Mira Bhayandar Municipal Corporation

ENVIRONMENT STATUS REPORT

2020-2021

For

Mira-Bhayandar Municipal Corporation

Prepared By

M/S. SKYLAB ANALYTICAL LABORATORY

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Mira Bhayandar Municipal Corporation

From Mayor's Desk…..

Every person in Mira-Bhayander area has a dream of well-developed city to live in. To fulfill these dream and expectation of locals, the administration of Mira-Bhayander Corporation is constantly working and putting effort for the same to get achieved. I am very proud to present the environmental status report of year 2020-2021 for references of local Mira-Bhayander area.

In past few years, Mira-Bhayander has shown huge infrastructural growth. Large scale increase in population and construction work has led to increase in pollution in the city area. This development is resulting into immense pressure on the surrounding environment. Therefore, Mira-Bhayander Corporation is putting effort to maintain balance between clean environment to be made available to local as well as to maintain constant pace of development.

Present environmental status report is like a mirror showing status of presenting environmental conditions for local of Mira-Bhayander area, also making them aware of present situation. This status report will be of utmost importance in deciding the way to achieve the planned constant development of the city.

Smt. Jyotsna Hasnale
MAYOR
Mira-Bhayandar Municipal Corporation

From Commissioner's Desk…….

Environment is essential for our development strategy for the reason of striking a balance between economic and social gains in fulfilling our needs without compromising those of the future Generations. So, every citizen of the country must contribute for This Success. These Environmental Status Report 2020-2021, Will Contribute Positively in Improving Our Knowledge, Awareness and Attitude That Will Facilitate Our Quest to Address Environmental Challenges Facing Our Land and Its Remarkable Biodiversity and Also Guide the Reader and Nature Lover in Creating Awareness About the Environment.
I Hope that, this ESR Will Give A Direction to The Sustainable Growth of The City.

Mr. Dilip Dhole
Commissioner
Mira-Bhayandar Municipal Corporation

ACKNOWLEDGEMENT

Mira-Bhayandar Municipal Corporation in accordance to the state law section 234 paragraph 12 subject number 8 Maharashtra state municipal corporation and council law 1994-part 67 A related 74th amendments in year 1992, has given responsibility to prepare environmental status report to SKYLAB Analytical Laboratory.

To protect environment is not possible for a person or organization, rather, it is collective responsibility of each section of society. This feeling of moral responsibility should be felt by each and every person of the society which will lead to balance between natural environment and manmade environment.

We thank to the Mayor Mira-Bhayandar Municipal Corporation Smt. Dimple Mehta, Commissioner of Mira-Bhayandar Municipal Corporation Shri. Balaji Khatgaonkar, Deputy Commissioner of Health Shri. Sambhaji Panpatte and Maharashtra Pollution Control Board for supporting and guiding by giving their kind inputs for preparation of this Environment Status Report of 2020-2021.

This ESR will definitely contribute to the betterment of Environment Status in the Mira-Bhayandar Municipal Corporation area.

Thanks,
M/s. SKYLAB Analytical Laboratory,
Bhiwandi, Thane.

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CHAPTER 1: INTRODUCTION

1.1 PURPOSE

Environmental Status Report is one of the ways to show trends of environmental pollution, impacts of growth and possible environmental action planning in the city. Is used to highlight the condition of the biophysical environment in the targeted area. ESR also include analysis of trends /changes in the environment, analysis of the causes of these changes, assessment and interpretation of the implications and impacts of these trends, and assessment of the actual and potential social response to environmental problems. An effective ESR is useful for policy makers, local public and other stakeholders to understand natural resources and the sustainability of resource-use patterns. Today, ESRs have emerged from being solely environment oriented to being all encompassing, interfacing with economic and social elements. The ESR of MBMC region will help to identify the key driving forces that influence environmental change and policies.

This environmental status reports will help to understand the relation between the man-made development and its effect on the environment of city. Further to this report will highlight the relation of environment quality with growing population, facilities and development of the city. This study describes the causes of growth and changes to assess the driving forces which create both benefits and environmental concern of the region and characterize the current status of environmental conditions.

1.2 BACKGROUND

Mira-Bhayandar is a city in the district of Thane with an area 79 sq. km., in the western state of Maharashtra, in India, located around 20 kms to the north of Mumbai on the Mumbai- Ahmadabad highway. It extends between 19° 17′ 24″ N, 72° 51′ 0″ E.

Mira-Bhayandar area is situated at the northern threshold of Brihan Mumbai Metropolis and has been identified as one of the growth centers. Mira-Bhayandar has gradually developed into an important residential locality due to its proximity to Mumbai and lower cost of living. Earlier Bhayandar was administrated by the Gram Panchayat system of local government. However, subsequently in accordance with recommendations of MMRDA, Mira-Bhayandar Municipal Corporation (MBMC) has been constituted for this area on 12thJune 1985. Khari, Ghoddeo, Ghodbunder, Penkar pada, Mira, Kashi, Navghar, Bhayandar and Mahajan wadi are the nine villages under its jurisdiction. Adjoining villages of the limits of Municipal Corporation are also showing trend of urbanization. Therefore govt. under its notification extended the limits of MBMC by including oflowing10 villages: Chene, Varsave, Raimurdhe, Murdhe, Morva, Uttan, Dongri, Tarodi PaliChowk.

Mira Bhayandar Municipal Corporation

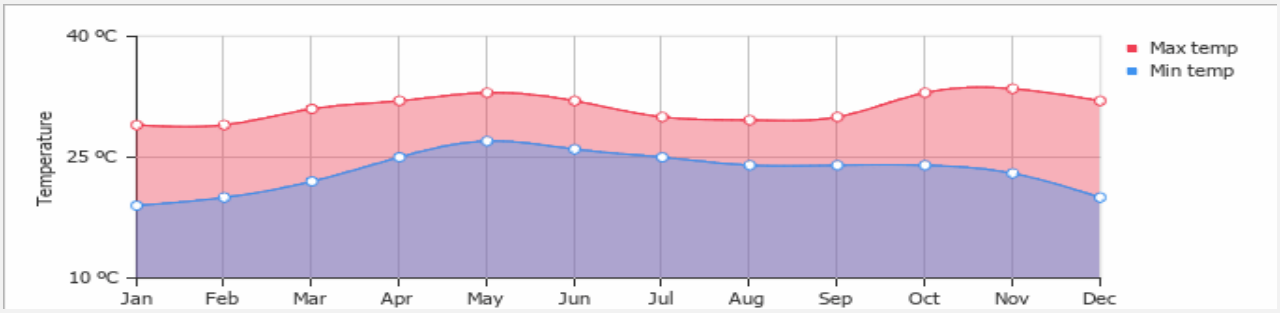
Bhayandar is divided into two parts by the Mumbai suburban rail line - East and West. The West was traditionally residential, and the East was predominantly an industrial area. Recent population growth and a flurry of construction have blurred the boundaries between Bhayandar and neighboring Mira Road on the East side of the rail tracks, turning it into a populous suburb.

1.3 HISTORY OF MIRA ROAD

Mira Road is a town in Maharashtra, India, part of the Mumbai Metropolitan Region. It's Located to the north of Mumbai, it is governed by the Mira-Bhayandar Municipal Corporation (MBMC).It also has a railway station on the Western Line of Mumbai Suburban Railway.

In Mira Road station, you will find below ancient poster near ticket counter, which describes the qualities of Mira Road as – Mira Road enjoy all the benefits which Mumbai cities has like power from the Tata Power and Reliance Energy, telecom services from MTNL and BEST bus services. In many building in Mira Road you will find gas pipeline from Mahanagar Gas. Also there is gas cylinders supply available from HP Gas and BP Gas.

The ESR report will serve as a light path document for future policies and their implementations. Methodology adopted for preparation of ESR is as follows-



Initially water, air, soil sample were collected from various sites; also, the noise levels were recorded at various locations. These samples were studied, analyzed in the laboratory and results are presented.

Mira Bhayandar Location Map

1.4 TOPOGRAPHY

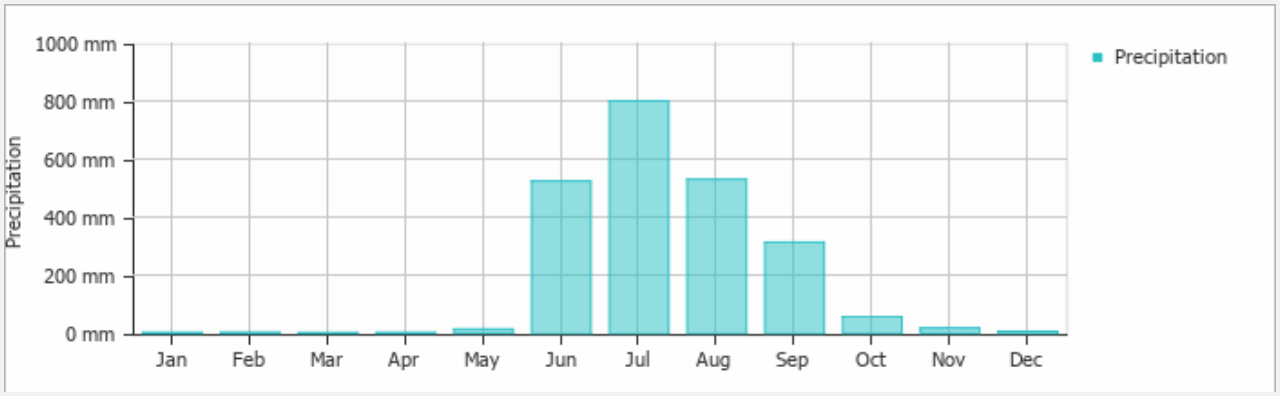
Mira Bhayandar is located on the northern portion of salsette Island. This region lies just outside the Mumbai Suburban district and officially belongs to the Thane district despite it being closer to the island of Mumbai. Mira Bhayandar region comprises an area of 79 km2. A marshy creek divides Mumbai and Mira road. To the north lies Vasai creek, to the east Sanjay Gandhi National park and the Uttar coast to the west. It mainly is of Deccan lava terrain and consists of waterlogged and marshy areas. The climate here is like that Mumbai.

1.5 CLIMATIC CONDITIONS

The city experiences a typical monsoon climate with three distinct seasons – summer, winter and rainy, as elsewhere in India. The average temperature is 26^0 C and min 15^0 C, max 30^0 C the wind direction in the city is form western side about 5 km/hr. The climate in the month of October is wet and hot followed by cool and pleasant weather from December to February and dry and hot weather from March to June. The climate of Mira-Bhayandar is typically coastal sultry and not really hot. There are virtually two distinct seasons, namely monsoon and dry season. The later covers both summer and winter.

- **Rainfall**

The rainy season starts at the beginning of the June and ends in the last week of September. Annual rainfall of is around 3,670.4 mm. The maximum rainfall is in the month of July averaging to 800mm.



Rainfall Graph

- **Rainfall Pattern**

✓ **Humidity:** The relative humidity in the atmosphere is about 45% to 85% with the highest humidity in the month of July.

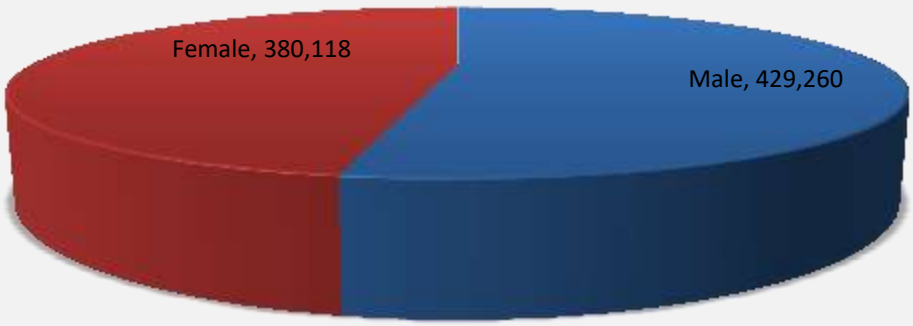
1.6 DEMOGRAPHY

- **Distribution of Population:** The rate of population growth is unimaginable which goes on increasing every year. The Mira-Bhayandar city is divided into 24 wards for which elections are held every 5 years. The Mira-Bhayandar Municipal Corporation has population of 809,378 of which 429,260 are males while 380,118 are females as per report released by Census India 2011.

Male	**429,260**
Female	**380,118**
Total	**809,378**

Population of Children with age of 0-6 is 88015 which is 10.87 % of total population of Mira-Bhayandar (M Corp). In Mira-Bhayandar Municipal Corporation, Female Sex Ratio is of 886 against state average of 929. Moreover, Child Sex Ratio in Mira-Bhayandar is around 898 compared to Maharashtra state average of 894.

- **Literacy level:** Literacy rate of Mira-Bhayandar city is 90.98 % higher than state average of 82.34 %. In Mira-Bhayandar, Male literacy is around 93.09 % while female literacy rate is 88.59 %.



Male and Female Ratio Graph

CHAPTER 2: AIR ENVIRONMENT

2.1 AIR POLLUTION

Central Pollution Control Board (CPCB) has specified standard Limits for various pollutants. Emissions from vehicles, construction work etc. are the main sources of air pollution as they emit Sulfur Dioxides, Nitrogen Dioxides, Carbon Monoxide, Suspended Particulate Matter etc.

Air pollution is the presence in the atmosphere of one or more contaminants in such quality and for such duration as is injurious, or tends to be injurious, to human health or welfare, animal or plant life. It is the contamination of air by the discharge of harmful substances. Air pollution can cause health problems and it can also damage the environment and property. It has caused thinning of the protective ozone layer of the atmosphere, which is leading to climate change. Modernization and progress have led to air getting more and more polluted over the years. Industries, vehicles, increase in the population, and urbanization are some of the major factors responsible for air pollution.

2.2 SOURCES OF AIR POLLUTION

- **Stationery and Area Sources:** A stationary source of air pollution refers to an emission source that does not move, also known as a point source. Stationary sources include factories, power plants dry cleaners and degreasing operations.

- **MOBILE SOURCES:** A mobile source of air pollutions refers to a source that is capable of moving under its own power. It includes motors vehicles such as cars, buses, aircrafts and trains.

- **Natural Sources:** Air pollution can be formed through both natural and man-made processes. Some examples of these are listed below Some of the natural sources of air pollution are organic compounds from plants, sea salt, suspended soils and dusts (e.g. from the Sahara).
  Other natural sources are released during catastrophes such as volcanic eruptions and forest fires. Large amounts of harmful gases and smoke are released which can increase background pollution levels for years - even in areas far away from the original source. Ozone is one of the most common natural air pollutants.

- **Man Made Sources:**

  - ✓ **Transport - Roads and Rails:** Vehicles like cars, vans, buses and Lorries run on petrol or diesel. When these fuels are burnt in the engine, pollutants are given out from the exhaust of the vehicles. This means road traffic is one of the biggest sources of air pollution in Scotland. Near busy roads are the main pollutants are nitrogen oxides, carbon monoxide and particulate matter. Larger vehicles with bigger engines release more pollution in to the atmosphere.

    Trains cause a lot less pollution than the same journey made by car. However, trains still pollute the environment. Electric trains use the electricity which is generated at power stations. When these fuels are burnt, pollutants like nitrogen oxides, sulphur dioxide and particulate matter are released into the atmosphere.

- **Agriculture:** Animals like cows and sheep release a massive amount of methane through belching and breaking wind. Methane is a colour less gas which is produced in their stomachs when bacteria break down the food that they eat. Across the whole world, livestock is the biggest source of methane. Methane is the second most important greenhouse gas which can cause climate change

- **Industry and Power Generation:** During the Industrial Revolution in the 1800s lots of factories, such as cotton factories, were built in Scotland near to the large towns and cities. Today the main industrial hubs tend to be in the countryside away from cities. Nitrogen dioxide and sulphur dioxide are the main pollutants associated with industrial processes. To generate electricity fuels such as coal, gas or oil are burned at power stations. When these fuels are burnt they release nitrogen oxides, sulphur dioxide and particulate matter as well as greenhouse gases which can cause climate change.

- **Waste:** In the UK, methane emitted from waste disposal is the largest emitter, with agriculture and livestock coming second. Methane is relased into the atmosphere when the waste that we throw away decomposes. Methane is the second most important greenhouse gas after carbon dioxide, which means that it also contributes towards climate change. Air pollutions come from many different sources. Natural processes that affect air quality include volcanoes, which produce sulfur, chlorine, and ash particulates. Wildfires produce smoke and carbon monoxide.

2.3 SAMPLING LOCATIONS

Mira-Bhayandar air pollution monitoring was done at various locations it includes solid waste disposal site, residential, commercial & industrial area. Total twelve Ambient Air Quality Monitoring (AAQM) sampling location was select in a month and their details are as follow,

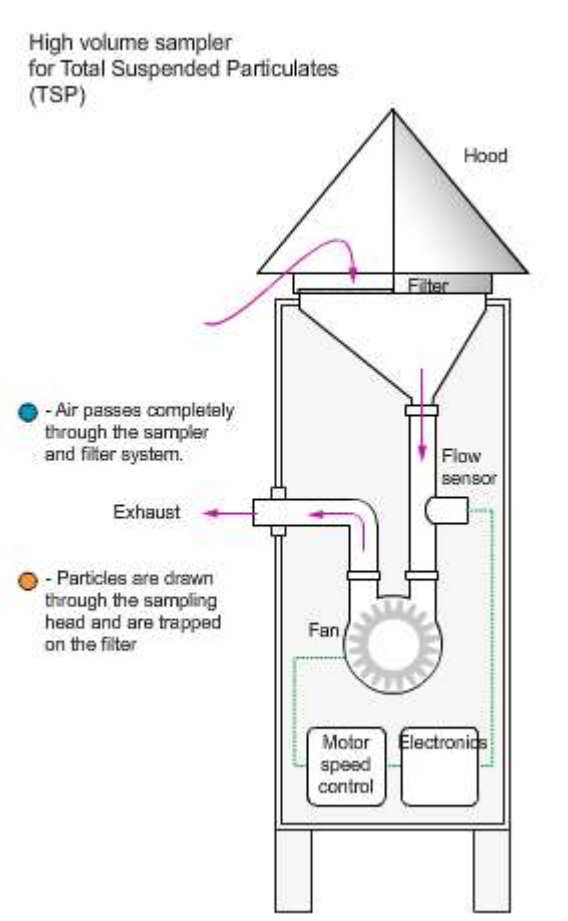
1	Kashimira Chowk, Near Chhatrapati Shivaji Maharaj Statue
2	Near Bhayandar Police Station
3	Mira Road Railway station
4	Bhayandar west, Railway Station
5	S.K. stone Chowk
6	Near Pali, St. Andrew Chowk
7	Bhayandar East, Cabin Road
8	Bhayandar East B.P. Road
9	Bhayandar St. East Navghar Road
10	Uttan naka Bus Stop chowk
11	Kanakia Police station Mira Road
12	Mira-Bhayandar corporation ghankachra vyavasthapan

Mira-Bhayandar Sampling Locations

Locations -	1	2	3	4	5	6	7	8	9	10	11	12
RSPM 10 (µg/m3)	56.53	61.1	57.76	55.63	56.52	60.93	56.81	59.42	59.96	58.04	57.93	57.49
SO2 (µg/m3)	10.39	12.51	12.22	11.42	10.69	12.42	12.2	10.58	11.12	12.62	12.11	12.31
NOx (µg/m3)	20.81	23.08	22.68	22.93	20.58	24.88	21.96	23.54	24.07	21.81	22.05	23.17

Annual average analysis result of ambient air from August 2020 to June 2021

All the air quality analysis observations (PM10, SO2 and NOx) recorded were well within CPCB limits. However, RSPM is on the boundary of crossing standard limit. Vehicular emission is measure source of the air pollution. Efficient traffic management is suggested. Tree plantation along the road side is suggested to control air pollutants.



Ambient Air Monitoring using High Volume Sampler

- **Sampling Producer:** An instrument called a high volume air sampler is used to collect TSP samples. The high volume air sampler draws a large known volume of air through a pre-weighed filter for 24 hours. As shown in the illustration, the sampler filter traps the TSP particles as air passes through the instrument.

  ✓ **Field sampling:**
  - Loosen the faceplate wing nuts and remove the faceplate. Remove the filter from its jacket and centre it on the support screen with the rough side of the filter facing upwards.
  - Replace the faceplate and tighten the wing nuts to secure the rubber gasket against the filter edge.
  - Adjust the flow rate by using volumetric flow control to 1132 LPM
  - The specified length of sampling is commonly 8 hours or 24 hours. During this period, several reading (hourly) of flow rate should be taken.
  - After the required time of sampling, record the flow meter reading, take out the filter media from the sampler, and put in a container or envelope.

Noise Monitoring and Air Monitoring

2.4 INTERPRETATION:

Noise is observed to be within standard limit. Categorization of area in Residential, commercial, industrial is required to effectively control and check the noise levels in the areas. Silence Zones near hospitals, schools shall be strictly implemented.

2.5 HEALTH EFECT:

Long-term exposure to polluted air can have permanent health effects such as: Accelerated aging of the lungs. Loss of lung capacity and decreased lung function. Development of diseases such as asthma, bronchitis, emphysema, and possibly cancer. Shortened life span

Even healthy people can experience health impacts from polluted air including respiratory irritation or breathing difficulties during exercise or outdoor activities. Your actual risk of adverse effects depends on your current health status, the pollutant type and concentration, and the length of your exposure to the polluted air.

High air pollution levels can cause immediate health problems including:

Aggravated cardiovascular and respiratory illness

Added stress to heart and lungs, which must work harder to supply the body with oxygen

Damaged cells in the respiratory system

Some of these gases can seriously and adversely affect the health of the population and should be given due attention by the concerned authority. The gases mentioned below are mainly outdoor air pollutants but some of them can and do occur indoor depending on the source and the circumstances.

