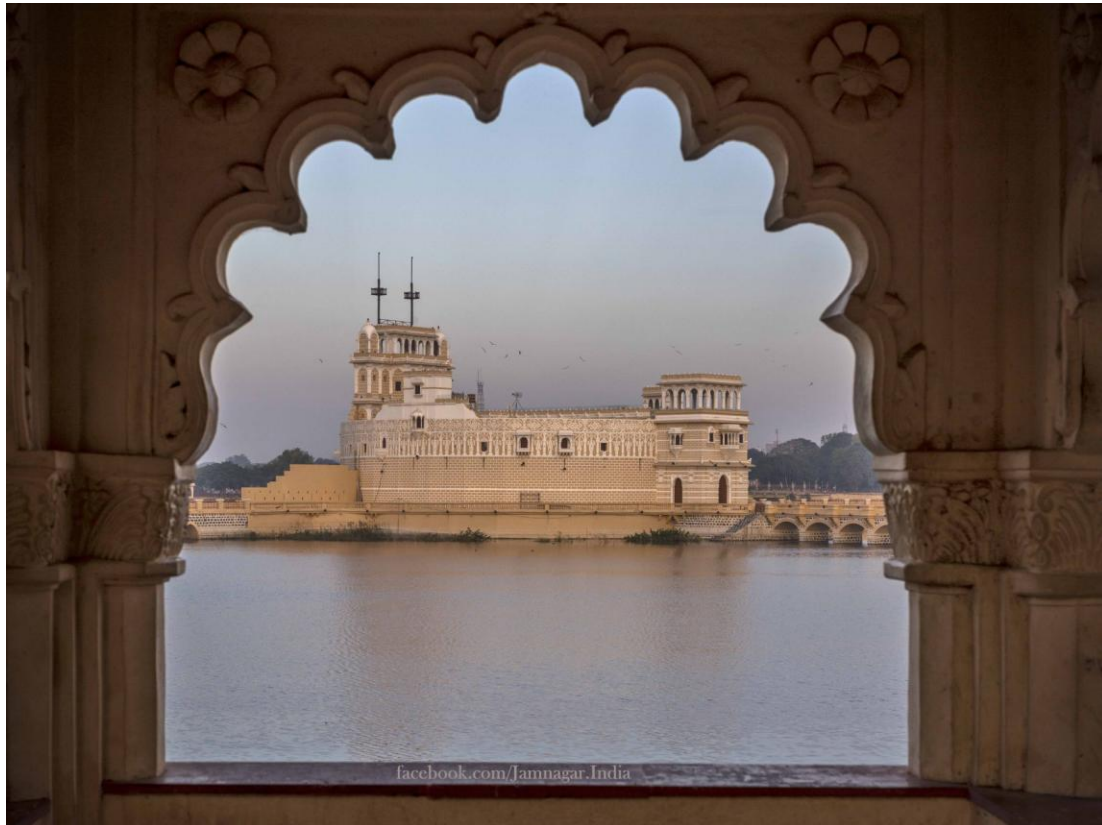




MUNICIPALITY DISASTER MANAGEMENT PLAN
FOR THE CITY OF JAMNAGAR
YEAR -2026



JAMNAGAR MUNICIPAL COORPORATION
FIRE AND EMERGENCY SERVICES
GUJARAT STATE DISASTER MANAGEMENT AUTHORITY

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List Of Abbreviation

AE	Assistant Engineer
AH	Animal Husbandry
ATVT	Apno Taluko Vibrant Taluko
BPL	Below Poverty Line
BRC	Block Resource Centre
CBO	Community Based Organization
CDHO	Chief District Health Officer
CDPO	Child Development Project Officer
CHC	Community Health Center
CRC	Community Resource Centre
CRF	Calamity Relief Fund
CSO	Civil Society Organization
DCMG	District Crisis Management Group
DDMA	District Disaster Management Authority
DDMP	District Disaster Management Plan
DEOC	District Emergency Operation Centre
DISH	Directorate of Industrial Safety and Health
DM	Disaster Management
DPO	District Project Officer
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EMRI	Emergency Management & Research Institute
EWS	Early Warning System
FCI	Food Corporation of India
GIDM	Gujarat Institute of Disaster Management
GSDMA	Gujarat State Disaster Management Authority
HFA	Hyogo Framework for Action
HRVC	Hazard, Risk, Vulnerability and Capacity
IDNDR	International Decade for Natural Disaster Reduction
ISDR	International Strategy for Disaster Reduction
ISR	Institute for Seismic Research
MDMP	Municipality Disaster Management Plan
MAH	Major Accident Hazard
NDMA	National Disaster Management Authority
NDRF	National Disaster Response Force
NGO	Non- Government Organization
NIDM	National Institute of Disaster Management
R & R	Recovery & Reconstruction
SDMA	State Disaster Management Authority
SDRF	State Disaster Response Fund
SDRN	State Disaster Response Network
SEOC	State Emergency Operation Centre
SMC	School Management Committee
SMS	Short Message Service
SOP	Standard Operating Procedure
ULB	Urban Local Body

CHAPTER-1

INTRODUCTION

CHAPTER-1: INTRODUCTION

Introduction:

- a. What is Disaster?
- b. Aim/Objective/Necessity of the plan
- c. Authority and Responsibilities
- d. Approach to Disaster Management:-
- e. Plan Review and updation

a. What is disaster?

Disaster management is a process or strategy that is implemented when any type of catastrophic event takes place. Sometimes referred to as disaster recovery management, the process may be initiated when anything threatens to disrupt normal operations or puts the lives of human beings at risk. Governments on all levels as well as many businesses create some sort of disaster plan that make it possible to overcome the catastrophe and return to normal function as quickly as possible.

b. Aim/ Objective of the Disaster Management Plan

Recognizing the fact that most tasks and actions before and following a disaster are common at the district level, the Jamnagar city administration has used a multi-disaster approach (all disasters covered by one plan) while developing disaster management plan for the district. The present plan is not intended to provide.

comprehensive explanations and background information about a disaster or serve as a training manual on how to respond to a disaster or conduct a disaster related task. This is simply a multi hazard Management Plan consisting details regarding different hazards affect the district with the response structure to deal with, and having linkages of subsidiary DM plans of all levels and of sectors with it.

❖ Following are the main objectives of this Plan.

- To protect and minimize loss of human lives from effects of different disasters.
- Promoting a culture of prevention and preparedness by ensuring that disaster management receives the highest priority at all levels.

- Ensuring that community is the most important stakeholder in the disaster management process.
- To minimize sufferings of people due to different disasters.
- Mainstreaming disaster management concerns into the developmental planning process.
- To minimize property and Infrastructure damage and losses.
- Reduce vulnerability aspect of both people and infrastructure due to different disasters.
- Ensuring efficient response and relief with a caring approach towards the needs of the vulnerable sections of the society.
- To create awareness and preparedness and provide advice and training to the agencies involved in disaster management and to the community.
- To assess the risks and vulnerabilities associated with various disasters.
- To provide clarity on roles and responsibilities for all stakeholders concerned with disaster management so that disasters can be managed more effectively.
- To strengthen the capacities of the community and establish and maintain effective systems for responding to disasters.
- To strengthen the existing Response mechanism.
- To incorporate all concerned aspects of DM for pre, during and post disaster phenomena.
- To integrate and link up of all level specific and department specific DM plan.

1. Document Outline

The City Disaster Management Plan of Jamnagar Municipal Corporation for the Year: 2025

Contains Chapters-. The sections provide detailed information of the following points:

1. Need of the plan and objective of the plan
2. Brief Introduction about Jamnagar City
3. Concept of Disaster Management
4. Disaster Preparedness: Role & Responsibilities; Early Warning systems and Disaster Management Trainings.
5. Hazard, Risk & Vulnerability Analysis of Jamnagar City.
6. Miscellaneous essential services.
7. Emergency Response Centre (ERC).
8. Disaster Response: Key contact personnel and response resources.

1.1 Need of the plan

Preparation of Disaster Management Plan is one of the mandatory provisions under the Gujarat State Disaster Management Act-2003 and the National Disaster Management Act-2005. With respect to the above mentioned provisions, Gujarat State Disaster Management Authority and Relief Commissioner have issued guidelines for the preparation of District Disaster Management Plan.

- i. As per THE GUJARAT STATE DISASTER MANAGEMENT ACT, 2003 under CLAUSE 26. Sub section (1), (2), (3), (4) & (5) Of CHAPTER X - FUNCTIONS OF LOCAL AUTHORITIES, Each department of the Government in a district shall prepare a disaster management plan for the district and the Collector shall ensure that such plans are integrated into the Disaster Management Plan for the whole of the district and submit a copy of the District Disaster Management Plan, and of any amendment thereto the Authority and the Commissioner.
- ii. Under the provision of the DISASTER MANAGEMENT ACT, 2005, under Clause 30 Section (2), subsection (i) & Clause 31 Section (1) of CHAPTER IV District Disaster Management Authority, without prejudice to the generality of the provisions of sub section (1), the district authority may (i) prepare a Disaster Management Plan including District Response Plan for the district, and there shall be a Disaster Management Plan for every district of the state.
- iii. Similarly the entire municipal corporation needs to have their own disaster management plan for respective city or municipal corporation limit.

Disaster Risk Reduction Post – 2015

Post 2015, there has been a significant shift from the approach of Managing Disasters to Managing Risk. The three landmark global agreements viz. – the Sendai Framework for Disaster Risk Reduction 2015-30 (SFDRR), Sustainable Development Goals (SDG) and the Paris Agreement (CoP 21) set the stage for future global action on Disaster Risk Reduction (DRR), sustainable development and climate change.

Sendai Framework of Actions for Disaster Risk Reduction 2015 – 2030

The Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR) was adopted at the Third United Nations World Conference on Disaster Risk Reduction held in Sendai, Japan in March 2015. The SFDRR is document which outlines four priorities for action to achieve 7 targets, which in turn would lead to one outcome that is – substantial reduction of disaster risk and losses in lives, livelihoods, health, economy of persons, businesses, communities, and countries. India is a signatory to the Sendai Framework for a 15 - year, voluntary, non –

binding agreement which recognizes that the State has the primary role to reduce risk, but that responsibility should be shared with other stakeholders including local government, the private sector and other stakeholders.

The Four priorities of actions are:-

1. Understanding Disaster Risk
2. Strengthening Disaster Risk Governance to Manage Disaster Risk
3. Investing in Disaster Risk Reduction for Resilience
4. Enhancing Disaster Preparedness for Effective Response and to 'Build Back Better' in Recovery, Rehabilitation and Reconstruction

The seven global targets are :-

- A. Substantially reduce global disaster mortality by 2030, aiming to lower the average per 100,000.
global mortality rate in the decade 2020-2030 compared to the period 2005-2015.
- B. Substantially reduce the number of affected people globally by 2030, aiming to lower the average.
global figure per 100,000 in the decade 2020-2030 compared to the period 2005-2015.
- C. Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030
- D. Substantially reduce disaster damage to critical infrastructure and disruption of basic services,
among them health and educational facilities, including through developing their resilience by
- E. Substantially increase the number of countries with national and local disaster risk reduction
strategies by 2020
- F. Substantially enhance international cooperation to developing countries through adequate and
sustainable support to complement their national actions for implementation of this
- G. Substantially increase the availability of and access to multi-hazard early warning
systems and
disaster risk information and assessments to the people by 2030

Sustainable Developmental Goals

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by all United Nations Member States in September 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030. The 17 SDGs are integrated- that is, they recognize that action in one area will affect outcomes in others, and that development must balance social, economic and environmental sustainability. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth—all while tackling climate change and working to preserve our oceans and forests. In order to make the 2030 Agenda a reality, broad ownership of the SDGs must translate into a strong commitment by all stakeholders to implement the global goals.

Paris Agreement on Climate Change Action and Disaster Risk Reduction (CoP 21)

The CoP 21 or the Paris Climate Conference held in December, 2015 led to a new international climate agreement, applicable to all countries, aiming at “holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change”. The Paris Agreement recognized the need loss and damage associated with the effects of climate change. The agreement identified areas of cooperation central to DRR and called for investments to address the underlying risk drivers associated with rising greenhouse gas (GHG) emission levels and to inspire innovation and low-carbon growth.

The City Disaster Management Plan (CDMP) has tried to envisage coherence across the city Efforts for DRR, sustainable development, and the actions in response to climate change.

Prime Minister’s 10 Point Agenda towards Disaster Risk Reduction

The Prime Minister, Shri Narendra Modi, listed a Ten –Point Agenda in his inaugural speech at the Asian Ministerial Conference on Disaster Risk Reduction 2016, held in New Delhi in November 2016 (AMCDRR), which has also been incorporated in the CDMP. The key elements consist of the following :

1. All development sectors to imbibe principles of Disaster Risk Management
2. Work towards risk coverage for all-starting from poor households to small and medium enterprises to multi-national corporations to nation states.
3. Encourage greater involvement and leadership of women in disaster risk management
4. Invest in risk mapping globally related to hazards such as earthquakes based on widely accepted standards and parameters.

5. Leverage technology to enhance the efficiency of disaster risk management efforts.
6. Develop a network of universities to work on disaster issues.
7. Utilise the opportunities provided by social media and mobile technologies.
8. Build on local capacity and initiative. Response agencies need to interact with the communities and make them familiar with the essential drill of disaster response.
9. Ensuring that disaster learning is well documented.
10. Bring about greater cohesion in international response to disaster.

Brief Introduction about Jamnagar city

Jamnagar is Located in the north-western corner of Gujarat State. Its mainland extends between 21- degree - 42 min and 22 degrees - 58-min north latitude and between 68 degree 56 Min and 70 degree - 40-min longitude. It is bounded by Gulf of Kutch in the north, Porbandar district in the south, Rajkot district in the east and Devbhumi Dwarka in the west. Its coastline is 78.80 kms Long. The district is having an area of 6026.44 Sq. Kms and accounting for above 7.21 % of the total stateland accommodates a population of 14.07 lakhs persons (as per 2011 census) and it is about 4.09 % of the total state population. Literacy rate of Jamnagar is 65.64 (Male: 72.45, Female: 58.37) District having Length from North to South 140.6 kms and From East to West 178.4 kms

(A) HISTORY

Jam Raval on the confluence of river Nagmati and Rangmati on the western bank founded Jamnagar in A.D. 1540. The area in the inner city, the original town founded by Jam Raval in 16th century.

(B) LOCATION

Jamnagar lies on North latitude 22 degrees - 28 minutes and East longitude 70 degrees - 4 minutes. It is an important station on the Mumbai - Ahmedabad - Okha - Porbandar broad gauge railway line. The Jamnagar city enjoys the privileges of four state highways. It is also connected with marine traffic through Bedi Port and New Port for import and export.

(A) Followings is the main objectives of this Plan:

1. To Understand Disaster, risk and vulnerability studies of Jamnagar city
2. To protect and minimize the loss of human lives from the effects of different disasters.
3. To promote a culture of prevention and preparedness by ensuring that disaster management receives the highest priority at all levels.
4. To ensure that community is the most important stakeholder in the disaster management process.
5. To minimize the sufferings of the people arising due to different disasters.
6. To mainstream the disaster management concerns into the developmental planning process.
7. To minimize the damages and losses that occurs to the Property and Infrastructure due to different disasters.
8. To reduce the vulnerability aspect of both the people and infrastructure due to different disasters.
9. To promote the culture of disaster risk prevention and mitigation at all levels.
10. To strengthen disaster risk modelling, assessment, mapping, monitoring and multi-hazard based early warning systems.
11. To Promote the leadership for active participation in disaster risk reduction and to aware about disaster-resilient in schools, colleges and other educational facilities.
12. Special focus on health care sectors to build an integrated platform for disaster preparedness and resilience of communities to cope and recover from disaster impacts.
13. To prepare resilience for poor community or lower line areas to prevent disasters aggravating poverty and to protect livelihoods

(C) DEMOGRAPHY

The population in the Jamnagar city was 591976 as per 2015 census. The population projection in 2011 has been forecast 8.00 lacks.

WARD NO.	AREA (Sq.Mt.)	POPULATION
1	5.62	36342
2	2.43	34082
3	1.26	33786
4	21.34	36060
5	2.64	34878
6	8.88	36544
7	7.06	39558
8	4.74	41038
9	2.10	32839
10	1.98	37461
11	30.11	39514
12	11.01	42997
13	0.95	35273
14	2.45	34628
15	10.39	38466
16	15.44	38510
TOTAL	128.4	591976.00

(D) GEOGRAPHICAL CHARACTERSTICS

The Jamnagar city is surrounded by Arabian Sea and the Gulf of Kutchhh. The city is situated at height of 20 meters from mean sea level.

(E)PHYSICAL CHARACTRSTICS

(A) Temperature

The climate of the city is generally more pleasant through out the year. January is the coldest period with minimum temperature of 11.6 degrees C and May is the hottest month with maximum temperature of 36 degrees C.

(B) Humidity

The average relative humidity is about 80 % during the monsoon and about 60% to 75 % in the rest of the year.

(C) Rainfall

The annual average rainfall is 527 mm about 95 % rains is received during the monsoon. The lowest rainfall of 36 mm was registered in 1987 while the highest rainfall of 2114 mm in 2010.

Year	2010	2011	2012	2013	2014	2015	2016	2017
<i>Rainfall</i>	2114 mm	973 mm	380 mm	1473 mm	368 mm	322 mm	380 mm	624 mm
Year	2018	2019	2020	2021	2022	2023	2024	2025
<i>Rainfall</i>	405 mm	1234 mm	1187 mm	822 mm	684 mm	1333 mm	1227 mm	690 mm

(D) SEISMIC ZONE:

Zone-IV

(E) SOIL TYPE:

UBC - 1.0

(F) REGIONAL FRAME

- (A) Jamnagar district is situated on sea cost in Saurashtra Region in the state of Gujarat. The area of the district is 6026.44 Sq.Km. The district has 6 Talukas, which are made of 440 villages, 4 Municipalities and 1 Municipal Corporation. The population in the City as per 2011 census is 600943.

(B) STATUS OF LOCAL AUTHORITY

The Jamnagar city has a Municipal Corporation status. Jamnagar Municipality was converted in Jamnagar Municipal Corporation on 06-10-1981. The area of Municipal Corporation limit is 128.4 Sq.Km. The city has been divided into nineteen wards.

As per the constitution of the local body governed by the Bombay Provincial Municipal Corporation Act - 1949, there are three major administrative dimension authorities in the following manner.

- 1) General Board
- 2) Standing Committee
- 3) Municipal Commissioner

Jamnagar Municipal Corporation has 64 Corporators, out of them 12 Corporators become members of Standing Committee and the Municipal Commissioner is the administrative head of local body. Jamnagar Municipal Corporation performs its duties and function according to BPMC Act.

IMPORTANCE OF JAMNAGAR CITY

Jamnagar city is the head quarter of the district, which is the most densely populated city in the Saurashtra Region in the State of Gujarat.

Jamnagar city has tremendous importance, as it is all weather port. The city has developed industries like Brass - Parts, Hardware, Textile (Wool), Solvent and extraction, Oil-seeds, Plastic Industries, and Salt Industries etc.

The highest industrial investment (more than Rs.30000 crores) in the State of Gujarat has been made in the vicinity of Jamnagar recently. The Asia's biggest grass root refinery viz., Reliance Petroleum is only 25 Km. away from Jamnagar. Also the concept of Mega G.I.D.C. has been proposed.

Jamnagar city is a nodal point of all the three wings of defence forces like Army, Navy and Air force, which has the strategic importance in the map of India. It is only the frontier city in the Western India

(3) WHY MDMP PLAN FOR THE CITY OF JAMNAGAR

The Jamnagar city faces, different types of natural calamities periodically. The calamities like cyclone, floods, scarcity, war and earth - quake adversely affect the properties and human life, in that situation, pre-planning is very much important for rescue services, relief work and rehabilitation. Considering all those, contingency plan is required.

(A) THREAT EVALUATION

- 1) Jamnagar city being a border city and is within the striking range of hostile enemy aircraft. Its proximity to Indo-Pak border by sea, further exposes it to air as well as sea threat. Looking to the geographical situation of the Jamnagar city, there is practically no possibility of ground threat as Jamnagar is very far of Pakistan by land route. Being border city, Karachi and other Pakistan's Military / Airforce bases are very near and due to modern sophisticated and speedy bombers at their commands they are capable of reaching Jamnagar within 5-6 minutes. Being a nodal point of all the three wings of defence forces, chance are more to become an enemy attack.
- 2) The rainfall is quite irregular and inadequate in the city. It creates draught condition since last decade. Although, sometimes heavy rainfall adversely affects the low-lying area of the city.
- 3) Jamnagar comes under cyclone prone zone. The city faced a severe cyclonic effect in 1998.
- 4) On 26th January-2001 at 08.46am (IST) Jamnagar district was affected by the earthquake and Jamnagar Municipal Corporation had to attend about 574 calls.

MDMP PLAN FOR THE CITY OF JAMNAGAR

1. GENERAL

At the time of contingencies like flood, cyclone, war, scarcity, epidemic event, the Municipal Corporation is expected to be ready with a specific action plan for providing services to the public of city with rapid action. It has been managing for

various types of events, and to overcome such contingencies, contingency plan has to be prepared. The main objective of the contingency plan is to maintain level of services, like rescues services, essential services, casually services and rehabilitation services.

2 FUNCTIONS OF ACTION PLAN

- (A) The Municipal Commissioner has the overall control and execution of plan.
- (B) The City Engineer performs duty as a coordinating officer from the centralised control room of fire & emergency services located at Municipal Officer Compound, Jubilee Garden, Jamnagar.
- (C) For organizing contingencies measures in the city, the city is divided into four groups. Each of them given specific charge along with their team to bring about normally.
- (D) All services are carried out under the centralised control room with the task force.
- (E) After receiving any type of warning, message or forecast, immediate action shall be taken accordingly.
- (F) Proper co-ordination and communication should be maintained during the contingencies.
- (G) All the necessary actions to be taken to avoid rumors and misunderstandings among the public.
- (H) As a part of precautionary measures, public is to be made aware of the latest information.
- (I) People's participation should be encouraged during the contingencies.

IMPORTANT LANDMARKS

1. Microwave tower of Tele-Communication Department.
2. Smoke chimney of Digvijay Woolen Mills and Bedeshwar Industrial Area.
3. Municipal filtration plant.
4. Elevated reservoir Tanks at
 - Pump house
 - Ranjit Sagar
 - Solarium
 - Shanker Tekri
 - Gulabnagar
 - Samarpan
 - Bedi
 - Mahaprabhuji Bhetak
 - Green City
5. Electricity sub stations (66 KVA) at
 - Sat Rasta
 - Near Gulab Nagar
 - Kalavad by-pass
 - Naghedi
6. Bridges / Over Bridges: -
 - Subash bridge
 - Vora Hajira Bridge
 - Navnala Bridge
 - Briidge near Dhuvav
 - Satyam colony Railway under bridge
 - Gulabnagar Railway Over Bridge
 - Digjam Circle Railway Over bfidge
 - Bedi Bandar Railway Over bridge
 - Railway Over bridge on bypass nr. khimaliya
 - Railway Over bridge on bypass nr. Morkanda
 - Railway Over bridge on bypass nr. Indira Marg
 - Over bridge on bypass Lalpur chokdi
 - Ranjitsagar Road Bridge
 - Kalavad gate Bridge
 - New Fly Over bfidge Nagnatha gate to Sat Rasta

7. Gandhinagar Railway station
8. Low-lying areas like
 - Areas falling under parallel to riverbank and other side of fort wall.
(Listed in Appendix-X)
9. State high ways connected to city
 - Jamnagar - Okha (Kha-Oka)
 - Jamnagar - Rajkot
 - Jamnagar - Kalavad - Junagadh
 - Jamnagar - Lalpur – Porbandar
10. Water supply Based Dams
 - Ranjit Sagar
 - Sasoi
 - Und
 - Aji-III
11. Bedi port and New Port
12. Civil Air port

4. ACTION PLAN CO-ORDINATION COMMITTEE

The Action Plan co-ordination committee will comprise of following:

- | | | | |
|-----|---------------------------|---|---------------------------------|
| (1) | Municipal Commissioner | - | Chairman |
| (2) | Deputy Commissioner | - | Co-Ordinator |
| (3) | Chief Fire Officer | - | Head of Rescue Services |
| (4) | Assistant Commissioner | - | Head of Rehabilitation Services |
| (5) | Executive Engineer | - | Head of Essential Services |
| (6) | Medical Officer of Health | - | Head of Casualty Services |

The above committees will assemble at the Central Control room, Municipal Office compound, fire & emergency services, Jamnagar within 30 minutes after receipt of general warning and strategy shall be formed against the warning and immediate actions shall be taken accordingly. Following Sr. officers will be available in the control room in any emergency situation.

