributed through the existing network to various parts of Mumbai.

  (Implementation status :- Tender is invited and submission date is 05.01.2008).

B] **Construction of Underground Tunnel from Malabar Hill to Cross Maidan**

It is proposed to construct underground Tunnel from Kilachand Garden to Cross Maidan. The length of the proposed Tunnel is 3.6 km. and the finished diameter will be 2.2 meter. This Tunnel will replace 8 out of 11 outlets which are difficult to rehabilitate. The cost of this project is Rs.102.13 crore. The Central Sanctioning & Monitoring Committee (CSMC) of the Central Govt. has approved an expenditure of Rs.93.99 crores as being admissible for Grant-in-Aid under the JNNURM. The execution period of the said project is from 2007-08 to 2010-11.

(Implementation status:- The Agency is fixed. The work has been started from July 2007).

C] **Mumbai Sewage Disposal Project (MSDP) [Stage-II-Priority Works-Component-I]**

**Preamble:**

Municipal Corporation of Greater Mumbai has been implementing integrated Water Supply and Sewerage Projects since 1974 with the assistance of the World Bank. MCGM has successfully completed the project ‘MSDP-I’ which included works such as laying of new sewers lines, improvement of pumping stations, new pumping stations, treatment plants & three marine outfalls.

**MSDP Stage-II Feasibility study -Master Plan**

The need of Stage-II Master Plan for Sewerage was anticipated to further improve environment in and around Mumbai and to cater to the needs of ever growing population. Accordingly, Stage-II Feasibility Studies for the Sewerage System of Mumbai was carried out and Master Plan for MSDP Stage-II (Year 2025) was prepared for improvement in sewerage system.

MCGM had appointed M/s Mott MacDonald / R.V. Andersons Associates Ltd. (Mott/RVA) to carry out MSDP Sewerage *Stage-II Feasibility Studies* in September 1999.
The Master Plan is based on scientific study such as population/water supply forecasts, changes in land use, environmental norms prescribed by Pollution Control Boards.

**Stage-II Master Plan-Implementation**

Now, MCGM is planning to implement project ‘MSDP Stage II’ for the horizon year 2025, involving the works amounting to Rs. 5570.40 crore (Base cost of year 2001). The works of MSDP Stage-II are divided in five phases and those in the first two phases are called 'Priority Works', amounting to Rs.1896 crores. MCGM has planned to complete the priority works by 2011. The priority works are divided in different work Components as Component I, II & III.

**Implementation Pattern of the Master Plan**

<table>
<thead>
<tr>
<th>MSDP Stage-II Master Plan</th>
<th>Rs.5,570.4 Crores</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Five Phases</strong></td>
<td>(Year 2002-2025)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phase I &amp; II</th>
<th>MSDP Stage-II Priority works</th>
<th>Rs.1896 Crores</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Five Phases</strong></td>
<td>(Year 2006-2011)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component-I</th>
<th>Rs.502.41 Crores (JnNURM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component-II &amp; III</td>
<td>Rs. 1393.59 Crores</td>
</tr>
</tbody>
</table>

- 35% from Government of India
- 15% from State Government
- ULBs share will be met by raising internal loan against Depreciation fund

**JnNURM funding**

After the launch of Jawaharlal Nehru National Urban Renewal Mission (JnNURM) on 3rd December 2005, the City Development Plan (CDP) of Mumbai was sent for appraisal to Urban Development Ministry under JnNURM in Feb 2006.

After the approval of CDP, MCGM has proposed to pose only Phase-I & II works of the Master Plan (i.e the Priority works), amounting to **Rs. 1896 Crores**, coinciding with
the JnNURM period of 2006-2011. It was evident that the DPR should contain detailed plans, drawings & estimates for the proposed works.

It was therefore decided to split the **MSDP Stage-II priority works** project in to three components as Components – I, II & III as described below.

**Component-I of the MSDP Stage-II priority works (approved under JnNURM)**
Component-I is regarding the measures to improve the collection & conveyance part of the system, where surplus-pumping capacity is available. It includes works routinely carried out by MCGM’s departmental staff with enough expertise to draw the Detailed Designs for the works such as laying of area/new sewers, augmentation of sewers, rehabilitation of sewers/manholes, micro-tunneling, augmentation of pumping capacity etc.

MCGM thus prepared & posed the Component -I DPR amounting to Rs.502.41 Crores. After the technical approval by CPHEEO, the Central Sanctioning & Monitoring Committee has approved the same on 8.9.2006 for the cost of Rs. 364.47 Crores.