- **Those most susceptible to severe health problems from air pollution are:**
  - Individuals with heart disease, coronary artery disease or congestive heart failure
  - Individuals with lung diseases such as asthma, emphysema or chronic obstructive pulmonary disease (COPD)
  - Pregnant women
  - Outdoor workers
  - Older adults and the elderly
  - Children under age 14
  - Athletes who exercise vigorously outdoors
  - People in these groups may experience health impacts at lower air pollution exposure levels, or their health effects may be of greater intensity.

- **Ground-level Ozone:** Ground-level ozone is formed when volatile organic compounds (VOCs) and oxides of nitrogen (NOx) react with the sun's ultraviolet rays. The primary source of VOCs and NOx is mobile sources, including cars, trucks, buses, construction equipment and agricultural equipment. Ground-level ozone reaches its highest level during the afternoon and early evening hours. High levels occur most often during the summer months. It is a strong irritant that can cause constriction of the airways, forcing the respiratory system to work harder in order to provide oxygen.

- **It can also cause other health problems including:**
  - Aggravated respiratory disease such as emphysema, bronchitis and asthma
  - Lung damage, even after symptoms such as coughing or a sore throat disappear
  - Wheezing, chest pain, dry throat, headache or nausea
  - Reduced resistance to infections
  - Increased fatigue
  - Weakened athletic performance

- **Particulate Matter (PM) and Wildfire Smoke:**
  - Particulate Matter is a complex mixture that may contain soot, smoke, metals, nitrates, sulfates, dust, and water and tire rubber. It can be directly emitted, as in smoke from a fire, or it can form in the atmosphere from reactions of gases such as nitrogen oxides. The size of particles is directly linked to their potential for causing health problems. Small particles (known as PM2.5 or fine particulate matter) pose the greatest problems because they bypass the body's natural defenses and can get deep into your lungs and potentially your bloodstream. Exposure to such particles can affect both your lungs and your heart.

- **SPM (suspended particulate matter):**
  - Suspended matter consists of dust, fumes, mist and smoke. The main chemical component of SPM that is of major concern is lead, others being nickel, arsenic, and those present in diesel exhaust. These particles when breathed in, lodge in our lung tissues and cause lung damage and respiratory problems. The importance of SPM as a major po lutant needs special emphasis as a) it affects more people globally than any other pollutant on a continuing basis; b) there is more monitoring data available on this than any other pollutant; and c) more epidemiological evidence has been collected on the exposure to this than to any other pollutant.

- **Long-term exposure to particulate pollution can result in significant health problems including:**
  - Increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing
  - Decreased lung function
  - Aggravated asthma
  - Development of chronic respiratory disease in children
  - Development of chronic bronchitis or chronic obstructive lung disease
  - Irregular heartbeat
  - Nonfatal heart attacks
  - Premature death in people with heart or lung disease, including death from lung cancer

- **Short-term exposure to particulate pollution can:**
  - Aggravate lung disease causing asthma attacks and acute bronchitis
  - Increase susceptibility to respiratory infections
  - Cause heart attacks and arrhythmias in people with heart disease

- Even if you are healthy, you may experience temporary symptoms, such as:
- Irritation of the eyes, nose and throat
- Coughing
- Chest tightness
- Shortness of breath

- **RESPIRABLESUSPENDEDPARTICULATEMATTER:** Particulate matter is characterized according to size - mainly because of the different health effects associated with particles of different diameters. Particulate matter (PM) is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. It includes aerosols, smoke, fumes, dust, ash and pollen. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, and dust. Particles 10 microns or less in diameter are defined as" Respirable Suspended Particulate Matter". Respirable particulates, lodge in the lung capillaries and alveoli, causing adverse health effects. The composition of particulate matter varies with place, season and weather conditions.

- **NITROGENOXIDES:** A nitrogen oxide, or NOx, is the generic term for a group of highly reactive gases, all of which contain nitrogen and oxygen in varying amounts. Many of the nitrogen oxides are colorless and odorless. However, one common pollutant, nitrogen dioxide (NO_2) along with particles in the air can often be seen as a reddish-brown layer in many urban areas. Nitrogen oxides form when fuel is burned at high temperatures, as in a combustion process. The primary manmade sources of NOx are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuels. NOx can also be formed naturally.

- **SULPHURDIOXIDE:** Sulfur dioxide, or SO_2, belongs to the family of sulfur oxide gases (SOx). These gases dissolve easily in water. Sulfur is prevalent in all raw materials, including crude oil, coal, and ore that contains common metals like aluminum, copper, zinc, lead, and iron. SOx gases are formed when fuel containing sulfur, such as coal and oil, is burned, and when gas online is extracted from oil, or metals are extracted from ore. SO_2dissolves in water vapor to form acid, and interacts with other gases and particles in the air to form sulfates and other products that can be harmful to people and their environment.

CHAPTER 3: NOISE ENVIRONMENT

3.1 NOISE POLLUTION

Noise pollution, also known as environmental noise or sound pollution, is the propagation of noise with ranging impacts on the activity of human or animal life, most of them harmful to a degree.

The source of outdoor noise worldwide is mainly caused by machines, transport, and propagation systems.

Poor urban planning may give rise to noise disintegration or pollution, side-by-side industrial and residential buildings can result in noise pollution in the residential areas.

Some of the main sources of noise in residential areas include loud music, transportation (traffic, rail, airplanes, etc.), lawn care maintenance, construction, electrical generators, explosions, and people.

The overarching source of most noise worldwide is generated by transportation systems, principally motor vehicle noise, but also including aircraft noise.

Besides transportation noise, other prominent sources are office equipment, factory machinery, appliances, power tools and audio entertainment systems. Mira-Bhayandar noise levels were monitored in different sectors such as Residential, commercial and Industrial area. In each month noise levels was recorded with the help of No isometric is measured in the units of decibels and is denoted by the dB

There are different sources of the noise pollution and include the agriculture machine, industries which produce a sound and the use of entertaining equipment, electric appliances, crackers etc.

3.2 SOURCE OF SAMPLING

Some of the main sources of noise in residential areas include loud music, transportation (traffic, rail, airplanes, etc.), lawn care maintenance, construction, electrical generators, explosions, and people.

Industrial machinery and processes are composed of various noise sources such as rotors, stators, gears, fans, vibrating panels, turbulent fluid flow, impact processes, electrical machines, internal combustion engines etc.

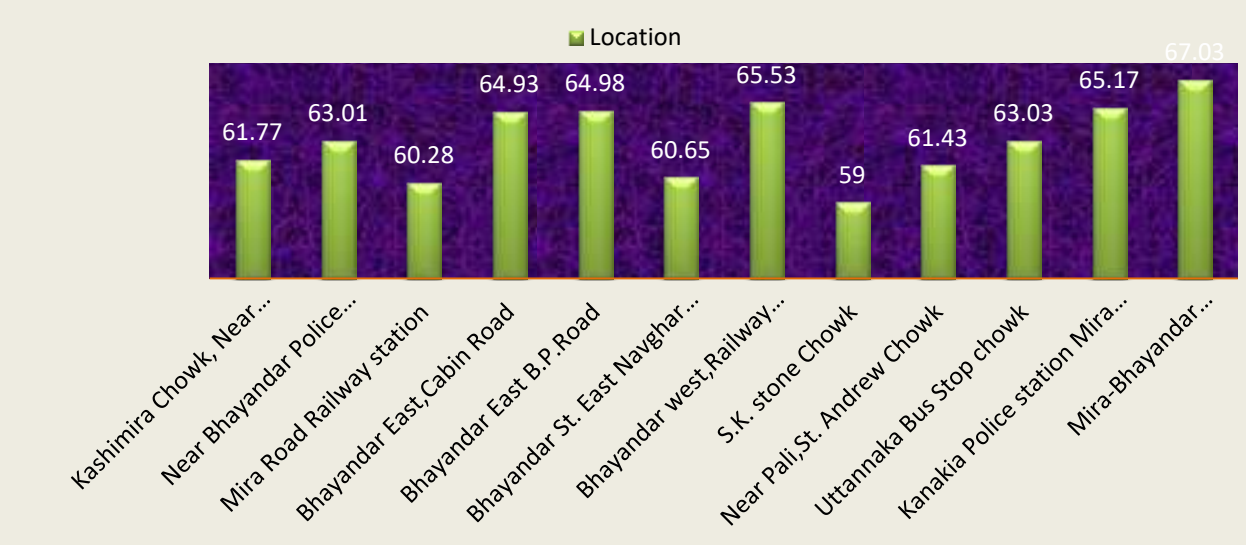
Source of most noise worldwide is generated by transportation systems, principally motor vehicle noise, but also including aircraft noise.

3.3 NOISE SAMPLING LOCATIONS

Noise level monitoring was carried out for 12 locations during day time as listed below.

Location	Avg dB (A)
Kashimira Chowk, Near Chatrapati Shivaji Maharaj Statue	61.77
Near Bhayandar Police Station	63.01
Mira Road Railway station	60.28
Bhayandar East,Cabin Road	64.93
Bhayandar East B.P.Road	64.98
Bhayandar St. East Navghar Road	60.65
Bhayandar west,Railway Station	65.53
S.K. stone Chowk	59
Near Pali,St. Andrew Chowk	61.43
Uttannaka Bus Stop chowk	63.03
Kanakia Police station Mira Road	65.17
Mira-Bhayandar corporation ghankachravyavasthapan	67.03

Sampling Location for Measuring Noise Level



Charts showing annual average of noise levels from July 2020 –June 2021

3.4 INTERPRETATION

Noise is observed to be within standard limit. Categorization of area in Residential, commercial, industrial is required to effectively control and check the noise levels in the areas. Silence Zones near hospitals, schools shall be strictly implemented.

CHAPTER 4: WATER ENVIRONMENT

4.1 WATER POLLUTION

Mira-Bhayandar region shows a variety of water bodies like lakes, ground water and creeks. Water is an important element so its pollution will be harmful to the surrounding environment. Now a day's water pollution is a very major problem and its main source would be the sewage and industrial effluents which are being disposed indiscriminately into the nearby water bodies. In addition to this, various industrial effluents have polluted the surface and ground water and as a result the concentration of heavy metals in ground and surface water in the surrounding areas, so its pollution status need to monitored regularly. In order to assess the water quality in Mira-Bhayandar Corporation following types of water was considered,

- Municipal water sample,
- Nallah water
- Industrial water

Water environment mainly covers water supply, Sewage treatment, sewage disposal etc. Water pollution affects drinking water, river, lakes and oceans all over the world. This consequence harms human health and the natural environment.

Different forms of pollutants affect the health of animals in different ways:

- ✓ Heavy metals from industrial processes can accumulate in nearby natural water bodies. These are toxic to marine life such as fish and shellfish, and subsequently to the humans who eat them. Heavy metals can slow development; result in birth defects and some are carcinogenic.
- ✓ Industrial waste often contains many toxic compounds that damage the health of aquatic animals and those who eat them. Some of the toxins in industrial waste may only have a mild effect whereas other can be fatal. They can cause immune suppression, reproductive failure or acute poisoning.
- ✓ Suspended particles in freshwater reduces the quality of drinking water for humans and the aquatic environment for marine life. Suspended particles can often reduce the amount of sunlight penetrating. The water, disrupting the growth of planktons or water chlorophylls and microorganisms
- ✓ Microbial pollutants from sewage often result in infectious diseases that infect aquatic life and terrestrial life through drinking water. Microbial water pollution is a major problem in the developing world, with diseases such as cholera and typhoid fever being the primary cause of in fan mortality. Organic matter and nutrients cause an increase in aerobic algae and depletes oxygen from the water column.

4.2 SOURCE OF WATER POLLUTION

Water samples can come from many sources: ground water, precipitation (rain or snow), surface water (lakes, river, runoff, etc.), ice or glacial melt, saline water, estuarial water and brines, waste water (domestic, landfill leachates, mine runoff, etc.), industrial process water and drinking water.

4.3 SAMPLING LOCATION

Mira-Bhayandar water sampling was done at various locations it includes solid waste disposal site, residential, commercial & industrial area. Total twelve Water Sampling locations was select in a month and their details are as follow,

1	Kashimira Chowk, Near Chhatrapati Shivaji Maharaj Statue
2	Near Bhayandar Police Station
3	Mira Road Railway station
4	Bhayandar west, Railway Station
5	S.K. stone Chowk
6	Near Pali, St. Andrew Chowk
7	Bhayandar East, Cabin Road
8	Bhayandar East B.P. Road
9	Bhayandar St. East Navghar Road
10	Uttan naka Bus Stop chowk
11	Kanakia Police station Mira Road
12	Mira-Bhayandar corporation ghankachra vyavasthapan

Water Sampling Locations

4.4 INTERPRETATION

Municipal water is used for drinking purpose so samples were compared to IS: 2296-1982 standards. Water pH was found 7.4 which are neutral and useful for drinking purpose. Heavy metal concentration was very less and found less than standard limits. In some samples microbiological concentration was recorded it may be due to unhygienic handling and storage of water. Lower levels of BOD and heavy metals showed absence of industrial pollution.

Industrial water quality is observed to be within standard limits.

However, regular check is required to control water quality discharged in industries.

The results have been compared with the drinking water standard prescribed by Bureau of Indian Standard (BIS). All the physiochemical parameters like turbidity, fecal coliform, e coli and heavy metal concentration are within the prescribed limit. So lake water samples were found suitable for irrigation purposes.

4.5 STUDY ARE WATER QUALITY

4.5.1 Water Supply System

Mira Bhayandar city currant water requirement is 136 MLD (source: MBMC Department) this water requirement met through stream water, infrastructure company pvt. Ltd.(86 MLD) and MIDC (50 MLD) respectively. The city is enveloped by sea water from three sides therefore in coastal areas ground water is mainly saline so this water is not suitable for potable uses. However in this city MHADA & MMRDA are proposed some construction projects which required some additional water demand. As a result gradually the water scarcity issues are getting severe for the city.

The population for Mira Bhayandar Municipal Corporation and required water supply as follows:

Sr no.	Year	Population	Water Requirement per day (MLD)	Actual Water supply
1.	2011	8.41	150	116
2.	2011 (predicted)	14.74	221	-
3.	2031 (predicted)	22.11	309.54	-
4.	2041 (predicted)	28.85	432.54	-

Due to the severe water shortage in Mira-Bhayandar city, honorable water resource minister has granted additional 20 MLD of water supply from MIDC quota, in the meeting dated 16/3/2012 to Mira Bhayandar Municipal Corporation. Subsequently provision of additional 100 MLD of water from MIDC to MBMC was discussed in a meeting chaired by honorable minister of industry and ports on 19/3/2012.accordingly following directives have been given:

- 1) The MBMC has been directed to make arrangements for lifting and distribution of the water that shall be made available by the MIDC after NMMC reduces its dependence on the MIDC water supply.
- 2) Currently navi Mumbai Municipal Corporation is getting 100 MLD of water supply from MIDC. NMMC has now constructed their own dam called morabe dam and they have their own dedicated water supply scheme. Hence NMMC will not require this 100 MLD on urgent basis and the honorable minister of industries has given directives to the MIDC to divert this water to MBMC and NMMC is reducing their dependence on MIDC water supply, the same will be diverted to the MBMC.

  In order to get some additional water from the dam the MBMC has passed are solution on 20/6/2005and send it to NMMC, also, commissioner, MBMC vide letters dated 06/06/2005, 17/08/2005 and 09/09/2005 has requested in NMMC to provide additional water and the matter has been followed up regularly, .it is imperative to mention that NMMC has not yet responded to the letters.

  The said 20 MLD of water supply to MBMC has been granted by MIDC vide letter dated 04/12/2012 The MBMC is expected to lay infrastructure for distribution of this water like pipelines ,pump, housemate The MBMC has initiated these works and the water supply shall be provided to them after the completion of the infrastructure laying .

  MBMC has a reservation for 218 MLC of drinking water from surya project (100 MLD from water resources dept. and 118 MLD from MMRDA).accordingly, MMRDA has prepared a detailed proposal for distribution of 303 MLD of water from Surya project (MBMC and VVCMC) and submitted it to the central govt. for financial approval under JNNURM scheme. MMRDA has also requested the general body of MBMC to pass a resolution and prepare a memorandum of understanding. Accordingly, a detailed proposal for laying of infrastructure for water distribution for Rs. 449.77 crores is prepared for approval. After completion of the above-mentioned schemes the water problem of MBMC shall be permanently resolved.

  To reduce the water deficit of the MB city, a meeting was convened by the honorable minister of water resource on 11/08/2010 at mantralaya. In this meeting, a quota of 100 MLD was sanctioned for the MBMC also water supply and sanitation department, mantralaya, has granted MMRDA a quota of 303 MLD from the surya project. From this water 118 MLD is granted for the MBMC and 200 MLD for the VVCMC.

  Water supply.

Source	Water Supply	Remark
a) STEM	86 MLD	
b)M.I.D.C	50 MLD	
c)Extra 75 MLD Programs , System	75 MLD	At Present 40 MLD Water Available

Location of Water Tanks and Their Capacity:

Sr.No.	Name of ESR/SUMP	Location	Capacity in lac liters
1.	Dongari MBR	Behind Manpa Office, Dongari Gaon, Bhayandar (W)	7.60
2.	Chene ESR	Chena Gaon, Chena Mira Road (E)	1.00
3.	Versave ESR	Versova Gaon, Versova, Mira Road(E)	0.80
4.	Kashi ESR	Kashi Gaon, Kshi Mira Road(E)	2.50
5.	Chowk ESR	Near U Turn Hotel, Chawk	3.00
6.	Fathak ESR	Fatak Road, Bhayandar (E)	3.80
7.	Goddev ESR	Godden Gaon, Bhayandar (E)	12.50
8.	Kamala Park ESR	60 feet Road, Bhayandar (E)	17.50
9.	Morva ESR	Near Talaw, Morva Gaon, Bhayandar (E)	5.00
10.	Uttan ESR	Near Talathi Office, Uttan, Bhayandar (E)	10.00
11.	Ligth House ESR	In Forunt of Light House, Uttan, Bhayandar (E)	2.00
12.	Navghar School ESR	Navghar Gaon, Bhayandar (E)	25.00
13.	Kanakiya ESR	Opp. Ayukta Bunglow , Mira Road(E)	12.50
14.	Sudama Nagar ESR	60 feet Road, Bhayandar (E)	8.00
15.	Survey No. 777 ESR	Near Subhash Maidan, Bhayandar (E)	20.00
16.	Silver Park ESR	Near Jangod Complex, Mira Road (E)	20.00
17.	Asmita Park ESR	Nayanagar, Mira Road (E)	20.00
18.	MIDC (LL) ESR	Near Western Highway, Kashmira Mira Road(E)	20.00
19.	MIDC (HL) ESR	Near Western Highway, Kashmira Mira Road(E)	6.00
20.	Jesal Park ESR	Bhayandar (E)	4.00
21.	Shanti Nagar Sec.7 ESR	Sector 7, Mira Road(E)	11.00
22.	Shanti Nagar Sec.11 ESR	Sector 11, Mira Road(E)	8.70
23.	Ghodbamder ESR	Ghodbandar Gaon, Ghodbandar Mira Road(E)	7.00
TOTAL			**227.90 lac liters**

2 list of ESR (Elevated surface reservoir) and their capacities

- **List of Sump and Pumping Station:**

Sr.No.	Name of pumping station	Capacity in lac liters
1.	Kasha Janata Nagar GSR & Pumping Station	2.50
2.	Dongari Sump & Pumping	1.20
3.	Asmita Park Sump & Pumping	10.00
4.	MIDC Sump & Pumping	20.00
5.	Shanti Nagar Sec 7 Sump & Pumping	11.00
6.	Shanti Nagar Sec 11 Sump & Pumping	10.70
7.	Light House Sump & Pumping Station	0.80
8.	Kapurbawadi Pumping Station	30.00
Total		**86.20**

4.5.2 GENRAL WATER QUALITY

- **Municipal / drinking water sample:** Drinking water samples (Municipal water) was collect per month and the sampling location is as follow,

1.Sarswati Tower	2.Sita Smriti Apt.	3.Sanjivani Complex	4.Girdhar Shanti Soc.	5 B. P. Road	6.Priya Hotel,	7.Super Dairy,	8.Sweety Sukhala,	9.Satya Vijay	10.New Shahi Family Restaurant
11.Khwaja Ka Hindustan	12.Shundar Zaiku	13.Aai Ashirwad Hotel	14.Vishwas Sweet,	15.Purushatm Chowk	16.Murdha Khade	17.Murdah goan	18.Pali Naka	19.Rai Village	20.Dongri Village
21.Masa Chapada Road	22.Kashmira Gaon	23.Ram GopalSadan,	24.Poonam Sagar Camp	25.Abhinav School	26.Near Shivar Garden	27.Near Post Offce	28.B.P. Road	29.Godder Naka,	30.Anand Nagar
31.Shanti Nagar	32.Sai KrupaNavghar	33.Golden Nest	34.Kalair Gaon (E)	35.Near Silver Park	36.Sai Baba Nagar	37.Temba Road	38.Azad Nagar	39.Rawal Nagar	40.Tankar Tea Stall
41.Sarita, Mansh Complex	42.Sai Swapana Apt. (Navghar)	43.Krishna Krupa Apt.	44.Shankar Narayan House	45.Chandesh Allord Silver Park,	46.Aruna Hotel	47.Man Sarovar Complex	48.Laxmi Motor Ltd. Pleasant Park	49.Patel House, Shivaji Nagar	50.Udyog Nagar
51.Mira Gaon Municipal School	52.abin Road	53.Surbhi Family Resto, Uttan Road	54.Uttan Naka	55.Rajdhani Caters & fast Food, Uttan	56.Dongir Chowk	57.Stela	58.Roshni Apt. Uttan Naka	59.Agri Katta, Uttan	60.Pali Gaon