Sr.	Name	Designation
1	Shri Devendrasinh A. Zala	Dy. Commissinor
2	Shri Bhavesh Jani	City Engineer & I/C. Asst.Commissinor (A)
3	Shri M. B. Varanva	Asst.Commissinor (A) & I/C. Executive Engineer (ENV)
4	Shri Jignesh Nirmal	I/C. Asst.Commissinor (Tax)
5	Shri Naresh Patel	I/C. Executive Engineer
6	Shri Dixit Nitin	Executive Engineer
7	Shri Singala Deepak	Dy. Engineer
8	Shri Alpesh Chariyania	Dy. Engineer
9	Shri Anil Bhatt	I/C.TPO
10	Shri Mukesh Chavda	I/C. Dy. Engineer
11	Dr. Harish Gori	I/C. MOH
12	Dr. Palak Gantra	MO I/C. TB Officer

5. DUTIES AND RESPONSIBILITIES OF SERVICE GROUPS

(A) Rescue Services

Rescue services team consists of following member will be for whole City:

- | | | | |
|-----|-------------------------------------|---|------------------|
| (1) | Chief Fire Officer | - | Head of the team |
| (2) | Executive Engineer
(Solid Waste) | - | Member |
| (3) | Dy. Chief Fire Officer | - | Member |
| (4) | Estate Officer | - | Member |
| (5) | Security Officer | - | Member |

(a) Duties

(Reporting Performa for rescue services is enclosed in Annexure-I Page No.49)

Chief Fire Officer is designated as a head of the rescue services. All rescue services, under whose control, rescue parties will function.

The main duty of rescue parties will be to protect human life. Also to protect living person entrapped in debris, responsible for recovery of the dead from the damage building and to take such immediate steps as may be necessary for the temporary support of demolished building; the collapse of which is likely to endanger life or obstruct traffic. The personnel for the rescue parties as detail in the appendix. Apart from this at resources will be mobilized from Mutual Aid Scheme.

(B) Essential Services

Essential services team consists of following member:

- | | | | |
|----|-------------------------------------|---|--------------|
| 1. | Executive Engineer
(Water Works) | - | Head of Team |
| 2. | Dy.Engineer
(Water Works) | - | Member |
| 3. | Dy.Engineer (Civil) | - | Member |
| 4. | Dy.Engineer
(Solid Waste) | - | Member |
| 5. | Dy.Engineer (Light) | - | Member |

(a) Duties (Health)

(Reporting performa for Emergency Services is enclosed in Annexure-II to V Page No. 50 to 53.)

The executive engineer (water works) is designated as a head of the essential services. All essential services under his control will function.

The main duty of essential parties is as follows:

To provide regular quantum of potable water supply, if not available, make alternate arrangement for the same.

- (1) To maintain the cleanness of roads, streets, surface drainage, under ground drainage; etc;
- (2) To dispose of fallen trees, dead animals' debris etc., from the roads / streets.
- (3) To clear the roads / streets for the traffic movement and maintain the same or make suitable alternate arrangement.
- (4) To make arrangements for removal of accumulated wastewater and storm water.
- (5) To make precautionary measures against live electric wires, break down of polls etc.

The members of the group will carry out the above essential services with their own staff like junior engineer, additional assistant engineer, and skilled and unskilled men with available equipment's. Apart from this at the time of emergency, resource mobilisation can also be made available.

(B) **CASUALTY SERVICES**

Casualty services team consists of following member:

- | | | | |
|----|-------------------------------|---|------------------|
| 1. | Medical Officer of Health | - | Head of the team |
| 2. | Dy. Medical Officer of Health | - | Member |
| 3. | Medical Officer (Doctor) | - | Member |
| 4. | Food inspector | - | Member |
| 5. | Malaria Officer | - | Member |

(a) Duties (Health)

(Reporting Performa for Casualty Services is enclosed in Annexure-VI Page No. 54)

Medical officer of health is designated as a head of the casualty services. All casualty services, under whose control, casualty parties will function. The main duties of casualty parties are as follows:

- (1) To provide first-aid treatment to injured person.
- (2) Seriously injured person will be sent to hospital.
- (3) To provide mobile van dispensary in the affected area.
- (4) To distribute essential medicines in affected area and to immunize if required.
- (5) To take necessary actions to prevent spreading of epidemic.
- (6) Disposal of unhygienic food.
- (7) Disposal of unclaimed bodies, after legal procedures.

(b) Composition of Casualty Party

Each casualty party will consist of 6 persons out of which one will be a either doctor or internee doctor, 2 will be mid-wife, 2 will be health workers and one will be driver with ambulance. Apart from this, at the time of emergency, resource mobilisation can also be made available.

REHABILITATION SERVICES

The Rehabilitation services team consists of following members:

MUKESH VARANVA ASST. COMMISSIONER (A)	- REHABILITATION TEAM HEAD
K. K. BISHNOI CHIEF FIRE OFFICER	- RESCUE TEAM HEAD
NIRMAL JIGNESH i/c. ASST. COMMISSIONER (T)	- ESSENTIAL TEAM HEAD
DR. HARESH GORI I/C MEDICAL OFFICER	- CASUALTY TEAM HEAD
VIJAY BHABHOR ACCOUNTANT i/c. TAX OFFICER	- FOOD PACKET TEAM HEAD

Duties

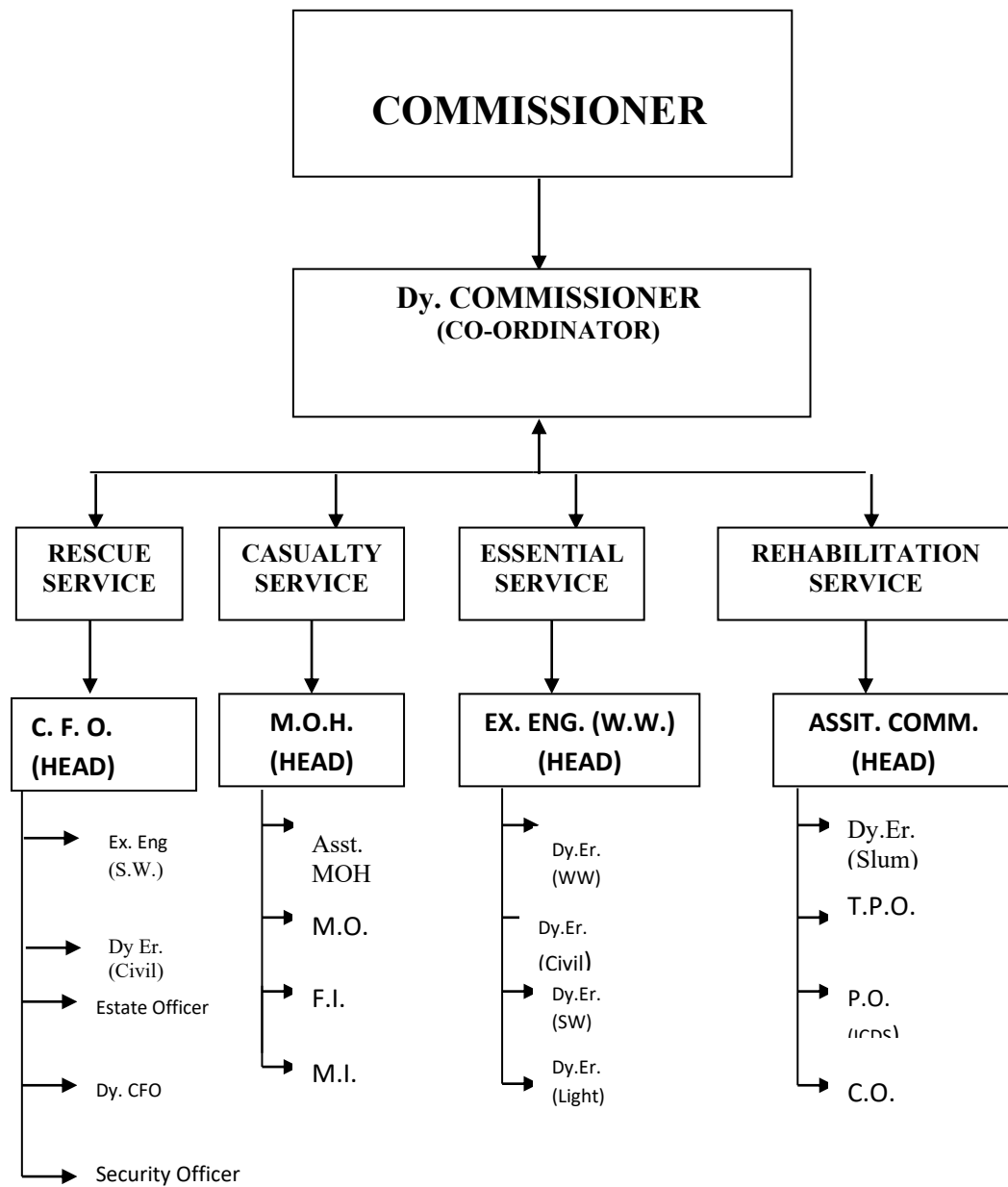
(Reporting performa for Rehabilitation Services is enclosed in Annexure-VII Page No.55)

Assistant Commissioner is designated as a head of the rehabilitation services. All rehabilitation services, under whose control, rehabilitation parties will function. The main duty of rehabilitation party shall be as under.

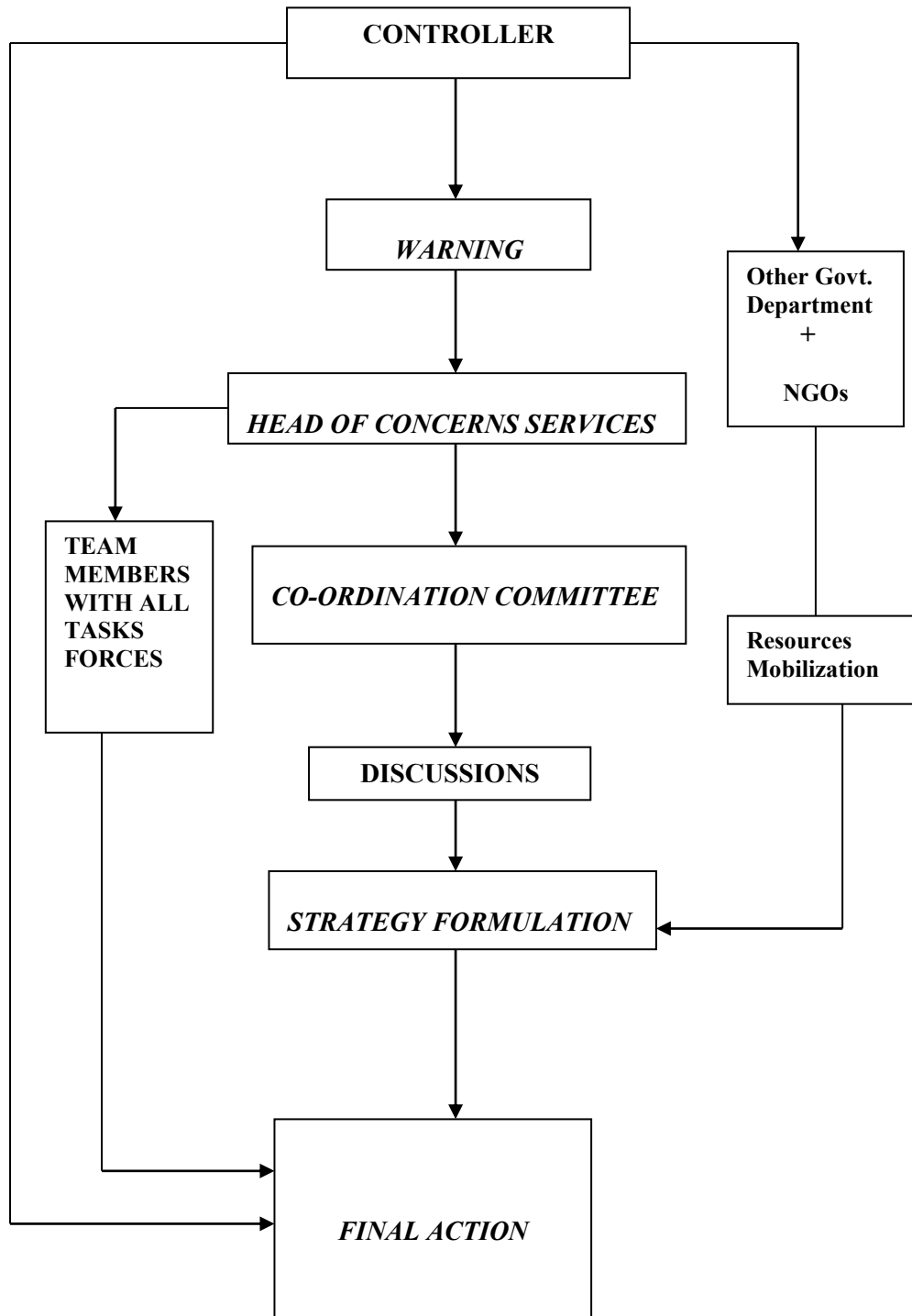
- (1) To shift affected people to nearest safer place.
- (2) To provide food - packets and other essential amenities to the affected people.
- (3) To make arrangement of relief camps for the affected people.
- (4) To distribute government aids as well as NGOs aids among the affected people.

The above rehabilitation services will be carried out by the members of the group with their own staff and Anganwadi workers, At the time of emergency resource mobilisation can also be made available from government organisation as well as NGOs.

FLOW CHART



FLOW CHART



ACTION IMPLEMENTATION

After the receipt of warning of any kind of calamity, following are the actions must be taken.

- 1) Immediately communicate to heads of the concern services rush to the centralised control room with all task forces within 30 minutes.
- 2) The co-ordination committee will be held immediately and after the discussion, formulate the strategy for the final action.
- 3) The co-ordinator will maintain the communication with all the concern heads of the services from the centralized control room.
- 4) The head of the concern services will instruct his team to be ready with for the action.
- 5) For better co-ordination and communication the each team will be provided with walky-talky, connected to centralized control room.
- 6) The controller will inform the respective department to be ready for resource mobilization, if required.
- 7) The each and every team will report to the centralized control room regarding the latest situation by every hour.
- 8) The co-ordinator will convey the latest situation to the controller.
- 9) The co-ordinator will provide the selected information to the press and information bureau.
- 10) The controller will report to the government about the situation and action to be taken.
- 11) The control room will be informed by the head of the concern services about the task completed by his team.
- 12) The control room will maintain the records received from heads of the concern services and co-ordinate the same.

GENERAL PRECAUTIONARY ACTION

(A) PRE MONSOON:

The Jamnagar Municipal Corporation carries out pre-monsoon – precaution actions in the month of May every year. The same task shall be completed before the actual rain starts.

The precautionary actions are as follows:

- (a) The cleaning of gutter, storm water drain, sewerage, canal nalas, etc. in the city have been carried out by the solid waste department.
- (b) The estate department has made the survey of ruinous buildings. After the legal procedures they have been made safe or pull them down if required.
- (c) The water works department does the cleaning of filter beds and make arrangements for stock of Alum bleaching powder and chlorine. It also tests D.G. sets, wireless set etc.

(B) FLOOD CONTROL

The Jamnagar Municipal Corporation starts the flood control room at fire brigade control room from 1st June. The control room functions round the clock in three shifts with necessary task force and equipments. The workings of control room are as follows:

- (a) The details of rainfall of last 24 hours of city and municipal dam (Ranjit sagar) to be submitted to collector control room.
- (b) To convey the forecasting of meteorological department or collector room to concern officers and the public.
- (c) To inform the people residing in low-lying area about precautionary measures.
- (d) To take necessary actions about the complaints received and follow up the same.
- (e) To maintain the co-ordination with collector control room and irrigation department.
- (f) To maintain the record of important addresses and phone nos. of NGO's, low lying area etc.

CHAPTER-2

HAZARD, VULNERABILITY

CAPACITY AND RISK

ASSESSMENT

CHAPTER-2

HAZARD, VULNERABILITY, CAPACITY AND RISK ASSESSMENT

Interim Guidance

Risk and Vulnerability Ranking-Analysis

(Adapted from Technical Note 1.4.1. Probability, impact and Risk Ranking Disaster Management Planning Workshop module (pages 20-21), prepared by Jeff klenk, Interworks, for the ADB-funded CBERR Project.)

All events or activities carry some risk and are associated with some level of vulnerability. Risk and vulnerability ranking is the process of assigning scores to the risk and possible impact of hazards to be able to compare the likely vulnerability and make informed management decisions about which hazards are of greatest concern and when planning and preparation efforts should be directed. A crude risk and vulnerability ranking process can be accomplished in five steps.

1.4 Introduction to Hazard and Disaster

terms and definitions of Disaster and Disaster Management as per the Disaster Management Act, 2005:

1.4.1 Hazard

It is natural or manmade phenomenon's which may causes physical damage, loss or threaten human life and wellbeing if it occurs in an area of human settlement, agricultural or industrial activity.

Category of Hazard

Natural hazards are the hazards that are caused because of natural phenomena (hazards with meteorological, geological or even biological origin). Examples of natural hazards are cyclones, tsunamis, earthquake and volcanic eruption which are exclusively of natural origin. Landslides, floods, drought, fires are socio-natural hazards since their causes are both natural and manmade. For example, flooding may be caused because of heavy rains, landslide or blocking of drains with human waste.

1. Geophysical: Geological process or phenomenon that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and

economic disruption, or environmental damage. Hydro-meteorological factors are important contributors to some of these processes.

2. Hydrological: Events caused by deviations in the normal water cycle and/or overflow of bodies of water caused by wind set-up.
3. Meteorological: Events caused by short-lived/small to meso-scale atmospheric processes
(In the spectrum from minutes to days).
4. Climatological: Events caused by long-lived meso- to macro-scale processes (in the Spectrum from intra-seasonal to multi-decadal climate variability).
5. Biological: Process or phenomenon of organic origin or conveyed by biological vectors, Including exposure to pathogenic micro-organisms, toxins and bioactive substances that may cause loss of life, injury, illness or other health impacts, property damage, loss of
Livelihoods and services, social and economic disruption, or environmental damage.
,e.g.: Epidemics/Pandemic of all types

Manmade hazards are the hazards that are caused due to human negligence. Manmade hazards which are sudden and progressive which impact with such severity that the affected community has to respond by taking immediate and exceptional measure including help from outside of the community.

1. Accidents: road, rail, sea ,air, transport of hazardous material
2. Fire: Forest Fire, Building coal mines and oil refinery
3. Industrial accidents: chemical leaks, fire, explosion, plant safety failure etc.
4. Nuclear Hazard: Radioactive leaks
5. Warfare: Conventional, Chemical, Biological and Nuclear
6. poisoning: Food, Water supply
7. Civil Conflicts: Terrorist Attack
8. Ecological, Environmental Pollution

1.4.2 Risk

It is defined as the expected losses (lives lost, persons injured, damage to property, economic activities of livelihoods disrupted) to a community when a hazard event occurs. The probability of the loss will occur as the result of an adverse event, given the hazard and vulnerability.

1.4.3. Vulnerability

It is defined as the degree of loss it is sets of prevailing conditions, which adversely affect people's ability, prevent, to prepare for and respond to hazards event. These long term factors, weaknesses or constraints affect a household or community's ability to absurd losses after disaster or to recover from the damage.

1.4.4 Disaster

It means a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or man-made causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of, environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area.

1.4.5 Disaster management

It means a continuous and integrated process of planning, organizing, coordinating and implementing measures which are necessary or expedient for—

1. Prevention of danger or threat of any disaster;
2. Mitigation or reduction of risk of any disaster or its severity or consequences;
3. Capacity-building;
4. Preparedness to deal with any disaster;
5. Prompt response to any threatening disaster situation or disaster;
6. Assessing the severity or magnitude of effects of any disaster;
7. Evacuation, rescue and relief;
8. Rehabilitation and reconstruction.

Figure- Disaster Management Cycle



1.4.6 Hazard Management and Citizen Empowerment

The concepts of all hazard management and empowerment provide the foundation for disaster management plans and efforts. All hazards management involves considering, planning for and taking actions to avoid or mitigate, all possible hazards, which may affect the district.

Empowerment means that each citizen is enabled through education, training and support, to be able to address all hazards and disasters, which may threaten their lives or livelihoods. Empowerment does not transfer full responsibility for dealing with disasters to the individual, but strives to ensure that each individual has the means and support needed to avoid or limit the impact of disaster.

The district and subsidiary plans seek to limit vulnerability and reinforce the resilience of communities in the face of hazards and disasters. Addressing vulnerability generally takes place before a disaster through actions to reduce the opportunities for the disasters to occur. Reinforcement of the resilience occurs through actions to reduce the scale or potential impact of a disaster, and building capacities and systems that facilitates (shorten and make less costly) the recovery process.

The Disaster Management Act, 2005 is a key document which provides guidelines for disaster management in India. The Prime & Chief Minister's Office, Ministry of Home

Affairs, National Disaster Management Authority, State Disaster Management Authorities, National Institute of Disaster Management, Indian Meteorological Department and Department of Space are key institutions for disaster management in India.

According to the DM Act, 2005:

“District Plan” means the plan for disaster management for the district prepared.

“Local authority” includes panchayati raj institutions, municipalities, a district board, cantonment board, town planning authority or jila Parishad or any other body or authority, by whatever name called, for the time being invested by law, for rendering essential services or, with the control and management of civic services, within a specified local area.

Here, the case would be the local authority of Jamnagar Municipal Corporation Jamnagar City which lies within the boundary of the Jamnagar District.

1.4.7 Stakeholders and their responsibilities

The Institutional framework for operationalization of the DM plan at the District level is conceived in terms of integration of both rural and urban areas and by recognizing the interdependence between line departments, district and state level authorities. The constitution of the District Disaster Management Committee will be as per the Gujarat Disaster Management Act 2003.

Authorities and Responsibilities

The requirement for district and subsidiary plans is set by the GSDMA under the authority of the Gujarat State Disaster Management Act of 2003. The Act authorizes the collector to secure cooperation and assistance from other parties in efforts to avoid or reduce the impact of disasters.

The Collector (Specifically) and Government authorities (generally) are responsible for managing hazards and disasters that affect a district, with support from GSDMA, the Relief Commissioner and other public and private parties as may be needed. The roles, responsibilities and obligations of the Collector and other key parties are set out in detail in the Act and are considered as part of this plan. Here, the case would be Municipal Commissioner and other departments of the corporation to coordinate and cooperate with the district administration for achieving better disaster management.

1.4.8 Mitigation, Preparedness and Prevention

Mitigation, preparedness and prevention actions are to be taken before a disaster to reduce the likelihood of a disaster (risk reduction) or the level of damage (vulnerability reduction) expected from a possible disaster. Vulnerability reduction is given priority over risk reduction. The district can avail itself of any or all of four mechanisms to reduce risk and vulnerability:

1. Long term planning for mitigation, preparedness and prevention-investments to this effect in the district,
2. Enforcement of regulations, particularly building and safety codes and land use plans;
3. Review and evaluation of development plans and activities to identify ways to reduce risks and vulnerability.
4. Capacity building, including warning, the provision of relief and recovery assistance and community-level identification of risk and vulnerability.

Here, the Municipal Commissioner assisted by other officers of the corporation, is responsible for developing plans and activities to effect mitigation, preparedness and prevention using the mechanism noted above. Based on the interim assessment of risk and vulnerabilities, the focus will be on the following areas for mitigation, preparedness and prevention, which are specific to Jamnagar City:

1. Resilience of lifeline systems (water, power, roads, communications, etc.),
2. Reduction in disaster impact on health care facilities and schools,
3. Vulnerability reduction in flood-prone areas, including riverbank erosion,
4. Vulnerability reduction to high winds,
5. Improvement of Off-site Preparedness near Industrial sites.

1.4.9 Warning, Relief and Recovery

Warning, Relief and Recovery actions are intended to eliminate the loss of life and property and reduce hardship as a result of disasters. Plans and SOPs at corporation level should provide a seamless mechanism of warning, relief and recovery assistance to avoid or reduce losses and hardship.

The focal point for early warning, relief and recovery is the District Collector, who directs and coordinates these efforts within the district. The Collector is also responsible for

coordinating warning, relief and recovery with similar activities in neighbouring districts and with the GSDMA and Revenue Department.

The Collector is further responsible for developing long term relief, recovery and rehabilitation plans during the course of a disaster. These plans will include steps to reduce disaster impact in the future and be coordinated with the GSDMA in terms of policy and implementation.

1.4.10 Plan Review and Updating

City Disaster Management Plan is prepared and reviewed by the Municipal Commissioner in collaboration with the line departments and other organizations in the corporation. The plan reviewed annually (in the Month of May) and in special case periodically too and updated:

1. When significant changes in the nature of any hazards,
2. Lessons learnt following any major disaster or
3. When there is any significant change to organization or responsibilities of primary members of the task forces defined in the plan.

1.4.11 Financial Arrangements

With respect to the updating of the CDMP the expenditure shall be booked either from the grant provisions of GSDMA under the CDMP Updating head and time to time guide lines of GSDMA or as per the directions of Municipal Commissioner. There are other provisions which are utilized in different kinds of relief measures as per the directions released from Central Government, State Government and so the Commissioner & Dy. Commissioner viz. the funds like Calamity Relief Fund (CRF), Mayor relief fund which is utilized for the affected people / nature / cattle death in case of the natural calamities, NCCF, CM Relief Fund, PM Relief Fund etc.

1.4.12 Scope of the Plan

The City Disaster Management Plan for Jamnagar Municipal Corporation has been prepared for its execution by various departments and agencies of the district and other Non-governmental Agencies expected to participate in disaster management process. This plan provides for Vulnerability Assessment and Risk Analysis, Preventive Measures, Mainstreaming disaster management concerns into Developmental Plans, Preparedness

Measures, Response Mechanism, and Partnership with Stakeholders, Financial Arrangement, Roles and Responsibilities of the various agencies interlinks in disaster management and the scope of their activities. An elaborative inventory of resources has also been formalized.

1.4.13 Trigger mechanism

The plan would be put into action as per the levels of disasters categorized i.e. L0, L1, L2 & L3.