**Component II & III :** aim at strengthening treatment facilities, refurbishing & expanding pumping stations, setting up of marine outfalls & new pumping stations etc. These works are of complex nature & need the services of Consultants. MCGM has appointed Consultants for the Detailed Engineering Designs & Project Management of these Component II & III works. The Detailed Project Reports of Component II (Rs.392.12 Crores) & Component III works (Rs.1001.47Crores) will also be posed to Central Government for grant under JnNURM by March 2008.

**Status of Implementation**

**Component-I works**
Out of the 61 different works under Component-I, work orders have been issued for **43** nos. of works amounting to **Rs.256.14 Crores** and the works are under progress. The tenders for **13** nos. of works are invited amounting to **Rs.126.68 Crores**, which are in various stages of tendering, evaluation & process for award. For remaining 5 works, the Draft Tenders are under preparation.

Actual amounts utilized in the project till November-07 is 36.95 Crores.

**Component-II & III works**
Component II & III Works (Rs.392.12 Crores & Rs. 1001.47 Crores respectively) will be posed for grant under JnNURM by March 2008, for which the consultants are carrying out detailed designs.
Issues & Constraints

Environmental Impact Assessment (EIA)

NEERI has been assigned the work of 'Environmental Impact Assessment (EIA)' for the Component II & III works on June 02, 2006 so as to enable MCGM to approach MoEF for Environmental clearance as required under the Environmental & Pollution Control Act. NEERI has already carried out Socio economic survey, Land survey, Air monitoring & Coastal water sampling for one season. NEERI has also completed oceanographic survey including 24 hour current measurements at 22 locations in the ocean and creeks and 15 days’ continuous tidal elevation measurements at 10 locations. NEERI will also be carrying out Ground water sampling, Drinking water samples at 8 locations & Hydrodynamic current analysis. The Rapid Environmental Impact Assessment Report on Sewage and Effluent Pumping Stations as well as Sewage and Effluent Pumping Mains at Versova and Malad regions will be ready by end of Dec 2007 and the Comprehensive EIA would be completed by March 2008.

EIA /CRZ Clearance

Component III works of treatment/disposal capacity enhancement are in CRZ-I/CRZ-II area. The proposal for environmental clearance from MoEF has been submitted to GoM/GoI. A presentation was made before Expert Appraisal Committee at Delhi on 20.7.2007. The comments/information as sought by MoEF were replied by MCGM with modified proposal vide letter no. AMC/P/G/1599 dated 20.10.2007. The modified proposal was also presented before the CZMA (GoM) Committee for approval. CZMA (GoM) has now recommended MCGM’s revised proposal to MoEF /GoI on 7.11.2007.

PIL 87 –Mangroves

Some of the proposed treatment plants are located in the estuaries of Malad Creek and Thane Creek & are on the mangroves areas. An affidavit is made in High Court, Mumbai , with a request to give permission to cut the mangroves & the exemption from the areas being declared / notified as “Protected Forests”/Forests” as per the order dated. 6.10.2005 passed by Hon’ble High Court w.r.t PIL no 87. The decision of Mumbai High Court is awaited.

Land Acquisition

Additional land is required for some of the works under Component-III namely, Headworks & outfall at Erangal (Malad), Transfer of sewage from Versova EPS & Malad
EPS to Erangal Outfall Headworks, new pumping station at Bharat Petroleum (Mahul-Chembur)& Chimbai. A proposal for transfer of Government land at three locations has been submitted to the Collector Bombay Suburban District and is being followed up. For new pumping station at Bharat Petroleum, Tata Power Company Ltd. is requested to spare the land.

**Funding pattern**

*MSDP Stage II priority works*

MCGM will execute this MSDP Stage II priority works (Component-I, II & III) project with the assistance of Government of India (GoI) & Government of Maharashtra (GoM) to the tune of 35% & 15% respectively. Rest of the 50% will be spent from MCGM’s internal resources. GoI has already approved the DPR for Component-I costing Rs. 364.47 Crore and accordingly, MCGM has received Rs.21.5 crore from GoM / GoI so far.

*Phase –III, IV & V*

As per the Master Plan the Phase –III, IV & V works will be implemented in year 2012-2025. It is proposed to pose these works for financial assistance from JBIC or any other financial institution with the approval of competent authority.