				Naka					
61.Dongir Chowk	62.Rai Goan Bus Stop Uttan Road	63.Littel Flower Eng. Medium High School	64.Akshata App.	65.Maxwell Hotel Uttan	66.Shivmurti HSG Soc. Uttan	67.Global Instrument School Murdha Goan	68.Dongri Chowk, Tejas	69.Marina darel, Tarodi	70. R.N.P. Park
71.Good Luck Hotel,	72. M.P. Road	73. Shanti nagar	74.Sai Max Apt Koliwada	75.Durga PadvaBhavan, Near	76.Tunga Hospital	77.C.C. Chawl, Cross Garden, Station	78.New Bolenath Lunch Home	79.Mina Bazar Chowl,	80.Sai Darshan Apt
81.R.G. Villa Buildin	82.Mira-Bhaindar Sport Complex	83.Kolkatta Fresh Fish Center	84. Shop no. MagiHous	85.Indira Nagar	86.Munsi Classic Complex	87.St. John Convent Highschool	88.Samarth Sadan	89.Ram Mandir Road, Ajinta Building,	90.Balaji Banquet Hall,
91.Himalya Complex,	92.Jay Dhurvai Niwas	93.Shri Ganesh Fast Food	94.Nirmala Apartment	95.Dharavi Niwas	96.Ratna Enclave	97.Near Ram Mandir	98.Saibaba Temple	99.Uttan Naka	100.Tarod, Lake

Municipal Water Sampling Locations

4.5.3 Waste Water Quality

Total Forty waste water samples was collect in per month and the sampling location is as follow,

Sr.No.	Waste Water Sampling Location
1	Bhayandar west Village
2	Cabin Rd
3	Morvagaon
4	B.P. Road
5	Rai Village
6	Murdha Nala
7	Pali Beach Resort Nala
8	Pali Rd Nala
9	Nr.Phatak Rd
10	Nr.Thakur Mall
11	Goddev gaon
12	Rawal Nagar
13	Nr.Jesal Park Creek
14	Nr.Pali beach
15	Nr.Uttan Petrol Pump Creek
16	Morva Creek
17	Murdha Creek
18	Uttangaon
19	Dongri Village
20	Naya Nagar

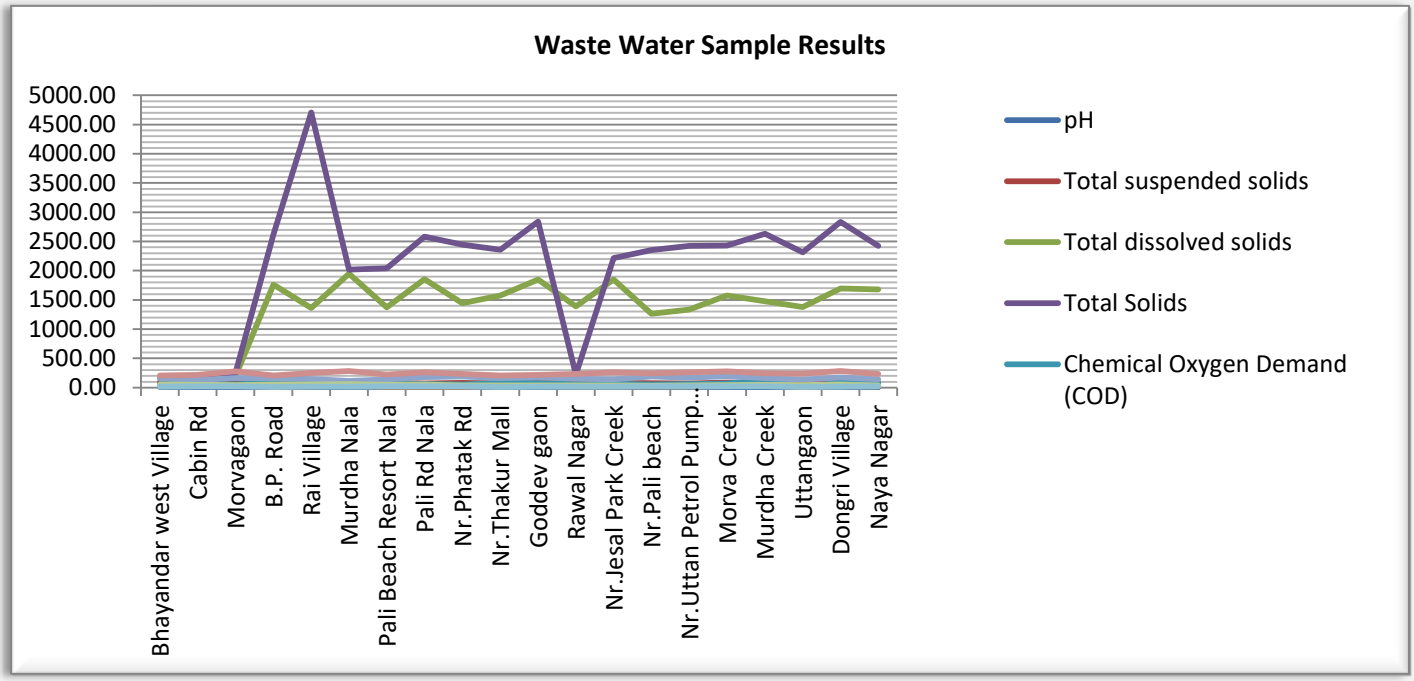
Waste Water Sampling Locations

Test Parameters	Bhayandar west Village	Cabin Rd	Morva gaon	B.P. Road	Rai Village	Murdha Nala	Pali Beach Resort Nala	Pali Rd Nala	Nr.Phatak Rd	Nr.Thakur Mall
pH	8.36	8.43	7.65	7.58	6.87	8.13	8.22	8.24	7.37	8.23
Total suspended solids	91.33	86.08	76.42	66.83	57.5	87.67	80.42	71.42	79.42	72.33
Total dissolved solids	162.8	185.3	189.8	1763	1361	1947	1371	1853	1446	1574
Total Solids	23.17	207	247.3	2623	4710	2019	2042	2585	2448	2361
Chemical Oxygen Demand (COD)	60.83	64.67	55.92	83.92	76.92	81.67	62.67	60.33	54.25	78.92
Biochemical Oxygen Demand (BOD) 3 Days @ 27ºC	24.67	26.5	25.08	18.58	22.08	29.92	16.25	15	14.92	25.5
Alkalinity	158.5	132.3	163.2	164.3	146.3	112.2	140.5	177.5	190.1	163.8
Hardness (total)	206.9	219	277.3	206.2	249.5	284.8	220.5	262.6	233.8	204.8
MPN	52.58	47	40.58	54.08	52.5	59	50	52.17	37.25	37.42
E-Coli	-	-	-	-	-	-	-	-	-	-
Faecal Coliform	16.83	20.58	18.42	10.83	14	17.92	21.83	22.67	21.33	12.33

Average analysis result of waste water samples (1-10) from July 2020-June 2021

Test Parameters	Goddev gaon	Rawal Nagar	Nr.Jesal Park Creek	Nr.Pali beach	Nr.Uttan Petrol Pump Creek	Morva Creek	Murdha Creek	Uttangaon	Dongri Village	Naya Nagar
pH	8.38	8.25	7.82	7.48	7.6	8.3	6.89	7.36	7.64	6.68
Total suspended solids	73.08	75.25	81.08	74	67.83	86.17	78.75	65.5	87.58	75.25
Total dissolved solids	1848	1387	1850	1263	1332	1577.5	1478.08	1376.33	1694.67	1676.92
Total Solids	2842	222.9	2215	2352	2424	2431.83	2634.17	2315.25	2832.5	2426.25
Chemical Oxygen Demand (COD)	76.83	61.17	62.17	55.75	60.42	71	122.17	5.67	87.92	73.5
Biochemical Oxygen Demand (BOD) 3 Days @ 27ºC	28.67	22.83	22.08	22.42	22.58	27.25	32.42	14.92	24.67	19.67
Alkalinity	179.6	154.6	139.8	190.5	168.7	195.83	163.75	134.42	176.33	141.33
Hardness (total)	215.7	234.8	263.8	244.7	260.5	278.5	243.83	240	282.08	235.08
MPN	39.08	39.75	35.08	29.58	34.5	42.08	45.75	43.25	55.33	37.92
E-Coli	-	-	-	-	-	-	-	-	-	-
Faecal Coliform	13.08	17	16	20.92	18.42	21.42	22.83	11.42	14.17	20.33

Average analysis result of waste water samples (11-20) from July 2020-June 2021



Waste Water Sample Result Graph

4.5.4 Industrial Water Quality

Industrialization is a major source of water pollution, it produces pollutants that are extremely harmful to people and the environment. This waste water usually contains specific and readily identifiable chemical compound. Total twenty industrial waste water samples was collect in per month and the sampling location is as follow,

Sr.No.	Industrial Waste Water Sampling Location
1	Press Vatak Indust Area Penkar Pada
2	R. K. Eng. Work, Udyog Nagar
3	Weskon Eng. Ind.
4	Thakar Mall Inds.
5	Om Sia Ram Inds.
6	Vikam Steel ball Ind. Kashmira chowk
7	PenkarPada Ind.
8	Raju Inds. Estate
9	Sudama Ind. Estate
10	United Rubber Ind. Phatak road
11	Kamal Modi Paints
12	Shirdinagar Niko Steel Ind.
13	Carbo Ind.
14	Ankit Paints
15	Laxmi Motors Ltd
16	Panchal Ind.Ltd
17	U.P.Mayekar Print
18	Sangam Paints
19	DoshiInd.Premises
20	MiragaonInd.Estate

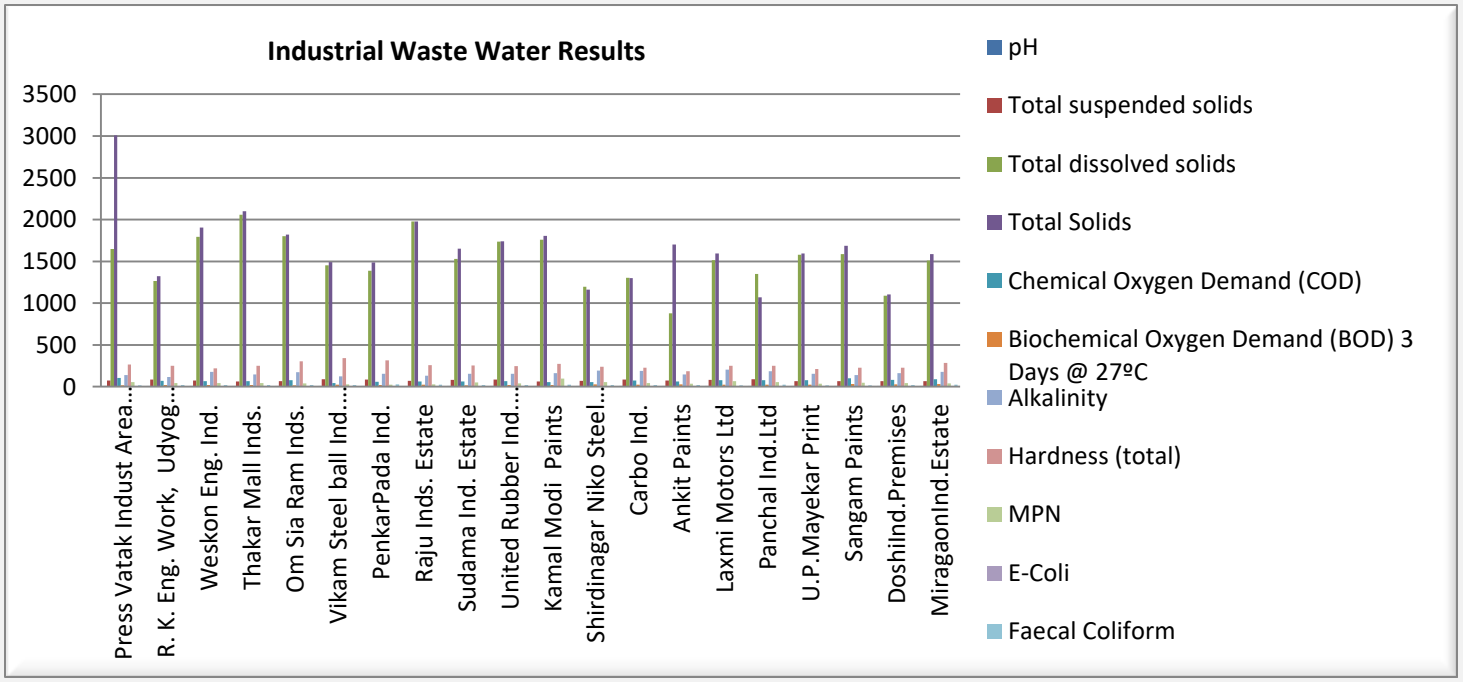
Industrial Water Sampling Sites/Locations

Test Parameters	Press Vatak Indust Area Penkar Pada	R. K. Eng. Work, Udyog Nagar	Weskon Eng. Ind.	Thakar Mall Inds.	Om Sia Ram Inds.	Vikam Steel ball Ind. Kashmira chowk	PenkarPada Ind.	Raju Inds. Estate	Sudama Ind. Estate	United Rubber Ind. Phatak road
pH	7.54	7.74	7.49	7.93	7.73	7.72	7.68	6.53	7.69	7.78
Total suspended solids	74.83	83.75	74.75	63	67.33	89.67	87.25	70.33	83.5	84.67
Total dissolved solids	1650	1266.2	1792.7	2056.7	1802.5	1450.8	1388	1978.2	1528.5	1734.3
Total Solids	3008	1322.7	1904.4	2100	1822.3	1492.7	1485.4	1976.3	1650.8	1740.2
Chemical Oxygen Demand (COD)	105.9	68.25	66.25	64.83	77.58	45.17	60.08	63.25	61	68
Biochemical Oxygen Demand (BOD) 3 Days @ 27ºC	15.5	22	21.67	18.67	17.58	22.67	19.5	24.5	18.17	20.92
Alkalinity	138.8	117.33	175.5	147.08	171.83	125.17	153	133.25	154.25	152.5
Hardness (total)	265.8	251.33	220.33	249.67	302.5	340.42	317.08	258.25	254.33	247.5
MPN	53.67	44.67	44	42.58	40.75	28.33	25.92	27.58	51.33	39.83
E-Coli										
Faecal Coliform	17.33	18.83	19.33	19.17	20.42	19.67	28.08	25.9	20.42	21.75

Average analysis result of industrial water samples (1-10) from July 2020-June 2021

Parameters	Kamal Modi Paints	Shirdinagar Niko Steel Ind.	Carbo Ind.	Ankit Paints	Laxmi Motors Ltd	Panchal Ind.Ltd	U.P.Mayekar Print	Sangam Paints	DoshiInd.Premises	MiragaonInd.Estate
pH	7.78	7.51	7.72	7.69	7.63	8.64	7.69	7.49	7.66	7.75
Total suspended solids	63.5	71.08	86.83	73.5	82.58	89	68.08	66.25	67.08	65.75
Total dissolved solids	1759.2	1196.9	1304.8	877.75	1515.1	1348.3	1579.1	1587.1	1088	1508.9
Total Solids	1806.3	1161.9	1299.9	1702.7	1593.8	1069.6	1595.3	1684.8	1104.7	1586.4
Chemical Oxygen Demand (COD)	55.33	53	73.67	64.33	76.58	76.25	76.83	101.42	80.92	88.92
Biochemical Oxygen Demand (BOD) 3 Days @ 27ºC	20.83	27.58	24.83	26.83	25.42	25.75	22.58	30.25	29.08	31.08
Alkalinity	163.83	190.92	188.33	147.42	203.33	185.58	153.25	138.92	160.92	178.5
Hardness (total)	271.33	239.83	228.08	184.25	250.25	251.17	210.58	228.67	228.92	284
MPN	98.58	56.58	42.42	37.5	64.75	56.58	36.08	47.67	43.25	39.67
E-Coli										
Faecal Coliform	23.25	19.42	21.58	20.92	18.17	22.58	17.08	15.67	18.67	23.67

Annual Average analysis result of industrial water samples (11-20) from July 2020-June 2021



Waste Industrial Water Result Graph

4.5.5 Lake Water Quality:

Lakes are the surface water bodies which is an important source for drinking, domestic and irrigation purposes. It plays an important role in maintaining ecology and has a great significance on environment. However lakes being a stagnant water bodies it could be more prone to pollution than the rivers or any running water. In collected samples we evaluating the water quality of various lakes in Mira Bhayandar area, twenty prominent lakes are selected to study and evaluate the water quality for drinking and irrigation purposes. The water samples were collected and analyzed for physiochemical parameters.

1	Kashimira Chowk, Near Chhatrapati Shivaji Maharaj Statue
2	Near Bhayandar Police Station
3	Mira Road Railway station
4	Bhayandar west, Railway Station
5	S.K. stone Chowk
6	Near Pali, St. Andrew Chowk
7	Bhayandar East, Cabin Road
8	Bhayandar East B.P. Road
9	Bhayandar St. East Navghar Road
10	Uttan naka Bus Stop chowk
11	Kanakia Police station Mira Road
12	Mira-Bhayandar corporation ghankachra vyavasthapan

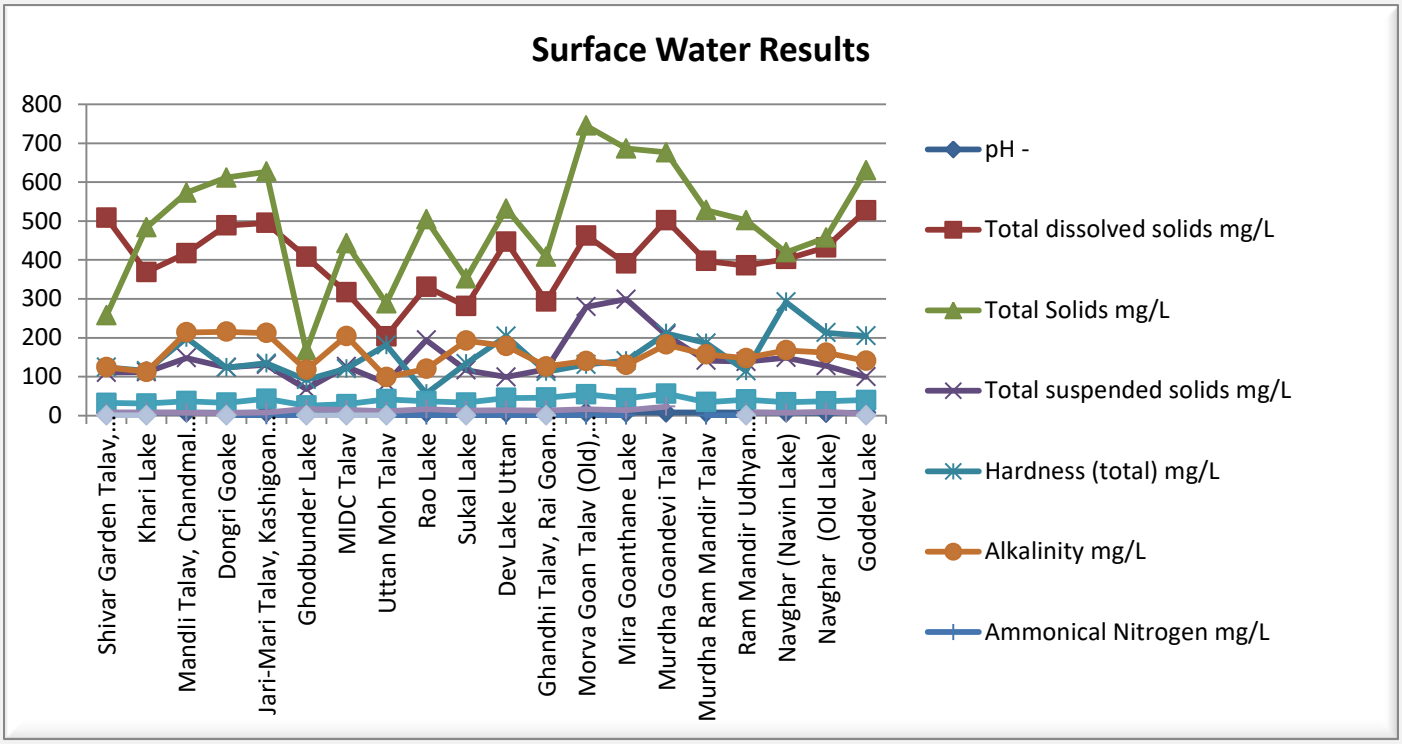
Lake Water Sampling Sites/Location

Parameters	Units	Shivar Garden Talav, Bhayander Road, Bhayander (E)	Khari Lake	Mandli Talav, Chandmal Nagar,Bhayander (W)	Dongri Goake	Jari-Mari Talav, Kashigoan Mira-Road	Ghodbunder Lake	MIDC Talav	Uttan Moh Talav	Rao Lake	Sukal Lake
pH	-	6.78	7.47	7.65	7.55	7.67	7.65	7.6	7.43	7.52	7.06
Total dissolved solids	mg/L	508.25	369	417.42	488.42	495.17	407.75	317.18	203.55	331	281.33
Total Solids	mg/L	257.51	483.67	572.92	611.25	626.5	166.92	443	288.36	504.08	351.91
Total suspended solids	mg/L	110.42	111.83	147.83	123.58	130.67	68	125.64	83.55	194.25	116.92
Hardness (total)	mg/L	124.17	115.25	199.75	123.25	134.58	91.92	120.55	181.45	56.33	133.75
Alkalinity	mg/L	124	112.25	213.67	215.25	212	117.75	204.55	98.73	120	192.25
Ammonical Nitrogen	mg/L	0.23	0.23		0.24	0.75	0.33	0.33	0.27	0.31	0.28
Chromium	mg/L	-	-	-	-	-	-	-	-	-	-
Nitrate	mg/L	-	-	-	-	-	-	-	-	-	-
Phosphate (total)	mg/L	-	-	-	-	-	-	-	-	-	-
Biochemical Oxygen Demand (BOD) 3 Days @ 27ºC	mg/L	32.33	30.67	36.92	32.75	43.33	25.5	29.36	41.91	37.08	33.33
Metal-Cadmium	mg/L	-	-	-	-	-	-	-	-	-	-
Metal-Copper	mg/L	-	-	-	-	-	-	-	-	-	-
Metal-Lead	mg/L	-	-	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-	-	-
MPN	Org/100ml	7.92	8.08	6.92	6.75	8.25	17	14.91	10.91	16.5	13
E-Coli	-	-	-	-	-	-	-	-	-	-	-
Faecal Coliform	CFU/100ml	-	-	-	-	-	-	-	-	-	-
Inorganic Phosphate	mg/L	0.23	0.25		0.18		0.26	0.21	0.28		0.2

Annual Average analysis result of lake water samples (1-10) July 2020-2021

Parameters	Units	Dev Lake Uttan	Ghandhi Talav, Rai Goan Bhayander (W)	Morva Goan Talav (Old), Opp Radh Krushana Mandir	Mira Goanthane Lake	Murdha Goandevi Talav	Murdha Ram Mandir Talav	Ram Mandir Udhyan Talav, Rai Goan, Bhayander (W)	Navghar (Navin Lake)	Navghar (Old Lake)	Goddev Lake
pH	-	7.45	7.75	7.71	7.62	7.71	7.78	7.62	7.48	6.97	7.49
Total dissolved solids	mg/L	447	293.33	462.75	390.58	502.25	397	385.58	402.33	432.17	527.17
Total Solids	mg/L	531.55	408.08	744.92	686.08	676.25	528.08	502.17	419.25	457.33	630.08
Total suspended solids	mg/L	99.18	119.42	279.75	299	207.08	141.25	138.42	148.83	127.75	99.67
Hardness (total)	mg/L	204.09	112.83	131.33	140.83	211.33	186.25	114.83	291.75	212.83	204.67
Alkalinity	mg/L	178.82	126.08	140.17	130.08	182.5	156.92	147.42	167.83	161.75	140.42
Ammonical Nitrogen	mg/L	0.33	0.28	0.19	0.24	-	0.24	0.25	-	-	-
Chromium	mg/L	-	-	-	-	-	-	-	-	-	-
Nitrate	mg/L	-	-	-	-	-	-	-	-	-	-
Phosphate (total)	mg/L	-	-	-	-	-	-	-	-	-	-
Biochemical Oxygen Demand (BOD) 3 Days @ 27ºC	mg/L	45.27	46	54.5	44.33	56.17	34.67	40.92	34.08	36.75	39.83
Metal-Cadmium	mg/L	-	-	-	-	-	-	-	-	-	-
Metal-Copper	mg/L	-	-	-	-	-	-	-	-	-	-
Metal-Lead	mg/L	-	-	-	-	-	-	-	-	-	-
Zinc	mg/L	-	-	-	-	-	-	-	-	-	-
MPN	Org/100ml	13.73	13.17	16	13.42	22.92		8.08	6.83	9.83	4.42
E-Coli	-	-	-	-	-	-	-	-	-	-	-
Faecal Coliform	CFU/100ml	-	-	-	-	-	-	-	-	-	-
Inorganic Phosphate	mg/L	-	0.22	-	-	-	-	0.18	-	-	0.2

Annual Average analysis result of lake water samples (11-20) July 2020-2021



Surface Water Result Graph

4.5.6 Ground Water Quality

Ground water is the Ground water bodies which is an important source for drinking, domestic and irrigation purposes. In collected samples we evaluating the water quality of Uttan Dumping Ground in Mira Bhayandar area, One prominent Ground are selected to study and evaluate the water quality for drinking and irrigation purposes.