Levels of Disaster (The L Concept): The L concept has been developed to define the different levels of disaster in order to facilitate the assistance to State and the Centre. It has four levels which are as follows.

L0 level: Denotes normal times, which will be utilized for close monitoring, documentation and preparatory activities. Training of Search and Rescue teams, rehearsals, evaluation and inventory updating for response activities will be carried out during this period.

L1 level: Denotes when the disasters which can be managed at the District level where the State and the Centre need to be on guard in case assistance is required for disaster relief operations.

L2 level: Disaster situations that require assistance and active participation of State resources for management of the disaster.

L3 level: Disaster situation arises in case of large scale disasters that have a noticeable impact on a number of districts of states and when the State and District authorities have been overwhelmed with the disaster and require assistance from the Centre for rescue and relief operation

Step 1: identify the Hazards of Concern

Complete the hazards column for the following table. Typical hazards have already been identified, but these should be confirmed at this step and additional hazards added as appropriate.

Risk and Vulnerability Analysis-State Level

Hazard	Probability	Impact	Vulnerability Rating (Probability times Impact)	Specific Locations and populations of concern.
Earthquake (resulting in damage)	4	4	16 [High]	Zone IV Jamnagar
Wind (cyclone)	4	3	12 (Medium)	Very High Damage risk zone [50 m/s.] 1.717 million population.
Sea surge (cyclone)	3	3	9 (Medium)	0.22 million [2, 27,264] population are likely to be affected. Maximum surge record 3 meters.
Flood	5	4	20 (High)	May occur due to very heavy rainfall, sea surge or dam failure
Industrial Accident	4	5	20 (High)	Jamnagar.
Drought	3	2	6 (Low)	Whole City
Heat/cold wave	4	2	8 (Medium)	Whole City
Hailstorm	1	1	1 [Low]	
Landslides mudflows	1	1	1 [Low]	
Dam Failure	1	1	1 (Low)	
Mine fires/collapse	2	1	2 [Low]	Dist. has no major dams but having 17 medium/minor dams.
Road/rail/air accident	5	4	20 (High)	Jamnagar. Highway connected villages.
Oil spill & Road (marine)	3	2	6 (Low)	Sea shore, coastal belt
Boat sinking	4	2	8 (Medium)	Jamnagar
Building collapse	4	3	12 (Medium)	4 ULB & Jamnagar City (JMC)

Communal Disease (epidemics)	3	3	9 (Medium)	Whole City
Food poisoning	3	3	9 (Medium)	Whole City
Animal disease (epidemics)	2	3	6 (Low)	
Terrorism (consequences)	1	3	3 [Low]	
Critical Infrastructure Failure (e.g. extended power outage)	4	3	12 (Medium)	The Hydrocarbon Cross-contra pipeline running for Jamnagar may be affected.
Civil Unrest	3	2	6 (Low)	Whole City
WAR	2	4	8 (Medium)	Whole City
TSUNAMI	2	4	8 (Medium)	Jamnagar

Step 2: Assign the Probability Ratings

Assess the probability-or "livelihood" of each hazard by reaching a consensus on probability and then assign each hazard a "Probability Level," as indicated in the following table. Enter the score for each hazard in the probability column of the table in Step 1.

Probability	Score	Description
Almost certain	5	A regular event, on the average at least once in a 12-month period
Likely	4	Will occur at least once every two years.
Moderate	3	Will occur at least once every 5 years.
Unlikely	2	Will occur sometime in a 25-year period.
Rate	1	Can be expected to occur sometime in a 100-year period

2.1 Methodology of HRVA

Hazard risk assessment and vulnerability mapping & vulnerable elements to specific hazards. The Hazard technically is not a disaster unless the ' Trigger ' set it off. It could be weak legislation that failed to regulate the functioning of the facility. The Risk and Vulnerability factors analyzed from these Hazards which vary from Minor to Major impacts affecting the smaller or larger areas of the district.

"Risk is a technical concept, which is used by engineering and management specialists to arrive at an estimation of losses in the event of disaster and the expected probability of its occurrence."

$$\text{Risk} = \frac{\text{Hazards} \times \text{Vulnerability}}{\text{Coping capacity}}$$

"Vulnerability gives the extent to which a community is affected by a disaster". The idea of danger or threat points out the possibility of physical event capable of causing damage, like earthquake, floods, industrial accidents etc. The vulnerability brings to light, the structural susceptibility of society or social group to suffer harm, based on physical event constituting a "Threat". Vulnerability concerns the relationship between the social, economic and physical elements, on which the wellbeing of the society or the group in question depends. The analysis of vulnerability is specific and based on the type of danger or threat, which is apprehended.

The table below summarizes the results of an analysis of impact of HRVA of Jamnagar city. This analysis indicates that disaster planning at Jamnagar city level should first focus on the functional response to the Flood, Industrial Accidents and Earthquakes which triggers to the other hazards like Dam Failure, Water logging, Fire, Failure of critical infrastructure and building collapse.

Step 3: Assign the Impact Ratings

Assess the potential magnitude or impact of each hazard and assign each an "Impact Level" as in the following table. Enter the impact score for each hazard in the table in Step 1.

Impact	Scope	Description
Catastrophic	5	Massive insecurity, substantial loss of life likely. Large and generalized assistance urgently needed for large segments of population. Additional management, administrative, and technical expertise urgently needed. Large volumes of materials inputs needed.
Major	4	Security threatened for large segments of population, substantial impacts on vulnerable groups likely. Some loss of life likely. Life-saving programs likely needed to handle impact of emergency situation. Large volumes of material inputs and additional administrative staff and technical expertise likely to be needed.
Moderate	3	Security is threatened for potential target groups, some interventions may be needed, particularly for groups who likely face increase in vulnerability. Organization can likely respond with existing country/regional management structures.
Minor	2	Momentary insecurity local groups able to respond adequately to those in need. Some technical assistance by organization may be helpful to local respondents, although not urgently needed.
Insignificant	1	Little or no significant change in conditions, no expected loss of life, injuries, or significant loss of property for usual target groups as the result of the hazard Normal operations continue.

Step 3.1: Assign the "Vulnerability" Ranking

Multiply the probability and the impact scores in the table in Step 1. The resulting score indicates crude vulnerability. Scores above 15 indicate high vulnerability; scores between 7 and 15 indicate medium vulnerability and scores below 7 indicate low vulnerability.

Probability Rating: Class and (score)	Impact Rating: Class and (score)				
	Insignificant (1)	Minor (2)	Moderate (3)	Major (4)	Catastrophic (5)
Almost certain (5)	Low-5	Moderate - 10	Moderate - 15	High-20	High-25
Likely (4)	Low-4	Moderate-8	Moderate - 12	High-16	High-20
Moderate (3)	Low-3	Low-6	Moderate -9	Moderate -12	Moderate -15
Unlikely (2)	Low-2	Low-4	Low-6	Moderate -8	Moderate -18
Rare (1)	Low-1	Low-2	Low-3	Low-4	Low-5

These three classes related to the immediate vulnerability to disaster and provide guidance on disaster response planning. Assessing risk and vulnerability to low likelihood but high impact hazards (e.g., earthquakes) requires a different, more long-term focused, assessment process.

Note that the rating process presumes that:

- Populations are better able to respond to disaster which more likely and do not have severe (major) impacts and,
- Steps taken to prepare for moderate or high vulnerability events will also improve the ability to respond to low vulnerability events.

The divisions between low, moderate and high crude vulnerability can be changed but should be used consistently for all similar assessments in the state.

TYPES OF HAZARDS THE CITY PRONE TO

Jamnagar city is highly prone to multi hazards like Cyclone, earthquake, flood, Accidents. The history of disasters in the district will provide a clear picture of the vulnerability to which the district is prone.

Probability Period/Seasonality of Disasters

TYPE OF HAZARDS	TIME OF OCCURRENCE	POTENTIAL IMPACT
Flood	June –September	Loss of life, livestock, crop and infrastructure
Epidemics	Anytime	Loss to human life
Fire Accidents	March-May	Human Loss and house damage
Earth Quake	Anytime	Loss of Life, Livestock and Infrastructure
Cyclone	April-May October-November	Loss of Life, Livestock and Infrastructure
Drought	July-October	Damaged to crops
Chemical Accident	Anytime	Loss of life and property

The made degree and extent of Response to fight out any crisis depends upon the nature, degree and extent of disaster, but some of the points are almost common to all kinds of situations.

PROBABILITY PERIOD / SEASONALITY OF DISASTERS												
Name of Disaster	Month											
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Flood												
Cyclone												
Drought												
Earthquake												

For example it is to be ensured in all types of crisis that:-

1. Appropriate steps are to be taken.
2. Preparedness is required to contain the damages and casualties out of the crisis.
3. Steps for recovery reclamation and restoration of community life within the reasonable time will have to be taken care of.

All events or activities carry some risk and are associated with some level of vulnerability. Risk and vulnerability ranking is the process of assigning scores to the risk and possible impact of hazards to be able to compare the likely vulnerability and make informed management decisions about which hazards are of greatest concern and when planning and preparation efforts should be directed. A crude risk and vulnerability ranking process can be accomplished in five steps.

Step 4: Identify Areas with Highest Vulnerability

Once vulnerability ranks have been identified, the locations and populations considered most vulnerable should be identified. This aids in knowing where disaster assistance may be most needed, as well as providing a quick indication of where vulnerability reduction efforts could be most productive. Note that vulnerability reduction can include education, structural measures, and non-structural measures like evacuation planning. Where possible, the areas of high vulnerability should be mapped and included in disaster planning documents.

➤ Outcome

Hazards are defined as “Phenomenal that pose a threat to people, structures or economic assets and which may cause a disaster. They could be either man-made or naturally occurring in our environment.” A disaster is the product of a hazard coinciding with a vulnerable situation, which might include communities, cities or villages. Vulnerability is defined as “the extent to which a community, structure, service or geographical area is likely to be damaged or disrupted by the impact of particular hazard, on account of their nature, construction and proximity to a hazardous terrain or disaster prone area.

➤ **Hazard analysis:**

A detailed analysis of the hazards likely to impact the state will be carried out by the Department of Disaster Management, in consultation with the DMC of the state H.C.M. RIPA and experts from the field. Hazard assessment is concerned with the properties of the hazard itself. The Vulnerability Atlas of Gujarat, developed by BMTPC, Govt of India, will be used as the baseline for all analyses. The State Disaster Management Authority shall take all appropriate steps to complete a comprehensive hazard assessment of the State.

1. Earthquake

The District is located in Zone-IV of seismic vulnerability as captured in the Vulnerability Atlas. While earthquakes cannot be predicted, a detailed mapping of seismic fault systems and seismic source regions, quantification of probability of experiencing various strengths of ground motion at a site in terms of return period for intensity will be carried out and appropriate regulations put in place to decrease the vulnerability of built environment.

Different types of ground do shake with different severity in an earthquake. Softer soils and those with high water content generally shake more than rocky sites. Wherever possible site structures on firmer ground. This will reduce the severity of vibrations experienced in an earthquake. Capital intensive infrastructure, hazardous facilities and materials, and other important buildings should not be located in the vicinity of a known fault. Since early warning is not possible in case of earthquakes, the best choice is to ensure that seismicity is monitored and integrated with the GIS. Jamnagar District's situation indicates that some parts of the District like Jodiya, Dhrol and Jamnagar Taluka have been adequately provided with the seismic instrumentation. It is necessary that mitigation strategy considers instrumentation of all other areas in order to have a total assessment of the seismic activity. This would enable reconfirmation and up gradation of micro zonation activities.

2. Flood

River flooding is a regular hazard faced by the City. All the major river systems in the city are vulnerable to flooding, as captured in the Vulnerability Atlas. The urban areas like Jamnagar City are facing flooding primarily due to drainage and increased run-off loads in hard surfaces.

Regulations would include.

- Not permitting unrestricted new development in the hazard prone areas
- Anchoring and flood proofing structures to be built in known flood prone areas
- Built-in safe guards for new water and sewage systems and utility lines from flooding

- Enforcing risk zone, base flood elevation, and flood way requirements
- Prohibition on development in wetlands
- Prescribing standards for different flood zones on flood maps.

To meet these requirements, local governments will have to adopt specific flood plan Management into zoning and subdivision regulations, housing and building codes, and resource protection regulations.

In low-lying areas, close to the coast, and on flat land in river valleys, there may be a Potential for coastal or river flooding. In geologically younger river valleys, in mountains, and

Foothills there may be a potential for flash-flooding.

It is important to check the history of flooding in the area. Wherever possible

- Map the extent of land covered by past flood waters
- Get an indication of the depth of past flood waters
- Find out about the severity of past floods; how much damage they have caused, how fast

They flowed and how much debris they left behind and

- Find out how often flooding has happened, over at least the past 20 years.

3. Cyclone

In meteorology, a cyclone is an area of closed, circular fluid motion rotating in the same direction as the Earth. This is usually characterized by inward spiraling winds that rotate counterclockwise and clockwise of the Earth. Most large-scale cyclonic circulations are centered on areas of low atmospheric pressure. The largest low-pressure systems are cold-core polar cyclones and extra tropical cyclones which lie on the synoptic scale.

Coastal areas of District Jamnagar are particularly prone. Cyclones originate out at sea and become hazardous when they come ashore. They also drive the sea level up to cause coastal flooding.

4. Chemical Disasters

Growth of chemical process industry in Gujarat has received a dramatic accelerated Momentum in last one decade. Sophisticated technology complex processes and a wide range of chemicals and chemical products have emerged to provide better standards and improved way of living to millions of people.

Jamnagar city has specific chemical zone of factories. However, the disaster

Preparedness as precautionary measures have envisaged by involving all the major Departments who are directly or indirectly responsible for Chemical hazard. Total 6 MAH unit is in this district. Most probability of chemical disaster in this district.

Industries involved in the production or transportation of inflammable, hazardous and toxic materials hold the responsibility for preparing an off-site plan and communicating the same to district collector. Simulation exercises are also undertaken in the adjoining communities.

- Poison centers established in Civil Hospital-Jamnagar which lays near the industrial estates with facilities for detoxication and also in industries hospital.

- All transport of hazardous and toxic materials are communicating to the RTO.

- Small scale industries releasing toxic waste in water have to be encouraged to set up common effluent treatment facility.

- A common format for chemical data sheets used by DISH for collect information from all

Industries in the district are same available with both fire brigade and police.

5. Tsunami

Tsunamis are ocean waves produced by earthquakes or underwater landslides. Tsunamis are often incorrectly referred to as tidal waves, but a tsunami is actually a series of waves that can travel at speeds averaging 450 (and up to 600) miles per hour in the open ocean. However, waves that are 10 to 20 feet high can be very destructive and cause many deaths or injuries.

Tsunamis are most often generated by earthquake-induced movement of the ocean floor. Land slides, volcanic eruptions, and even meteorites can also generate risk are less than 25 feet above sea level and within one mile of the shoreline. So far as Jamnagar City is concern as per Analysis of Mean Sea level of Jamnagar City there less then 2 km far from sea and on less then 10 meter of height from ocean level. Most deaths caused by a tsunami are because of drowning. Associated risks include flooding, contamination of drinking water, fires from ruptured tanks or gas lines, and the loss of vital community infrastructure.

6. Epidemics

The Public Health Department is the nodal agency responsible for monitoring and control of epidemics. Local governments and municipal authorities also have a responsibility for taking appropriate steps in this context. Therefore, success of mitigation strategy for control of epidemics is depending on the type of coordination that exists between the Health Department and local authorities. Mitigation efforts for control of epidemics would include

1. Surveillance and warning

- 2 Preventive and Primitive measures

3. Strengthening institutional infrastructure... Like...

- Promoting and strengthening community hospitals with adequate network of Para-professionals will improve the capacity of the Health Department for surveillance and control of epidemics.
- Establishing testing laboratories at appropriate locations in different divisions within the State will reduce the time taken for diagnosis and subsequent warning.
- Establishing procedures and methods of coordination between Health Departments and local authorities.

7. Nuclear Disaster: -

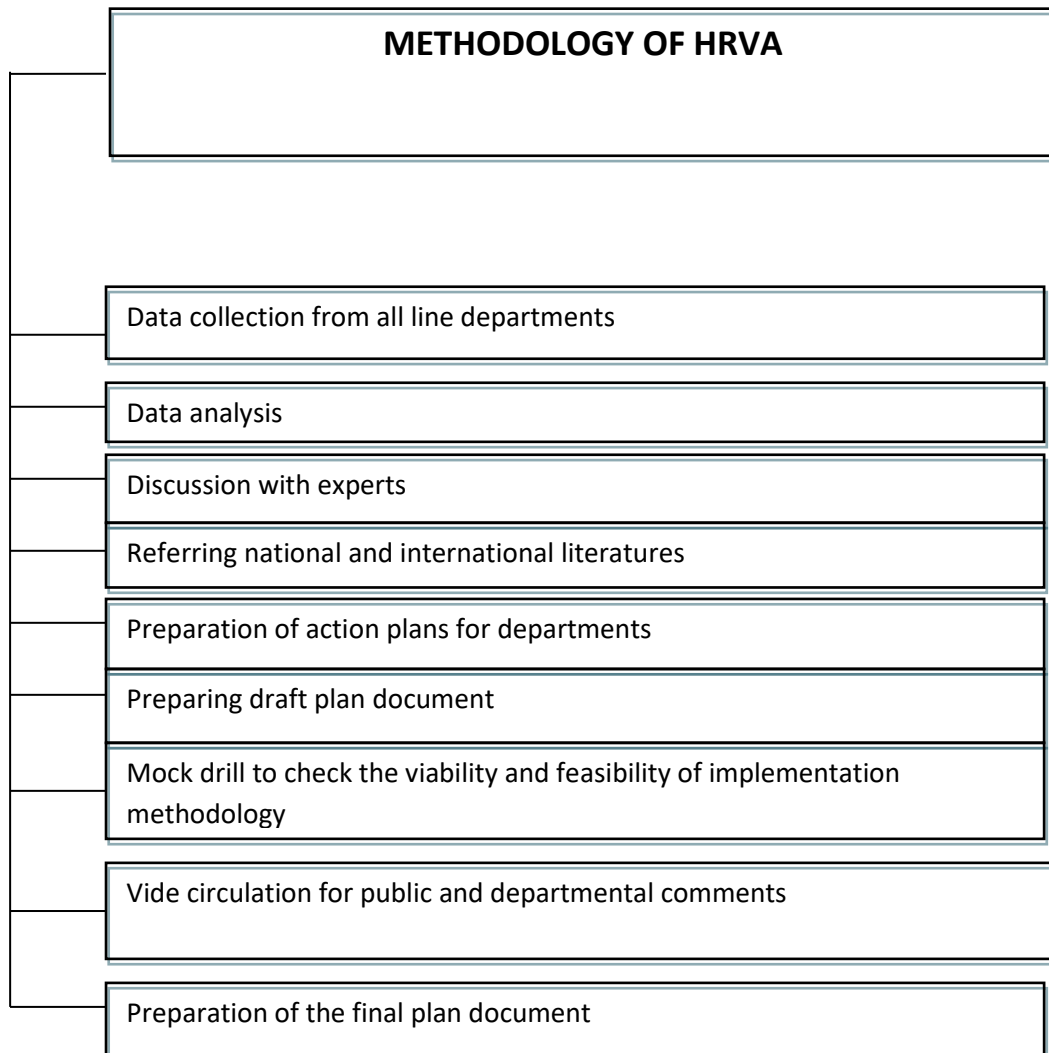
In the Past there is no any nuclear disaster was occurred...

8. Drought:

Low rainfall coupled with erratic behavior of the monsoon in the state make Jamnagar the most vulnerable to drought. Of all the natural disasters, drought can have the greatest impact and affect the largest number of people. Drought invariably has a direct and significant impact on food production and the overall economy. Drought, however, differs from other natural hazards. Because of its slow onset, its effects may accumulate over time and may linger for many years. The impact is less obvious than for events such as earthquakes or flood but may be spread over a larger geographic area. Because of the pervasive effects of drought, assessing their impact and planning assistance becomes more difficult than with other natural hazards.

9. Fire:

Fires may be caused due to earthquakes, explosions, electrical malfunctioning and various other causes. The State shall take up detailed assessment of fire hazards like preparation of inventories/maps of storage locations of toxic/hazardous substances, provision and regular maintenance of firefighting equipment, identification of evacuation routes, fail-safe design and operating procedures, planning inputs, transportation corridors etc.



DISASTER MANAGEMENT BASIC CONCEPTS

HAZARD: A potentially damaging physical event, natural phenomenon or human activity that may adversely affect human life, property or social and economic disruption or environmental damage.

VULNERABILITY: The conditions determined by physical, social, economic, and environmental factors which increase the damageability or proneness of an individual or community/society to impact of hazards.

RISK: Expected or anticipated losses from impact of a hazard at a given element over a specific period of time.

CAPACITY: The ability of stakeholders to cope with/resist/respond to the effects of a hazard or a catastrophic event.

Disaster Risk = H + V – C

Human vulnerability to disasters is inversely related to human capacity to withstand the effects of disasters.

DISASTER: Disaster Management Act, 2003 Gujarat defines Disaster as: “Disaster means a catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or man-made causes, or by accident or negligence which results in substantial loss of life or human suffering or damage to, and destruction of, property, or damage to, or degradation of environment, and is of such a nature or magnitude as to be beyond the coping capacity of the community of the affected area.

DISASTER MANAGEMENT: Disaster Management Act, 2003 defines Disaster Management as:

“Disaster Management means a continuous and integrated process of planning, organizing, coordinating and implementing measures which are necessary for prevention of danger or threat of any disaster; mitigation or reduction of risk of any disaster or its severity or consequences; capacity building; preparedness to deal with any disaster; prompt response to any threatening disaster situation or disaster; assessing the severity or magnitude of effects of any disaster; evacuation, rescue and relief; and rehabilitation and reconstruction.

CHAPTER-3

INSTITUTIONAL

ARRANGEMENT FOR DM

CHAPTER 03

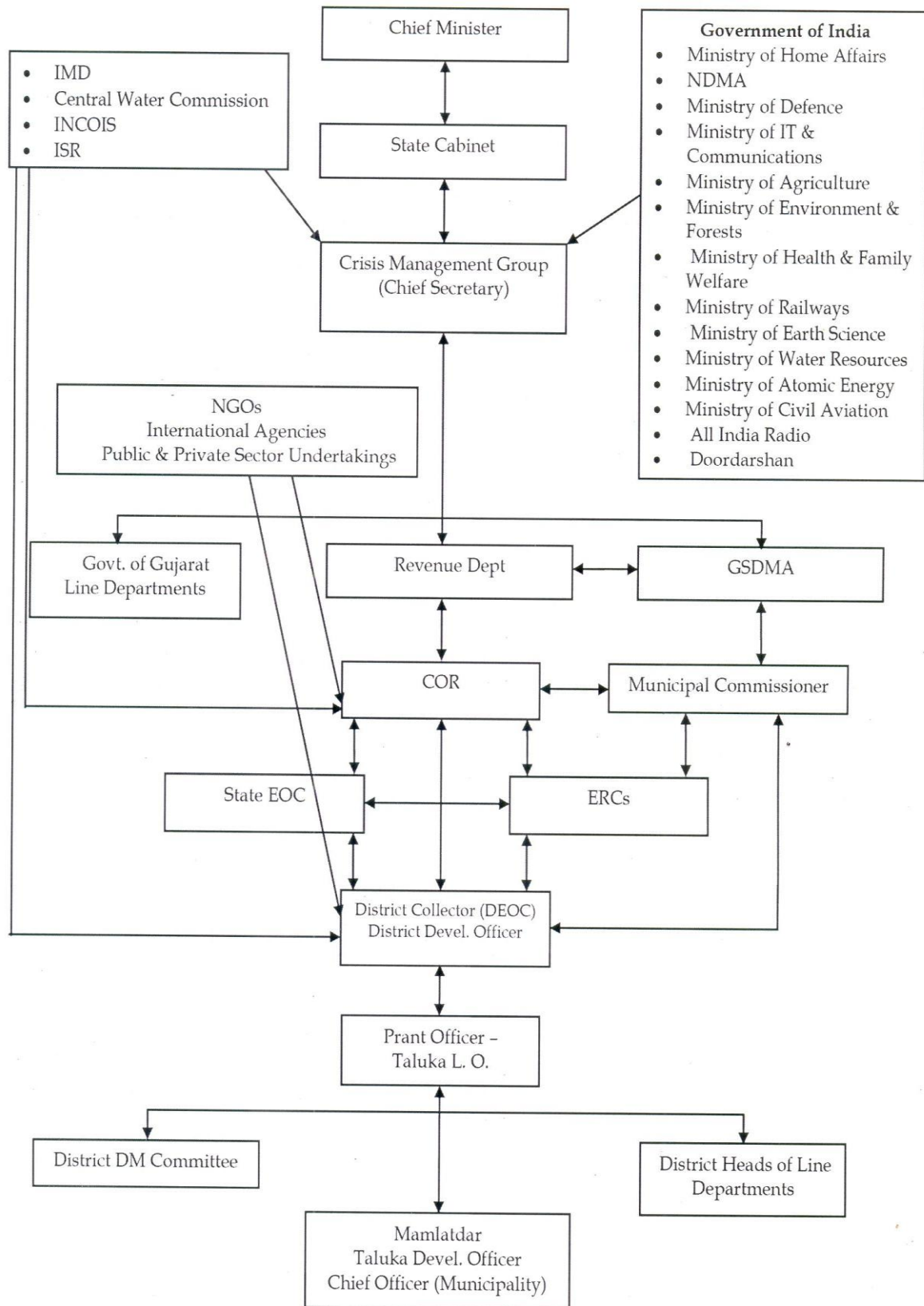
INSTITUTIONAL ARRANGEMENT FOR DM

InstitutionalArrangement

The plan incorporates multi level institutional as well as response planning mechanism at district level. That is.....