4.6 SEWAGE TREATMENT PLANT

A sewage treatment plant is mean for the purification of sewage origination from residential and commercial areas of Mira Bhayandar town of Maharashtra state. The domestic sewage bears large number of suspended solids of various origins. Sewage treatment or domestic waste water treatment, is the process of removing contaminants from waste water, both runoff and domestic. It includes process to remove physical, chemical and biological contaminants.

Its objective to produce a waste stream (or treated effluents) and a solid waste or sludge which is suitable for discharge or reuse back into the environmental. The source of water supply is through Ulhas River (shahad with capacity of 80 MLD from stem authority, 12 MLD from M.I.D.C.)

4.7 UNDERGROUND SEWERAGE DRAINAGE PROJECTS OF MBMC

Municipal corporation of Mira Bhayandar was established on 28/02/2002 and as per 2001 the city has a population of 5, 20,301. This city is adjoining Mumbai city and is expanding rapidly. Within the decade of

1991 to 2001 the population of the city increased by 3, 44,901. The percentage of population rise in this period is 196.68% and it is the highest population growth percentage in the entire country. The population growth rates have continued to increase and currently the population has crossed 1 million marks.

Geographically, this city is enveloped by water on three sides with Arabian sea on west, vasai creek on north and jafari creek on south. Till date only 15% of the sewage is connected to underground sewerage drains and 85% of the untreated raw sewage is let out in open drains. This has led to increase in mosquito numbers and the untreated sewage mixing with sea and creek water, affecting the water quality adversely and hence it is imperative to take up this project of underground sewerage drainage immediately.

Underground sewerage system is based on decentralized system having total capacity

of 115 MLD. This scheme includes total 10 sewage treatment plant and network of underground sewage pipelines of 89 kms. Sewage treatment plant (STP) area as follows:

Sr No	Zone No	Location Name	Capacity	Remark
1	1	Bhayander (W) Behind Najreth school	8 MLD	Work in Process
2	2	Bhayander (W) Near Garden Court Tower	8 MLD	In Operation
3	3	Kharigaon, Bhayander (E)	13 MLD	Work in Process
4	4	Golden Nest Road Bhayander (E)	12 MLD	In Operation
5	5	Kanakia Mira Road (E)	17 MLD	In Operation
6	6A	Shantipark, Sangavinagar, Mira Road (E)	13 MLD	In Operation
7	6B	Mhada Colony	7 MLD	In Operation
8	6C	Shantinagar ,Mira Road (E) near Ayyappa mandir	11 MLD	In Operation
9	7	Kanugo, near ahmad raza ground	12MLD	Work in Process
10	8	Hatkesh near 15 no bus stop , Ghodbunder	14 MLD	In Operation

The general body of MBMC under resolution 59 on 18/12/2004 has given financial and governmental grand to this project for Rs. 349.18 crores, to which the central government has given, corrected grand of Rs 315.39 crores.

The standing committee resolved (resolution no116) on 17/02/2009 to approve the tender and the general body on 21/02/2009 vide resolution no 98 approved the revised cost of Rs 491.98 crores and gave financial and administrative approval. Thereafter, SPML has been given order on 28/02/2009 and the work on this project is under progress

As per the agreed cost of the project of Rs 315.39 crores 35% cost will be borne by the central government 15% cost will be borne by the state government and remaining 50% cost has to be borne by the MBMC.

In 2005/06 the central government announced the scheme JNNURM and the municipal corporation in the state have prepared the detailed project reports as per the prevailing schedule of rates and submitted to

central govt. between 2005 and 2007.many projects were approved under this scheme however, it took more than 2 years for getting the funds and the tendering process of such projects could only start between

2007-08 and 2008-09.during the period however, there was escalation in the schedule of rates, that resulted in the increased of the project cost.

The increased cost was loaded on the municipal corporation and due to the financial position of the corporation is difficult to complete the project within the given time frame. Therefore, as per the GR no. NUR-2009/P.NO. 127/09/NEW-33dated 31/08/2009 50% grant 50% of the increased projects cost due to difference in the schedule of rates was to given as grant from state government . Accordingly, GR no NUR-2009/QP.NO. 122/09/NEW-33 dated 30/03/2013 MBMC was sanctioned Rs 74.75 crores for this project.

Sr no	Detail	Granted amount	Received amount	total expenses
1	Central govt	110.39	99.32	
2	State govt	47.31	42.55	
3	MBMC Loan Own money	 226.65 107.61	 66.87 111.67	300.99
4	total	491.96	320.41	

All amount in crores

The amount 157.70 crores by the central and the state government has been released in 4 equal installments and the corporation has received 141.87 crores and Rs 74.75 crores as the DSR difference. thus, the project has received a total amount of 216.62 crores from the government.

- **Sewerage Network:** The sewage and salvage generated in the MBMC area shall be taken to the sewage treatment plant through a 79 km sewerage network. This network is mainly consisting of cement pipes of 150 mm to 200 mm diameter and will be 2.5 to 8.5 mar below the ground level in order to avoid the corrosion of the pipe, the pipes made of SRC Cements shall be used. The sewerage network connections will also have manholes.
- **STP:** Total 10 STPs are proposed to treat the sewage and sullage collected through the sewerage network. MBMR technology will be used for this purposed to reuse the treated sewage for constructions and gardening. this may generated some revenue from the sale of treated sewage
- **SCADA :** In order to avoid the human errors ,the entire sewage and sullage treatment system shall be operated using SCADA , so that all works shall be automatically handle
- **Expenditure:** May2013: 300.99 crores have been spent on the scheme.

❖ **Note:** The sewerage network and setting up of the STPs are proposed to be as follows:

December-2013	-	5 STP
March-2014	-	5 STP
Total	-	10 STP


मिरा-भाईंदर महानगरपालिका

CHAPTER 5: SOIL ENVIRONMENT

5.1 SOIL POLLUTION

Soil pollution is defined as the build-up in soils of persistent toxic compounds, chemicals, salts, radioactive materials, or disease-causing agents, which have adverse effects on plant growth and animal health.

Soil contamination or soil pollution as part of land degradation is caused by the presence of xenobiotics (human-made) chemicals or other alteration in the natural soil environment. It is typically caused by industrial activity, agricultural chemicals or improper disposal of waste.

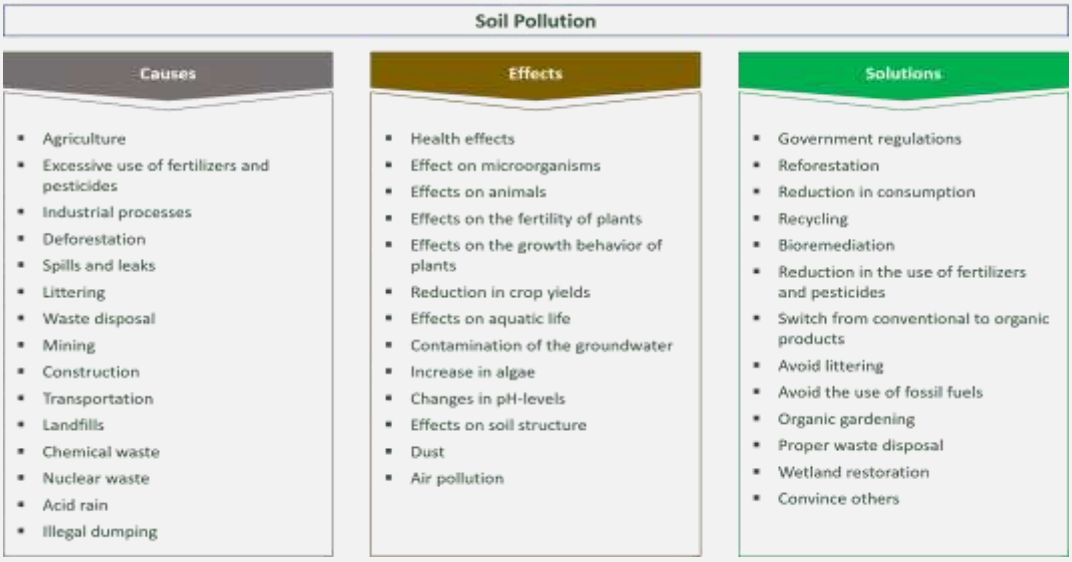
➢ Types of Soil Pollutants

Soil pollution consists of pollutants and contaminants. The main pollutants of the soil are the biological agents and some of the human activities. Soil contaminants are all products of soil pollutants that contaminate the soil. Human activities that pollute the soil range from agricultural practices that infest the crops with pesticide chemicals to urban or industrial wastes or radioactive emissions that contaminate the soil with various toxic substances.

5.2 SOURCE OF SOIL POLLUTION

There are various means of soil pollution. Soil pollution in Mira – Bhayandar is increasing day by day resulting in poor crop stand along with health hazards of human beings and animals. Major sources of soil pollution in Mira – Bhayandar are as follows:

- Industrial effluents
- Sewage Sludge
- Fertilizers and pesticides application.
- Non - degradable Solid Waste
- Bio- medical Waste.



- **Effects on Agricultural Land:** Soil pollution can cause an imbalance of the ecosystem of the soil. Thus, soil pollution can negatively impact the lives of the living organisms and can result in the gradual death of many organisms. It can cause health threats to animals grazing in the contaminated soil or microorganisms residing in the soil.

  Excessive use of chemicals such as pesticides, insecticides and fertilizer are one of the prime factors causing soil pollution. These chemicals adversely affect the soil by increasing its salinity and making it imperfects for crop bearing. The excessive use of chemicals also adversely affects the microorganisms presents in the soil, causing the soil to lose its fertility and resulting in the loss of minerals present in the soil thus causing soil pollution

5.3 SOIL SAMPLING LOCATION

Soil is quite heterogeneous containing rocks, trapped gases, and liquids. It varies across the surface, and with depth. This variation is caused by contact with the atmosphere and the biosphere, as well as by the flow of ground water. Soil sampling devices must be made of tough material which can be forced into the soil. These are usually brass, steel or plastic, sometimes Teflon coated to prevent contamination of the samples by the metals used in construction of the sampler. Stainless steel sampling devices are most popular. Chrome and nickel plated devices should be avoided since scratches and flaking can contaminate samples with trace elements. When the sampling device is forced into the soil, there is much friction between the tool and the soil sample. Since most of the possible contamination will occur on the surface of the sample which comes in contact with the tool, contamination can be reduced by collecting samples with high volume to surface ratio.

Soil samples collected from the uppermost foot of soil can be obtained using a sample scoop. The soil can be loosened with a shovel or a spade and a scoop can be used to collect the sample. A device for collecting an undisturbed sample is a thin walled tube 3 to 8 cm i.d. and 30 to 60 cm long. This tube sampler is pressed or hammered into the soil and then is pulled out, bringing up a core sample which preserves differences in the soil composition with depth.

For obtaining samples from a greater depth, a device that can drill into the ground has to be used. Samplers of many different designs are available for doing this. A thin walled tube sampler is usually used with an auger bit to drill a hole to the desired depth in the soil. The auger bit is then replaced with a tube corer which is lowered down to the bottom of the hole and is pushed into the soil to the desired depth. The tube is then withdrawn and the sample is collected. This device is quite versatile. Samples can be collected at the surface by using only the tube corer. Devices like this may be used to collect samples down as far as 6 meters under ideal conditions. However, because rocks may be encountered, or the bore hole may collapse in softer soils, the normal sampling depth is usually less than 2 meters. Different types of cutting tips are available for coring dry, moist, sandy, or hard rocky soil.

The Veihmeyer sampler consists of a sampling tip, sampling tube, a drive head, and a drop hammer. The sampling tube is constructed of chromium molybdenum steel, and its length can be anywhere from 3 to 16 ft. The tube is calibrated every 12 inches. The drive head is attached to the top of the tube to prevent the hammer from deforming the tube when it is driven into the ground. The sampling tip is removable, and different tips are available for different types of soils. The drop hammer is made of cast iron, weighs about 15 lb., and is used to drive the sampling tube into the ground. A puller jack may be used to pull the tube sampler out when sampling is done at a greater depth, or when the soil is hard.

Soil sampling was done from three sampling locations i.e. 1. Purushatm Chowk 2. Dongri Village 3.Uttan Naka. And their details are as follow,

Purushatm Chowk	Dongri Village	Uttan Naka

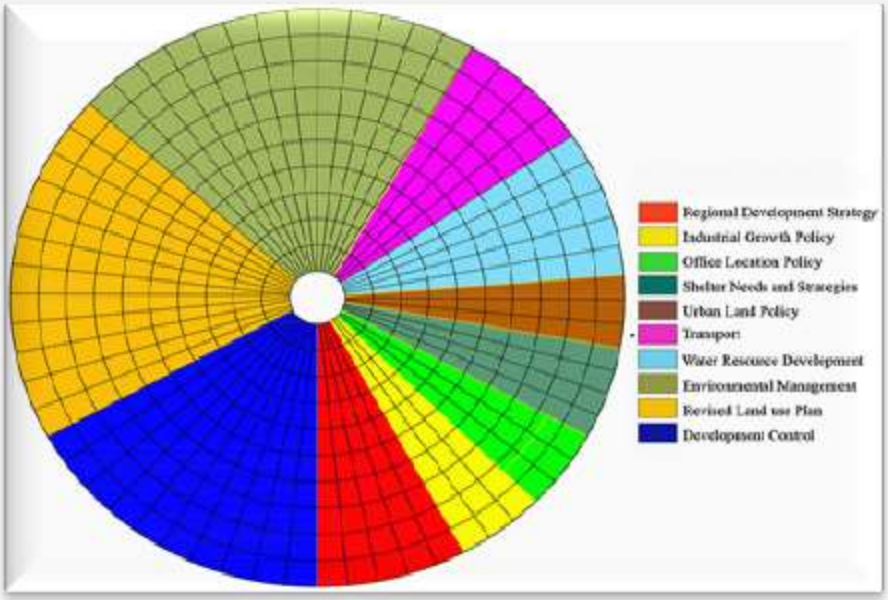
Soil Sampling Location

5.4 INTERPRETATION

There are various means of soil pollution. Soil pollution in Mira Bhayander is increasing day by day resulting in poor crop stand along with health hazards of human beings and animals.

5.5 LAND USE PATTERN

Mira Bhayandar municipal corporation area is 79.40sq.km.



Of this 248,227 were males while 68,136 were females. In census survey, worker is defined as person who does business, job, service, and cultivator and labour activity. Of total 316363 working population, 89.04 % were engaged in Main Work while 10.96 % of total workers were engaged in Marginal Work. Out of total population, 316,363 were engaged in work or business activity.

- **Residential area:** In last few years Mira-Bhayandar has emerged as the fastest growing suburb of the Mumbai city. Due to the increasing population pressure on Mumbai and easy communication facilities to the commuters going to and coming from Mumbai from Mira-Bhayandar, the population has shifted towards the Mira-Bhayandar region. As a result, large housing complex have come up in this area. This has also led to the development of slum pockets in the area.
- **Commercial area:** Residential growth of the area has led to the massive commercial establishment. Earlier the commercial activities were limited mainly on Bhayandar uttan road form Bhayandar station (w) up to municipal corporation office and on east of Bhayandar railway station activity was concentrated to Balarampatil road in last year the area around Mira Bhayandar road and Mira

Bhayandar bridge has emerged as the largest commercial development of the region. Maxus mall, reliance fresh,

spinach bank, restaurants, showrooms of famous brands like Reebok, Woodland, Vijay sales etc. have come up here, further, many banks such as SBI, corporation bank etc. Had also opened their branches in this region.

- **Industrial area:** This user covers around 1.59% of the total area. As per the latest record of MBMC there are around 383 industrial estates with around 5000 industrial galas are existing in the area. it is estimated the around 20,000 workers are working in this industrial area.
- **Land under public and semipublic use:** This category includes area occupied by educational institutions such primary and secondary school, religious places such as temple, church, mosque etc government and semi-government offices. It covers nearly 0.151% of the total area.
- **Land under open spaces :** Mira-Bhayandar is bounded by natural water tanks scattered in various parts of the town. The municipal corporation has developed three lakes enriched with proper landscaping viz.

MBMC main office lake, goddeo lake and Shivar lake wherein boating activity is also available for citizens. The open space and recreational ground are lungs of the town and they cater active and passive recreation need of city.

Morava Salt Pans In Uttan

Saltpan area also consider under the open space. These salt pans are shallow manmade ponds design to produce salt from sea water. During high tide, tidal water collect into this ponds and water is drawn out through natural evaporation which allows the salt formation. There are several salt pans in Mira-Bhayandar region comprising of 1394.33 hectare of land.

CHAPTER 6: FACILITIES ENVIRONMENT

6.1 SOLID WATE MANAGEMENT

Daily 550 Tons of solid waste generated from MBMC area. Solid waste management procedure and practices are designed to prevent or reduce the discharge of pollutants to storm water from solid or construction waste by providing designated waste collection areas and containers , arranging for regular disposal and training employees and subcontractors .

Applications. BMP Is suitable for construction sites where the following wastes are generated or store:

Solid waste generated from trees and shrubs remove during land clearing, demolition of existing structures and building construction. Packaging materials including wood, papers, and plastic scrap or surplus building materials including scrap metal, rubber, plastic, glass pieces and masonry products. Domestics waste including food container such as beverage cans, coffee cups, paper bags, plastics wrappers and cigarettes. Construction waste including brick, mortar, timber, steel and metal scraps , pipe and electrical cuttings, non-hazardous equipment's parts , Styrofoam and other materials used to transport and package construction materials highway planting waste , including vegetative materials, plant containers and packing materials.

Everyday 120 vehicles are throw garbage in Uttan area . After that segregate the wet and dry garbage. They make compost using wet garbage and RDF using dry garbage.

IMPLEMENTATION

The following steps will help keep a clean site and reduce storm water pollution.

- Select designated waste collection areas onsite.
- Inform trash-hauling contractors that you will accepts only watertight dumpsters for onsite use.
- Inspect dumpsters for leaks and repair any dumpster that is not watertight.
- Locate container in a covered area or in a secondary containment.
- Provide an adequate number of containers with lids or cover that can be place over the container to keep rain out or to prevent loss of waters then it is windy.
- Plan for additional container and more frequent pickup during the demolition phase of construction. collects site trash daily, especially during rainy and windy condition.
- Remove this solid waste promptly since erosion and sediment control device tend to collect litter. make sure that toxic liquid waste (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris .do not hose out dumpster on the construction site.
- Leave dumpster cleaning to the trash hauling contractor. Arrange for regular waste collection before containers overflow. Cleans up immediately if a container does spill, make sure that construction waste is collected, removed, and disposed of only at
- Authorized disposal areas.

Typical solid waste generation source, activities and location associated with various source classifications

Source	Activities and location	Types of solid wastes
Open areas	Streets, alleys, parks vacant lots , playground, beaches, highways , recreational areas etc	Special wastes , rubbish
Treatment plant sites	Water , waste water and industrial treatment process etc	Treatment plant waste principally composed of residual sludge
Municipal	As above	As above
Agriculture	Field and rows crops , orchards , vineyards , dairies, feedlots , farms etc	Spoiled food wastes , agricultural wastes , rubbish , hazardous waste
Industrial	Construction , fabrication, light and heavy manufacturing , refineries , chemical plants , lumbering , mining , power plants , demolition etc	Food waste , rubbish, ashes , demolition and construction waste , special waste , hazardous waste
Residential	Single-family and multi-family dwellings , low, medium and high rise apartment	Food waste, rubbish, ashes, special wastes
Commercial	Stores, restaurants, market, office building, hotels, print shops, auto repair shops, medical facilities and institutions etc	Food waste , rubbish, ashes , demolition and construction waste , occasionally hazardous waste

Municipal solid waste consists of household waste, construction and demolition debris, sanitation residue and waste from streets. this garbage is generated mainly from residential and commercial complexes.

Hospital waste is generated during the diagnosis, treatment or immunization of human being or animal or in research activities in this field or in the production or testing of biological. it may include wastes like sharps, soiled waste, disposables, anatomical waste, cultures, discarded medicines, chemical wastes etc. these are in the form of disposables syringes, swabs, bandages, body fluids, human excreta, etc. this waste is highly infectious and can be serious threat to human health if not managed in a scientific and discriminate manner .

Industrial and hospital waste is considered hazardous as they may contain toxic substances; certain type of household waste is also hazardous. Hazardous waste could be highly toxic to human, animal and plants are corrosive highly inflammable or explosive and react when exposed to certain things e.g. gases. Household wastes that can be categorized as hazardous waste include old batteries.

M/S. Enviro vigil has the authorization from Maharashtra pollution control board for the collection transport and disposal of bio-medical waste (MPMB/ROT/BMW-3/2003). Bio medical waste contain human/animal blood organ, dressing materials, syringes etc. generated within the MBMC by the government and private labs , pathological laboratories , nursing homes , maternity hospital , clinics etc. By the rules of biomedical waste disposal (1998) the waste is collected in colored bags that are internationally approved and then send to thane for treatment and disposal. Every month approximately 1742 kg of biomedical waste gets transported to Thane. MBMC has an agreement with Bhayandar medical association and m/s Enviro vigil for the management of biomedical waste.

INTEGRATED MULTIPRODUCT MUNICIPAL SOLID WASTE PROJECT

In Mira Bhayandar Region the total solid waste generation is about 550 tons per day. District collector of thane has handed over the 31-hectare land at mauje uttan pali to MBMC on 26.12.03 for management of solid waste under solid waste management program. Further, MBMC has given the solid waste management work to M/S Saurashtra Enviro Project Pvt Ltd mira energy purely on the basis of build, finan cooperate and transfer. For this purpose, 30-acre land has been given to the company for 09 years lease for which Mira Bhayandar municipal corporation receives Rs 1/sq. m./year as rent.

SALIENT FEATURE OF THE PROJECT

- Bio-degradable waste will be converted to compost and will be available to Municipal Corporation at free of cost for plantation purpose
- The 19% rejected materials from the project will be sending to landfill site according to the MSW rules 2016Work is under process for preparation of landfill site.
- In this project, daily produced solid waste will be segregated and treated at the side.
- The high heat content solid waste will be converted to Eco-coal for substitute of coal.

6.2 RAIN WATER HARVESTING SYSTEM

Mira Bhayandar region is located near creek, as there are less natural water reservoirs; the town offer suffers from water shortage. Presently this region is receiving 86 MLD water from STEM, although there is adequate water available for the citizens of Mira Bhayandar yet MBMC is making every effort to save and conserve water.

As the average rainfall of the region is 2500 mm to 3000 mm the roof rain water harvesting project is implemented for the main building. Daily many people come to MBMC office for various work hence increasing the water usage. Every day 20000 lit potable water issued in office toilet, garden, cleaning of vehicle, inner and outs.

Rain water harvesting project is compulsory for all the news constructed building and constructed by builders and the amount of water harvesting depends on the requirement and area. There was an extra unwanted usage of water in MBMC main building at Bhayandar (w) so with the help of natural resources a roof rain water harvesting project was implemented to balance the over usage of water. According to suitable place selected for the project in premises of MBMC main building. A pit of size 10×10×10 was dug; it is then filled with some stone, crushed stone and sand. Rain water accumulated on building terrace is directed to pit through a pipe. Due to this an increase in the level of water table is observed and also the water quality is improved. Water collected from roof rain water harvesting project is analyzed for various parameters and the result indicate that it can be used for drinking purpose. Increase in the quality and purity of water will be observed in the next 3-4 years. Around 3.9 lac rupees are invested in the project. daily 20 to 22 MLD water is made available through this project .This harvested water is used in toilets , garden , cleaning of vehicles , inner and outside cleaning of main building hence 15000 to 20000 lit of water is being saved every day .

MBMC has arranged the workshop with the help of Rambhau mhalagi prabadhini for social organization and social workers to make them understand the importance of this roof rain water harvesting project. MBMC has published a booklet during the workshop a spread awareness of the importance of saving the water. This has inspired private developers/housing agency to implement additional 7 projects of such types. These projects are running successfully and harvesting 3.0 lac lit water per day.

- **The Importance of Rain-Water Harvesting System :** Although all of us might realize the value of this irreplaceable natural resource but only a few take up measures in order to prevent it and make sure that it is used optimally. One of such method that is extremely effective in conserving water is rainwater harvesting. The process of collecting and filtering of rainwater so that it can then be used for various purposes is called rainwater harvesting. It is a great method that can be used to harvest rainwater from different surfaces and can be stored for later use.

- **It Saves Time and Money:** The best part about rain-water harvesting is that it saves a lot of time as you do not have to fetch time in order to store water. You can simply filter out the impurities from the water and it can be used for purposes like gardening, crop irrigation, watering livestock, laundry, and flushing toilets. Also, it should be noted that rainwater is not ideal for drinking and bathing purposes but can be used for all the mentioned purposes. As this is method is really easy and does not require any advanced equipment or hi-tech water purifiers, it is also an extremely budget-friendly option.

- **It Maintains the Ecological Balance:** We as humans hold an extremely important responsibility towards the environment and in order to make sure the ecological balance, we need to make sure that water is used optimally. This is because we tend to waste a major portion of water as compared to the amount we actually use. For instance, flushing a toilet is almost 35% of complete domestic water usage and other activities that are carried out on regular basis in a household like irrigating the lawn, washing cars, etc. might take up an incredible amount of water. Thus, we can balance this wastage of water by utilizing rainwater to execute such tasks.

- **It Promotes Optimal Usage of Water:** As rainwater harvesting provides us an alternative source of water that promotes an optimal usage of water. Humans tend to use tap-water and purified water for various purposes that one can carry out with rainwater as well. With this, we can make sure that we utilize this natural resource is an optimal way and also limit the wastage which occurs almost on a daily basis. Thus, it is important to use this technique which will make sure that we are not devoid of this precious natural resource.

6.3 ELECTRICITY SUPPLY

- **Total Electricity consumption:** The total electricity consumption of the city is around 130 mw per day and mainly supplied by M/s. Adani Electricity Mumbai Ltd. The consumption for street light in MBMC area is 45,00,000 KWH per annum and the consumption for various pumping station of water supply is 16,00,000 KWH the public building like municipal schools, corporation offices, recreation centers , cemetery are maintained by MBMC where the electricity consumption is very high .

- **Source of electricity supply:** The city is adjacent to Mumbai and despite being situated in Thane district; it enjoys the living standards of Mumbai. The electricity is being supplied by M/s. Adani Electricity Mumbai Ltd energy having generation plant at situated in Dahanu. Some village portion vise chene and kajupada receiving electricity supply from MSEDCL Mira-bhayander municipal corporation providing street light facility for the public roads maintained by MBMC. The maintenance of the 16220 nos. electric pole out of 13520 nos. of electricity pole are being done by

M/s. Adani Electricity Mumbai Ltd. the remaining 2700 nos. of electric pole in slum are maintained by MBMC through our funds.

- **Increase in Consumption:** As the city is fast developing and having no other sources being in used no other than the conventional one the demand goes on increasing day by day.

- **Energy Conservation Plan:** The program of replacement of HPSV lamp by LED lamp is being done on top a priority to reduce the consumption. All the high-pressure mercury vapor (1-IZEMV) lamps are replaced by high [pressure sodium vapor (HPSV) Lamps.

- **Use of Solar Panels for Energy Conservation:** Solar panels are in use at traffic control signals at 5 locations. The solar panels are proposed in upcoming hospital building of MBMC situated at Mira road 8 Bhayandar (w). Corporation is already motivating the residential complexes for installing solar water heating system by way of giving rebate in municipal taxes.

- **Details of Energy Audit:** The recommendation in energy audit carried for pumping station in water supply as well head office building is being scrupulously followed. The water supply department in the years 2005 had taken the energy audit for their pumping station to optimize the use of electricity also the energy audit of the head office building is done in the year 2009 and the improvement in power factor achieved.

6.4 TRANSPORTATION

Mira Road (station code: MIRA) is a passenger railway station located at Mira Road town of Thane district. It is situated between the Borivali and Bhayandar stations on the Western line, of the Mumbai Suburban Railway.

The route of the station is located between the salt pans towards the western zone of the town leading towards Bhayandar.

Mira Road station consists of four side platforms, divided into two sections by the twin bores of the station; a skywalk serving the commuters to Shanti Nagar and Naya Nagar zone. Trains serve the station 12 hours a day every day; the headway between trains is 6 minutes during peak periods, with less frequent service at other times. Mira Road station is also served by three bus services including BEST Transport, MBMT Transport and TMT Transport buses, serving the areas of Thane, Navi Mumbai and Bhayandar. Wi-fi's have also been installed on all platforms.

The western railway suburban local train service is the primary means of transport and commute to Mumbai. At presents the Borivali –Virar railway track is four lanes and many new trains have been started to cater to the increasing commuter in the region. The government has future plan to have more trains running between Virar and Borivali., this should somewhat ease the commute to and from Mira Bhayandar. A railway yard is also in pipeline in the Bhayandar area. This is just the start and if the development continues then Mira road and Bhayandar will be the most important station in the western railway circuit.

The entrance road of Mira Railway Station is constructed by Corporation and open for commuters.

The Beautification on both sides of Bhayandar Railway Station work under process.

- **Bhayandar station:** State transport (s.t) and thane Municipal Transport (T.M.T) buses have started running between Mira road and thane. MBMT (Mira Bhayandar Transport Corporation) buses have started running between Mira road and Bhayandar. Frequencies of these buses are being increased to ease the travel a bit the Mira road –Bhayandar link road and the two new railway lines which are soon to become the USPs for Mira Bhayandar. Western railways and BEST provide the transportation needed by the suburb. There are also private buses and auto-rickshaws that make life easier. MBMT is also granting concession to students and commuters under monthly 2 and quarterly pass schemes also free transportation facility is giving to the soldiers.

  Mr. Ganesh Naik environmental minister had inaugurated the Mira –Bhayandar transportation program on 15th Sep 2005 and hence forth the Mira Bhayandar bus services was started. Currently 100 buses are running on 19 routes under MBMC's transportation program provided with 774 bus stops. Mira-Bhayandar has well connected networks of roads and flyovers, designed to cater to the ever-increasing number of vehicles and public transport. Over years several new roads have been added and many existing roads widened. Most of the roads now have sufficiently wide foot paths. The only road route to Bhayandar is through Mira road which is turn connects to Mumbai through the western express highway (NH-8) existing developed roads area is 154.91 sq.km. There are 12 signals to control smooth traffic run. There is only one existing road connecting NH-8 and ROB. There is only one existing road connecting NH-8 and ROB. This is not sufficient to catter to increasing traffic. Therefore, necessities to develop ring route of roads. Under ring route project 11 roads are proposed of which 9 are still being completed.

Skywalk Near Mira Road Station

Mira Bhayandar Municipal Corporation

Detail for Bus Routs

Sr. no.	Bus Rout No.	Name of the rout	Total No. of Buses	No.of Bus Stop
1	1	Bhayandar Station (w) to chowk	100	774
2	2	Bhayandar Station (w) to Uttan Naka		
3	3	Bhayandar Station (w) to Manori Tar		
4	4	Bhayandar Station (w) Essel World (pangoda)		
5	6	Uttan Naka To Monari Tar		
6	7	Bhayandar Station (w) to Varsova bridge		
7	8	Uttan Naka To Gorai Tar		
8	10	Bhayandar Station (w) to Thane		
9	11	Bhayandar Station (E) to Magathane depot via Mira Goanthan		
10	12	Bhayandar Station (E) to Magathane depot via, Nayanagar,Mira Goa		
11	13	Versoa bridge to Magathane depot via Hatkesh		
12	14	Bhayandar Station (E) to Magathane depot via, Kashimira		
13	15	Mira road station (E) to Reshmi complex		
14	17	Bhayandar Station (E) to Kashimira western park		
15	18	Western park to Jogeshwari (Moibn nagar)		
16	21	Mira road station (E) to Ramdev park		
17	22	Mira road station (E) to Shanty Vidyanagari		
18	23	Bhayandar Station (E) to Bhayandar Station (E) via Kashmira Goddev naka, Indraloak, Royal College		
19	24	Mira road station (E) to Western Park		

Sr.no.	Bus stop name	Sr.no.	Bus stop name
1	Jahangir Complex	9	Masjit Nayanagar (up)
2	Green avenue	10	Masjit Nayanagar (down)
3	I.C.I.C.I BANK (up)	11	Balaji Building
4	I.C.I.C.I BANK (down)	12	Cross garden
5	Asmita super market (up)	13	Bhyender police Station (market)
6	Asmita super market (down)	14	Poonam sagar
7	Mira road market (up)	15	Gaurav residency
8	Mira road market (down)		
Sr.no.	**Name of Bus stop**	**Sr.no.**	**Bus stop name**
1	Bhayandar Station (W)	28	Mira Road Market
2	Bombay Market	29	Sector no. 10
3	Cross Garden	30	Gaurav residence
4	Mahapalika main office	31	Poonam sagar

5	Police Station	32	Asmita super market
6	Bhayandar secondary high school	33	Holly cross Highschool
7	Subhaschandra bhose groungd	34	Mira road police station
8	Murdhakhadi primary school	35	Cinemax Theater
9	Murdha Village	36	Sanskruti Complex
10	Sai temple murdha	37	Gaurav residensi
11	Custom Office	38	Gaurav agency
12	Rai village	39	Hydri chowk
13	Salaser Nagar	40	N.H school
14	Morva Village	41	Tunga Hospital
15	Telephone Exchange	42	Shiwar garden
16	Talavali	43	Rose wood garden
17	Keshav srusti	44	Ramdev park
18	Essel world	45	Poonam complex
19	Jammu Kashmir Bank	46	St. Xevear
20	R.N.Complex	47	Shanti Vidhangiri
21	Shagun Hotel	48	Anand Nagar
22	I.C.I.C.I BANK	49	Indralok
23	Sector no.2	50	Jyoti park
24	Sai Mangalam Highschool	51	Sukharam trust
25	Ganga Complex	52	Sonam nagar
26	Balaji Building	53	Golden nest fes-1
27	Masjid	54	Sonali Hotel
		55	Sanghavi complex

Sr.no.	Bus stop name	Sr.no.	Bus stop name
1	Kashmira	14	Azad nagar
2	Punjab Foundry	15	Bhyendar Fatak
3	Green park	16	Kasturi state
4	Hicto Company	17	Ahbinav school
5	Silver park	18	Goddev Naka
6	Sunder Nagar	19	Bhayandar Station
7	S.K. Stone	20	Mira road station
8	Bevhaly park	21	Sector 4
9	Shiwar garden	22	Jain Mandir
10	Subhash nagar	23	Sector 7
11	Shreenath complex	24	Sheetal/ Siddhrth nagar
12	Goolden nest	25	Sheetal nagar
13	Bhyendar uddanpool	26	Jammu Kashmir
14		27	Sai mandir

Shati, sector-2/C -29, Mira road (E), District- Thane

Sr. No.	Bus stop name
1	Jain Mandir Mira road
2	Sector 7, Mira road
3	Apna Bazar, Shrusti, Revti
4	Surya Shopping, Police chowki
5	Shrushti, Rishab Building
6	Ganesh Mandir, Mira road
7	Lodha Complex, Mira road
8	Lodha Complex, Mira road, R.O.B
9	Nayanagar Police chowki
10	Shrushti Sector 2

Bhayandar Shopping Center, Bhayandar (W)

Sr. No.	Bus stop name
1	Bhayandar(W), Near railway station
2	Prakash Market near (Khau galli)
3	Devchand Nagar, near jain mandir
4	Mandli talav, Near nagar bhvavan
5	Police Station Bhayandar(W)
6	Bhayandar(W), secondary school
7	Netaji Subhash Chanrda Bose Ground, Ambedkar nagar
8	Radha swami satsang, near uddan pool
9	Keshav shrusti , near kaka baptista chowk near
10	Dr, Ambedkar road shirsagar hotel near
11	Uttan Naka

Mira- Bhayandar Buses and Rout

Mira Bhayandar Municipal Corporation

Mira Bhayandar Municipal corporation bus route information

Sr. No.	Route No.	Form to	Route Length	Fleet	No. of Stop	R. Time (In Min.)	Lay over (In Min.)	Head way (In Min.)	First bus	Last bus	Min. Fare	Max. Fare	Total duty	Schedule
1.	1	Bhayandar st. (W) to chowk	14.2	7	50	45	5	30-35	1.45 4	23.05 23.45	4	9	17	1289.4
2.	2	Bhayandar st. W) to uttan naka	10.3	7	35	30	5	Dec-15	5:00 4:20	0:50 1:17	4	7	17	1551.0/ 1550.4
3.	3	Bhayandar st (W) to manori tar	19.3	1		50	5	110	5:45 6:40	18:10 19:15	4	11	2	249.4
4.	4	Bhayandar st. (W) to essel world	16.1	2	47	45	5	50	6:40 7:25	19:35 20:35	4	11	4	523
5.	5	Bhayandar st. (W) to Maxus mall	5.9	1	10	20	5	40	8:10	21:50	4	6	2	141
6.	6	Uttan naka to Manori tar	11.6	3	32	35	5	30	5:40 6:15	21:15 21:50	4	8	6	723.8
7.	7	Bhayandar st. (W) to vasova bridge	11.4	2	39	40	5	45	6:45 6:05	21:10 21:10	4	8	4	458.8
8.	8	Uttan naka to Gorai Tar	9.7	1	23	30	5	70	7:40 7:05	19:10 19:45	4	9	3	2860
9.	10	Bhayandar st. (W) to Thane stn (E) kopari via W.E.H majiwada	34.5	7	68	115	5	60	6:15 8:10	19:00 20:55	4	15	14	1976.8
10.	11	Bhayandar st. (E) to Magathane depo via via MTNL srushti. Dahisar checknaka	13.2	2	52	60	2--5	60	6:30 7:30	20:30 21:30	4	9	6	470.8/234 .2
11.	12	Bhyayandar stn. (E) to magathane Depo via Nayanagar Mira road st. (E) Dahisar check naka 9 Borivali (E)	13.1	2	52	60	2--5	60	6:00 7:00	21:00 22:00	4	9	5	470.5
12.	13	Versova Bridge to Magathane depo via Hatkesh	12.7	2	32	60	5	60	6:00 7:00	19:30 20:30	4	9	4	196.8
13.	14	Bhayandar stn. (E) to Magathane depo via kashimira borivali st (E)	13.5	4	44	60	3--5	20	6:00 6:55	21:55 23:55	4	9	12	1574.6/11 53.4
14.	15	Mira road stn. (E) to to Rasmi Comp. via S. K. Stone Bevarly park Cine max	4.2	5	42	15-18	2--3	7	5:16 5:00	2:10 1:34	4	4.5	13	1190.7/11 93.6
15.	17	Bhayandar stn. To western park	8.6	1	36	45	5	90	5:40	19:45	4	7	2	159.2
16.	18	western park to Jogeshwari (west)	19.5	2	85	90	5	60	6:00 7:00	17:30 18:30	4	13	4	192.4
17.	19	Bhayandar stn. (E) to penkar pada	8.8	1	24	30-40	5	40	6:00 6:30	17:40 10:20	4	6	2	160.4
18.	20	Bhayandar stn. (W) Morva	5.5	1	16	25	5	25	6:00 6:15	21:00 21:25	4	6	2	160.4
19.	21	Mira road stn. (E) to Ramdev park via Razar Theatre Bharati park shivar garden	3.1	3	12	10--12	2--3	8	5:45 5:32	2:12 1:57	4	4.5	8	682.8
20.	22	Mira road stn. (E) to shanti vidya nagari via jain mandir vijay park silver park	4.4	4	18	18-20	2--3	11	6:06 5:47	2:10 1:37	4	4.5	12	899.2
21.	23	Bhayandar stn. (E) to via Ghodev naka indralok Mira road stn. (E) Royal college	15	2	31	60	5	20	6:10	20:38	4	6	4	462
22.	24	Mira road stn. (E) to western park	5.7	2	19	17-20	2--3	20	6:00 6:20	23:05 23:06	4	5	5	463.3
23.	27	Bhayandar stn. (W) to Bhiwandi via Majiwada	46.9	2		120	5	120	7:15	16:30	4	28	4	388
24.	30	Bhayandar stn. (W) Shirsadh Phata	36.5	2		90	5	90	7:00 8:30	19:00 20:30	4	17	4	598.8

- **Traffic Congestion:** Mira Bhayandar which is part of thane district is located at the northern threshold of the greater Mumbai. this area which has been identified as one of the growth centers around Mumbai is well connected with the metropolis by suburban commuter rail and Mumbai Ahmadabad national highway. The total length of roads in Mira Bhayandar region covers 297 km of which 159.2 Km. bitumen surface and 173 Km of Cement Concrete pathways. The roads are classified as follows:
  - ✓ Primary road > 12 M
  - ✓ Secondary road 6-12 M
  - ✓ Tertiary road <6M

- **Primary**

  Strategic roads. These provide for major traffic movement between centres of population and economic activity on a national and regional level.