The DM structure in the State is as per the Gujarat State Disaster Management Act – 2003. The National Disaster Management Act – 2005 resembles the State Act with only a few provisions which are not a part of the State Act but are there in the Central Act. Those provisions include designating a Vice Chairman to the SDMA, constitution of a State Executive Committee, establishment of a District Disaster Management Authority in each District and creation of a District Disaster Response & Mitigation Funds. The State has existing institutional arrangements in place for addressing the roles / responsibilities envisaged through the above provisions and hence does not find it compelling to implement the provisions afresh.

1.10 DM Structure in the State



The District Collector will be responsible for coordinating all disaster management activities at the district level. There shall be a District Disaster Management Authority headed by Collector. The District Disaster Management Authority shall approve a district disaster management planning and review all measures relating to preparedness and response to various hazards. The District Disaster Management Committee comprises members from Jilla Panchayat, different line departments, NGOs and others to be notified by the Department of Disaster Management from time to time. In times of disasters, Dist. Collector shall constitute a District Relief Committee to oversee management of relief. Following member should ne club at district level committee.

B. DDMC: -District Disaster Management Committee

Sr. No.	Detail
1	Collector
2	DDO
3	SP
4	District supply officer
5	Exe. Engineer-R&B State
6	Exe. Engineer-R&B Panchayat
7	Exe. Engineer-R&B State Irrigation
8	Superintending Engineer- PGVCL
9	District Home guard commandant
10	Superintendent G.G. Hospital
11	Port Officer-GMB
12	District forest Officer
13	Dy. Director-Information Department
14	Chief fire officer
15	Regional Officer-GPCB
16	District Agriculture Officer
17	SDM
18	Regional Transport officer
19	Divisional Controller-State transport
20	Dy. Controller –Civil Defence
21	District Education Officer
22	District Primary Education officer
23	NGO Member
24	Media Person

C. TDMC: - Taluka Disaster Management Committee

Block/ Taluka level Disaster Management Committees will be constituted and will be Headed by Mamlatdar as the case may be Officers from different departments and representatives of local panchayat body will be members of this Committee. The Committee will look into all the aspects of disaster management including mitigation preparedness, response and relief. Following member is club in TDMC.

Sr. No.	Detail
1	Dy. Collector/ Dy. D.D.O.
2	Mamlatdar
3	Taluka Development Officer
4	Dy. Executive Engineer- R & B (State)
5	Dy. Executive Engineer- R & B (Panchayat)
6	Dy. Executive Engineer – Irrigation
7	Dy. Executive Engineer –GEB
8	Dy. Executive Engineer – Water Supply
9	Junior Engineer-Telecom
10	Medical Officer (Mother PHC)
11	Police Inspector/ Police Sub Inspector
12	Taluka Home Guard Commandant
13	Taluka Kelvani Nirikshak
14	Godown Manager- Civil Supply Corporation
15	Depot Manager – S.T.
16	Port Officer
17	Range Forest Officer (Head Quarter)
❖ <u>Non- Government Members</u>	
18	President - Taluka Panchayat
19	M.P.
20	M.L.A.
21	Chairman- Social Justice Committee (Taluka Panchayat)
22	Woman Member - Taluka Panchayat
23	NGO Representative

D. CDMC: -City Disaster Management Committee

In each City / Nagar palika, there shall be a Disaster Management Committee which will oversee all activities in disaster management. The ULB will also constitute a City Disaster Management Team consisting of officials and non-officials and organize training for them to be able to discharge their duties properly.

Sr. No.	Department
1	Dy. Collector/SDM/Dy.DDO
2	Chief Officer
3	Chief fire officer
4	Mamlatdar
5	Town planning Head
6	Dy.Exe. Engineer-R&B state
7	Dy.Exe. Engineer-state-Irrigation
8	Dy.Exe. Engineer- PGVCL
9	Dy.Exe. Engineer-GWSSB
10	Junior Engineer Telecom
11	Medical Officer-C.H.C.
12	Medical Officer Municipality Health Centre
13	Head Transport committee
14	PI/PSI
15	Taluka Home guard Commandant
16	Education Officer Municipality Education committee
17	Project Coordinator-UCD
18	Port officer
19	Range forest officer-Extension
Non Governmental Member	
20	President Municipality
21	Member of Parliament
22	Member of Legislative assembly
23	Chairman- Standing Committee committee
24	Chairman-Water Supply committee
25	Chairman City planning committee
26	Chairman Construction Committee
27	Women Member of Municipality
28	Scheduled caste Member of municipality
29	Local N.G.O.
30	Other-Decide By CDMC

E. MDMC: - Municipal corporation Disaster Management Committee

The responsibility to manage disasters in the urban areas will rest with the Municipal Commissioner under the overall supervision of District Collector. The urban local body will be responsible for putting in place techno-legal regime and its compliance, training and capacity building of municipal staff, Disaster Management Plan, awareness raising in the urban areas, functioning of fire services, setting up of search and rescue teams and such other activities to be notified by Relief Commissioner and CEO-GSDMA from time to time.

Sr. No.	Department
1	Commissioner-Municipal corporation
2	Additional collector
3	Dy. Commissioner
4	Dy. Commissioner
5	Asst. Commissioner
6	Chief Fire officer
7	Dy. S.P.-City
8	Project officer-GSDMA DRM Programme
9	Dy. Controller-Civil Defence
10	CDHO
11	Education Officer-Municipal corporation Education committee
12	CEO-JADA
13	Project Officer-UCD
14	City Engineer
15	Estate Manager
16	Exe. Engineer Water Supply-City
17	Exe. Engineer Drainage Municipal corporation
18	Town Planning Officer
19	Dy. engineer-Slum
20	Dy. Engineer Civil Department-Zone1,2,3,4
21	E.D.P. Manager
22	Dy. Engineer Light Department
23	Dy. Engineer Project planning
24	Dy. Engineer Water Works
25	Inquiry officer Municipal corporation
26	Medical officer-Health Branch
27	Representative Lead Bank
28	Representative from Engineer College
29	In charge N.S.S. Unit

F. VDMC: - Village Disaster Management committee

Each village shall have a Disaster Management Committee consisting of officials and nonofficials. The Committee will be constituted to oversee by the gram sabha. The Committee will be responsible for awareness generation, warning dissemination, community preparedness plan, adoption of safe housing practices and organizing and cooperating relief in post disaster

Situations. The member is..

Sr. No.	Detail
1	Sarpanch-Chair Person
2	Talati cum Mantri
3	Primary Principal
4	Health Worker
5	Anganwadi Worker
6	President Seva Co operative
7	President Milk cooperative
8	Community Representative
9	Community Representative
10	Community Representative
11	Fair price shop holder

Disaster Management (DM) is a multi-level, multi-agency responsibility. As per the National Disaster Management Act, 2005 and the National Disaster Management Policy, institutional mechanisms at national, state, and local levels are structured to ensure coordinated disaster preparedness, mitigation, response, and recovery. This chapter outlines the DM institutional structure with specific focus on Jamnagar Municipal Corporation (JMC) and the community level.

Disaster Management Organizational Structure

National Level

- **National Disaster Management Authority (NDMA):** Apex body chaired by the Prime Minister.
 - Lays down policies, plans, and guidelines.
 - Coordinates with States for disaster preparedness and response.
- **National Executive Committee (NEC):** Supports NDMA in execution and inter-ministerial coordination.

State Level (Gujarat)

- **Gujarat State Disaster Management Authority (GSDMA):** Headed by the Chief Minister.
 - Develops state disaster management plans.
 - Coordinates resource mobilization and risk reduction strategies.
- **State Executive Committee (SEC):** Chaired by the Chief Secretary.
- **Incident Response System (IRS):** Deployed across the state.
 - Roles include Incident Commander (IC), Operations, Planning, and Logistics Sections.
- **State Emergency Operation Center (SEOC):** 24x7 functional in Gandhinagar with GIS and communication facilities.

City Level – Jamnagar Municipal Corporation

- **Jamnagar City Disaster Management Committee (JCDMC):**
 - Chairperson: Municipal Commissioner.
 - Members: Heads of Fire, Health, Engineering, Water, Solid Waste, Drainage Department, Road Department, Garden Department, Light Department, NGOs, and other civic agencies.
 - Functions: Plan, coordinate, and monitor disaster management activities in the city.
- **Task Forces:**
 - Search & Rescue Task Force
 - Medical & Health Task Force
 - Relief & Shelter Task Force

- Water and Sanitation Task Force
- Electricity Restoration Task Force
- Each task force is headed by a nodal officer and supported by trained personnel.

Incident Response System (IRS) – Jamnagar City

- Incident Commander (IC): Usually the Municipal Commissioner or the appointed officer during disasters.
- IRS structure includes:
 - Operations Section: Ground-level response teams.
 - Planning Section: Information management, documentation, and situation reports.
 - Logistics Section: Resource mobilization, transportation, facilities, and services.

This structure ensures clarity of roles, streamlined communication, and effective coordination among all stakeholders during emergencies.

Community-Level Institutional Framework

- Ward Disaster Management Committees (WDMCs):
 - Formed at ward level, led by Ward Officer.
 - Includes volunteers, NGOs, SHG members, and community leaders.
- Community-Based Organizations (CBOs) and NGOs:
 - Actively participate in awareness campaigns, mock drills, and relief activities.
- Academic Institutions:
 - Support risk assessment, research, and capacity-building.

Inter-Agency Coordination Platforms

- Inter-Agency Group (IAG):
 - Brings together NGOs, private agencies, academic institutions, and government bodies.
 - Facilitates partnership in planning and response.
- Public-Private Partnerships (PPP):
 - Used for logistics, ambulance support, water supply, power backup, etc.

3.8 Emergency Services in Jamnagar City

Service	Facility	Contact
Fire & Emergency Services	Fire Stations (JMC)	101, 0288 2672208
Police	Police Control Room	100
Health	108 Emergency Ambulance	108

3.9 Forecasting and Warning Agencies

Agency	Function
India Meteorological Department (IMD), Ahmedabad	Cyclone, Rainfall, Heatwave Alerts
Central Water Commission (CWC)	Flood Forecasts
INCOIS	Tsunami Alerts
GSDMA & SEOC	State-level alerts and coordination
JMC DEOC & Control Room	Local dissemination of alerts
Media, WhatsApp Groups, SMS Gateway	Public communication and awareness

Work of the officials of Jamnagar Municipal Corporation

Sr. No.	Officer	Responsibilities
1	Commissioner	Overall supervision of all activities.
2	Deputy Commissioner (Admin)	Under the guidance and supervision of the Commissioner, manage daily operations, media coordination, press releases, communication with government officials, and coordination with various departments for arrangements related to isolation, quarantine, etc., as well as public awareness and health-related announcements.
3	Assistant Commissioner	Coordinate tasks with the Commissioner, Deputy Commissioner, and other officials.
4	City Engineer	• Supervise all technical arrangements, daily operations, control, and monitoring. • Monitor cleanliness and sanitation activities. • Guide the layout and execution of temporary arrangements and coordinate with other departments.
5	EDP Manager	• This department shall ensure immediate assignment of control room responsibilities to the required staff/officers as per the situation. • The EDP Manager shall ensure the availability of a typist for timely typing of reports. • A list with names, designations, and telephone numbers of all officers/employees of the Municipal Corporation shall be prepared. • The EDP Manager shall arrange for the prompt communication of important updates to the concerned departments via internet/email, and ensure that the control room staff receives those messages promptly for further dissemination.
6	Flood Control Officer	• Flood control officer shall supervise the control room operations round-the-clock and carry out all functions of the control room as per the plan, along with monitoring and direction of all activities.
7	Public Relations Officer	• This department, through emergency services centers and the control room, shall ensure timely dissemination of warnings and alerts to the public during heavy rains, storms, earthquakes, or other such events through local newspapers, cable operators, mike announcements, mobile phones, and WhatsApp groups.

		• Will coordinate with the information account/collector's office. • Will make efforts to ensure that public information management is handled efficiently and that people receive timely and correct information. • Will collect and maintain authenticated and accurate information from newspapers, cable operators, officers of the information department, sound service providers, vendors of loudspeakers, and various channels, with proper signatures. • Will coordinate and work in alignment with the Deputy Commissioner (Admin).
8	Executive Engineer (Drainage Department) Solid Waste Management Department	• This department will manage the disposal of water accumulated due to heavy rainfall in low-lying areas through drainage. • Immediate action will be taken to ensure the functioning of stormwater pumping stations where required. • The department will keep all vehicles of the Municipal Corporation in a ready-to-operate condition. • Contact details of drivers and staff required for emergency night-time operations will be prepared and shared with the Deputy Commissioner (Admin). • Supervisors, operators, typists, wireless operators, inspectors, and supervisors will be alerted in advance for emergency duties. • Arrangements for potable water and supply of drinking water by tankers will be ensured where drinking water supply is disrupted. • Special attention will be given to keeping generators ready in case of power outages. • Cleanliness and quick removal of debris, mud, and other waste from waterlogged areas will be done immediately. • Additional work teams will be prepared with supervisors, typists, and sanitation inspectors. • The department will keep all vehicles like JCBs/loaders, refuse collectors, trucks, tractors, etc., in working condition, with daily updates reported to higher officials. • In affected areas, arrangements will be made to temporarily shelter animals in safe places.

		• Precautions will be taken to prevent the spread of diseases among animals, and veterinary support will be arranged. • Fodder arrangements for animals will be made. • Veterinary officers from the So.Ve. Department and NGOs will be deployed. • Disposal of animal carcasses will be handled promptly. • For the disposal of human bodies, arrangements will be made for hearse vans, coffins, chlorine, D.D.T., etc., and the necessary coordination will be ensured for dignified last rites.
9	Executive Engineer (Water works) Filter Manager (Filter)	• During floods/cyclones/earthquakes, arrangements should be made to ensure a continuous supply of clean drinking water and to take necessary measures for hygiene. • A list of officers working at waterworks and their contact details should be prepared and kept ready in coordination with the concerned departments. • In case of damage to pipelines/water tanks due to floods, arrangements should be made to immediately repair the damage and restore water supply. • If pollution of drinking water is detected, arrangements should be made to provide clean drinking water through tankers.
10	Medical Officer of Health	• During outbreaks of disease, arrangements should be made for the chlorination/filtering of drinking water. • The department should arrange for primary treatment of people injured during the disaster. • At primary health centers, ensure the availability of life-saving medicines, saline, emergency drugs, chlorine tablets, etc. • Ensure availability of essential treatment equipment. • Provide assistance from surgeons, pediatricians,

		gynecologists, and other specialists as needed. • Take immediate measures to prevent the spread of any outbreak of disease. • Keep contact information ready for medical associations, medical store associations, hospitals, private clinics, and specialist doctors in the city.
11	Malaria Health Department (Biologist)	• department shall arrange for the testing of emergency medicines used for waterborne diseases stored in godowns. • Vaccines for waterborne diseases, cholera injections, and ORS powder must be stored in adequate quantities for prevention and control.
12	Chief Fire Officer	• Fire and emergency services team will be deployed for rescue operations and prompt reporting will be arranged for trapped individuals. • Arrangements should be made for immediate availability of fire fighters, extinguishers, and rescue equipment where needed. • All necessary tools and resources for search and rescue operations must be made available on-site. • In affected areas, the department must make arrangements to evacuate people to safe places and assist in managing crowds. • Animals should also be relocated to safe places. • In cases of past similar emergencies, experienced personnel should be immediately deployed with appropriate arrangements for their travel and stay. • Necessary assistance must be provided to people in temporary shelters and ensure a rescue team is deployed at each affected location.

13	Estate Officer	• Make temporary shelters ready and immediately remove unsafe buildings that are about to collapse. • Remove road obstructions/debris and ensure roads are cleared. • Coordinate the above activities with the Chief Fire Officer. • In case of risk of high wind due to a cyclone, promptly arrange to prevent damage to hoardings in city areas. • If demolition is necessary, take immediate action for removal.
14	Project Officer (UCD), ICDS Officer, Mamlatdar, Mid-Day Meal	• Project Officers, voluntary organizations, and volunteers should help arrange food packets and essential clothing for the affected people. • Ensure immediate and adequate availability of food supplies to the victims. • Food packets must be delivered timely to the affected in relief camps. • Coordinate effectively with voluntary organizations for timely food distribution. • Ensure coordination with the food supply department for the procurement and delivery of essential goods. • The ICDS must provide food, nutrition, and supplementary meals to children and mothers.
15	Executive Engineer (Mechanical - Bus) (Garage)	• This department will ensure availability of buses in sufficient numbers for transporting the affected people to safer places and relocation sites. It will also make arrangements to coordinate with BMC (Bhavnagar Municipal Corporation) for this purpose. • Arrangements should be made to quickly mobilize and deploy water tankers, ST (State Transport) buses,

		and private buses as needed.
16	Executive Engineer: Roshani Department	• This department will ensure emergency lighting arrangements at temporary shelter locations for affected people. • In coordination with PGVCL (Paschim Gujarat Vij Company Ltd.), ensure quick repair and restoration of electric supply in case of power outages, streetlight failures, etc. • In coordination with PGVCL, ensure immediate rectification of electric faults such as broken poles, snapped wires, and fallen lines obstructing roads. • Ensure generators, telephone, and wireless sets are available and functional, and coordinate with BSNL for support. • Ensure availability of contact numbers of all generator operators and private party owners who can supply emergency lighting equipment. • Provide necessary support for setting up emergency lighting at important offices like Collector Office, Smart Tower, Street Light Control Room, etc.
17	Town Development Officer Town Planner	• Provide primary aid and relief in case of collapsed homes, huts, and structures in slum areas and due to natural calamities. • Conduct surveys and make arrangements for compensation and rehabilitation in government records. • For this task, the Town Development Officer and Town Planner along with their subordinate staff and officers will provide full cooperation.
18	Executive Engineer (Roads)	• Roads, bridges, culverts, etc., should be repaired and cleared.

		• In case of heavy rainfall, remove debris and mud from the roads. • Ensure proper drainage, repair potholes, and restore damaged roads.
19	Store Superintendent	• Ensure availability of emergency stock such as: ○ Petroleum, ○ Kerosene, ○ Diesel, ○ Gasoline, ○ Dry batteries, ○ Torches, ○ Other necessary emergency equipment.
20	Administrative Officer Town Primary Education Committee (Shasanadhikarishree)	• Make arrangements for using school buildings as shelter and provide required assistance as per need. • Ensure that all staff and teachers of the school are available and ready. • Clean the school premises beforehand. • Complete the process of handing over schools to the administration. • Arrange for regular teaching once the schools reopen.
21	Garden Superintendent	• Remove trees or large branches that have fallen on roads and restore traffic. • Cut down trees or branches that pose a risk to roads.

Incident Response at the State Level

In any disaster response, the initial efforts would always be taken by the District Administration. However, when Districts are overwhelmed in any situation, the support necessarily has to come From the State and National level. While the IRS is mainly relevant at the basic functional level, It is absolutely necessary that the support functionaries from the State and the National level Also conform to the principles of IRS in the emergency support duties. This will be greatly Beneficial for the proper coordination of the various response efforts at the National and State Level with that of the District. It is therefore necessary to clearly understand the structure of The IRS in the context of State response. The hierarchical representation of RO with State EOC, Headquarters IRT and its lower level of IRTs at District levels are shown in Fig. 4.

Chief Secretary		
Nodal Officer-Air Operations) HQ IRT	State EOC	
Incident Commander IRT District – A	Incident Commander IRT District – B	Incident Commander IRT District – C

Incident Response at the District Level

The District Magistrate/DC is the head of the District administrative set up and chairperson Of the DDMA as per the DM Act, 2005. He has been designated as the RO in the District. The heads of different departments in the District will have separate roles to play depending on the nature and kind of disaster. The roles and responsibilities of the members of the DDMA Will be decided in advance in consultation with the concerned members. The roles of other line Departments also have to be clearly delineated in various disaster situations in the District DM Plan which will be duly approved by the State Government, so that there will be no ambiguity About their functions during response.

DISTRICT MAGISTRATE / RO		
Nodal Officer-Air Operations) HQ IRT	District EOC	
Incident Commander Sub-Division IRT	Incident Commander Tehsil IRT	Incident Commander Block IRT



Emergency Rescue Kit-EOC Set up and Facilities available

As a part of preparedness following equipment were allocated in this district

EMMERGENCY RESCUE KIT AT TALUKA PLACES OF JAMNAGAR/JAMNAGAR DISTRICT

No.	Name of Taluka Mamlatdar Office	Artical includeed in each ECRs		
		Life Saving Jacket	200 ft. Ropes	100 ft.Ropes
1	Mamlatdar Office – Jamnagar Rural	35	4	8
2	Mamlatdar Office – Jamnagar City	25	4	8

➤ Forecasting and warning agencies:

9.4 Warning or Occurrence of Disaster

On the receipt of warning of alert from any such agency which is competent to issue such a warning, or on the basis of reports from Divisional Commissioner/ District Collector of the occurrence of a disaster, all community preparedness measures including counter-disaster measures will be put into operation. The Chief Secretary/ Relief Commissioner will assume the role of the Chief of Operations for Disaster Management.

It is assumed that the district administration would be one of the key organizations for issuing warnings and alert. Additionally, the following agencies competent for issuing warning or alert are given below.

<u>Disaster</u>	<u>Agencies</u>
Earthquakes	IMD
Floods	Meteorological Department, Irrigation Department.
Cyclones	IMD
Epidemics	Public Health Department
Road Accidents	Police
Industrial and Chemical Accidents	Industry, Police, District Collector
Fire	Fire Brigade, Police, Collector
Rail Accident	Railways, Police, Collector
Air Accident	Police, Collector, Airlines
Ammunition Depot-Fire	Army, Police, Collector.

➤ **The occurrence of the disaster will be communicated to :**

Governor, Chief Minister, Home Minister, Relief Minister and non-officials namely MPs and MLAs from the affected district. Chief Secretary, Principal Secretary, Disaster Management & Relief Department, Secretary, Disaster Management & Relief Department, Cabinet Secretary, Secretary, Home and Defense, Government of India. Secretary, Agriculture, and Joint Secretary, NDM, Ministry of Agriculture, GOI Local Area Commander of the Army.

➤ **The Occurrence of the Disaster would essentially bring into force the following :**

- ❖ The Emergency Operations Centre will be put on full alert and expanded to include Branch arrangements, with responsibilities for specific tasks, depending on the nature of disaster and extent of its impact. The number of branches to be activated will be decided by the Chief of Operations.
- ❖ All Branch Officers and Nodal Officers will work under the overall supervision and administrative control of the Chief of Operations. All the decision taken in the EOC have to be approved by the Chief of Operations.
- ❖ Immediate access to the disaster site.
- ❖ Telephonic and VSAT, wireless communication and hotline contact with the Divisional Commissioner, and Collector/s of the affected district/s will be activated.

The EOC in its expanded form will continue to operate as long as the need for emergency relief and operations continue and the long-term plans for rehabilitation are finalized for managing long-term rehabilitation programmes, such as construction of houses, restoration of infrastructure etc. the responsibilities will be that of respective line departments. This will enable EOC to attend to other disaster situation, if the need be.

Chapter-4

PREVENTION AND MITIGATION MEASURES

Chapter-4

Prevention and Mitigation Measures

Prevention and Mitigation Plan – Jamnagar City

1. Introduction

Prevention and mitigation aim to reduce the risk and impact of disasters before they occur. Jamnagar, being a coastal city, is vulnerable to cyclones, flooding, earthquakes, industrial hazards, and fire incidents. This plan outlines proactive measures for disaster risk reduction (DRR) by the Jamnagar Municipal Corporation (JMC) in coordination with district and state authorities.

For disaster prevention and mitigation, both structural and non-structural interventions can be planned. Structural interventions include construction of physical engineering and non engineering structures to reduce hazard risks. Non structural mitigation includes awareness and capacity building at official and community level, formulation of new plans and overall promoting a commitment for safety.

2. Objectives

- Identify and reduce disaster risks.
- Integrate disaster risk reduction into city development plans.
- Promote resilient infrastructure and community awareness.
- Implement long-term and short-term mitigation strategies.

Mitigation measures can be divided in two categories:

- i) Structural measures: On site works, construction, and engineering works and
- ii) Non-structural measures: Which include studies, research, regulations, policy changes and capacity building activities that support the structural measures.

The taluka disaster management plan includes hazard specific structural and non structural mitigation plans in consultation and convergence with various Departments. For example, the MGNREGA work can take up activities on construction of embankment for flood safety or the forest department may take up mangrove plantation in the coastal areas, while the water supply department can construct hand pumps on raised platforms.

Departments shall draw out its own plan, goals and milestones and review it annually for its achievements and planning for next year.

3. Disaster Preparedness

The Idea of protective city planning suggests decentralization and isolation of vulnerable facilities from the rest of the city. The following are the typical ingredients indicate the broad scope of an urban risk reduction programme.