  Main roads or primary streets

  Within urban boundaries these link traffic from strategic roads to residential streets or industrial roads. They include 'arterial' through routes and mixed-use, multi-functional 'high streets' (at least in part along their length), providing access to properties as well as other amenities. Likely to be public transport routes they require a careful balance of place and movement when improving or connecting into with new development.

- **Secondary**

  Residential streets

  Provide access to properties and through routes within a residential area. As secondary connectors they are much less likely to be public transport routes.

  Industrial roads

  Link multi-functional industrial/commercialpremises andassociated parking and service areas to main or strategic roads. When within urban boundaries some elements of Designing Streets may be applied, dependent on context and an assessment of future adaptability, but the balance is towards vehicle movement.

- **Tertiary**

  Other routes, not for motor vehicles include:
  - ✓ Footways: A pedestrian route that adjoins a carriageway.
  - ✓ Footpaths: A pedestrian route not adjoining a carriageway.
  - ✓ Cycleways: A cyclist route that adjoins a carriageway.
  - ✓ Cycletrack: A cyclist route not adjoining a carriageway

Shared surfaces: Low trafficked single level street that serves a range of user types, normally limited to residential streets where traffic speeds do not exceed 10 mph.

Mira Bhayandar has well connected networks of roads and fly over designed to cater to the ever-increasing number of vehicles and public transport. The only major road Chhatrapati Shivaji MaharajMarg (popularly known as kashimira road) connecting bhayander, Mira road and finally the western Mumbai Ahmedabad N.H.NO 8at kashimira naka is of total length of 3.80kmand width 45 mtr. This road has been developed (started functioning in 2003) by MBMC. At present kashimira road has become the prime road in MBMC area bearing heavy traffic.at the end of this road, in the east there is fly over on western railway track to connect west part of mira bhjayander up to uttan. Connecting to this road, the road from subhash chancdra Bose Maidan up to uttan which was in possession of state public works department is now handed over to MBMC. The work of developing uttan and Jessal Park-Ghodbundear road is being carried out by MMRDA with their own funds. the total road from Nnh-8 including fly –over up to uttan is only road to famous "Essel World" the recreation centre and sea side villages of uttan, chowk within in MPCB limits. The above road projects will help in ease the traffic on the already congested existing roads. The construction of the road connecting Bhayandar and Dahisar will provide on easy entry/ exit route to Mumbai from Mira Bhayandar Municipal Corporation limits. This will provide alternate route connecting NH No. 8 and act as ring route as well. There is also passed the Metro Project from Dahisar to Bhayander. These proposed projects will help in decongest and allow smooth flow of traffic. To cater the increasing traffic on Mira Bhayandar main road using ring route project, the work of proposed 11road has been completed to carter the traffic congestion in the city. due to close proximity to brihan Mumbai the Mira Bhayandar municipal corporation is experiencing rapid urban growth where in large quantity of new areas is being developed. Hence it becomes much necessary to construct the D.P. roads in such area. The corporation has prepared detailed project report of stage I roads amounting Rs 108.25 Cr

6.5 FIRE BRIDGE AND EMERGENCY SERVICE CENTER

MBMC fire bridge and emergency service center is functioning 24 hrs for benefit of the citizens. The department is always working to avoid deaths during accidents and naturals calamities. to make citizens more alert during such situation they are giving primary training by arranging demonstration programs in school, colleges, police station etc. the department is not only working for Mira Bhayandar but also helping the regions nearby. presently there are 7 fire brigade station at Bhayandar (W), silver park, Mira road and uttan Bhayandar (W) , Maheshwary Bhavan , Bhayandar (W) , Kanakaiya Fire Station , Mira Road (E) , Navghar Gaon , Shankar Narayan College opp Water Tank Near Bhayandar (E) are working & Darvesh Fire Station , Near Dahisar Check Naka are in progress .

Fire Fighting Station

Sr No	No of firefighting station	
1	1.Bhayander west 2. Silver park -Mira Road 3.Uttan –Bhayandar (W) 4. Navghar Gaon , Shankar Narayan College opp water tank nr Bhayandar (E) 5. Maheshwary Bhavan , Bhayandar (W) 6. Kankaiya Fire Station , Mira Road (E) 7.Darvesh Fire Station , Near Dahisar Check naka .	Work in process
2	No Of Fire –Fighting Employees	
	A Chief Fire Officer	01
	Sub-Station Officer	08
	Leading Fireman	11
	Driver Operator	12
	Driver	08
	Fireman	31
	Sweeper	08
	Labor	04
3	No Of Fire Fighting Vehicles	
	Water tender	09
	Rescue Tender	01
	Bolero Jeep	02
	Ambulance	01
	Pick Up	02
	T.T.L	01
	Mini Water tender	02
	Water Tanker	02
	68 Mtr TTL Vehicle	01(Work order has been given)
	90 Mtr ALP Vehicle	01 (In Tendering Process)

Fire Fighting Services

- **Their Training Programs :**
  - Various training program are attended time to time arranged by "district disaster management and state fire training center."
- **Safety measures following by the officials:**
  - Arrangement of MOCK drill for the awareness of public at various public places ,school , colleges etc
  - Every year during fire service week fire department arranges slides show in residential area and fire vehicle rally program in Mira Bhayandar corporation area
  - Issues NOC's for high rise building and for the various business according fire and safety measure given in N.B.C and Maharashtra fire prevention and life safety measure Act – 2006Training programs

6.6 HEALTH AND MEDICAL FACILITIES

Family health survey has been conducted by 10 health care centers from health department of MBMC. This survey has been conducted mainly in slum areas of Municipal Corporation

Birth and death centre of MBMC is working according to birth death registration rule 1969 Maharashtra birth death. registration rule 2000 and Mumbai regional municipal corporation rule 1949 under section 263 to 271.MBMCs new and advanced public care centre has been started on 31.01.05 this centre issues birth and death certificates. The survey covers total 5801 families and about 1, 55.906 population. The main purpose of this medicals camp was to provide

essential data on health and family welfare for policy and program purpose. Vaccination programs conducted per month by MBMC.

Table No. 7.3 Malaria & Dengue cases reported in 2016

Disease	Private Hospital		Municipal Health Care Centre	
	No. of Patient	Mortality Rate	No. of Patient	Mortality Rate
Dengue cases	11	0	22	2
Malaria cases	313	1	244	-

Table No. 7.3 Malaria & Dengue cases reported in 2017

Disease	Private Hospital		Municipal Health Care Centre	
	No. of Patient	Mortality Rate	No. of Patient	Mortality Rate
Dengue cases	540	-	23	-
Malaria cases	378	-	179	-

10 Health centers and 02 hospitals are in operations under health dept. of MBMC. Further as per Bombay nursing Home Regulation Act 1949, 164 private hospitals and as per Maharashtra municipal corporation act 1949, 756 private clinics, pathology, diagnostic center are registered.

Health care program report 2016-17

Month	No. of Health Care Program Scheduled			No. of Health care programs Conducted			No. of Health care program cancelled		Reason for cancellation of Health care Program
	In house	External	Total	In house	External	Total	In house	External	
Apr-16	44	228	272	44	228	272	-	-	-
May-16	44	228	272	44	228	272	-	-	-
Jun-16	44	228	272	44	228	272	-	-	-
Jul-16	46	232	278	46	232	278	-	-	-
Aug-16	51	214	265	51	214	265	-	-	-
Sep-16	47	223	270	47	223	270	-	-	-
Oct-16	46	221	267	46	221	267	-	-	-
Nov-16	45	221	266	45	221	266	-	-	-
Dec-16	45	224	269	45	224	269	-	-	-
Jan-17	41	223	264	41	223	264	-	-	-
Feb-17	46	220	266	46	220	266	-	-	-
Mar-17	52	235	287	52	235	287	-	-	-
Total	551	2697	3248	551	2697	3248	0	0	0

Sr. No.	Details	Total number
1.	Description of Health Surveys/ camps Conducted during this year & a brief description about it.	Health Survey of 100 nearby houses was conducted. If any person having fever is found, his blood sample is transferred to the Health Care Centre for checking.
2.	No. of Government Hospitals	01 (Bharat Ratna Indira Gandhi Hospital with the facility of 50 Beds)
4.	No. of Dispensaries	09 Municipal Health Care Centers
5.	No. of Maternity Hospitals	Nil
6.	No. Pathology Lab	1
7.	No. Veterinary Hospitals	Nil
8.	No. Ambulance	4
9.	No. Blood bank	1
10.	No. Medical Store /Centre	Nil
11	No. Facility of Mortgage Houses	2
12.	Other emergency facilities	Municipality Hospital has started maternity home having facility for cesarean Surgery
14.	Hospital Waste Management	Bio-medical Waste generated in hospitals , health care centers & dispensaries is disposed by M/s. Enviro Vigil

Vaccination Program for the Year 2016-2017

Month	Health Care Program Scheduled		
	In-house	External	Total
Apr-16	44	228	272
May-16	44	228	272
Jun-16	44	228	272
Jul-16	46	232	278
Aug-16	51	214	265
Sep-16	47	223	270
Oct-16	46	221	267
Nov-16	45	221	266
Dec-16	45	224	269
Jan-17	41	223	264
Feb-17	46	220	266
Mar-17	52	235	287
Total	**551**	**2697**	**3248**

- **City Sanitation Plan:** The national urban sanitation policy (NUSP) is announced by the ministry of urban development (MOUD) government of India (GOI) in august 2008. The overall goal of the NUSP is to make all Indian cities totally sanitized healthy and livable for all citizens especially the urban poor. In pursuance of the policy, GOI is supporting cities to develop city sanitation plans. The Mound has also formulated service level benchmark (SLB) in four areas of service delivery

- **viz:**

✓ Water supply (was)
✓ Solid waste management (SWM)
✓ Sewerage and sanitation (SS)
✓ Storm water drainage (SWD)

The water supply and sanitation department (WSSD) government of Maharashtra (GOM) submitted proposal for preparation of city sanitation plan (CSP) under NUSP , for 23 municipals corporation in the Maharashtra state to the MOUD ,GOI in march 2010 . accordingly, the MOUD, GOI accorded sanction to the preparation of the CSP for 19 corporations vide GOI order dated – 30th march 2010.the WSSP, GOM communicated to the MBMC to prepare CSP under NUSP vide8MBMC City sanitation plan government letter no CSP 2010/CR49/WS-21 dated 13thApril 2010. It was also communicated to MBMC about the self-government (AIILSG), Mumbai for the capacity building of the municipal corporation for the preparation of CSP under NUSP.

Taking into consideration the demography and the economic activities of MBMC the four-element mentioned above are include in the CSP.

As per the 74thconstitutional amendment the ULBs are responsible for providing best sanitation water supply service to its citizen. Accordingly, MBMC is committed to provide best sanitation and water supply service to its citizen.

The 13th finance commission has made it mandatory for all the state to publish in the government gazette prior to each financial year the status of the above service level bench marks and the targets to be achieved by the urban local bodies for the next financial year for being eligible for the performance grant. The water supply and sanitation program “sujal nirmal abhiyan” 2010-2011 vide GR dated 12th October 2008 and for universal access “water at door step and toilet in house “program vide GR dated 19thJune 2010.

- **OBJECTIVE :** Taking into consideration the vision of MBMC as well as the definition of sanitation the objectives are as follows: -

a) Achieving zero garbage city status.
b) A good network of storm water drainage.
c) Providing safe , sufficient , sustainable and equitable drinking water to all citizens
d) Improving the environmental status of the city.
e) Operational and maintenance of all sanitary installations and water supply schemes for sustainability of water supply and sanitation services.
f) Providing safe , sufficient , sustainable and equitable drinking water to all citizens
g) Improving the environmental status of the city.
h) Operational and maintenance of all sanitary installations and water supply schemes for sustainability of water supply and sanitation services.
i) Setting the standard of the civic discipline

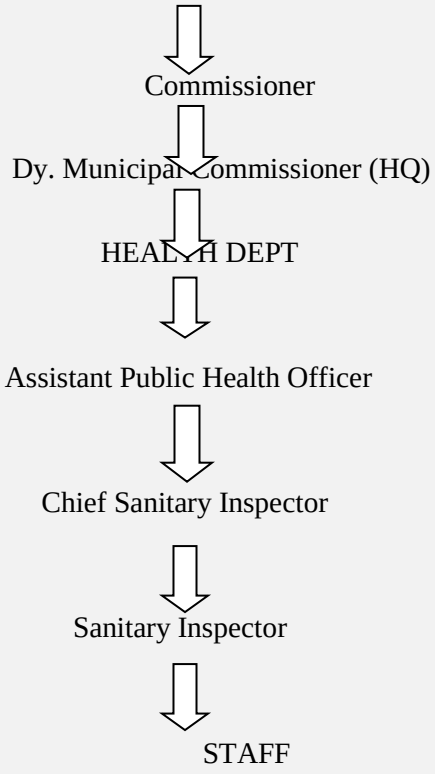
- **Roles and Responsibilities Of MBMC:** The 74th constitutional amendment encourages development planning by adopting bottom up approached through constitution of ward committees, district planning committees and metropolitan planning committees. The devolution of functional responsibilities has been specified in the 12th schedule under article 243-W as details below.

  - Slum improvement and up gradation.
  - Urban poverty alleviation.
  - Provision of urban amenities and facilities such as parks garden playgrounds
  - Promotion of cultural educational and aesthetic aspects.
  - Burials and burial grounds, cremation, cremation ground and electric crematoriums.
  - Cattle pound : prevention of cruelty to animals
  - Vital statistics including registration of births and deaths.
  - Public amenities including street lighting , parking lots , bus stops and public conveniences
  - Urban planning including town planning
  - Regulation of land use and construction of building
  - Planning for economic and social development
  - Roads and bridges
  - Water supply for domestics industrial and commercial purpose
  - Public health , sanitation conservancy and solid waste management
  - Fire services
  - Urban forestry, protection of environment and promotion of ecological aspects.
  - Safeguarding the interested of weaker section of society, including the handicapped and mentally retarded.
  - Regulation of slaughter houses and tanneries.

- **To fulfill the above responsibilities the MBMC has following financial resources:**
  - Property tax
  - Local body tax (octroi/cess)
  - User charges
  - License fees
  - Development charges
  - Registration charges
  -

- **EXISTING SITUATIONS**
  - **Coverage of Toilets:** Roles and responsibilities as per the 74th constitutional amendment and as specified in the 12th schedule under article 243-W providing sanitation services to the citizen is the functional responsibility of the MBMC. The responsibility is entrusted to Dy. municipal commissioner (Head quarter) Following is the organization charts for proving the

Services to the citizen:



- **The details of the officers and the staff working under the DMC (HQ) are:**

  - ✓ Assistant public health officer 1
  - ✓ Chief sanitary inspector 1
  - ✓ Sanitary inspector 13
  - ✓ Clerks 7
  - ✓ Mukadam 47
  - ✓ Watchmen 5 (for prohibition of open defecation)
  - ✓ Workers for toilets cleaning 4
  - ✓ Suction pump worker 3

Total 81

Sr. no.	School	Total No. of School	Number of Students	Total Urinals		Number of Students		Total No. of Toilet	
1	MBMC School	34	10,296	11	10	4911	5385	31	22
2	Pri. School Government Grant	20	10,534	41	41	4979	5555	29	29
3	Non Grant Govrnment School	158	62,028	338	266	32935	29049	264	268
4	Colleges	22	90,873	501	370	47126	43747	377	373
(Source:- MBMC School Sanitation Register)									

6.7 EDUCATION FACILITIES

In Mira Bhayandar literacy level of males is 89.28% and that of females is 85.53%. There are 35 primary municipal schools, 20 private governments granted 8 primaries non –granted and 150 primary non-granted schools. There are 10 unauthorized schools. There are separated scholarship and funds given to the poor student. The medium of instruction are varied from Marathi, Hindi, Gujrathi, and English. At present 202 teachers are teaching in municipal school in this corporation jurisdiction.

The important of education is most evident in developing countries. Education plays an important role in personal and social development. Education has become the basic rights of each and every individual.

List of school

Mira Bhayandar Municipal Corporation

15

Mira Bhayander Municipal Corporation					
Udise Code	School Name	Management	Low class	High class	Mobile no
27210700101	ADARSH V.M.P.S,RAI	Govt. Aided (Pvt.)	1	4	9702056808
27210700102	ADARSH V.M.S.S,RAI	Govt. Aided (Pvt.)	5	10	9323194404
27210700111	SANT JOSEF MAR PRI SCH	Govt. Aided (Pvt.)	1	4	9823118535
27210700112	ST.JOSEF S.H.S.,UTTAN	Govt. Aided (Pvt.)	5	12	9820073879
27210700115	BELAN MULI .M.P.S.,DONGARI	Govt. Aided (Pvt.)	1	4	9881774604
27210700206	BHAYANDAR SECONDRY.M.S.SEC.,BHAYANDAR	Govt. Aided (Pvt.)	5	10	9766976661
27210700207	BHAYANDAR SECONDRY P.S.,BHAYANDAR	Govt. Aided (Pvt.)	1	4	
27210700215	J.H.P.P.G.S.,BHAYANDAR	Govt. Aided (Pvt.)	1	4	9930391585
27210700216	J.H.P.S.G.S.,BHAYANDAR	Govt. Aided (Pvt.)	5	12	9869222492
27210700217	J.H.P.P.H.S.,BHAYANDAR	Govt. Aided (Pvt.)	1	4	9930391558
27210700240	SUBODH VIDYALAY.U.P.M.S.,BHAYANDAR	Govt. Aided (Pvt.)	1	4	9764219504
27210700303	A.V.M.P.G.S.,BHAYANDAR	Govt. Aided (Pvt.)	1	4	9967330456
27210700305	A.V.M.U.P.H.S.,BHAYANDAR	Govt. Aided (Pvt.)	1	7	7738379481
27210700306	ABHINAV V MANDIR HINDI PRI SCH	Govt. Aided (Pvt.)	8	10	9619701315
27210700307	A.V.M.P.M.S.,BHAYANDAR	Govt. Aided (Pvt.)	1	4	9890846360
27210700308	A.V.M.S.M.S.,BHAYANDAR	Govt. Aided (Pvt.)	5	12	9967413556
27210700312	A.J.V.M.U.P.H.S.,BHAYANDAR	Govt. Aided (Pvt.)	1	7	9561243004
27210700313	AMAR JYOTI V MANDIR SEC SCHOOL	Govt. Aided (Pvt.)	8	10	9004250253
27210700314	BHARTIY VIDYA.U.P.H.S.,BHAYANDAR	Govt. Aided (Pvt.)	1	7	9702424601
27210700315	BHARTIY VIDYA SEC HINDI SCHOOL	Govt. Aided (Pvt.)	8	10	9702424601
27210700322	DIVHAIN HIM GUJ SEC SCHOOL	Govt. Aided (Pvt.)	8	10	8976566504
27210700325	DIVAEN.HIM.U.P.H.S.,BHAYANDAR	Govt. Aided (Pvt.)	1	7	9892676130
27210700326	DIVAEN HIM HINDI HIGH SCHOOL	Govt. Aided (Pvt.)	8	10	9833205944
27210700340	LOKMANYA V.U.P.M.S.,BHAYANDAR	Govt. Aided (Pvt.)	1	7	9004053914
27210700341	LOKAMANYA VIDYA SEC SCHOOL	Govt. Aided (Pvt.)	8	12	9730358197
27210700342	MAA.B.U.P.H.S.,BHAYANDAR	Govt. Aided (Pvt.)	1	7	9321605392
27210700343	MAA BHARTI V MANDIR SEC SCHOOL	Govt. Aided (Pvt.)	8	12	9224383027
27210700388	LALIT V NIKETAN SEC SCHOOL	Govt. Aided (Pvt.)	5	10	9819229343
27210700401	ANJUMAN YATAMA URDU PRI SCHOOL	Govt. Aided (Pvt.)	1	7	9819425470
27210700408	KAJGHI PRATMIC MRATHI MIRA R	Govt. Aided (Pvt.)	1	5	9146560574
27210700474	ROYAL GIRLS URDU HIGH SCHOOL	Govt. Aided (Pvt.)	8	10	9867277402
27210700505	GRAMIN VIDALIYE MIRE.U.P.S., KASHI	Govt. Aided (Pvt.)	1	7	9766091867
27210700511	NITIYANAND.P.U.P.H.S.,KASHI	Govt. Aided (Pvt.)	1	7	9322620537
27210700516	RAJA SHIVAJI VIDALYE SEC KASHI	Govt. Aided (Pvt.)	5	10	9820711158
27210700531	ADARSH VIDYA NIKETAN SEC SCH	Govt. Aided (Pvt.)	8	10	9224214219
27210700554	ROYAL COLLEGE OF ARTS MIRA ROAD PENKAR PADA	Govt. Aided (Pvt.)	11	12	9819163766
27210700561	ROYAL URDU PRIMARY SCHOOL	Govt. Aided (Pvt.)	1	7	9930591252
27210700618	ADARSH V.N.P MARATHI KASHI	Govt. Aided (Pvt.)	1	7	8446360472
27210700625	NATIONAL HIGH SCH HINDI SEC BHAY EAST	Partially Aided	8	12	9930004555