- The preliminary process includes hazard mapping, vulnerability assessment, resources identification and loss estimation
- Training key officials through on the job training, mentor training and workshops.
- Development of City disaster management plan as a part of District as well as state DM Plan and should have proper DM Information system module.
- Protecting lifeline resources such as key infrastructure, media resources book, schools, shelter places, communication network, key economic asset etc.
- Developing and Implementing disaster mitigation measures is a demanding task in developing nations because such measures are relatively high investments inputs such as flood response and mitigation system, early warning system etc.
- Organising community vulnerability reduction programmes to aware and prepare measures through public education system like radio, news paper and awareness.

4. Structural Mitigation Measures

4.1. Infrastructure Strengthening

- Strengthening of critical infrastructure (hospitals, schools, buildings).
- Earthquake-resistant construction norms as per IS codes.
- Cyclone shelters in coastal and vulnerable wards.

4.2. Flood Mitigation

- Upgrading drainage networks to reduce urban flooding.
- Desilting of rivers, stormwater drains, and lakes before monsoon.
- Construction of check dams and retention ponds.

4.3. Retrofitting & Urban Planning

- Retrofitting old government buildings and high-risk private structures.
- Land-use planning with hazard zones and buffer areas.
- Relocation of highly vulnerable informal settlements.
-

5. Non-Structural Mitigation Measures

5.1. Policy and Planning

- Integration of DRR in Bhavnagar Development Plan and Smart City Mission.
- Strict enforcement of Building Code, Fire Safety Act, and Environmental Rules.

5.2. Awareness and Capacity Building

- Public awareness campaigns in schools, markets, and vulnerable areas.
- Fire drills, mock exercises in coordination with NDRF/SDRF.
- Training of municipal staff, volunteers, and ward officers.

5.3. Early Warning Systems

- Installation of cyclone and flood early warning systems.
- Use of mobile alerts, community sirens, and loudspeakers.
- Coordination with IMD and INCOIS for real-time updates.

5.4. Industrial Risk Management

- Regular safety audits of GIDC and chemical industries.
- Creation of off-site emergency plans and buffer zones.
- Pollution control and hazardous waste monitoring.

6. Institutional Framework

Institution / Agency	Role in Prevention and Mitigation
Jamnagar Municipal Corporation	Urban planning, enforcement, public services
Jamnagar District Disaster Authority (DDMA)	Coordination and resource allocation
Gujarat State Disaster Management Authority (GSDMA)	Technical support and funding
Local NGOs and RWAs	Community outreach and grassroots training

7. Funding Sources

Smart City Project Fund

Smart City Project Fund – Overview & Use for Disaster Prevention and Mitigation

The Smart City Project Fund is part of the Smart Cities Mission (SCM) launched by the Ministry of Housing and Urban Affairs (MoHUA), Government of India, in 2015. The mission supports urban transformation by promoting sustainable and inclusive development through smart solutions.

Smart City Project Fund: Structure

1. Funding Structure

- Central Government Contribution: ₹500 crore per Smart City (₹100 crore/year for 5 years).
- State Government/ULB Contribution: Matching contribution of ₹500 crore.
- Total Baseline Allocation: ₹1000 crore per city over 5 years.

2. Additional Funding Sources

- Public-Private Partnership (PPP) investments
- Convergence with other Central/State schemes (e.g., AMRUT, PMAY, SBM)
- Loans from multilateral agencies (ADB, World Bank)
- CSR contributions
-

Key Components of Smart City Projects

1. Core Infrastructure Services

- Water supply, sewerage, solid waste management, power

2. Efficient Urban Mobility

- Smart roads, traffic systems, pedestrian-friendly streets

3. Digital Governance & e-Governance

4. Smart Health and Education

5. Sustainable Environment

6. Disaster Resilience & Climate Adaptation

Use of Smart City Fund in Disaster Prevention & Mitigation

A. Infrastructure Upgrades

- Underground power lines and stormwater drains.
- Smart water logging sensors and pumps
- Earthquake-resistant public buildings and smart schools
- Flood mitigation works integrated with urban drainage.

B. Early Warning & Monitoring Systems

- Weather stations, flood alert systems, and real-time sensors
- Smart CCTV and command-control centers (ICCC)
- GIS-based hazard mapping

C. Fire Safety & Emergency Services

- Modern fire stations and fire hydrant systems
- Smart fire detection and alarm systems in markets/public spaces
- Digital maps for emergency response routes

D. Community Resilience Projects

- Smart shelters with solar backup and water storage
- Multi-purpose community halls for emergencies
- Mobile apps for public awareness and emergency alerts
- Integrated Command and Control Centre (ICCC)

- Smart LED lighting with disaster-resilient wiring
- Smart roads with better drainage
- GIS mapping of urban zones to assess vulnerability.
- Rainwater harvesting structures.
-

Integration Suggestions for Jamnagar

To better utilize the Smart City Fund for disaster mitigation:

- Allocate a dedicated Disaster Resilience Budget Line within SCM
- Converge SCM with GSDMA and DDMA plans.
- Include climate adaptation and green infrastructure projects.
- Involve local residents via Smart City Advisory Forums
-

State Disaster Mitigation Fund (SDMF)

The State Disaster Mitigation Fund (SDMF) is a dedicated fund created by the Government of India under the recommendations of the 15th Finance Commission. It is part of the disaster risk financing framework under the Disaster Management Act, 2005, and is meant specifically for risk reduction and mitigation activities, not for relief or response.

2. Objective of SDMF

The SDMF aims to:

- Support **prevention and mitigation projects** that reduce vulnerability to future disasters.
- Build long-term resilience in infrastructure, communities, and ecosystems.
- Strengthen institutional and local capacities for disaster risk reduction (DRR).

3. Funding Structure

Component	Details
Total Duration	2021–26 (15th Finance Commission cycle)
Funding Pattern	75% by Central Government, 25% by State
Gujarat's Annual Allocation	Based on hazard risk, population, and vulnerability profile
Administered By	Gujarat State Disaster Management Authority (GSDMA) with disbursal to districts and ULBs

4. Eligible Activities under SDMF

The following types of projects can be funded under the SDMF:

A. Infrastructure and Engineering Measures

- Retrofitting public buildings (schools, hospitals, offices)
- Construction of embankments, stormwater drains, fire stations.
- Flood control and slope stabilization works.

B. Natural Resource Management

- Water conservation and drought-proofing
- Mangrove regeneration and coastal shelterbelt plantation (important for Jamnagar)
- Soil erosion control measures

C. Capacity Building and Awareness

- Community-level training and mock drills
- Public education on disaster risk
- Development of hazard maps and risk atlases

D. Technology and Early Warning

- Installation of automatic weather stations
- GIS and remote sensing tools
- Early warning siren systems and digital displays
- **15th Finance Commission Grants (DRR)**

The **15th Finance Commission (XV-FC)** of India has made special provisions for **Disaster Risk Reduction (DRR)**, allocating dedicated grants to states for **both response and mitigation**. These grants are part of a broader effort to institutionalize **resilience and preparedness** into urban and rural governance frameworks.

- **CSR funds from local industries**

Corporate Social Responsibility (CSR) under **Section 135 of the Companies Act, 2013** mandates eligible companies to spend at least **2% of their average net profits** (from the last 3 years) on approved social development areas, including **disaster management and risk reduction**.

This creates a valuable opportunity for **Jamnagar Municipal Corporation (JMC)** and the **District Disaster Management Authority (DDMA)** to mobilize **local industry CSR funds** for disaster preparedness, mitigation, and community resilience projects.

- **National Adaptation Fund for Climate Change (NAFCC)**

The **National Adaptation Fund for Climate Change (NAFCC)** was established in **2015** by the Government of India under the **Ministry of Environment, Forest, and Climate Change (MoEFCC)** to support projects that address the adverse effects of climate change, especially in **vulnerable sectors and regions**.

It provides **financial support to state and UT governments** for implementing **climate adaptation projects**, especially in sectors like **agriculture, water, forestry, ecosystems, and disaster management**.

8. Monitoring and Evaluation

- Annual DRR audits by JMC & DDMA.
- Hazard vulnerability assessments updated every 2 years.
- Performance indicators: reduction in fire incidents, flood days, loss of life/property.

9. Community Participation

- Ward-level Disaster Management Committees.
- Community Task Forces for first response.
- Local youth trained as Disaster Volunteers (Apda Mitras).

10. Conclusion

A well-planned and executed Prevention and Mitigation Plan can transform Bhavnagar into a disaster-resilient city. It requires a collaborative effort between the administration, citizens, and technical agencies.

Chapter 5

Preparedness Measures

Chapter 5

Preparedness Measures

5.1 Introduction

Preparedness is a vital component of the disaster management cycle, enabling swift and coordinated response efforts. This chapter outlines the current preparedness status of Jamnagar city and the steps required to enhance resilience against various hazards such as floods, cyclones, industrial accidents, and fire incidents.

5.2 Analysis of Existing Preparedness Infrastructure

5.2.1 Communication Systems

- **District Emergency Operation Centre (DEOC):** Functional 24x7 with satellite phones, HAM radio, and wireless sets.
- **Integrated Command and Control Centre (ICCC):** Under Smart City Mission, linked with city CCTV, GIS, and public address systems.
- **Public Communication:** Loudspeakers, mobile SMS alerts, WhatsApp groups for ward officers, media, and key volunteers.

5.2.2 Public Distribution System (PDS)

- fair price shops with stock tracking via digital systems.
- Emergency provisioning plan for supply continuity during disasters.

5.2.3 Storage Facilities

- Government godowns for food grains (FCI & state-level).
- Dedicated warehouses for essential medicines (Health Dept).
- Cold storage for perishables in GIDC area.

5.2.4 Transportation Facilities

- Fleet of city buses and contracted vehicles mapped for emergency use.
- Pre-identified evacuation routes from coastal/low-lying areas.
- Linkage with GSRTC and railways for mass movement.

5.2.5 Medical Facilities

- G. G. Hospital as nodal disaster hospital with emergency beds.
- urban PHCs/CHCs identified for support.
- Pre-positioning of ambulances under 108 emergency services.

5.2.6 Emergency Reserves

- Pre-stocked **Family Relief Kits** at zonal stores.
- Water purification tablets, chlorine stock for drinking water.
- Fuel reserves and power backup at hospitals and DEOC.

5.2.7 Fire and Rescue Services

- Fire Stations with Emergency Services response units.
- Firefighting units mapped with GIDC and industrial bodies.

5.2.9 NGOs and Volunteer Networks

- Red Cross, Rotary, Lions Club, Jamnagar Lakhota Nature Club.
- Youth organizations like NSS, NCC, Civil Defence.
- Trained community volunteers at ward level.

5.3 Stakeholder Identification and Role Mapping

Stakeholder	Function During Disaster Response
JMC (Municipal Corporation)	Coordination, logistics, sanitation, infrastructure restoration
District Collectorate	DEOC operation, resource mobilization, inter-agency coordination
Police and Fire Dept	Law and order, fire response, search & rescue
Health Department	Emergency health care, disease surveillance
NGOs/Volunteers	Relief distribution, psychosocial support, first aid
Industries/CSR Units	Equipment support, food, shelter
Media Houses	Information dissemination, awareness

5.4 Formation of Functional Teams

- **Early Warning Team** – Meteorology Dept, GSCDMA, DEOC, ICCC
- **Search & Rescue Team** – Fire Brigade, Civil Defence, NDRF, Police
- **Evacuation Team** – Ward Officers, GSRTC, Transport Dept, Education Dept
- **Damage & Loss Assessment Team** – R&B, PWD, Irrigation, Agri, Revenue Dept

5.5 Incident Response System (IRS) Activation

- **District Collector:** Incident Commander
- **DEOC & IRS Cell:** Operational hub
- IRS structure customized to include **Medical, Logistics, Planning, Media, and Shelter branches.**

5.6 External Help Protocols

- **GoI & State Govt:** Request through DEOC to SDMA and MHA.
- **NDRF/SDRF:** Pre-deployment based on IMD alerts.
- **Army/Navy/Air Force:** Activated via SDMA/NCMC upon requisition.
- **PSUs & Central Agencies:** MOUs exist with ONGC, IOCL, Railways for logistics and response support.

5.7 Logistics & Operational Readiness

- **Logistics Inventory:** Maintained under IDRN/SDRN portal.
- **Operational Check-ups:** Monthly mock tests of sirens, radios, EOC backup power.
- **EOC Maintenance:** Daily readiness log and emergency contact verifications.

5.8 Seasonal Inspections

- Monsoon inspections of:
 - Drainage and sewer lines

5.9 Command, Coordination & Quick Response Teams

- Each zone has:
 - **Quick Response Team (QRT)** with fire, police, health, and transport leads
 - **Ward-level Emergency Committee** for initial relief
 - **Nodal Officers** for real-time decisions

5.10 NGO & Volunteer Coordination

- **NGO Coordination Cell** at DEOC
- Volunteers trained for:
 - First aid
 - Relief distribution
 - Child and women safety
- Responsibilities allocated by sector and geography.

5.11 Seasonal Preparedness Measures

- **Flood Season:** Dewatering pumps, drainage cleaning, embankment repair.
- **Cyclone Season:** Cyclone drill, evacuation plan rehearsals, coastal watch
- **Fire Season (Summer):** Industrial audits, forest fire watch (if applicable)

5.12 Community Preparedness Initiatives

- **Community Warning System:** Sirens, WhatsApp groups, local leaders
- **Education & Awareness:** School programs, mock drills, IEC materials
- **Responsibilities:** Community volunteers trained in SOPs and alert protocols

5.13 Standard Operating Procedures (SOPs)

- **VIP Visit Protocols** – Escort, helipad coordination, security SOPs
- **Procurement Protocols** – Rate contracts, emergency vendors registered.
- **Logistics SOP** – Movement plan, storage sites, distribution chains

5.14 Knowledge Management

- **IDRN/SDRN Updates** – Regular uploads of manpower, vehicles, equipment
- **Lessons Learnt Documentation** – Post-event review workshops.
- **Media Coordination** – Designated spokesperson, media briefing SOP, pre-event press engagement

5.15 Disaster Committees at All Levels

- **District Disaster Management Authority (DDMA):** Active
- **Sub-district Taluka Committees:** Headed by Mamlatdar
- **Ward-Level Committees (Urban) & Gram Panchayat Committees (Rural):** To be reactivated and trained.

5.16 Early Warning Mechanism

- **Meteorological Alerts (IMD, INCOIS)**
- **Real-time Water Level Monitoring**
- **Last-mile SMS and Loudspeaker Broadcasting**

5.17 Preparedness Kits

- **Family Kits:** Dry ration, water pouches, torch, medicines, sanitary items
- **First Aid Kits:** Placed at health center

5.18 Awareness Generation Strategy

- Use of print, radio, social media, rallies, and school engagement.
- Community-based disaster preparedness (CBDP) sessions at ward level.
- DRR education integrated in municipal schools.

Chapter 6

Capacity Building and Training Measures

Chapter 6

Capacity Building and Training Measures

6.1 Approach

Capacity building is a crucial pillar in disaster risk reduction and resilience enhancement. In Jamnagar City, the approach focuses on strengthening institutional frameworks, professional competencies, community awareness, and the integration of disaster management education into various sectors. The overarching goal is to establish a multi-tiered, sustainable capacity-building system that enables all stakeholders to effectively respond to and manage disasters.

6.2 Capacity Building Plan

6.2.1 Institutional Capacity Building

To ensure disaster preparedness and effective response, the city aims to enhance the capacity of institutions through:

- Development and periodic review of SOPs and response protocols.
- Formation and strengthening of Emergency Operation Centres (EOCs).
- Establishment of clear roles and responsibilities among departments.
- Inter-agency coordination frameworks and simulation exercises.
-

6.2.2 Target Groups for Capacity Building

Capacity-building initiatives will target the following groups with tailored training programs:

Target Group	Training Focus
Officials / Policymakers	Disaster risk governance, legal frameworks, inter-departmental coordination.
Engineers, Architects, Masons	Structural safety, retrofitting techniques, resilient infrastructure design.
Doctors, Nurses, Paramedics	Mass casualty management, emergency medical response, psychosocial care.
Teachers	School safety, child- centered DRR education, emergency evacuation.
Police, Fire Services, SDRF Personnel	Search and rescue, incident command system, CBRN response.
Community Volunteers, Civil Defence	First aid, basic rescue techniques, public awareness campaigns.

6.3 Community Capacity Building

The active participation of local communities is vital for disaster resilience. Community-based Disaster Risk Management (CBDRM) initiatives will include:

- Formation of ward-level disaster management committees.
- Awareness drives on local hazards, early warning systems, and response actions.
- Mock drills, especially in vulnerable areas such as coastal zones and slums.
- Promotion of inclusive approaches, ensuring participation of women, children, elderly, and differently abled.

6.4 Training of Trainers (ToT)

To ensure sustainability, a cadre of Master Trainers will be developed across different sectors. These trainers will:

- Undergo specialized training in disaster management.
- Train additional local trainers and community members.
- Serve as key resource persons during actual disaster response.

6.5 Disaster Management Education

6.5.1 Schools and Colleges

- Schools: Incorporation of disaster preparedness in the curriculum, school safety plans, regular drills.
- Colleges:
 - Medical Colleges: Disaster medicine, emergency health care modules.
 - Engineering Colleges: Seismic safety, hazard-resistant design principles.

6.5.2 Professional Courses

- Integration of DRM into continuing education programs for architects, engineers, health professionals.
- Coordination with professional bodies and licensing authorities to standardize DRM components in training.

6.6 Skill Upgradation and Follow-up Training

- Periodic refresher courses to update knowledge and skills.
- Specialized training modules for new hazards or technologies.
- Evaluation mechanisms to assess the effectiveness of training programs.

6.7 Inventory of Trained Personnel

An updated database will be maintained containing:

- List of trained engineers, architects, masons.
- Medical professionals trained in emergency response.
- Rescue and response specialists.
- Civil defence volunteers and community leaders.

Chapter 7

Response and Relief Measures

Chapter 7

Response and Relief Measures

7.1 Overview

This chapter outlines the framework for prompt, coordinated, and effective disaster response and relief in Jamnagar City. The focus is on multi-hazard preparedness, quick assessment, early warning systems, activation of response mechanisms, resource mobilization, and comprehensive coordination.

7.2 Response Planning and Preparedness

A comprehensive multi-hazard response plan includes:

- Pre-disaster preparedness and role clarity.
- Coordination between departments, agencies, and communities.
- Activation protocols and SOPs.
- Early warning dissemination and evacuation strategies.

7.3 Quick Assessment of Damage and Needs

- Initial Damage Assessment (IDA): Conducted by field-level teams within hours of the event.
- Needs Assessment: Focus on immediate needs—medical, shelter, food, water, and safety.
- Reports submitted to the District Emergency Operation Centre (EOC) for decision-making and resource allocation.

7.4 Response Flow Chart

A visual flow chart (to be added in annexure) will depict:

- Activation of EOC
- Alert dissemination.
- Departmental responsibilities
- Resource deployment
- Relief coordination

7.5 Warning and Alert Mechanism

Early Warning Systems

- Two-Way Communication System between village and district levels using wireless, satellite phones, and mobile alerts.
- Coordination with IMD, INCOIS, and other agencies for hazard-specific alerts.

Warning Dissemination

- Alerts must be translated into simple language by DDMA.
- Dissemination through:
 - Local radio/FM stations
 - SMS alerts
 - Public address systems
 - WhatsApp groups and social media
 - Loudspeakers and sirens in vulnerable areas
- Withdrawal of Warning: To be issued formally by DDMA to avoid confusion.

7.6 Activation of Emergency Operation Centre (EOC)

- The EOC functions 24x7 during emergencies.
- Acts as the nerve center for:
 - Situation monitoring
 - Inter-agency coordination
 - Media handling
 - Logistics and resource mobilization
 - Real-time reporting

7.7 Crisis Management Group (CMG) Meeting

- CMG is chaired by the District Collector.
- Activated immediately upon early warning or sudden impact.
- Key decisions on evacuation, response strategies, and media briefing are taken.

7.8 Resource Mobilization

- Rapid deployment of personnel, equipment, and materials.
- Inter-district or state-level assistance requested when required.
- Collaboration with civil society, NGOs, and private sector for resources like ambulances, relief kits, shelter, and food.

7.9 Initial Assessment Report (First Report)

- Submitted within 6 hours of the incident.
- Includes:
 - Area affected.
 - Casualties/injuries
 - Immediate needs
 - Ongoing response

7.10 Media Management and Information Dissemination

- Designated media spokesperson from DDMA.
- Timely and verified updates through:
 - Press releases.
 - Social media
 - Government portals
- Avoid misinformation and panic.

7.11 Development of SOPs, Checklists, Formats

- SOPs and Checklists for each Essential Service Function (ESF):
 - Health and medical response
 - Search and rescue.
 - Shelter and relief
 - Logistics and communication
- **Formats for:**
 - Damage reports.
 - Relief distribution
 - Expenditure tracking

7.12 Reporting and Documentation

- Situation Reports (SitReps) generated every 4–6 hours.
- Media releases cleared by designated officer.
- All activities documented for review, audits, and learning.

7.13 Demobilization and Winding Up

- Gradual withdrawal of response teams.
- Restoration of essential services.
- Final report and review meeting.
- Focus on:
 - Documentation
 - Success stories
 - Lessons learned for future preparedness.

7.14 Responsibility Matrix

With Early Warning Available

Time	Task	Department/Agency	Activity
D-72 Hr	Warning Analysis	IMD/DDMA	Issue watch
D-48 Hr	Alert	EOC	Activate response units
D-24 Hr	Evacuation Planning	Police, Fire	Identify vulnerable zones
D-0 Hr	Impact Response	SDRF, Health	Immediate rescue and treatment
D+15 Min	Quick Assessment	Revenue, Local Bodies	Damage and casualty assessment
D+1-24 Hr	Relief & Rehabilitation	Food, Shelter, Health	Relief camp setup, food supply

Without Early Warning

Time	Task	Department/Agency	Activity
D+15 Min	Alert CMG	Collector/EOC	Convene emergency meeting
D+30 Min	Activation	All Departments	Mobilize response teams
D+1-6 Hr	Search & Rescue	SDRF, Fire, Police	Area-specific rescue
D+12 Hr	Shelter & Relief	Social Welfare, NGOs	Relief camp establishment
D+24 Hr	Reporting	Revenue, EOC	Full situation report

Chapter 8

Reconstruction, Rehabilitation, and Recovery Measures

Chapter 8

Reconstruction, Rehabilitation, and Recovery Measures

8.1 Overview

Reconstruction, rehabilitation, and recovery (RRR) are critical phases of the disaster management cycle aimed at restoring normalcy, rebuilding lives, and enhancing community resilience in Jamnagar City. These measures go beyond immediate relief and address both short-term and long-term needs of the affected population, infrastructure, and economy.

8.2 Objectives of Recovery Plan

- Ensure timely and equitable assistance to affected populations.
- Restore vital infrastructure and services to pre-disaster or improved standards.
- Promote sustainable and inclusive rehabilitation.
- Support long-term economic and social recovery, with risk reduction integrated into rebuilding efforts.

8.3 General Policy Guidelines

- **Prioritization:** Priority will be given to the most vulnerable groups and critical infrastructure.
- **Build Back Better (BBB):** Reconstruction will incorporate disaster-resilient designs and technologies.
- **Inclusivity:** Gender-sensitive and community-based approaches will be adopted.
- **Transparency:** All programs will include monitoring, public reporting, and grievance redressal systems.
- **Environmental Considerations:** Recovery will minimize environmental degradation and promote eco-restoration.

8.4 Role of DDMA and Coordination

- District Disaster Management Authority (DDMA), led by the District Collector, will coordinate the recovery process.
- Inter-agency Coordination: DC will declare the type and level of assistance needed from:
 - State and Central Government Departments
 - Urban Local Bodies (ULBs)
 - NGOs and international organizations
 - Private sector and CSR contributors

8.5 Damage and Loss Assessment

A Detailed Damage and Loss Assessment (DDLA) will be undertaken to:

- Assess the extent of destruction to buildings, roads, utilities, and livelihoods.
- Identify the number of people affected and their needs.
- Estimate financial requirements for recovery.
- Prioritize interventions.

8.6 Restoration Measures

8.6.1 Restoration of Infrastructure and Services

- Basic Infrastructure: Roads, water supply, sanitation, electricity, and drainage.
- Essential Services: Healthcare, education, waste management, law, and order.
- Livelihoods: Restarting agricultural, industrial, and commercial activities.

8.6.2 Repair and Reconstruction

- Lifeline Buildings: Hospitals, schools, police stations, fire stations.
- Public Buildings: Government offices, public halls, community centers.
- Damaged Private Structures: Promote Owner Driven Reconstruction (ODR) with technical and financial support.

8.7 Recovery Programs

8.7.1 Short-Term Recovery Program

Focus on immediate resumption of daily life:

- Cash or in-kind support for food, shelter, and healthcare.
- Short-term employment schemes (e.g., MGNREGA).
- Micro-credit and livelihood grants.
- Temporary housing and relocation support.

8.7.2 Long-Term Recovery Program

Focus on sustainable rebuilding and risk reduction:

- Permanent housing reconstruction with hazard-resistant design.
- Reviving agriculture, industries, and service sectors.
- Livelihood diversification and skill development.
- Access to insurance schemes and financial inclusion.

Chapter 9

Financial Resources for Implementation of MDMP

Chapter 9

Financial Resources for Implementation of MDMP

9.1 Introduction

The successful implementation of the Municipal Disaster Management Plan (MDMP) in Jamnagar requires adequate and timely financial support. Financial provisioning ensures that disaster risk reduction (DRR), preparedness, mitigation, and response activities are carried out without delay. This chapter outlines the potential sources of funds and the financial strategy for disaster management within Jamnagar Municipal Corporation (JMC).

9.2 Key Principles of Financial Planning

- Mainstreaming DRR into development plans and budgets.
- Dedicated budget lines for preparedness and emergency response.
- Flexibility in fund reallocation during emergencies.
- Transparency and accountability in fund usage.

9.3 Budgetary Sources for Disaster Management

Source of Funding	Purpose	Responsible Agency
State Disaster Response Fund (SDRF)	Relief and response in notified disasters	Revenue Department / DDMA
National Disaster Response Fund (NDRF)	Support for severe disasters when SDRF is inadequate	NDMA / MoHA
JMC Budget (Own Funds)	Local-level preparedness, mitigation projects, training, awareness	Jamnagar Municipal Corporation
Finance Commission Grants (15th FC)	Disaster management-related infrastructure and resilience building	JMC / State Finance Dept.
Urban Development Schemes (e.g., AMRUT, Smart Cities)	Infrastructure retrofitting, water supply, drainage improvements	Urban Development Department / JMC
CSR Funds from Local Industry	Support for emergency supplies, capacity building, shelters	Local Industries, GIDC, CSR Networks
NGO and International Funding	Community-based DRR, training, IEC material	NGOs, UNDP, Red Cross, etc.
Insurance and Risk Transfer Mechanisms	Compensation and loss reduction	Insurance Companies, State Government

9.4 Annual Budgeting and Allocation

- JMC will allocate at least 1% of its annual budget for disaster management activities.
- Ward-level budgets shall include contingency funds for local emergencies.
- Special resilience funds will be proposed for climate adaptation projects.

9.5 Emergency Fund Utilization Protocol

Stage	Action
Pre-Disaster	- Fund allocation for training, mock drills, IEC- Procurement of emergency equipment- Infrastructure audits and retrofitting
During Disaster	- Quick release of contingency funds for relief and rescue- Disbursement to health, fire, transport, and food supply agencies
Post-Disaster	- Assessment of losses- Rehabilitation support- Reconstruction of civic infrastructure

9.6 Financial Monitoring and Audit

- Finance and Accounts Department of JMC will maintain detailed records of expenditure.
- Utilization Certificates (UCs) must be submitted to higher authorities as per guidelines.
- Independent audits will be conducted post-disaster to ensure fund accountability.

9.7 Capacity Building for Financial Planning

- Training of municipal finance officials on disaster budgeting and fund utilization.
- Workshops on risk-informed planning and investment.
- Integration of Public Financial Management System (PFMS) for fund tracking.

9.8 Resource Mobilization Strategy

- Establishing MoUs with local industries for emergency resource support under CSR.
- Preparing a resource inventory and donor registry.
- Creation of a Municipal Emergency Resource Fund for immediate mobilization.

9.9 Conclusion

Sustainable and inclusive disaster risk financing is critical for Jamnagar's resilience. Jamnagar Municipal Corporation shall ensure the availability of adequate, accountable, and timely financial resources to implement the MDMP effectively and reduce disaster risks across the city.

Chapter 10

Procedure and Methodology for Monitoring, Evaluation, Updation, and Maintenance of the MDMP

Chapter 10

Procedure and Methodology for Monitoring, Evaluation, Updation, and Maintenance of the MDMP

10.1 Introduction

Effective disaster management is an ongoing process that requires regular monitoring, evaluation, revision, and maintenance of the Municipal Disaster Management Plan (MDMP). This ensures that the plan remains relevant, actionable, and responsive to emerging hazards, vulnerabilities, and institutional changes.

10.2 Authority for Maintaining and Reviewing the MDMP

- The **Municipal Commissioner, Jamnagar Municipal Corporation (JMC)**, shall be the nodal authority for maintaining and updating the MDMP.
- The **District Disaster Management Authority (DDMA)**, chaired by the **District Collector**, will coordinate the review process in consultation with line departments and stakeholders.
- Updates must also be shared with the **State Disaster Management Authority (SDMA)** for integration into the broader state framework.

10.3 Monitoring and Evaluation of the MDMP

The plan's effectiveness will be evaluated through:

- **Performance monitoring indicators**, such as timely response, effectiveness of coordination, and post-disaster recovery timelines.
- **Third-party or inter-departmental evaluations** to ensure impartial assessments.
- **Community feedback mechanisms**, especially in high-risk zones.
- Inclusion of **recommendations** from real incidents and mock exercises in the evaluation process.

10.4 Post-Disaster Evaluation Mechanism

After any disaster or major emergency:

- An **After-Action Report (AAR)** will be prepared within 30 days by DDMA, documenting:

Challenges faced. Best practices Gaps identified. Stakeholder performance.

- These findings will be used to modify the MDMP accordingly and enhance future readiness.

10.5 Schedule for Updation of MDMP

Updation Element	Frequency	Responsible Authority
Complete review and revision	Annually	JMC/ DDMA
Minor updates (e.g., contact lists)	Every 6 months	Municipal Control Room
After-action inputs from disasters	Within 30 days post-event	Incident Commander / DDMA
Technological & policy changes	As and when necessary	Concerned Line Departments

Updated versions must be uploaded on the **MDMA/SDMA websites** for public and departmental access.

10.6 Conduct of Mock Drills

Mock drills play a critical role in **testing the effectiveness** of the MDMP and building confidence among responders and the public.

10.6.1 Mock Drill Objectives

- Ensure clarity of roles and responsibilities.
- Identify gaps in preparedness and response.
- Assess resource adequacy.
- Improve inter-agency coordination.

10.6.2 Annual Mock Drill Calendar

S/N	Type of Drill	Responsible Agency	Frequency	Resource Support From
1	Earthquake Simulation	JMC + Fire Department	Once a year	SDMA, NDRF
2	Flood Evacuation Drill	Collector Office + Police + JMC	Pre-monsoon season	Irrigation Dept, SDRF
3	Industrial/Chemical Accident	Industries + Fire + GPCB	Bi-annually	Industries Association, GIDC
4	School Safety Mock Drill	DEO + Schools + Police	Annually (per school)	Education Dept, DDMA

10.7 Monitoring and Gap Evaluation

- **Skill & Training Review:** Ensure all personnel assigned roles in MDMP are trained in their respective functions, including:
 - Emergency response
 - First aid
 - Evacuation procedures
 - Crowd control.
 - Hazard-specific interventions
- **Plan Compliance Check:** Confirm that department-wise Standard Operating Procedures (SOPs) are aligned with the updated MDMP.
- **Feedback Loop:** Each mock drill or real event will conclude with a debriefing session and a **Gap Analysis Report**, which will guide future training and investment.

10.8 Integration of On-Site / Off-Site Emergency Plans

- All **on-site and off-site emergency plans** of **major chemical, industrial, and nuclear installations** must be submitted to the **Municipal Commissioner's Office** and integrated into the MDMP.
- Plans should be reviewed for:
 - Compatibility with city-level response plans
 - Clarity of communication and warning protocols
 - Resource sharing and evacuation coordination

10.9 Documentation and Record Maintenance

- **All revisions** of the MDMP will be documented with version numbers and dates.
- A **logbook** will be maintained at the **Municipal Control Room** noting:
 - All updates and approvals
 - Training conducted.
 - Mock drills and evaluations
- All versions and supporting documents will be stored digitally and uploaded to the **official municipal website** and shared with **DDMA and SDMA**.

Chapter 11

Coordination Mechanism for Implementation of MDMP

Chapter 11

Coordination Mechanism for Implementation of MDMP

11.1 Introduction

The **Jamnagar Municipal Corporation (JMC)** plays a central role in implementing the Municipal Disaster Management Plan (MDMP) by coordinating activities across departments and agencies within the city. This chapter outlines the institutional mechanisms established to ensure seamless intra-city coordination, effective communication with external stakeholders, and integration with district and state plans.

11.2 Intra-Departmental Coordination within JMC

- **Municipal Commissioner** is the nodal authority for overall implementation of the MDMP.
- Departmental coordination between:
 - Health and Sanitation
 - Fire & Emergency Services
 - Town Planning
 - Roads & Building
 - Water Supply and Drainage
 - Solid Waste Management
- **Ward-level Control Rooms** are linked to the **Central Emergency Operations Centre (EOC)** at the Municipal Headquarters for real-time updates.
- Designation of **Disaster Management Nodal Officers** in each department to ensure coordinated responses during emergencies.

11.3 Inter-Agency Coordination (Urban Scope)

- **Regular coordination meetings** with:
 - Police Department
 - Jamnagar Fire & Emergency Services
 - Jamnagar Civil Hospital & Private Hospitals
 - GIDC/Industries

- Education Department (Urban Schools and Colleges)
- **Joint preparedness drills and capacity-building workshops** are conducted under the guidance of DDMA with support from GIDM.

11.4 Coordination with NGOs, CBOs, SHGs, and Private Sector

- JMC partners with NGOs for:
 - Running relief camps
 - Distribution of food and supplies
 - Psycho-social care
- Collaboration with:
 - **Private hospitals** for emergency treatment
 - **Schools and Colleges** for evacuation centers and volunteer training
 - **Industries and CSR wings** for logistics and financial support
- Maintenance of a **City Disaster Volunteer Roster**, including Civil Defence and SHG members trained for emergency roles.

11.5 Linkage with District and State Agencies

- BMC coordinates with **District Collector and DDMA** for:
 - Early warning dissemination
 - External aid mobilization
 - Inter-block coordination during large-scale disasters
- Integration with **State Disaster Management Authority (SDMA)** for:
 - Technical training
 - Access to State Disaster Response Fund (SDRF)
 - Joint response protocols for large events like cyclones or epidemics

11.6 Ward and Zone-Level Coordination (Urban Local Government System)

- The city is divided into **wards and administrative zones**, each with a **Ward Disaster Management Committee** headed by the local councilor and supervised by the Zonal Officer.
- Functions of ward-level committees:
 - Community awareness

- Early warning delivery
- Local relief coordination
- Monitoring of vulnerable areas
- **Intra-ward coordination** is maintained through zonal control rooms connected with the Municipal Control Room.

11.7 Role of JMC in Integration with the State Disaster Management Plan (SDMP)

- All JMC emergency protocols are aligned with the **Gujarat SDMP**.
- JMC submits annual progress reports and status updates to SDMA.
- Integration of **State-Level Emergency Response Framework** into the city's SOPs ensures consistency and faster state-level support.

11.8 Communication Protocol and Resource Sharing

- JMC operates a **two-way communication system** linking:
 - Municipal Commissioner's Office
 - Emergency Services
 - DDMA and SDMA
- Resources like emergency stockpiles, mobile water units, and shelter kits are pre-positioned and shared through **coordination protocols** established with state and central agencies.

11.9 Municipal Corporation's Legal and Institutional Framework

As per Section 41 of the Disaster Management Act:

- Urban Local Bodies (ULBs) like **Jamnagar Municipal Corporation** are bound to act **under the direction of the District Authority (DDMA)** during disaster situations.
- Responsibilities include:
 - Implementation of approved disaster management plan
 - Maintenance of emergency infrastructure and supplies
 - Coordination with private sector and local organizations
 - Providing real-time information and damage assessment reports to DDMA

Chapter 12

Standard Operating Procedures (SOPs) and Checklists

Chapter 12

Standard Operating Procedures (SOPs) and Checklists

12.1 Introduction

This chapter outlines the **Standard Operating Procedures (SOPs)** and **response checklists** for key stakeholders in Jamnagar City to ensure coordinated, timely, and effective disaster response. These SOPs are organized around **Emergency Support Functions (ESFs)** and follow the **Incident Response System (IRS)** framework. They are designed considering the **hazard profile** and **institutional capacity** of the city.

12.2 Objectives of SOPs

- Provide clear **roles and responsibilities** for various departments and stakeholders.
- Ensure **rapid decision-making and coordination** during emergencies.
- Promote effective **utilization of resources**, both technical and financial.
- Guide **information flow and media communication**.
- Facilitate uniform standards for **relief, recovery, and rehabilitation**.

12.3 Structure of Each SOP

Each SOP and Checklist includes:

1. Definition of the Disaster Situation

A **disaster situation** refers to a serious disruption in the functioning of a community or society, causing widespread human, material, economic, or environmental losses that exceed the affected community's or society's ability to cope using its own resources. In the context of **Jamnagar city**, a disaster situation may arise due to natural or human-made hazards such as cyclones, floods, earthquakes, industrial accidents, or pandemics.

Such situations demand immediate emergency response, coordination among various agencies, and mobilization of resources for rescue, relief, and recovery. A disaster situation is typically characterized by:

- **Sudden onset or rapid escalation** of hazard impact.
- **Widespread disruption** to normal life and infrastructure.
- **Significant threat to life, property, and environment**.
- **Inadequacy of local capacity** to manage the crisis without external assistance.
- **Requirement for urgent intervention** from government and disaster management authorities.

2. Triggering Mechanism & Warning Dissemination

Triggering Mechanism

A **triggering mechanism** refers to the process or event that initiates emergency response actions in the event of a potential or actual disaster. This mechanism is activated when early warning indicators suggest the likelihood of a hazardous event, or when an incident occurs that necessitates immediate response.

In Jamnagar, various types of disasters have specific triggering mechanisms:

- **Cyclone/Storm Surge:** Alerts issued by the India Meteorological Department (IMD) and Indian National Centre for Ocean Information Services (INCOIS) based on sea conditions and satellite data.
- **Flood:** Rising water levels in rivers, heavy rainfall forecasts, and reservoir overflow warnings by the Central Water Commission (CWC) or Gujarat State Disaster Management Authority (GSDMA).
- **Earthquake:** Sudden occurrence; triggers are seismic activities recorded by IMD and national seismic monitoring centers.
- **Industrial/Chemical Accidents:** Triggered by hazardous material leakage, fire, or explosion in industrial areas like Dred GIDC; alerts come from on-site sensors and plant safety systems.
- **Fire:** Fire incidents are detected via public calls, emergency control rooms, or surveillance in vulnerable areas.
- **Pandemics:** Triggered by abnormal health surveillance reports, hospital admission trends, or public health authority alerts.

Once the situation is assessed as critical, the response protocol is activated under the Jamnagar Municipal Corporation's Emergency Operations Centre (EOC) and District Disaster Management Authority (DDMA).

Warning Dissemination

Warning dissemination is the structured communication of alerts and instructions to relevant stakeholders and the public to ensure timely preventive action and response.

Key channels and procedures used in Jamnagar include:

- **Official Alerts** from IMD, GSDMA, CWC, and NDMA through SMS, email, and emergency notification systems.
- **Jamnagar Municipal Corporation (JMC)** communicates warnings via:
 - **Public address systems** (especially in coastal and flood-prone areas)
 - **Loudspeakers on municipal vehicles**
 - **Local cable TV, radio, and FM channels**

- **Bulk SMS and mobile app alerts**
- **Social media platforms (Facebook, Twitter, WhatsApp)**
- **Community volunteers and ward-level disaster response teams**
- **Police and Home Guards** help in door-to-door alerts in high-risk areas.
- **Schools, colleges, and hospitals** receive direct instructions for protective actions.

The goal of warning dissemination is to ensure that all citizens, especially vulnerable groups, receive timely and clear instructions to safeguard life and property.

3. Activation of Emergency Response Functions (ERFs)

3. Activation of Emergency Response Functions (ERFs)

The **activation of Emergency Response Functions (ERFs)** is a structured and coordinated process that begins immediately after a disaster is anticipated or occurs. These functions are designed to ensure swift and effective response to minimize loss of life, damage to property, and disruption to essential services.

Objective of ERF Activation

To ensure a well-coordinated, multi-agency emergency response by quickly mobilizing resources, personnel, and services as per pre-defined roles and responsibilities outlined in the City Disaster Management Plan (CDMP).

Phases of Activation

1. Pre-Disaster (Early Warning Phase):

- Activation is initiated upon receipt of early warning or credible information from agencies like IMD, CWC, GSDMA, etc.
- The **Emergency Operations Centre (EOC)** at Jamnagar Municipal Corporation (JMC) becomes operational.
- Key line departments and nodal officers are put on alert.

2. During Disaster (Impact Phase):

- The **District Collector or Municipal Commissioner**, as the Incident Commander, formally activates ERFs.
- Departments begin functioning as per Standard Operating Procedures (SOPs).
- Emergency support agencies such as Police, Fire, Health, and Transport initiate field operations.

- Deployment of **Search & Rescue (SAR)** teams, medical units, evacuation support, and relief materials begins.

3. Post-Disaster (Relief & Recovery Phase):

- Continued functioning of ERFs for relief distribution, damage assessment, restoration of services, and rehabilitation.
- Coordination with NGOs, Civil Society Organizations (CSOs), and private sector partners for extended support.

Key Emergency Response Functions (ERFs)

ERF	Responsible Department/Agency	Key Activities
Search & Rescue	Fire Department, NDRF/SDRF, Police	Evacuation, locating and rescuing victims
Medical Response	Health Dept., Red Cross, Hospitals	First aid, emergency treatment, disease control
Shelter & Relief	Revenue Dept., JMC, NGOs	Setting up relief camps, food & water distribution
Law & Order	Police Department	Crowd control, security, traffic management
Public Works	R&B, JMC Engineering Wing	Debris clearance, infrastructure repair
Transport	RTO, Transport Dept.	Evacuation logistics, vehicle coordination
Communication	BSNL, IT Dept.	Ensuring network restoration and communication flow
Utilities Restoration	PGVCL, GWSSB, JMC	Power, water, and sewerage restoration
Information Management	DIPRO, JMC Media Cell	Public awareness, media coordination
Damage Assessment	Revenue Dept., Engineering Wing	Rapid assessment of losses and needs

Command and Control

- The **Incident Command System (ICS)** is activated to coordinate ERFs.
- The **Emergency Operations Centre (EOC)** acts as the nerve center for inter-agency coordination, data collection, decision-making, and resource allocation.
- Coordination with **State EOC (SEOC)** and **Gujarat State Disaster Management Authority (GSDMA)** is maintained throughout the emergency phase.

4. Resource Mobilization Procedure

Resource mobilization is a critical component of disaster response that involves the swift identification, allocation, and deployment of human, material, and financial resources to the affected areas. In Bhavnagar, this procedure is guided by the City Disaster Management Plan (CDMP) under the supervision of the Jamnagar Municipal Corporation (JMC) and District Disaster Management Authority (DDMA).

Objectives

- Ensure timely availability and deployment of essential resources.
- Avoid duplication and gaps in emergency response efforts.
- Maintain transparency, accountability, and efficiency during resource distribution.

Phases of Resource Mobilization

1. Pre-Disaster Preparedness

- **Resource Inventory:** Creation and regular updating of a comprehensive inventory of available resources (vehicles, manpower, medical kits, boats, shelter supplies, etc.) in coordination with line departments.
- **Memorandums of Understanding (MoUs):** Pre-arranged agreements with private contractors, transporters, hospitals, NGOs, and suppliers.
- **Stockpiling:** Pre-positioning of critical supplies at strategic locations (relief camps, EOC stores, etc.).
- **Training & Orientation:** Resource personnel, volunteers, and drivers are trained for emergency duties.

2. Triggered Mobilization During Emergency

Upon activation of the emergency response mechanism:

- **Command Activation:** The **Incident Commander** (District Collector/Municipal Commissioner) authorizes full-scale resource mobilization.
- **Requisition Protocol:** Line departments submit resource requirements to the EOC through designated nodal officers.

- **Prioritization:** Allocation based on severity of impact, vulnerability, and urgency.
- **Deployment Orders:** Issued through the EOC with logistics managed by the Transport and Logistics ERF.
- **Transport & Delivery:** Resources are dispatched with proper documentation and tracking.

3. Post-Disaster Mobilization

- **Reinforcement:** Additional resources called from neighboring districts or state-level reserves if needed.
- **Relief Augmentation:** Distribution of food, water, medicines, and shelter materials in relief camps.
- **Damage Repair:** Equipment and technical teams mobilized for restoring electricity, roads, water supply, and other essential services.

Key Types of Resources Mobilized

Type of Resource	Examples	Responsible Agencies
Human Resources	SAR teams, medical staff, engineers, volunteers	Fire Dept., Health Dept., NGOs, NDRF
Relief Materials	Tents, blankets, food kits, drinking water	JMC, Civil Supplies Dept., NGOs
Technical Equipment	Boats, fire tenders, JCBs, power generators	Fire Dept., R&B, Light Department, PGVCL
Transport & Fuel	Buses, trucks, ambulances, fuel supply	RTO, GSRTC, Indian Oil, BPCL
Medical Supplies	First aid, essential drugs, PPE, mobile health units	Health Dept., Red Cross, Private Hospitals
Financial Resources	Emergency relief funds, contingency reserves	District Treasury, State Disaster Response Fund (SDRF)

Coordination Mechanism

- All mobilized resources are tracked via the **Resource Tracking Sheet** at the EOC.
- A **Nodal Resource Officer** is designated to coordinate with suppliers, departments, and receiving units.
- Periodic updates are communicated to the Incident Commander and Planning Section under the **Incident Command System (ICS)**.

Roles and Responsibilities of Departments

Communication and Reporting Protocols

Media and Public Information Management

Relief and Rehabilitation Norms

Checklists for Key Tasks

12.4 Core Emergency Support Functions (ESFs) and SOP Components

ESF No.	Support Function	Trigger/Agencies	Checklist (SOP Components)
ESF-1	Evacuation	Trigger: Early warning from IMD, CWC, DDMA Agencies: Police, Fire, Ward Officers, Transport Dept.	- Identify vulnerable zones- Arrange transport- Mark and activate safe shelters- Maintain register of evacuees
ESF-2	Search and Rescue	Agencies: Fire Brigade, SDRF/NDRF, Police	- Equip teams with rescue kits- Deploy to critical zones- Ensure coordination with medical teams- Report to EOC every 2 hours
ESF-3	Cordoning and Law & Order	Agencies: Police Department	- Seal danger zones- Prevent public entry in risk areas- Guard relief camps and distribution centers
ESF-4	Traffic Control and Route Clearance	Agencies: RTO, Police, Municipal Engineering Dept.	- Clear main access roads- Set up emergency traffic routes- Provide route maps to responders
ESF-5	Medical Care, Trauma & Dead Body Management	Agencies: Civil Hospital, Private Hospitals, JMC Health Dept.	- Triage and treatment centers- Mobile health teams' deployment- Body tagging and respectful disposal as per NDMA guidelines

ESF-6	Carcass Disposal	Agencies: JMC Veterinary Dept., Health Dept.	- Identify carcass sites- Use lime and disinfectants- Document disposal process
ESF-7	Relief and Humanitarian Aid	Agencies: Food & Civil Supplies, NGOs, JMC, DDMA	- Food, water, and medicine stocks- Setup and management of relief centers- Maintain gender-sensitive and child-friendly environment
ESF-8	Shelter Management	Agencies: JMC Ward Offices, Education Dept.	- Identify and inspect shelter buildings- Provide bedding, water, sanitation- Update register of occupants daily
ESF-9	Water Supply and Sanitation	Agencies: JMC Water and Drainage Dept.	- Supply of safe drinking water- Emergency water tankers- Provision of mobile toilets and chlorination
ESF-10	Power and Fuel Supply	Agencies: Light Dept., PGVCL	- Emergency restoration of electric lines- Fuel stock for ambulances and generators- Coordination with diesel vendors
ESF-11	Communication and Helpline Management	Agencies: JMC IT Dept., Police, Telecom Providers	- Activate 24x7 helpline- Ensure working mobile towers and wireless systems- Public notification systems (sirens, SMS)
ESF-12	Media and Public Information	Agencies: District PRO, JMC Nodal Officer	- Prepare accurate press notes- Designated spokesperson- Counter rumors and misinformation
ESF-13	VIP Visit Management	Agencies: Protocol Branch, Police, JMC Commissionerate	- Security arrangements- Designated routes- Briefing documents for VIPs
ESF-14	Emergency Resource Inventory and Reserves	Agencies: JMC Store Dept., DDMA, NGOs	- Maintain stock registers (tents, blankets, kits)- MOU with private suppliers for rapid procurement- Update resource database every quarter

12.5 Financial and Technical Resource Access

- SOPs must include:
 - **Pre-authorization** norms for fund use by DC and Municipal Commissioner.
 - Quick requisition of equipment and manpower from neighboring districts or private agencies.

12.6 Information and Media Management

- Accurate **Situation Reports (SitReps)** every 6 hours to DDMA and SDMA.
- **Media cells** to provide verified information.
- Daily bulletins on:
 - Relief status
 - Shelter occupancy
 - Casualty updates

12.7 State Government Assistance Procedure

- Formal requisition through District Collector
- Specific request format for:
 - SDRF/NDRF
 - Military aid
 - Financial grants

12.8 Checklists and SOP Annexures

A detailed checklist and SOP format for each ESF shall be provided in the **Annexure** section including:

- Contact details of nodal officers
- Pre-identified emergency shelters and hospitals
- Resource suppliers (food, water, tents)
- NGO partnership list
- Inventory formats.
- Transportation plans

- **STANDARD OPERATING PROCEDURE ON BOREWELL INCIDENT RESPONSE**



1. INTRODUCTION:

India is the biggest user of ground water in the world which is drawing around 230 cubic kilometer per year. There are approximately 27 million bore wells in India. Due to water scarcity, low rain falls, drought and depletion of underground water, large number of bore wells are dug. When the water gets dried, the motor along with casing pipe are removed and outer surface of bore well is not properly covered or sealed. Reports say that since 2009, more than 40 children fell into the bore well. On an average 70% of the conventional child rescue operation fails.