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Sr No.	Udise Code	School Name	Management	Low class	High class	Mobile no
1	27210700104	CHOUK MAR SCHOOL NO 11	MNC	1	7	9821209519
2	27210700105	D.P.P.S.NO.12,BHAYANDAR	MNC	1	4	9987074820
3	27210700106	M.M.U.P.S.NO.24,BHAYANDAR	MNC	1	7	9224241677
4	27210700107	M.K.G.P.S.NO.23,BHAYANDAR	MNC	1	3	9819913079
5	27210700108	MURDHA MAR SCH NO 22.	MNC	1	7	9224423701
6	27210700109	R.J.U.P.S.NO.26,BHAYANDAR	MNC	1	5	9987637716
7	27210700110	R.M.U.P.S.NO.25,BHAYANDAR	MNC	1	7	9987208536
8	27210700113	UTTAN MAR SCHOOL NO 1	MNC	1	3	9769219036
9	27210700114	UTTAN URDRU SCHOOL NO 2	MNC	1	7	9224787290
10	27210700118	MURDHA HINDI NO. 33	MNC	1	7	8879476498
11	27210700201	B.G.NO.17U.P.S.,BHAYANDAR	MNC	1	7	9821645400
12	27210700203	B.H.NO.18U.P.S.,BHAYANDAR	MNC	1	7	9167484707
13	27210700205	B.M.NO.16U.P.S.,BHAYANDAR	MNC	1	7	9987175404
14	27210700254	BHAYANDER HINDI SCH NO.30	MNC	1	7	9324737914
15	27210700255	BHAYANDER URDU SCH NO.31	MNC	1	8	9987576293
16	27210700317	B.M.U.P.S.NO.15,BHAYANDAR	MNC	1	7	9273207734
17	27210700330	G.M.S.NO.8U.P.S.,BHAYANDAR	MNC	1	7	9869902688
18	27210700338	K.G.U.P.S.NO.7,BHAYANDAR	MNC	1	7	7666952542
19	27210700339	K.M.U.P.S.NO.6,BHAYANDAR	MNC	1	7	9004782563
20	27210700350	N.U.P.H.S.NO.29,BHAYANDAR	MNC	1	7	9221251758
21	27210700351	N.U.P.M.S.NO.13,BHAYANDAR	MNC	1	7	9226810385
22	27210700409	M.R.P.G.SCHOOL NO.21	MNC	1	5	9969388724
23	27210700503	C.U.P.S.NO.10,KASHI	MNC	1	8	8087186675
24	27210700504	G.M.U.P.S.NO.9,KASHI	MNC	1	7	9930378481
25	27210700506	K.P.P.S.NO.03,KASHI	MNC	1	5	9833375139
26	27210700507	K.M.U.P.S.NO.04,KASHI	MNC	1	8	9224593598
27	27210700508	K.U.U.P.S.NO.05,KASHI	MNC	1	8	9221062231
28	27210700509	M.P.P.S.NO.19,KASHI	MNC	1	7	9224449014
29	27210700510	M.M.U.P.S.NO.20,KASHI	MNC	1	7	7738942980
30	27210700515	PENKAR PADA MAR SCH NO 14	MNC	1	8	9967447302
31	27210700517	R.B.P.S.NO.27,KASHI	MNC	1	3	
32	27210700523	V.P.S.NO.28,KASHI	MNC	1	5	9029737645
33	27210700538	MBMC URDU NO. 32	MNC	1	8	9172207108
34	27210700539	MBMC URDU NO. 34	MNC	1	8	9870305044
35	27210700615	MBMC SCH NO. 35 DACHKULPADA	MNC	1	2	9029551460

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Mira Bhayander Municipal Corporation						
Sr No.	Udise Code	School Name	Management	Low class	High class	Mobile no
1	27210700116	AMACH GHAR SHCOOL	Unaided	1	7	9960218865
2	27210700117	ROYAL ENG SCHOOL UTTAN	Unaided	1	7	9892274536
3	27210700123	ROYAL ENG SEC HIGH UTTAN	Unaided	8	10	9960320220
4	27210700126	ST.ANDREW PRI ENG S UTTAN	Unaided	1	7	7588459903
5	27210700129	RAM RATNA VIDYAMANDIR	Self Financ	5	12	7506339101
6	27210700210	CARMALIT CANVANT.U.P.E.S.,BHAYANDAR	Unaided	1	7	9096629543
7	27210700211	DISALVA' U.P.E.S.,BHAYANDAR	Unaided	1	7	9820458827
8	27210700213	J.H.P.P.E.S.,BHAYANDAR	Unaided	1	4	
9	27210700214	J.H.POTDAR SEC SCHOO ENG	Unaided	5	10	9960059853
10	27210700222	M.V.M.U.P.H.S.,BHAYANDAR	Unaided	1	7	8898839389
11	27210700224	MOUNT MARRY.P.E.S.,BHAYANDAR	Unaided	1	7	9820304265
12	27210700225	MOUNT MERRY SEC SCHOOL	Unaided	8	10	9322098421
13	27210700230	HOUR LADY OF NAZRETH SEC SCH	Unaided	8	12	9892658168
14	27210700233	RUBINA ACAD.P.E.S.,BHAYANDAR	Unaided	1	7	9819916255
15	27210700234	KARME LIGHT ENG SEC	Unaided	8	10	09096629543
16	27210700237	ST.X.U.P.E.S.,BHAYANDAR	Unaided	1	7	9867603908
17	27210700238	ST. ZEVIYAR SEC SCHOOL	Unaided	8	10	
18	27210700245	THE CARNESHAN ENG SCHOOL	Unaided	1	7	8446966090
19	27210700249	MANJUL VIDYA MANDIR SEC HINDI	Unaided	8	10	
20	27210700268	SUBODH VIDYALAY SEC MARATHI BHY WEST	Unaided	8	10	9869707263
21	27210700269	LALIT VIDYA NIKETAN BHA EAST	Unaided	1	4	
22	27210700309	ADARSH VIDIYA NIKETAN.P.E.S.,BHAYANDAR	Unaided	1	7	9920065619
23	27210700316	BLOSSOM .U.P.E.S.,BHAY EAST	Unaided	1	7	9892901631
24	27210700319	DIVE DROP.U.P.E.S.,BHAYANDAR	Unaided	1	7	9892443231
25	27210700320	DIVE DROP.U.P.H.S.,BHAYANDAR	Unaided	1	7	9819832923
26	27210700321	DIVHAIN HIM ENG SEC BHAI EAST	Unaided	8	10	9869486228
27	27210700324	DIVAIN HIM ENG SCHOOL	Unaided	1	7	9892676130
28	27210700327	DON BOSCO PUBLIC U.P.E.S.,BHA EAST	Unaided	1	7	9920581010
29	27210700331	HOLY CROSS PRI ENG SCH	Unaided	1	7	9821729344
30	27210700335	J.&M.U.P.E.S.,BHAYANDAR	Unaided	1	7	9769484041
31	27210700336	K.B.N.U.P.E.S.,BHAYANDAR	Unaided	1	7	
32	27210700344	MAYKAR COVENT.U.P.E.S.,BHAYANDAR	Unaided	8	10	8454989899
33	27210700345	MOTHER MARYS.U.P.E.S.,BHAY EAST	Unaided	1	7	9867725938
34	27210700348	NATIONAL U.P.E.S.,BHAYANDAR	Unaided	1	7	9930004555
35	27210700349	NATIONAL U.P.H.S.,BHAYANDAR	Unaided	1	7	9930004555
36	27210700353	N.C.P.H.S.,BHAYANDAR	Unaided	1	7	9224523099
37	27210700354	NEW MODERN.P.E.S.,BHAYANDAR	Unaided	1	7	9867448440
38	27210700355	OM SWAMI VIVEKANANAD.U.P.E.S.,BHAYANDAR	Unaided	1	7	9892443231
39	27210700357	OM SWAMI VIVEKANAND U.P.H.S.,BHAYANDAR	Unaided	1	7	9892443231
40	27210700358	OM SAI VIVEKANAD SEC HINDI SCH	Unaided	8	10	9892443231
41	27210700362	PAMS U.P.E.S.,BHAY EAST	Unaided	1	7	9820451095
42	27210700365	R.V.N.U.P.H.S.,BHAYANDAR	Unaided	1	7	9892760907
43	27210700366	RAHUL V NIKETAN SEC HINDI SCH	Unaided	8	10	9892760907
44	27210700368	SHREE SAI BABA.P.H.S.,BHA EAST	Unaided	1	7	9920581010
45	27210700369	SARSWATI PRI ENG SCHOOL	Unaided	1	4	9820209880
46	27210700370	NEW CAMBRIDGE HIGH SCHOOL BHA EAST	Unaided	8	10	9224523099
47	27210700373	ST.AGNES.U.P.E.S.,BHAYANDAR	Unaided	1	7	7738763002
48	27210700374	ST AGNES ENG SEC SCHOOL BHA	Unaided	8	10	7738763002
49	27210700377	ST.S.U.P.E.S.,BHAYANDAR	Unaided	1	7	9323134894
50	27210700378	ST SOLDIER SEC SCHOOL	Unaided	8	10	
51	27210700380	DIVAEN IMAGE HIGHSCHOOL	Unaided	1	7	9867000120
52	27210700383	R K MEMORIAL ENG PRI SCHOOL	Unaided	1	7	9870475844
53	27210700384	RAHUL ENG SCHOOL	Unaided	1	7	9930816716
54	27210700385	INDIAN KEBRIG SHOOL	Unaided	1	7	9699994641
55	27210700390	ADRASHA VIDYA NIKETAN ENG SEC	Unaided	8	10	7045556687

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56	27210700392	ADARSHA VIDYA NIKETAN HINDI	Unaided	1	7	9833398559
57	27210700393	SHREE SAI BABA HINDI SEC SCH	Unaided	8	10	9920581010
58	27210700396	OXFORD ENG PRI SCHOOL	Unaided	1	7	9870733369
59	27210700402	ANJUMAN YATAMA URDU SEC SCHOOL	Unaided	8	10	9833610367
60	27210700405	H.C.U.P.E.S.,MIRA ROAD(E.)	Unaided	1	4	9822072779
61	27210700406	HOLLY CROSS CON.E.S.,MIRA ROAD(E.)	Unaided	5	10	
62	27210700412	NL.DALMIYA.P.E.S.,MIRA ROAD(E.)	Unaided	1	4	9022622506
63	27210700413	NL DALMIYA.S.E.S.,MIRA ROAD(E.)	Unaided	5	10	9819589232
64	27210700423	SARDAR VALABHBHAI .P.P.E.S.,MIRA ROAD(E.)	Unaided	1	4	
65	27210700430	ST.AUGASTIN .P.E.S.,MIRA ROAD(E.)	Unaided	1	7	9321279972
66	27210700432	ST JOSEPH.U.P.S.,MIRA ROAD(E.)	Unaided	1	7	
67	27210700434	OXFORD ENG HIGH SCHOOL	Unaided	8	10	9892443705
68	27210700436	ST POAL ENG PRI SCHOOL	Unaided	1	7	
69	27210700437	ST POAL SEC.E.S.,MIRA ROAD(E.)	Unaided	8	10	
70	27210700439	ST.X.U.P.E.S.,MIRA ROAD(E.)	Unaided	1	7	8652793898
71	27210700440	ST ZEVAAARSH SEC SCHOOL	Unaided	8	10	8652793898
72	27210700441	COSMOPOTITIN SCHOOL,MIRA ROAD	Unaided	1	7	9920623812
73	27210700442	SHARADA VIDYALAYA PRI. SCHOOL	Unaided	1	7	9994825420
74	27210700444	G.S. JANGID MEMORIAL	Unaided	1	7	9987755876
75	27210700446	SHARADA VIDYALAYA SEC MAR SCH	Unaided	8	12	9967464081
76	27210700451	KASMOPOLITIN HIGH SCHOOL	Unaided	8	10	9920623812
77	27210700456	SARSWATI SEC SCHOOL	Unaided	8	10	
78	27210700461	DON BASKO HIGHSCHOOL	Unaided	1	7	9819831029
79	27210700462	SARDAR VALLBHAI PATEL HIGHSC	Unaided	5	10	
80	27210700464	JAYANT DATTA HIGHSCHOOL	Unaided	8	10	9860295883
81	27210700466	NOORJAHAN URDU PRI SCHOOL	Unaided	1	7	9930901499
82	27210700471	SAI MANGALAM PRI ENG SCHOOL	Unaided	1	7	9869771020
83	27210700472	RELIVENT PRI HINDI SCHOOL	Unaided	1	7	9930296766
84	27210700473	INDIYAN HIGH SCHOOL	Unaided	1	7	9820770089
85	27210700481	SWAMI DYANAND PRI SCHOOL	Unaided	1	7	9594508896
86	27210700486	VIDYA SAGAR SCH	Unaided	1	7	9920321086
87	27210700487	S.M.PUBLIC SCHOOL	Unaided	1	7	9029069669
88	27210700494	SWAMI DAYANAND HINDI HIGH SCHOOL KASHI	Unaided	1	7	9594976540
89	27210700497	SHARDHABAN PRANJEEVAN BAI ENG SCHOOL	Unaided	1	7	8108442900
90	27210700498	BRIGHT INTERNATIONAL SCHOOL	Unaided	8	10	9820444298
91	27210700499	INDIAN HIGH SCHOOL SECONDRY	Unaided	8	10	9520770089
92	27210700512	NITYANAND.P.S.H.S.,KASHI	Unaided	8	10	9221210791
93	27210700518	RAJA SHIVAJI PRI MARATHI SCH	Unaided	1	4	9821778426
94	27210700520	ST.MARYS.U.P.S.,KASHI	Unaided	1	7	9699153130
95	27210700522	TRINITY ENG P.S.,KASHI	Unaided	1	7	9820951503
96	27210700524	PREMA LAXMAN VIDYALAY MAR PRI	Unaided	1	7	9221024405
97	27210700525	SAI VIDYA NIKETAN SEC MAR SCH	Unaided	8	10	8286783161
98	27210700528	ST, XEVIOR SCH PRI	Unaided	1	7	9987155003
99	27210700530	CH. SHAHOO MAHARAJ SEC SCH	Unaided	8	10	9869335747
100	27210700532	ST MERRYJ SEC SCHOOL	Unaided	8	10	9833623889
101	27210700537	SWAMI DYANAND HIGH S. K.G.	Unaided	8	10	8425830033
102	27210700543	SANTHOME PUBLIC SCHOOL	Unaided	1	7	9969599535
103	27210700545	RELEVANT PUBLIC H SEC	Unaided	8	10	9773572323
104	27210700550	R B K GLOBAL ENG SCH MIRA E	Unaided	1	7	9223600750
105	27210700553	TAPOVAN VIDHYALAY ENG SC BHA EAST	Unaided	1	6	9820950286
106	27210700564	WESTERN ENGLISH SCHOOL	Self Financ	1	6	9867919142
107	27210700601	ADARSH V NIKETAN HINDI PRI SCH	Unaided	1	7	9920065619
108	27210700602	DIVHAIN HIM PRI GUJ SCHOOL	Unaided	1	7	9633206766
109	27210700605	K B NARAVAT HINDI SEC SCHOOL	Unaided	8	10	
110	27210700606	JACK & JILL PRI SCHOOL	Unaided	1	7	7666884021
111	27210700607	RAHUL ENG SEC SCHOOL	Unaided	8	10	9930816716
112	27210700608	NEW MODARN ENG SCHOOL	Unaided	8	10	9323756231
113	27210700609	NARMADA MEMOREEL SEC ENG SCH	Unaided	8	10	9004940089
114	27210700611	INDIAN KRABRIJ HINDI SEC SCH	Unaided	8	10	9699994641
115	27210700621	ADARASH V N SEC HINDI BHAYANDAR	Unaided	8	10	9833398559

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Sr No.	Udise Code	School Name	Management	Low class	High class	Mobile no
1	27210700119	ROSENEIL HIGH ENGLIEH SCHOOL BYA WEST	P Unaided	8	10	9819242499
2	27210700120	ST VINCENT DE PAUL HIGH ENG BYA WEST	P Unaided	8	10	9930930785
3	27210700121	THE DON BOSCO SCHOOL,SHIV SENA G BHA (WEST)	P Unaided	1	7	9892348842
4	27210700124	ROYAL ENG SECONDARY SCH. BHAYANDAR(E)	P Unaided	8	10	7083149660
5	27210700125	K S MAHETHA COLLEGE SCHOOL	P Unaided	11	12	9892421835
6	27210700127	REENA MEHTA HIGH SCH & COLLEGE BHA WEST	P Unaided	8	12	9920392119
7	27210700128	HOLY CROSS HIGH SCHOOL BHAYANDAR WEST	P Unaided	8	10	9867913296
8	27210700130	RAM RATNA INTERNATIONAL SCHOOL	P Unaided	1	7	8879660890
9	27210700131	RAM RATNA INTERNATIONAL SEC SCHOOL	P Unaided	8	10	8879660890
10	27210700208	BISHAP.U.P.E.S.,BHAYANDAR WEST	P Unaided	1	7	9821475962
11	27210700209	BISHAP SEC SCHOOL	P Unaided	8	10	9821475962
12	27210700212	DISALVA'.S.E.S.,BHAYANDAR	P Unaided	8	10	98202458827
13	27210700219	ROSENILE PRI ENG SCHOOL	P Unaided	1	7	9819242499
14	27210700223	MYRTLES.U.P.E.S.,BHAYANDAR	P Unaided	1	7	8446123067
15	27210700227	NIRMALA NIKETAN PRI ENG SCHOOL	P Unaided	1	7	9821198883
16	27210700228	NIRMALA.N.U.P.E.S.,BHAYANDAR	P Unaided	8	10	9821198883
17	27210700229	O.L.O.N.U.P.E.S.,BHAYANDAR	P Unaided	1	7	
18	27210700231	O.L.O.V.P.E.S.,BHAYANDAR	P Unaided	1	4	9819149992
19	27210700232	HOUR LADY OF VELANKANI SEC SCH	P Unaided	5	12	9819149992
20	27210700235	REENA MEHTA PRI SCH BHAYANDAR WEST	P Unaided	1	7	9920392119
21	27210700239	ST VINCENT DE PAUL.U.P.E.S.,BHAYANDAR	P Unaided	1	7	9930930785
22	27210700242	T.D.B.U.P.E.S.,BHAYANDAR	P Unaided	1	7	9324261027
23	27210700243	THE BOSKO SEC SCHOOL	P Unaided	8	10	9821332438
24	27210700246	MATRALS SEC HIGHSCHOOL	P Unaided	8	10	8446123067
25	27210700257	HOLY CROSS PRI SCHOOL BHA WEST	P Unaided	1	7	9821729344
26	27210700260	GRACIOUS ENG SCH.BYA EAST	P Unaided	1	7	9892053114
27	27210700261	S.L. PORWAL PRI SCH	P Unaided	1	7	9029285183
28	27210700262	S.L. PORWAL SEC SCH	P Unaided	8	10	9029285183
29	27210700263	HOLY ANGELS .E .PRI	P Unaided	1	7	9322883797
30	27210700264	HOLY ANNGEL E.SEC	P Unaided	8	10	9322883797
31	27210700267	ST.JOSEPHS PRI ENG S UTTAN	P Unaided	1	7	9930800593
32	27210700270	SANKAR NARAYAN JUNIAR COLLG BHA EAST	P Unaided	11	12	8108652100
33	27210700271	ST ALOYSIUS ENGLISH PRI SCHOOL BHAYANDER EAST	P Unaided	1	7	7738763002
34	27210700272	ST ALOYSIUS ENGLISH SEC SCHOOL BHAYANDER EAST	P Unaided	8	10	7738763002
35	27210700273	S B S MEMORIAL HIGH SCHOOL (ENGLISH)	P Unaided	8	10	9819654538
36	27210700274	S B S MEMORIAL HIGH SCHOOL (HINDI)	P Unaided	8	10	9819654538
37	27210700275	MOTHER TERESA HIGH SCHOOL PRIMARY	P Unaided	1	7	9833688608
38	27210700276	NARMADA MEMORIAL HIGH SCHOOL	P Unaided	1	7	9004940089
39	27210700277	MOTHER MARYS JR COLLEGE	P Unaided	11	12	9820149002
40	27210700301	A.V.M.P.E.S.,BHYANDAR	P Unaided	1	4	8097363030
41	27210700302	A.V.M.S.E.S.,BHAYANDAR	P Unaided	5	10	9967899866
42	27210700310	A.J.V.M.U.P.E.S.,BHAYANDAR	P Unaided	1	7	9702291289
43	27210700311	AMAR JYOTI V MANDIR SEC SCHOOL	P Unaided	8	10	
44	27210700318	MOTHER TERESA HIGH SCHOOL	P Unaided	8	10	9833783946
45	27210700323	BLOSAM SEC ENG SCHOOL	P Unaided	8	12	9892901631
46	27210700328	FATHER.JOSEF.U.P.E.S.,BHAYANDAR	P Unaided	1	7	9819661887
47	27210700329	FATHER JOSEPH SEC ENG SCHOOL	P Unaided	8	10	9049068490
48	27210700332	HOLY CROSS HIGH SCHOOL	P Unaided	8	10	9860448179
49	27210700334	I.I.U.P.E.S.,BHAYANDAR	P Unaided	1	7	9699994641
50	27210700337	K.B.N.U.P.H.S.,BHAYANDAR	P Unaided	1	7	9820721119
51	27210700346	MATHOR MERRYJ SEC SCHOOL	P Unaided	8	10	9867725938
52	27210700352	NEW KEBRU PRI ENG SCH	P Unaided	1	7	8108220010
53	27210700363	PAYAS BUDS.U.P.E.S.,BHAYANDAR	P Unaided	1	7	
54	27210700364	PAYAS BADAS SEC SCHOOL	P Unaided	8	10	8898310039
55	27210700367	ROYAL PRI ENG SCH BHA EAST LOKMANIYE	P Unaided	1	7	9167978301
56	27210700372	SARWATI VIDYA SEC ENG SCHOOL	P Unaided	5	10	8689962223
57	27210700375	ST.FRANCIS.U.P.E.S.,BHAY EST	P Unaided	1	4	9969061444
58	27210700376	ST FRANCIS.S.E.S.,BHAYANDAR	P Unaided	5	10	
59	27210700381	DEVHAIN EMAGE SEC SCHOOL	P Unaided	8	12	9867000120
60	27210700382	DON BOSCO PUBLIC SEC S BHA EAST	P Unaided	8	10	9920581010
61	27210700386	HOLY TRINITI PRI SCH	P Unaided	1	7	9699665019
62	27210700394	MAYEKAR CONVENT SCHOOL	P Unaided	1	7	8454989899
63	27210700395	JIJAS & MERRYJ SEC SCHOOL	P Unaided	8	10	8454989899