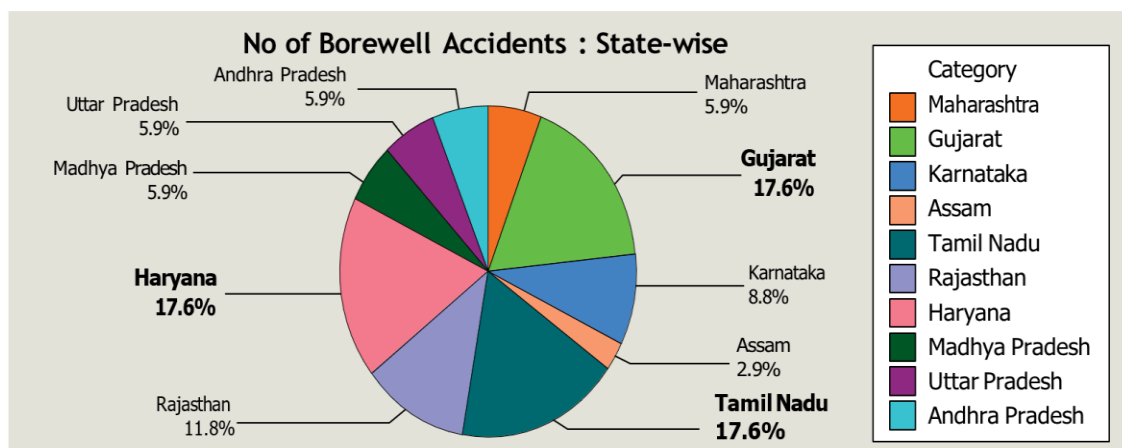
India, recently has witnessed some of the most tragic but helpless incidents which touched us deeply and forced us to look after the matter seriously. As the statistics suggest in the consecutive years starting from 2006, still more than 33 deaths occurred while stuck in bore well. The most mournful fact in that figure is that 92% of that victim is under the age of 10. The children were playing around the bore well unaware of the fact that the bore well was waiting for them in the form of a death trap. After slipping in the rotten congested pitch-black environment they were waiting for the help to come. But the lack of

oxygen and deadly atmosphere has taken their life slowly before the rescue team can reach them.

The incident of losing lives trapped in Bore well was highlighted in 2006 where a 5-years- old child named Prince was rescued after a tough combat which lasted 49 hours. Another incident in Indore took place in the same year where a child name Deepak stuck in the pit hole and died for the lack of oxygen. After that, there were number of incidents happened in the various parts of the country of falling of child in a Bore well, where depth of Bore well varies from 50 feet to 250 feet.

In rural regions of the States, bore wells are widely used due to lack of water supply or unavailability of ponds, rivers etc. Almost all Government programmes seek to supply water through tube wells. With the falling water level, most of these tube wells are abandoned and are usually left uncapped and open. A survey sponsored by the Ministry of Water Resources in 2008 discovered that 85 percent of rural, 50 percentage of urban drinking and industrial needs, and 55 percent of irrigation needs were met through bore wells. Incidents of bore well deaths will stop only when consistent water supply where needed is ensured.

The statewise data of bore well incident is given below in the pie-chart.



1. AIM:

The aim of this SOP is to lay down guidelines for NDRF Bns for responding to bore well emergencies.

2. PURPOSE:

The purpose of this SOP is to establish the procedure for the response of the SAR team(s) of the Bns of NDRF in the States/UTs for bore well incident. The SOP prescribes guidelines and assigns responsibility for adopting various executive actions to ensure prompt response during incident.

3. OBJECTIVES:

This SOP shall be used to formulate NDRF action plans and procedures for launching specialized Rescue response which should be instrumental in saving precious lives. The objective of this SOP is to establish operating procedures for addressing all aspects of managing during bore well incident.

These are as follow:

- a) Guidelines for troops for rescue operation during the bore well incident.
- b) Achievement of best result through well planned rescue operations.
- c) Reducing reaction time of the teams in responding to such incidents.
- d) Coordinating and collaborative instructions during bore well incident.

4. SCOPE:

To define a 'Standard Operating Procedure' for bore well incident response in the country.

The SOP applies to all elements of the Command while performing bore well incident response operations. This SOP is a guideline and shall be subject to be reviewed periodically.

5. ROLE AND RESPONSIBILITIES DURING BORE WELL INCIDENT

5.1 Role: Bore well incident preparedness provides a platform to design effective, realistic, coordinated planning and reduces duplication of efforts. The SOP unifies support for all functional areas to support a disaster requiring a coordinated response. The expertise of NDRF in strengthening the coordination amongst the various stakeholders is also very instrumental and important for effective response. Incidents of children falling into bore well/well are increasing in various parts of the country due to lack of awareness of people and do not follow the guidelines issued by Hon'ble Supreme Court. NDRF has not sufficient equipment to carry out the bore well rescue operation. However, NDRF responds in bore well incidents to rescue the precious life.

5.2 6.2. Responsibilities:

5.3 Executives/Supervisors/Commanders: It shall be the responsibility of all the Executives/ Supervisors/ Commanders at all levels of the chain of the command of NDRF who are involved in the bore well incident response to ensure that all aspects of this SOP are adhered to.

5.4 Responders: It shall be the responsibility of all the responders to know, understand and follow the directions of the SOP in the letter and spirit.

DECISION OF DEPLOYMENT:

5.5 SAR team(s) of NDRF shall be mobilized:

- a) On the request of the incident States/UT Govt., or
- b) On directions of Central Govt. Authorities (NCMC, NEC, NDMA)

5.6 The procedure of making requisition for services of NDRF is given below:

- a) The State Govt. is required to make a telephonic request to Control Room, HQ NDRF for sending SAR team(s) for disaster response followed by a written requisition through fax/email/dak on the prescribed Performa duly filled up in all respects to the HQ, NDRF-New Delhi.
- b) Under exigencies, on getting the direct request from the State Authority, Commandant of the local BN after due appreciation of the situation shall mobilize his SAR team(s) for the bore well incident response without wastage of time and simultaneously seek formal approval from the HQ, NDRF-New Delhi.

- c) In case, the Govt. of the bore well incident State/UT makes a direct requisition to the Central authorities (NCMC, NEC, NDMA), the SAR Team(s) of NDRF will be mobilized by the DG, NDRF as per the directions of Central authorities.
- d) Following authorities of the State Govts./UTs can place requisitions for the team (s) of the NDRF during disaster:
 - i. The Chief Secretary/Principal Secretary Disaster Management /Relief Commissioner or higher authority of SDMA.
 - ii. Collectors/DCs/DMs of the DDMA can request for the response of the NDRF Battalion which falls in jurisdiction of local district.
- e) Finally, deployment of SAR team(s) of NDRF at the bore well incident site shall be executed under the directions of the DG, NDRF in the quickest possible time after having receipt of the requisition from the States/UTs and the same shall be intimated to the NDMA/MHA.

6. EXECUTION OF BORE WELL DISASTER RESPONSE

India pre-dominantly being an agricultural economy relies on monsoon rains to fulfill the needs of irrigation as well for various other needs like industrial, household etc. But the erratic nature of monsoon rains and its unequal distribution has led to severe water shortage across the country.

With increase in cultivable land and increase in population the demand for water is rising day by day. This has led to use of underground water by digging mechanical bore wells which are fast replacing traditional wells. With water level deepening due to unhindered extraction of water, surpassing the recharge rate, such bore wells are getting deeper day by day. This has given rise to the phenomena of infants and children falling into such bore wells.

NDRF teams have responded successfully to various Bore well / well rescue incidents. The details of operations carried by NDRF are as attached Appendix- 'F'. Response to such incident is completed in five phases viz.

i. Preparedness Phase

ii. Activation and Mobilization Phase

iii. Operation Phase

iv. Deactivation and Demobilization phase

v. Post Operation Phase

MEASURES BEFORE BORE WELL INCIDENT

Do's

- The owner of the land/premises, before taking any steps for construction bore well/tube well must inform in writing at least 15 days in advance to the concerned authorities in the area.
- Registration of all the drilling agencies, viz., Govt./Semi Govt./Private etc. should be mandatory with the district administration or Statutory Authority wherever applicable. • Erection of signboard at the time of construction near the well is mandatory. The following details should be included on the signboard:-(a) Complete address of the drilling agency at the time of construction/rehabilitation of well. (b) Complete address of the user agency/owner of the well.
- Erection of barbed wire fencing or any other suitable barrier around the well during construction.
- Construction of cement/concrete platform measuring 0.50x0.50x0.60 meter (0.30 meter above ground level and 0.30 meter below ground level) around the well casing.
- Capping of well assembly by welding steel plate or by providing a strong cap to be fixed to the casing pipe with bolts and nuts.
- In case of pump repair, the tube well should not be left uncovered.
- Filling of mud pits and channels after completion of works.
- Filling up abandoned bore wells by clay/sand/boulders/pebbles/drill cuttings etc. from bottom to ground level.
- On completion of the drilling operations at a particular location, the ground conditions are to be restored as before the start of drilling.
- District Collector should be empowered to verify that the above guidelines are being followed and proper monitoring check about the status of boreholes/tube wells are being taken care through the concerned State/Central Government agencies.
- District/Block/Village wise status of bore wells/tube wells drilled. In the rural areas monitoring of these should be done through village Sarpanch and the Executive from the Agriculture Department. In case of urban areas, the monitoring should be done through Junior Engineer and the Executive from the concerned Department of Ground Water or Public Health or Municipal Corporation.
- If a bore well/tube well is 'Abandoned' at any stage, a certificate from the concerned department of Ground Water/Public health/Municipal Corporation/Private contractor must be obtained by these agencies.
- Information on all such data on the above are to be maintained in the District Collector/Block Development Office of the State.

MEASURES AFTER BORE WELL INCIDENT

- Secure the scene by cordoning the bore well to avoid any unwanted objects falling into the bore well and causing harm to the child and thus hamper the rescuing efforts. • Cordon the affected area and control unnecessary movements/crowd gathering near the bore well.
- Try to stabilize the victim, if possible, with the help of rope.
- Make arrangements for supplying of oxygen to the child with the help of pipe.
- Arrangement of sufficient lights in the area for the night operation.
- Immediately contact the nearby NDRF Unit.
- As per the direction of NDRF unit, start digging earth vertically and parallel to the depth of bore well at the sufficient distance from the bore well or as directed by the NDRF.
- Keep motivating the victim by regular talking of parents or relatives.
- District medical officer should be made aware about the compartment compression syndrome and action to be taken in such cases.

Don'ts

- Don't leave the tube well/bore well uncovered after repair/daily work done.
- Do not throw any food article or pour water in the Bore well.
- Do not allow underground water seepage in bore well.
- Do not allow heavy machines to work at full power to avoid heavy vibration which may result in loosening of surrounding soils and collapse of the bore well.
- Do not allow crowd to gather around the incident site.

GUIDELINES REGARDING BORE WELL SAFETY MEASURES BY SUPREME COURT

Safety measures/guidelines as given in the Order dated 11.02.2010 of Hon'ble Supreme Court is to be observed by all the States: -

- i) The owner of the land/premises, before taking any steps for construction bore well/tube well must inform in writing at least 15 days in advance to the concerned authorities in the area, i.e., District Collector/District Magistrate/Sarpanch of the Gram Panchayat/ Concerned officers of the Department of Ground Water/ Public

Health/Municipal Corporation, as the case may be, about the construction of bore well/tube well.

ii) Registration of all the drilling agencies, viz., Govt./Semi Govt./Private etc. should be mandatory with the district administration.

iii) Erection of signboard at the time of construction near the well with the following details:- (a) Complete address of the drilling agency at the time of construction/ rehabilitation of well. (b) Complete address of the user agency/owner of the well.

iv) Erection of barbed wire fencing or any other suitable barrier around the well during construction.

v) Construction of cement/concrete platform measuring 0.50x0.50x0.60 meter (0.30 meter above ground level and 0.30 meter below ground level) around the well casing.

vi) Capping of well assembly by welding steel plate or by providing a strong cap to be fixed to the casing pipe with bolts and nuts.

vii) In case of pump repair, the tube well should not be left uncovered.

viii) Filling of mud pits and channels after completion of works.

ix) Filling up abandoned Bore wells by clay/sand/boulders/pebbles/drill cuttings etc. from bottom to ground level.

x) On completion of the drilling operations at a particular location, the ground conditions are to be restored as before the start of drilling.

xi) District Collector should be empowered to verify that the above guidelines are being followed and proper monitoring check about the status of boreholes/tube-wells are being taken care through the concerned State/Central Government agencies.

xii) District/Block/Village wise status of bore wells/tube-wells drilled viz. No. of wells in use, No. of abandoned bore wells/tube wells found open, No. of abandoned Bore wells/tube wells properly filled up to ground level and balance number of abandoned Bore wells/tube-wells to be filled up to ground level is to be maintained at District Level. In rural areas, the monitoring of the above is to be done through village Sarpanch and the Executive from the Agriculture Department.

xiii) If a Bore well/tube-well is 'Abandoned' at any stage, a certificate from the concerned department of Ground Water/Public health/Municipal Corporation/Private contractor etc. must be obtained by the aforesaid agencies that the 'Abandoned' Bore well/tubewell is properly filled up-to the ground level. Random inspection of the abandoned wells is also to be done by the Executive of the concerned agency/department. Information on all such data on the above are to be maintained in the District Collector/Block Development Office of the State.

ANNEXURES

Annexure

Rainfall Detail for Jamnagar District from 2015 to 2024

Rainfall

The annual average rainfall is 527 mm about 95 % rains is received during the monsoon. The lowest rainfall of 36 mm was registered in 1987 while the highest rainfall of 2114 mm in 2010.

Year	2010	2011	2012	2013	2014	2015	2016	2017
<i>Rainfall</i>	2114 mm	973 mm	380 mm	1473 mm	368 mm	322 mm	380 mm	624 mm
Year	2018	2019	2020	2021	2022	2023	2024	2025
<i>Rainfall</i>	405 mm	1234 mm	1187 mm	822 mm	684 mm	1333 mm	1227 mm	690 mm

(1) WATER WORK

Zone Wise Employees List For Essential Work

Sr. No	Engr.s Name & Designation	ESR Filter Plant	Mobile No.
1	Shri N. M. Patel	Ex.Eng. & City Zone -02	98795 89599
2	Shri Alpesh Charaniya	City Zone -01	98795 03038
3	Shri Reeta Vasava	Head Work /Office Work	97277 14694
4	Shri Ketan Chavada	Dy. Eng /Office Work	97274 15021
5	Shri Darshan C. Davudra	Ranjitsagar & project work	98791 14872
6	Shri Priyan Joisar	Pump house filter plant, khijadi filter plant,aji-3,und-1	79842 72309
7	Bhavik Johsi (O. W.A.)	Sasoi dam, Gyanganga filter plant	96871 08437
8	Shri Ashok Ninama	Samarpan & Ravi park Zonal Officer	99783 22362
9	Shri Jay Katarmal (O.W.A.)	Shanker Tekari Zonal Officer	91067 20230
10	Shri Parth Vegad	Navagam Ghed Zonal Officer	81414 04647
11	Shri Kishor Pithiya	Pavanchakki Zonal Officer &Office Work	99798 99663
12	Shri Divya Sengar	Samarpan Water Tenker Vibhag	99255 80949
13	Shri Parth Chauhan	Officer Work	82006 68296
14	Shri Vivek Gogra	Ranjitnagar Zonal Officer	76009 62030
15	Shri Bharat Nakum	Gyanganga Filter Plant	81605 89830
16	Shri Mustakim Gori	Mahaprabhuji Bethak Zonal Officer	91739 74313
17	Shri Vikaram Gariya	Gokulnagar Zonal Officer	73594 05313
18	Shri Deepak Buddh	Bedi & Madhapurbhuga Zonal Officer	80001 27369
19	Shri Harsil Mehta	Jamnudaru & Pabari Zone	70169 50159
20	Shri Nishit Kanakhara	Samarpna Water Tenker Vibhag	85300 32152
21	Shri Ramesh Taraviya	Meter Reader	98259 38741
22	Shri Sanjay Khimsuriya	Head Work & Project Work	97142 34356
23	Shri Deepak Bhoraniya	Chemist W.W.	99748 60463
24	Shri Netta Modhvadiya	Chemist W.W.	96621 30693
25	Shri Chirag Zala	Scada Project	79901 98684
26	Shree Rishi Bhanushali	Scada Project	97372 22043

(2) Solid Waste Management

Executive Engineer, Solid Waste Management

Sr.No.	Name of Employee	Designation	Contacte No.
1	M. B. VARANVA	Controlling Officer	98791 14962

Dy. Engineer, Solid Waste Management

Sr.No.	Name of Employee	Designation	Contacte No.
1	KETAN K. KATESHIYA	DEPUTY ENGINEER	99095 01500

Engineers, Solid Waste Management

Sr.No.	Name of Employee	Designation	Contacte No.
1	Sandip S. Patel	Jr. Engineer	99789 12374
2	Pardumansinh Jadeja	A.A.E.	99252 24820
3	Malay Thaker	A.A.E.	84604 28843
4	Devang Hada	Work Assit.	96011 21134
5	Milan Nanda	Work Assit.	91068 43098
6	Rajendrasinh S. Jadeja	Motor Vehical Officer	99795 55533

Zonal Officer/ Chief Sanitary Inspector/ Sanitary Inspector, Solid Waste Management

Sr.No.	Name of Employee	Designation	Contacte No.
1	Dipak Sureshbhai Patel	Zonal Officer	90990 73023
2	Urvashi Kiritbhai Makwana	Zonal Officer	98248 49807
3	Ashok Parshotambhai Nai	Sanitary Inspector	90990 73027
4	Ramesh Nathabhai Babriya	Sanitary Inspector	90990 73026
5	Shashikant Ratubhai Damor	Sanitary Inspector	90990 73037
6	Rajiv M. Dattani	Sanitary Inspector	99099 42419
7	Mahesh A. Parmar	Sanitary Inspector	98252 17611
8	Piyush B. Khandvi	Sanitary Inspector	90990 73033
9	Devendra Navalsi Chauhan	Sanitary Inspector	90990 73011
10	Nikhil R. Faliya	Sanitary Inspector	99090 05556
11	Pravin P. Chavda	Sanitary Inspector	98796 29477
12	Balvant V. Chauhan	Sanitary Inspector	98258 76514

Sanitary Sub Inspector, Solid Waste Management

Sr. No.	Name of Employee	Designation	Contacte No.
1	MAYUR RASIKBHAI DUDANI	SANITARY SUB INSPECTOR	98988 34282
2	GOPAL DHANJIBHAI SARDHARA	SANITARY SUB INSPECTOR	90990 73021
3	KAPIL RASIKLAL PITHDIYA	SANITARY SUB INSPECTOR	90990 73029
4	PRAKASH MOTILAL MAKWANA	SANITARY SUB INSPECTOR	91734 68325
5	NILESH NAGJIBHAI PARAMR	SANITARY SUB INSPECTOR	90990 73004
6	CHIRAG MAVJIBHAI DAFDA	SANITARY SUB INSPECTOR	97274 50406
7	BHIMSHI RAMSHIBHAI GOJIYA	SANITARY SUB INSPECTOR	87585 18181
8	GIRISH RANMALBHAI SADAD	SANITARY SUB INSPECTOR	90998 33888
9	MAHENDRASINH KALUBHA JADEJA	SANITARY SUB INSPECTOR	90990 35726
10	RAJESH TULSIDAS MADHVACHARYA	SANITARY SUB INSPECTOR	90990 73008
11	SHAILESH V. RATHOD	SANITARY SUB INSPECTOR	98790 86007
12	RAJESH B. VAGHELA	SANITARY SUB INSPECTOR	98259 25693
13	VIJAY PREMJBHAI BABARIYA	SANITARY SUB INSPECTOR	9913700242
14	VIJAY JAGDISHBHAI VAGHELA	SANITARY SUB INSPECTOR	99250 29957
15	AASHISH P. MAKWANA	SANITARY SUB INSPECTOR	75670 70515
16	BHARAT HARIBHAI VAGHELA	SANITARY SUB INSPECTOR (CONTRA)	97148 32551
17	DIPAK MAGANLAL PARMAR	SANITARY SUB INSPECTOR (CONTRA)	90990 73022
18	CHIRAG NANJIBHAI SOLANKI	SANITARY SUB INSPECTOR (CONTRA)	90990 73025
19	BIPIN NATHABHAI CHAVDA	SANITARY SUB INSPECTOR (CONTRA)	90990 20108
20	KETAN MANSUKHBHAI NAROLA	SANITARY SUB INSPECTOR (CONTRA)	97278 44477
21	CHIRAG M. TAKODARA	SANITARY SUB INSPECTOR (CONTRA)	80004 57231
22	VISHAL D. VAGHELA	SANITARY SUB INSPECTOR (CONTRA)	97144 49596
23	MEHUL NAGJIBHAI PARMAR	SANITARY SUB INSPECTOR (CONTRA)	98250 17933
24	JAGDISH SAVABHAI GOHIL	SANITARY SUB INSPECTOR (CONTRA)	98250 30931
25	RAJU SOMABHAI PARIYA	SANITARY SUB INSPECTOR (CONTRA)	82641 31343
26	MILAN MANSUKHBHAI NAROLA	SANITARY SUB INSPECTOR (CONTRA)	99250 24096
27	VISHAL KANJARIYA	SANITARY SUB INSPECTOR (CONTRA)	94269 93253
28	VIPUL NATHABHAI MOVALIYA	SANITARY SUB INSPECTOR	90990 73041

		(CONTRA)	
29	YUVRAJSINH HEMANTSINH KANCHVA	SANITARY SUB INSPECTOR (Out Source)	96623 69610
30	RAHUL DEVJIBHAI RATHOD	SANITARY SUB INSPECTOR (Out Source)	78018 01277
31	JAYDEEPSINH BHARATSINH JADEJA	SANITARY SUB INSPECTOR (Out Source)	91371 11137
32	MEET S. KANKHARA	SANITARY SUB INSPECTOR (Out Source)	97734 51110
33	JATIN CHANDRA	SANITARY SUB INSPECTOR (Out Source)	79848 38215
34	KULDEEP VAGHELA	SANITARY SUB INSPECTOR (Out Source)	81416 49703
35	KHODIDAS MAKWANA	SANITARY SUB INSPECTOR (Out Source)	99987 80353
36	PARTH SACHDEV	SANITARY SUB INSPECTOR (Out Source)	83201 61782
37	LALIT BHIKHABHAI NAROLA	SANITARY SUB INSPECTOR (Out Source)	96648 05126
38	SAVAN CHUAHAN	SANITARY SUB INSPECTOR (Out Source)	99749 32863
39	JAYDEEP D. SOLANKI	SANITARY SUB INSPECTOR (Out Source)	95371 71137
40	BHARAT CHAVADA	SANITARY SUB INSPECTOR (Out Source)	82009 19559
41	DEVJI M. RATHOD	SANITARY SUB INSPECTOR (Out Source)	84909 94581
42	SURJITSINH JADEJA	SANITARY SUB INSPECTOR (Out Source)	63510 98036
43	BHARAT S. DHRUVE	SANITARY SUB INSPECTOR (Out Source)	98248 75845
44	DRHUVRAJSINH CHUDASAMA	SANITARY SUB INSPECTOR (Out Source)	

Garbage Generation

Sr. No.	Description	Details
1	Waste generated per day	375 M. tone.
2	Waste Collected per day	375 M. tone

(C) Detail of Drains:

Sr. No.	Type	Length
1	Pacca Open Drain	566 K.m.
2	Kutchha Open Drain	5 Km.
3	Covered Drain	40 km.
Total		611 Km.