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64	27210700399	S M PUBLIC SEC HIGH SCHOOL KHARI	P Unaided	8	10	9029569669
65	27210700403	BANEGAR U.P.E.S.,MIRA ROAD(E.)	P Unaided	1	7	9820049267
66	27210700404	BANEGAR ENG SEC HIGH SCHOOL	P Unaided	8	10	9967992747
67	27210700407	HOLLY FAMAILY DAY ENG PRI MIRA R	P Unaided	1	7	8451838988
68	27210700410	N.H ACADEMY PRI ENG SCH	P Unaided	1	7	9869309613
69	27210700411	N.H. ACADEMY PRIENG HIGHSCHOOL	P Unaided	8	10	9869309613
70	27210700414	QUEEN MERRY,U.P.E.S.,MIRA ROAD(E.)	P Unaided	1	7	9320134806
71	27210700415	QUEEN MERIS ENG HIGHSCH MIRA R	P Unaided	8	10	
72	27210700416	R.K.U.P.E.S.,MIRA ROAD(E.)	P Unaided	1	7	9819897725
73	27210700417	ROYAL GIRLS ENG PRI SCH MIRA ROAD	P Unaided	1	7	9819183234
74	27210700418	THE RAVAL INTERNATIONAL SCHOOL PRI	P Unaided	1	7	9920304134
75	27210700419	L P RAVALSEC & COLLEGE MIRA R	P Unaided	8	12	9920304134
76	27210700424	SYMBIOSIS U.P.E.S.,MIRA ROAD(E.)	P Unaided	1	7	9222046951
77	27210700425	SINBAYASIS SEC ENG SCHOOL	P Unaided	8	10	9222046951
78	27210700426	SHANTI N.U.P.E.S.,MIRA ROAD(E.)	P Unaided	1	4	
79	27210700427	SHANTI NAGAR SEC SCHOOL	P Unaided	5	10	9923901181
80	27210700428	ST.ANDREWS.P.E.S.,MIRA ROAD(E.)	P Unaided	1	7	
81	27210700431	ST HARISE PRIM HIGH SCHOOL	P Unaided	1	7	
82	27210700433	ST.JUDS U.P.E.S.,MIRA ROAD(E.)	P Unaided	1	7	7666290071
83	27210700435	ST.LOUIS U.P.S.,MIRA ROAD(E.)	P Unaided	1	7	9222046951
84	27210700438	ST.THAMS U.P.E.S.,MIRA ROAD(E.)	P Unaided	1	7	
85	27210700443	ST.M.TERESA PRI. SCHOOL	P Unaided	1	7	9869182511
86	27210700445	ST. HARIS HIGH SCHOOL SEC SCH	P Unaided	8	10	9869440688
87	27210700449	ST.ANTHONI ENG HIGH SCHOOL	P Unaided	1	7	9820707722
88	27210700450	ST THOMAS HIGH ENG SCHOOL	P Unaided	8	10	9867862146
89	27210700452	GRESIYAS SEC HIGHSCHOOL	P Unaided	8	12	9820680717
90	27210700453	G.S. JANGID MOMORIYAL HIGH SCH	P Unaided	8	12	9987755876
91	27210700454	ST TRESA HIGHSCHOOL	P Unaided	8	10	9869182511
92	27210700455	CHRIST PRI ENG SCHOOL	P Unaided	1	7	9323125499
93	27210700457	VEDANT INTERNATIONAL HIGHSC	P Unaided	8	12	9324552919
94	27210700459	GRESIYAS PRI ENG SCHOOL	P Unaided	1	7	9820680717
95	27210700460	P.G.HORA ENG PRI SCHOOL	P Unaided	1	7	9969424878
96	27210700465	R K ENGLISH PRI SCHOOL	P Unaided	8	10	9819897725
97	27210700468	ST. JOSEPH SEC HIGH SCHOOL	P Unaided	8	10	9892718670
98	27210700469	RAMABEN KANKIYA SEC HIGHSCHOOL	P Unaided	8	12	
99	27210700478	ROZARI HIGH SCHOOL	P Unaided	1	7	9324379202
100	27210700488	ST. PETER SCHOOL	P Unaided	1	7	9867208057
101	27210700489	CHRIST ENG HIGH SCHOOL KASHI	P Unaided	8	10	9930842798
102	27210700490	ST APPOLLONIAS CON ENG SEC SCH B E	P Unaided	8	10	9221812428
103	27210700491	ST AUGUSTINS ENG HIGH SEC SCH MIRA R	P Unaided	8	10	9321279972
104	27210700492	P.G.VORA HIGH SCHOOL	P Unaided	8	10	9969424878
105	27210700493	ST.XEVIERS HIGH SCHOOL KASHIGAON	P Unaided	8	10	9987155003
106	27210700495	ST.JOHN'S HIGH SCHOOL KASHIGAON	P Unaided	1	7	8424956348
107	27210700496	MOMAI GLOBAL SCHOOL	P Unaided	1	7	9867635504
108	27210700501	B.M.S.U.P.S.,KASHI	P Unaided	1	7	9757019618
109	27210700502	B M S SEC ENG SCHOOL	P Unaided	8	12	9892350668
110	27210700519	ST.JEROM.P.S.,KASHI	P Unaided	1	7	9224476743
111	27210700526	AABID PATEL MEMO PRI ENG SCH	P Unaided	1	7	
112	27210700527	ABID PATEL MEMORIAL SHCOOL	P Unaided	11	12	9892613189
113	27210700529	TRINITY ENG SEC SCHOOL	P Unaided	8	10	9869034449
114	27210700540	ST. DOMNIC SAVIO PRI	P Unaided	1	7	9223901006
115	27210700541	SEVEN SQUARE ACADEMY	P Unaided	1	7	9321123711
116	27210700542	K.S.MEHTA HIGH SCHOOL	P Unaided	1	7	9892421835
117	27210700544	BARIGHT INTE RNATIONAL PRI SCHOOL	P Unaided	1	7	9820444298
118	27210700546	NOOR JAHAN URDU SEC SCHOOL	P Unaided	8	10	9967739433
119	27210700547	K S MAHTA SEC ENG SCHOOL KASHI	P Unaided	8	10	9892421835
120	27210700548	ST DOMINIC SAVIO SEC ENG SCHOOL KASHI	P Unaided	8	10	9223901006
121	27210700549	ST JUDES HIGH SCH SEC MIRA R	P Unaided	8	10	9022622506
122	27210700551	RELEVANT PRI ENG SCH MIRA R	P Unaided	1	7	8097323370
123	27210700552	RELEVANT SEC ENG SCH MIRA R	P Unaided	8	10	9768730426
124	27210700555	JAYANT DUTTA PRI ENG HIGH SCHOOL M.IRA ROAD	P Unaided	1	7	9029521204
125	27210700556	DON BOSKO HIGH SCHOOL SHANTI PARK(ENG)	P Unaided	8	10	9819831029
126	27210700557	ST.JOHN ENG.HIGH SCHOOL,KASHIGAON	P Unaided	8	10	9467486439
127	27210700558	ST.TREZA ENG. HIGH SCHOOL,MIRAROAD	P Unaided	1	7	9869182511
128	27210700559	AADARSH VIDYANIKETAN ENG.(PRI),KASHIMIRA	P Unaided	1	7	9224214219
129	27210700560	AADARSH VIDYANIKETAN ENG.(SEC),KASHIMIRA	P Unaided	8	10	9224214219
130	27210700562	ROYAL ENGLISH HIGH SCHOOL,DALMIYA	P Unaided	8	10	9969635345
131	27210700563	SANTHOM PUBLIC SCHOOL,MIRAROAD	P Unaided	8	10	9869739958

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132	27210700565	ST.ANDRUJ ENGLISH SCHOOL	P Unaided	8	10	
133	27210700566	ST.ANTHONY ENG.SEC.SCHOOL	P Unaided	8	10	9664581744
134	27210700567	SANJEEVAN LEARNING CENTER	P Unaided	1	7	9870285268
135	27210700568	U.S.OSTWAL ENG.ACADAMY PRI.	P Unaided	1	7	9223447707
136	27210700569	U.S.OSTWAL ENG.ACADAMY SEC.	P Unaided	8	10	9223447707
137	27210700570	VEDANT INTERNATIONAL HIGH SCHOOL	P Unaided	1	7	9324552919
138	27210700571	A.P.INTERNATIONAL SEC.SCHOOL	P Unaided	8	10	
139	27210700572	ROSARY HIGH SCHOOL	P Unaided	8	10	9324379202
140	27210700573	DON BOSCO HIGH SCHOOL,PLEASANT PARK	P Unaided	1	7	
141	27210700574	SEVEN SQUEREACADMY SEC	P Unaided	8	12	9819856550
142	27210700603	R K ENG PRI SCHOOL	P Unaided	1	7	9819897725
143	27210700604	K B NARAVAT ENG SEC SCHOOL	P Unaided	8	10	
144	27210700610	R K MEMOREEL SEC ENG SCHOOL	P Unaided	8	12	9870475844
145	27210700612	INFANT JIJAS ENG SEC SCHOOL	P Unaided	8	10	9699994641
146	27210700616	AMARJYOTI JR.COLLEGE	P Unaided	11	12	9702291289
147	27210700617	PREMA LAXMAN V E P	P Unaided	1	7	9930084250
148	27210700619	SHIKHAR INTERNATIONAL P E MIRA R	P Unaided	1	7	9321461999
149	27210700620	GOLDEN NEST P E	P Unaided	1	7	7208628734
150	27210700622	ST.JEROME CONVENT H E SCH	P Unaided	8	10	9324911396
151	27210700623	GOLDEN NEST E HIGH SCH	P Unaided	8	10	9323394542
152	27210700624	PREMA LAXMAN V ENG SEC MIRA R	P Unaided	8	10	9870329484
153	27210700626	NATIONAL HIGH SCH ENG SEC BHAY EAST	P Unaided	8	10	9930004555
154	27210700627	BANEGAR ENGLISH SCHOOL & HAFIZA JR COLLEGE OF AR	P Unaided	11	12	9967992747
155	27210700628	SEVEN ELEVEN SCHOLASTIC SCHOOL	P Unaided	1	7	8108193711

S.N .College, Bhayandar (E)

6.8 GARDEN AND PARKS

In Mira Bhayandar plantation program is carried on a large scale and varieties of plants are being planted. The total area of corporation is 79 sq .km of which there are about 1,89,842 number of trees, according to 2005 -2006 census. two nurseries have been developed by MBMC which consist of plants of various species.

No of garden	Ward no.1- gardens -23,crematorium-5,open ground-3,seashore-1 Ward no.2- gardens -8,crematorium-3,open ground-1,seashore-1 Ward no.3- gardens -3,crematorium-4 Ward no.4- gardens -13,crematorium-1,open ground-5,nursery-1
No of traffic garden	There is only one traffic garden near golden nest signal
Types of tree planted	There is various tree such as limb, bad am, Ashok, saptaparni, poltifarm, kashid, kanchan, wad, pimple, gulmohar, palm, cinch, caccia, chapha, parijatak, shiotranjanetc.
Dominant trees , medicinal plants and decorative plants	Medicinal plant: tulsi, limb,lavang Decorative plants:craton,boganvel, rose, aricapalm, kaner, lentenaetc.
Plantation programmers undertaken	The plantation program was undertaken under the guidance of deputy commissioner
Details of recent tree census	As per tree census of the year 2011there are total 2,39,337 plants were planted which include avala, babhul, bahava, bhokar, cinch, cinh, ritha, saptaparni, supari, sonchafa, suru, umbar, kanchan, kokam, bottlepalm, Chico stc.

Gardens and open spaces provide recreational areas for people and children of the city. large variety of trees is planted on road side, in open spaces, in garden etc.

World environmental day is celebrated on 5thJune. Tree plantation day celebrated in Municipal Corporation by organizing rallies at various places. The plantation program was undertaken under the guidance of shivmurti naik commissioner and tulsidas mhatre nayor. All the officers and administrative are present for this function. Large numbers of trees is planted on this day to reduce pollutions level to increase the green zone, to protect the old trees as well as to plant new ones. People with botanical knowledge who help conserve the greenery and surrounding are honor.

- **Following list of plants which are observed within corporation area:**
  - Medicinal varieties : tulsi , neem , etc
  - Decorative varieties: golden Durante,rose, are capalm, kaner, croton, lantanaetc
  - Generavarieties lemon, almond, Ashoka saptaparni,kashid,kanchan,peepal,gulmohar,shirtranjan,madhukamini,coconut,peltopharm,cassia ,champa,parijatak,amla,bahava,bhokar,neem,jamun,ritha,sonchafa,suru,umber,kokam,bottleoalm ,chickuetc.All garden and parks are maintained. The Shivar garden and navghar udyan are good hang out places and gardens are provided with swings, see-saws etc. all the facilities are provided to maintain cleanliness in the park. lawns and joggers park provided for morning walk.

MBMC provides special attention to stop the tree cutting. MBMC has destroyed and decorated 36 gardens with 1 traffic garden near golden nest signal, 6playgrounds, 2 seashores, 13 crematories.

- **Work done by the forest depart ment for the advancement of Mira Bhayandar:**
  - Development of Navghar lake for children and the people for all age groups
    - ✓ Playground and landscaping of Rai Gandhi lake
    - ✓ Landscaping of Chimaji AppaUdyan
    - ✓ Decoration of Navghar graveyard through plantation
    - ✓ Development of morning walk track on Navgharmarathi school ground.
    - ✓ Landscaping of naan-Nani park at Mira road sector no 1
    - ✓ Development of traffic garden and its maintenance on Chhatrapati Shivaji Maharaj road khashimira
    - ✓ Nana Nani park and jogging track in murrdha village.

- **Tree planation is MBMC area in 2020-2021 is as follows:**

Sr No	TREE PLANTATION	NUMBERS
1	Mangrove Plantation	22720
2	Tree Plantation	6177
	TOTAL TREE PLANTATION	28897

6.9 ENTERTAINMENT CENTRES

Entertainment centers at Mira Bhayandar has attracted significant large retailers like a maxus mall, maxus cinema, cine max theater, rassaz theater, reliance fresh, big bazaar, as mitasuper market, rebook store, Hp world store and more.

6.10 TOURIST ATTRACTION

Gorai is also popular for its beach and nearby manori beach and is a popular weekend gateway for Bhayandar residents. These beaches are generally safe to swim except during the monsoons.

Essel World and water kingdom has a special place in the hearts of Mumbai kars and also people across the country because it is the oldest amusement park in the city. Though being one of the first amusement parks it is new in style and concept. Essel world is an international style theme park and amusement park that has defined the parameters of modern fun. It is located just a few kilometers outsides city limits at Gorai. It is situated on the green landscape, island on an area of 64 acres. It can be reached by ferry from gorai creek to marve beach.

6.11 GANESH IDOL IMMERSION

- **Sarvajanik and Household Ganeshidols:** There are 494 nos of sarvajanik Ganesh idols and 11.37 nos of household Ganesh idols 11567 every year. The immersion of sarvajanik takes place mostly at Bhayandarchoupati situated in east and west side of western railway track, also immersion of household Ganesh idols being done in lakes in MBMC area.
- **Places for Immersion :** There are 29 lakes in the city MBMC provide facility such as illumination, mandap,boating , drinking water , supply security guards , arrangement of fire brigade squad , doctor squad etc almost at all lakes in the MBMC area.

6.12 BASIC SERVICE TONURBAN POORS

- **Project Information :** With this housing facility this project will also provide other basic amenities and services such as solar water heating system, water supply, sanitation, health and social security to improve the lifestyle of the slum dweller beneficiaries.
  Mira Bhayandar Municipal Corporation has taken integrated rehabilitation BSUP project phase-I for animanga and kashi church slum under JNNURM for 4136 slum dwellers beneficiaries. Under this project dwelling unit consisting hall, bedroom, kitchen, bath room and WC measuring 250 Sqm carpet area will be provide to the beneficiary slum dwellers.

After Slum Rehabilitation

After Slum Rehabilitation

Mira Bhayandar Municipal Corporation

Name of Project: BSUP project of jantanagar and kashi church slum Mira bhayander
Date of administrative approval by GOI: 11-11-2009
Coast as per administrative approval:Rs 27955.42 lacs
Period for completion: 2 year (up to 10.11.2011)
Financial Pattern:

- **Salient Feature:**

✓ No Of slum and beneficiaries

Sr no	Name of slum	No of beneficiaries
1.	Janta nagar	3665
2	Kashi church	471
	total	4136

✓ Nature of house : 1 BHK Flat (containing living , kitchen , bed ,W.C, bath passage and balcony)
✓ Carpet area : 25.00 m2 (269.00 square feet)
✓ Cost per house (with infrastructure)
✓ House cost:Rs 3.46 lacs
✓ Infrastructure cost:Rs 3.30 lacs
✓ Total cost per house:Rs 6.76 lacs
✓ Beneficiaries share
✓ For SC/ST (10% of actual house cost):Rs 34689 /-
✓ For general (12% actual house cost):Rs 41627 /-
✓ Infrastructure
✓ Water supply
✓ Sewerage
✓ Internal roads
✓ Road lights
✓ Balwadi and community center

Sr no	Name of slum	No of balwadi	No of community centre
1	Janta nagar	6	5
2	Kashi church	1	1
3	Total	7	6

- **Progress Achieve so Far:**

  - ✓ Validation of beneficiaries first list
  - ✓ Approval of R.C.C design and subsequently getting proof checked from I.I.T MUMBAI
  - ✓ Foundation for transit camp started.
  - ✓ Above Table Utilization of fund (up to June 2011)
  - ✓ Above Table Overview of janta nagar
  - ✓ Above Table Kashi church satellite image

CHAPTER 7: ENVIRONMENT STATUS REPORT-AT GLANCE

ENVIRONMENT STATUS REPORT-AT GLANCE

Base on the assessment of the environmental status of the areas under MBMC jurisdiction an environmental management plan (EMP) has been prepared which described the measured that MBMC should follow for the protection and betterment of the environment. This plan is aimed to assist the effort of the MBMC to achieve continued environmental improvements and quality of life of the people residing in the areas. The environmental problems are area specific and the environmental management plan prepared for MBMC takes in to account those problem and subsequently the remedial measures are suggested.

Measure attention is required for sewage treatment and disposal, water pollution, air pollution, noise pollution. Collective and continued efforts of active citizens, municipal administration and public representatives are necessary. Suggested measures are as follows,

- ✓ To implement strict restriction on use of plastics.
- ✓ To spread awareness about the prevention of air, noise, water pollution etc. during the public functions.
- ✓ To take strict action for following of traffic rules, irregular parking, unnecessary horn etc. along with spreading awareness about the same.
- ✓ Planning, preparing Development Plan of the city by considering and visualizing the increasing population in the corporation area and its impact on the public facilities. To strictly implementing this DP.
- ✓ To include traffic management, proper water supply system, sewage treatment and disposal, solid waste disposal, develop gardens and grounds, control and protection of water resources etc. in Development Plan and Action Plan.
- ✓ To forming and implementing the system to have regular and efficient communication between citizens, administration and public representatives.
- ✓ Make people aware of the concept of Reduce, Recycle and Reuse.
- ✓ Try to use solar power.
- ✓ Encourage people to use more and more public modes of transportation to reduce pollution.
- ✓ Use C.N.G vehicles which are helps to reduce the pollution.
- ✓ Increasing the man power for solid waste management.
- ✓
- ✓ Use of local cable network, newspaper to spread awareness and importance of careful use and saving of drinking water.
- ✓ Implementing awareness programs for rain water harvesting with help of local NGOs. Making rain water harvesting mandatory to Complexes, Societies etc.
- ✓ Removable screens, soft nets etc. should be installed/ fitted at regular intervals in the drainages. Removable screens, soft nets etc. should also be fitted at locations where these drainages meet to creek. This will prevent solid waste from nalla to get disposed in the creek and vice versa.
- ✓ To measure Air quality at more locations.

- ✓ To find, measure and take necessary action on air pollution sources and noise pollution sources from time to time.
- ✓ To keep regular check on the PUC of vehicles. Coordination with RTO, traffic police is necessary.
- ✓ To avoid air pollution due to heavy trucks in the city area, arrangement of separate truck terminals shall be made. To connect this terminal to various important roads, highways etc.
- ✓ To encourage running buses, public transport, vehicles etc on CNG.
- ✓ To spread and implement awareness programs for importance of segregation domestic solid waste at source only. To encourage complexes, societies for generation of fertilizer from wet waste and recycle dry waste.

CHAPTER 8: FIGHTING WITH COVID-19 VIRUS

Fighting With Covid-19 Virus

To prevent the spread of COVID-19:
Clean your hands often. Use soap and water, or an alcohol-based hand rub.
Maintain a safe distance from anyone who is coughing or sneezing.
Wear a mask when physical distancing is not possible.
Don't touch your eyes, nose or mouth.
Cover your nose and mouth with your bent elbow or a tissue when you cough or sneeze.
Stay home if you feel unwell.
If you have a fever, cough and difficulty breathing, seek medical attention.

- **Lungs/Health:**
  While the virus can camp out in different parts of the body, it prefers to attack the lungs first and foremost. Typically, COVID-19 affects the lungs by causing pneumonia or, in the worst cases, acute respiratory distress syndrome.

- **Heart and Cardiovascular:**
  COVID-19 is considered a respiratory disease, but cardiologists have noted it can also damage the heart, reduces the organ's ability to pump blood. In addition to arrhythmias, a patient can suffer from chest paint, shortness of breath, and fatigue.

- **Kidneys:**

  Early reports suggest that up to 30% of hospitalized corona virus patients develop moderate to severe kidney injury. Many of them already suffered from conditions, such as diabetes and high blood pressure that make them more susceptible to kidney disease.

- **Digestive tract:**

  COVID-19 sometimes presents with abdominal pain and diarrhea as well as nausea and vomiting and loss of appetite.

- **Brain and neurological system:**

  Just as COVID-19 damages other organs, scientists have discovered that the virus can also cause neurological problems, from seizures to hallucinations to mental confusion. This could be a result of oxygen starvation or the aftermath of the cytokine storm when the body's immune system overreacts to the virus.

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