Details of Disposal Site

Particulars	Type of disposal	Location	Distance from city
Waste To Energy plant	Scienfic WasteDisposal	Nawagam Ghed Bh. Gandhinagar	5

Staff Schedule

Post	Nos.
1) Deputy Engineer	2
2) Engineer	5
3) Zonal Officer/ Cheif Sanitory Inspector	5
4) Sanitory Inspector	7
5) Sanitory Sub Inspector	44

Details of Vehicle / Machinery

Sr. No.	Vehicle	Nos.
1	Lobed Trailer	4
2	Dead Animal Recovery Van (Small)	3
3	Dead Animal Recovery Van (Big)	3
4	Urinal Cleaner Auto Rikshow (MLM)	2
5	Urinal Cleaner (V-30)	3
6	Front and Loader	2
7	Tractor	8
8	Mobile Sanitation Court	1
9	Backhoe Loader	8
10	Road Sweeper	9
11	Open Nala Cleaner	1
12	Mobile Toilet Unit	6
13	Excavator	1

Civil

Zone Wise Employee List for Essential Works:

Sr. No	Name of Employee	Zone
1	Shree H. V. Pathak Executive Engineer	Civil Branch Head Civil West, Central, East, South North
2	Shree N. R. Dixit Executive Engineer	Garden Branch
3	Shree D. N. Shingala Deputy Executive Engineer	Civil East Zone (Ward no.10,11,12) Civil North Zone (Ward no. 2, 3, 4)
4	Shree S. A. Sheikh Deputy Executive Engineer	Civil South Zone (Ward no. 8, 15, 16)
5	Shree H. C. Vaniya Deputy Executive Engineer	Civil Central Zone (Ward no. 5, 9, 13, 14)
6	Shree R. G. Solanki Deputy Executive Engineer	Civil West Zone (Ward no. 1,6,7)

APPENDIX - I

LIST OF SIRENS: (ELECTRICALLY OPERATED)

Sr. No.	Location of siren	
01	Jamnagar muni. Corporation, corporation ground, Jamnagar	In operation by JMC
02	Vohra hajira, rangmati river bank, jamnagar	Controlled by Civil Defence
03	New bharat engg. Works, bedi bandar road, Jamnagar	
04	M. P. Shah school, digvijay plot, jamnagar	
05	Kalawad gate, jamnagar	
06	Khambhalia gate, Jamnagar	
07	Digvijay woolen mills, aerodram road, jamnagar	
08	Western railways, old railway station, jamnagar	
09	Undyognagar police chowky, shankar tekri, udyognagar, Jamnagar	
10	G.E.B. Office, sat rasta, jamnagar	

APPENDIX-II
Existing Status Of Physical
Infrastructure in The City
(A) WATER SUPPLY:- (a) Source Details

Sr no	Particulars	Source-i	Source-ii	Source-iii	Source-iv	Source-v
A	Name of Dam	Ranjitsagar	Und-1	Sasoi	Aji-III	Narmada Canal
B	Capacity of Dam	987 MCFT	2437 MCFT	1387 MCFT	1756 MCFT	Narmada Canal
C	Drawl Reservation For JMC	25 M.L.D	25 M.L.D	25 M.L.D	40 M.L.D	20 M.L.D
D	Distance From Sources	10 Kms	45 Kms	22 Kms	63 Kms	-
E	Type of Pipe line	PSC	PSC	D.I. Pipe line	D.I. Pipe line	M.S.
F	Size of Pipe line	750 MM DIA	700 MM DIA	700 MM DIA	800/ 750 MM DIA	-
G	Transmission	Gravity	Pumping	Pumping	Pumping	Available at Khijadia @ 1900 mm
H	Drawl capacity	44 M.L.D	40 M.L.D	25 M.L.D	40 M.L.D	20 M.L.D
I	Transmission & distribution losses	15-20%	15-20%	5-10%	5-10%	NiL

(b) Transmission & Distribution Details

Sr. No	Size of Pipe	Pipe Materials	Pipe Length (M)
1	50 to 150 mm dia	A.C. PRESSURE	4,50,000
2	350 mm dia	A.C. PRESSURE	40,000
3	400 mm dia	A.C. PRESSURE	45,000
4	450 mm dia	A.C. PRESSURE	50,000
5	500 mm dia	A.C. PRESSURE	70,000
6	700 mm dia	PSC	55,000
7	750 mm dia	H.S.& PSC	12,000
8	1118 mm dia	M.S. PIEP	13,500
9	100 to 500 mm dia	D.I. PIPE	3,50,000
10	700 TO 800 mm dia	D.I. PIPE	85,000
Total Pipeline lenght (M)			11,70,500

D.G.SET: -

PARTICULAR	NOS	CAPACITY
PUMP HOUSE FILTER PALNT	1.00	750 K.V. A
KHIJADIA FILTER PLANT	2.00	125/600 K.V. A
GYANGANGA FILTER PLANT	1.00	500 K.V. A
UND-1 DAM, HEAD WORKS	2.00	400 K.V. A
SASOI DAM HEAD WORKS	1.00	500 K.V. A
AJI – III DAM HEAD WORKS	1.00	750 K.V. A
GULABNAGAR E.S. R	1.00	250 K.V. A
SOLARIUM E.S. R	1.00	250 K.V. A
SAMARPAN E.S. R	1.00	180 K.V. A
SANKER TEKARI E.S.R.	1.00	320 K.V. A
RANJITNAGAR E.S.R.	1.00	250 K.V. A
GOKULNAGAR E.S.R	1.00	350 K.V. A
MAHAPRABHUJI BETHAK E.S.R	1.00	250 K.V. A
RAVI PARK E.S.R.	1.00	250 K.V.A.

(c) Treatment Plant Details: -

Sr No	Name of dam	Total Capacity	Exisiting Capacity	Drawl Capacity
1	Ranjitsagar	987 MCFT	690 MCFT	44 M.L.D.
2	Und-1	2437 MCFT	916 MCFT	40 M.L.D.
3	Sasoi	1387 MCFT	690 MCFT	25 M.L.D.
4	Aji-III	1756 MCFT	1018 MCFT	40 M.L.D.
5	Narmada Canal	-	-	20 M.L.D.

(C) DETAILS OF INDIVIDUAL RESERVOIRS

Location	Reservoir type (GSR/ESR)	Zone served	Capacity (M.L)	No. of pumping hrs	Pumping capacity (H.P)	ZONE POPULATION APPX.
Gulabnagar	E.S.R.	Gulabnagar	1.70	20 HRS	180 X 3	250,000
Solarium	E.S.R.	Solarium	1.80	20 HRS	167	165,000
Navagam ghed	E.S.R.	Navagam ghed	1.50	20 HRS	40 X 3	50,000
Bedi	E.S.R.	Bedi	1.00	20 HRS	25 X 3	40,000
Samarpan	E.S.R.	Samarpan	1.70	29 HRS	100 X 3 150 X 1	180,000
Ranjitnagar	E.S.R.	Ranjitnagar	2.20	15 HRS	120 X 3	165,000
Sanker tekari	E.S.R.	Sanker tekari	1.40	20 HRS	120 X 3	175,000
Sanker tekari	GSR	Sanker tekari	24.60	-	-	-
Pump House	E.S.R.	Pump House	1.50	20 HRS	100X3	95,000
Gokulnagar	E.S.R.	Gokulnagar	1.50	20 HRS	75 X 3	1,00,000
Gyanganga	E.S.R.	Gyanganga	6.50	20 HRS	60 X 3	60,000
Mahaprabhuji bhetk	E.S.R.	Mahaprabhuji bethak	1.50	14 HRS	55 X3	70,000
Ravi Park	E.S.R.	Ravipark	1.80	14 HRS	75 X 3	90,000

(a) Ground Water sources:

Particulars	Nos
(1) No. of borewell	450
(2) No. of Wells	04
(3) Ground water Table	70 feet in normal rainy season

APPENXIX - IV

CIVIL BRANCH (C) Roads

(a) Road Surface Details (upto 31-03-2026)

Sr. No.	Surface type	Length in km.
1	Concrete	595.009
2	Bituminous	260.960
3	Water Bound Macadam	114.789
4	Others (Unsurface- Moterable- Non Moterable Road)	221.281
5	Total	1192.039

(b) Vehicle - Machinery details

Sr. No.	Type	Nos.
1	Excavator cum loader (Rented)	16
2	Tractors (Rented)	16

(c) Staff Schedules

Sr. No.	Post	Nos.
1	City Engineer	1
2	Executive Engineer	2
3	Deputy Engineer	6
4	Junior Engineer	8
5	Surveyor	1
6	Additional Assistant Engineer	1
7	Additional Assistant Engineer (Contract Base)	1
8	Technical Assistant (Work Assistant)	0
9	Technical Assistant (Work Assistant) (Contract Base)	35
10	Mistri	2
11	Labours (Out Sourceing if required)	25

APPENDIX – V

(D) STREET LIGHTING: - (a) Street Light Details (In 2026)

Sr. No.	Description	Nos.
01	High Mast Tower	11
02	Small 11 Mtr Towers	10
03	LED lights	52938
04	Others	200

Ward No	Street/Road Name	Type	Nos
1 to 16	Main Road	LED	52938
	Street		
	Garden	Mercury	0
	Circle	High Mast	11
	Others		100

(b) Vehicle Schedule:-

Type	Nos
Hydraulic Tower (11 mt. Height)	02
Bolero with wooden ladder	01
Contractor TATA Ace	04

(c) Staff Schedule:-

Post	Nos
Dy. Engineer	02
Junior Engineer	02
A.A.E.	00
A.A.E. (Contract Base)	02
W.A. (Contract Base)	01
A.A.E. (Outsourced)	03
Linemen Helper	09
Jr. Clerk/ComputerOperator (Outsourced)	02
Electrician	01
Contract Base Helper	22
Helper (Outsourced)	19
Driver	03
Driver (Outsourced)	02

(d) Information Regarding D.G. Sets

Branch	No. of Equipment in working Condition	Place
Light Branch	250 Kva	Municipal Admin Building
Project Branch	100 Kva	Fire Terminal Building
Light Branch	200 Kva	New General Board Building

APPENDIX - VI

(a) Fire Vehical Details: -

Sr. No.	Type of Vehicals	Nos.
01	Water Tender	05
02	Mini Water Tender	02
03	Water Bauser	04
04	Ambulance	03
05	Fire Motorcycle	03
06	Fire Bus	01
07	Hydraulic Platform	01
08	Mini Rescue van	03
09	Scorpio	01
10	HDP Boat (Not included in Total)	04
11	Mini Fire Tender With Crane	01
12	Mahindra Commanding Car	02
14	Innova car	02
	Total Vahical	28

(b)

Details Of Staff :-

Sr. No.	Permanent Staff	Task	Total Sanction Post (Nos.)
01	Chief Fire Officer	Overall Command	01
02	Dy. Chief Fire Officer	To Assist C. F.O.	01
03	Station Officer	Team Leader	10
04	Station Officer (Work Shop)	Vehicles Maintenance Officer	01
05	Firemen Cum Driver	Fire Fighting	80
05	Driver Cum Pump Opretor	Driver & pump Operation	20
06	Clerk	Adm.	01
07	Peon	Adm.	03

(C) Fire Calls:

No. Sr.	Year	Fire Call	Fire Rescue Cell
1	2012-13	189	152
2	2013-14	198	238
3	2014-15	244	205
4	2015-16	250	212
5	2016-17	201	292
6	2017-18	251	176
7	2018-19	235	140
8	2019-20	205	401
9	2020-21	197	310
10	2021-22	195	274
11	2022-23	257	319
12	2023-24	385	563
13	2024-25	374	428
14	2025-26	364	355

INFORMATION REGARDING DE-WATERING PUMPS

Branch Name / Ward No.	No. of Equipments in working conditions	Information regarding party Having de-watering pump	Name of concerned owner	Place
Under Ground Drainage	5 Nos., 5HP – fuel pump (Dewatering pump) 5 Nos., 7.5 HP- fuel pump (Dewatering pump)	-	Contractor	At Contractor Workshop
	2 Nos., 7.5 HP- Electric pump 2Nos., 10 HP –Electric pump	-	Jamnagar municipal corporation	At pumping station

APPENDIX-X
THE LIST OF LOW LAYING AREAS ARE AS FOLLOWS

Sr no.	Area	Ward no.	Population	safe shifting place in case of emergency
1	Dharanar nagar 1 & 2	1	13511	Rolitana english school shantiniketan vidhyalaya jila margha ucher kendra gyan ganga vidhyalaya/shelter home bedi near ROB
	Jay bhimvas	4	4539	Bhimvas school railway station
3	Bai ni vadi	16	1635	Adarsh nivasi shala gandhi udhyog mandir nandanvan primary schhol
4	Lal khan	16	883	-
5	Ghanchi Kabrastan Area	16	761	M.E.S warfare club arya colony
6	Ambedkar vas	16	971	Ambedkar vas community hall nandanvan primary school
7	Ambedkar dham	16	995	-
8	Koli dango	2	1370	Rolita english school Muni.community hall Jay Co-Op. Society
9	Marwadi vas	16	595	Nandanvan primary school community hall
10	Shanker tekri ramnagar & shastri nagar	15	8500	Pradipkumar pethraj school no.24
11	Bachunagar	12	896	
12	Gulabnagar navnala	11	2758	Primary school no.15/Night shelter hapa iskon temple Jamnagar-Rajkot highway
13	Gulabnagar ram wadi	11	1500	Gulabnagar primary school no.24/ Night shelter hapa iskon temple Jamnagar-Rajkot highway
14	Cricket bunglow st no.1,2,3	9	2308	DCC high school sindhi panchyat bhavan
15	Ghanchi khadki	16	3100	Vahevarita madresa
16	Purabia khadki	12	947	
17	Dhunvav naka	11	3000	Bhoivada community hall bhoi gyadi vadi
18	Ashapura khadhki	12	1223	Vagher vado bal mandir
19	Navagam ghed- khadkhnagar	4		
20	Navagam ghed-vinayak park	4		
21	Navagam ghed-indira society	4		
22	Bedi-Hussani chowk	1		
23	Bedi-Idd Masjid	1		
	Total		49,492	

APPENDIX – XI

LIST OF MAIN SEWERAGE DRAIN AND STORM WATER DRAINAGE

1. Pump house to Mani Kankeshwar to Nal Wali Vav to Ghanchi Khadki – open drain
2. Nilkanth Nagar to Raval Smashan – open drain
3. Dared to Lakhota lake feeding canal
4. Over flow canal – outer lake to guru dwara junction to bhimvas
5. Outer lake to Khodiyar colony to Fionika society to dharar Nagar
6. Lilasha Dharmashala to Fishrish inlet
7. Digvijay Plot St.no-49 shanker tekri to Panakhan
8. Chamber colony to Khambhalia road
9. Indira colony to Khambhalia road
10. Khambhalia Naka to Khoja Naka to Nal wali vav
11. Hawai Chowk to Pancheshwar tower to Bedi Gate to Tin Darwaja to Jadeja vas to sonapuri
12. Digvijay Plot St.no-64 to siddharth shopping Center.
13. Dhan sheri to Bhimvas to Navagam ghed
14. Ghanchi Khadki to Kalavad Naka to dhunvav Naka to Sonapuri
15. Vibhaji School to Town Hall to bedi gate
16. Nav nala to Tadia Hanuman
17. Sonal nagar canal
18. Nr. Gandhinagar railway station

APPENDIX – XII
List Of Municipal Primary School
Nagar Primary Education Committee-Jamnagar 2026

Sr.No.	School No.	Shift	Type	Principal's Name	Address	Mobile No.
1	1	Both	Mixed	Ashikkumar A. Bensdadiya (H. Tat)	Lalvadi Patel Samaj Near	7984971468
2	3	Morning	Mixed	Jayeshkumar P. Solanki (H. Tat)	Shankartekri Shastrinagar, Near Water Tank	9426049729
3	4	Afternoon	Girls	Jagdishbhai N. Solanki (H. Tat)	Nandanvan Society, Ranjitsagar Road	9904237720
4	5	Afternoon	Girls	Monikaben U. Shah	Near Big Haveli, Mahalakshmi Chowk	9429273037
5	6	Morning	Girls	Prashantbhai Madhavachaya (H. Tat)	Sajuba Girls High School Compound	6355182202
6	7	Both	Mixed	Chiragbhai Sanchaniya	Gokulnagar, Radar Road	9998987524
7	10	Morning	Girls	Jignashaben Kansagra (H. Tat)	Ranjitnagar, Behind Vegetable Market	7878783366
8	11	Morning	Girls	Kaushikbhai Jogidas (H. Tat)	Kishan Chowk Opposite Kabir Ashram	9426366149
9	12	Morning	Girls	Vijaybhai V. Valadara	Shankartekri Nehrunagar, 49-Digvi Plot Road	9898787621
10	14	Morning	Boys	Kajalben Joshi	Behind Subhash Market, Mochisar	7567751987
11	15	Afternoon	Mixed	Paraskumar P. Makavana	Naganath Gate, Near Crematorium	9825996539
12	16	Morning	Mixed	Punitaben Jadav	Near Ashapura Temple, Wagherwado	8000664781
13	17	Morning	Boys	Deepaben Mehata (H. Tat)	Gulabnagar, Vibhapar Road	8320578215
14	18	Morning	Girls	Deepakbhai Pagda (H. Tat)	Udyog Nagar, Panakhani, Tele.A. Same	9825701568
15	19	Afternoon	Boys	Rambhai Solanki	Udyog Nagar, Panakhani, Tele.A. Same	8141043149
16	20	Morning	Mixed	Mehulbhai D. Pathak (H. Tat)	Ghanchi Colony, Behind Graveyard	7383512582
17	21	Morning	Boys	Meramanbhai Karetha (H. Tat)	Nandanvan Society, Ranjitsagar Road	9662062711
18	22	Morning	Girls	Jitendrkumar M. Kathad (H. Tat)	Beside Vambe Housing, Mayurnagar	7801875745
19	24	Morning	Girls	Alpeshbhai Kateshiya (H. Tat)	48 - Digvijay Plot, Near Meghji Pethraj	9428126881
20	25	Morning	Mixed	Kamleshbhai Rajayguru (H. Tat)	New Digvijay Gov. High School Building	9428125096
21	26	Morning	Mixed	Ferozbhai Kureshi (H. Tat)	Khoja Gate, Opposite Hajipir Dargah	9898449832
22	27	Morning	Boys	Pradip Kumar R. Rathod	Beside Bedeshwar Temple, Valsura Road	9723589643
23	29	Afternoon	Mixed	Kanjibhai Aghera	Police Head Quarters, Sharusection Road	9427411352
24	30	Morning	Mixed	Hemangiben Khanadhar (H.Tat)	Jodiabhunga, Opposite Warehouse Godown	7984869737
25	31	Morning	Mixed	Pithabhai Nandania (H.Tat)	Opp Himalaya Society, Digjam Circle	9978942397

Sr.No.	School No.	Shift	Type	Principal's Name	Address	Mobile No.
26	32	Morning	Mixed	Mukeshbhai Pujara	Near Gandhinagar City Bus Stop	9825217602
27	33	Afternoon	Boys	Bhimashibhai L. Suva (H.Tat)	Beside Vambe Housing, Mayurnagar	9429800130
28	37	Afternoon	Boys	Vikram Singh Jadeja (H.Tat)	Ranjitnagar, Behind Vegetable Market	7874914092
29	38	Morning	Girls	Dhritiben Wadalia (H.Tat)	Sajuba Girls High School Compound	9426848448
30	39	Afternoon	Boys	Aravindbhai L. Dabhi	48-Digvi.Plot, Meghji Pethraj	9904047744
31	40	Morning	Girls	Sanjaybhai Messiah (H.Tat)	Jawahar Nagar, Behind MP Shah Udyog Nagar	9924384620
32	41	Morning	Girls	Rannaben Padia (H.Tat)	Near Big Haveli, Mahalakshmi Chowk	9924580611
33	42	Morning	Mixed	Rajeshbhai Bhensaddia (H.Tat)	Bhimwas, Behind Old Railway Station	9825795994
34	44	Afternoon	Boys	Harasibhai L. Pingal (H. Tat)	Jawahar Nagar, Behind MP Shah Udyog Nagar	9428726488
35	45	Afternoon	Boys	Jenishkumar G. Dedaniya (H. Tat)	Kishan Chowk Opposite Kabir Ashram	9909186370
36	46	Afternoon	Girls	Chandrakantbhai Khakhariya (H.Tat)	48 - Digvijay Plot, Near Meghji Pethraj	9974065309
37	50	Afternoon	Girls	Jayeshbhai Vyas (H.Tat)	Near Gandhinagar City Bus Stop	9428668842
38	51	Afternoon	Girls	Kaushikbhai Chudasama (H.Tat)	Beside Bederwar Temple, Valsura Road	9067078812
39	54	Morning	Boys	Salim Yusuf M. Bukhari (H.Tat)	Vaishalinagar, near Dhaliya of Kholmil	9725203428
40	55	Afternoon	Girls	Sanjaybhai Bhateliya (H.Tat)	Vaishalinagar, Near Dhaliya of Kholmil	9427774648
41	56	Morning	Boys	Binaben G. Trivedi (H.Tat)	Krishnanagar, Near CT Bus Stop	9925019010
42	57	Afternoon	Mixed	Babubhai Matang	Opp Himalaya Society, Digjam Circle	9824585892
43	58	Afternoon	Boys	Sarojben Damor	Shankartekri Nehrunagar, 49-Digvi.Plot Road	9586172424
44	59	Afternoon	Girls	Bhailalbhai Dholetar	Gulabnagar, Vibhappar Road	9925473118
45	60	Afternoon	Girls	Vijaybhai K. Pandya (H.Tat)	Krishnanagar, Near CT Bus Stop	9426984200
46	MEGPS - 1	Morning	Mixed	Vikram Singh Jadeja (H.Tat)	Devraj Depal, ST. Near bus station	7874914092
47	MEGPS - 2	Afternoon	Mixed	Pithabhai Nandania (H.Tat)	Opp Himalaya Society, Digjam Circle	9978942397

JAMNAGAR MUNICIPAL CORPORATION
HEALTH BRANCH
ZONE WISE TEAM LIST FOR QAUALTY SERVICES
2026

HEALTH OFFICER: Dr. Hareshkumar K. Gori (Mob.No.82380 06510)

Team Details	Zone No.1	Zone No.2	Zone No.3	Zone No.4	Zone No.5	Zone No.6
Word No.	1,2,5	9,10,11	3,4	6,7,8	14,15	12,13,16
Medical Officer	Dr. Hardash Ambaliya Mo.99093 94900	Dr. Yogesh Nakum Mo.88663 37635	Dr. Kinjal Ghediya Mo.90331 04235	Dr. Kajal Chauhan Mo. 82380 06502	Dr. Dipesh Trivedi Mo.9106 1 04929	Dr. Dwarkesh Masharu Mo.99673 88378
Food Safty Officer	N.P. Jasoliya	N.P. Jasoliya	D.B. Parmar	D.B. Parmar	N.P. Jasoliya	D.B. Parmar
Supervisor	Jayant Trivedi	Bhanuben Makwana	Bhanuben Makwana	Labhuben Ranipa	Bharat Zala	Dineshbhai Gohil
FHW	Dipeeka Parmar	Monila Vansjaliya	Jalpa Dangar	Amisha Maghodiya	Bhadarka Nitaben	Rasila Singrakhiya
ANM	Bhavna Vinjuda	Kotad Kajal	Jayshree Pariya	Vaibhavi Ghelani	Mitaben Kandoriya	Madhuben Chhuchar
Pharmacist	Ashish Patel	Divya Agola	Urmi Dawadi	Pankaj Jalandhara	Jalpaben Mungra	Trupti Vaghasiya
Leb.Tach.	Jayesh Desai	Chiragbhai Patel	Radhika Yadav	Meghaviben Timbadiya	Bansiben Dholariya	Jagruti Maru

APPENDIX - XIII
LIST OF COLLEGES AND POLYTECHNICS

SR. NO.	PARTICULARS
1	M. P. SHAH MEDICAL COLLEGE, JAMNAGAR
2	DENTAL MEDICAL COLLEGE, JAMNAGAR
3	RAJMATA GULABKUNVARBA COLLEGE, JAMNAGAR
4	GUJARAT AYURVEDIC UNIVERSITY, JAMNAGAR
5	D. K. V. ARTS AND SCIENCE COLLEGE, JAMNAGAR
6	A. K. DOSHI MAHILA ARTS / COMMECE / HOME SCIENCE COLLEGE, JAMNAGAR
7	SHRI V. M. MEHTA ARTS AND COMMECE (MUNI.) COLLEGE, JAMNAGAR
8	M. P. SHAH COMMERCE COLLEGE, JAMNAGAR
9	K. P. SHAH LAW COLLEGE, JAMNAGAR
10	GOVERNMENT POLYTECHNIC COLLEGE, JAMNAGAR

LIST OF HIGHER SECONDARY SCHOOL

SR. NO.	PARTICULARS
01	Nawanagar high school
02	Sajuba girls high school
03	Digvijay sinhji new English school
04	D. C. C. High school
05	National high school
06	Dayanand high school
07	St. Xavier's high school
08	St. Ann's girls high school
09	G .s. Mehta girls high school
10	Satya sai high school
11	Pranami high school
12	Jekunwar soni kanya vidyalaya
13	Haria high school
14	G. D. Shah high school
15	Taheria madresa high school
16	Ratanbai girls high school
17	Industrial training institute
18	Sardar patel high school
19	Vibhaji Goverment High School
20	A.b.virani girls high school
21	D.s.gojiya high school
22	A.k.doshi high school
23	L.g.hariya high school
24	Sodha sarilaba girls high school
25	Sastri trambaykram high school
26	Santiniketan high school
27	Sunshine high school
28	Odhavdip high school

APPENDIX - XIV

MUTUAL-AID SCHEME ORGANISATION'S Member Details

Company name	Name of Employee	Designation	Mobile number	E mail ID
RIL	Umesh Khandalkar	VP-Fire & Safety	9998215963	umesh.khandalkar@ril.com
	Subhash Chander	GM-Fire	9998217931	Subhash.k.chander@ril.com
	Abhidan Kushwaha	DGM-Fire	7709009768	Abhidan.kushwaha@ril.com
	Fire Control room	RIL	0288-351190/91/97	-
NAYARA Energy	Prabhanjan R Dixit	VP-HSCF	9909908685	Prabhanjan.Dixit@nayaraenergy.com
	Likhit Devikar	GM-Fire	9998010513	Likhit.Devikar@nayaraenergy.com
	Himanshu S Mishra	DGM-HSCF	9099067847	himanshu.mishra2@nayaraenergy.com
	Anil Sharkhedhi	DGM	7567870838	Anil.Sarkhedhi@nayaraenergy.com
	Fire Control room	Nayra Energy	9925150927	-
BPCL	Ashwani Kumar	VP	9589893011	ashwanikumar@bharatpetroleum.in
	Falit Shah	Manager - Fire	9898360812	-
	Mrudul Sharma	Fire & Safety Incharge	9024220681	-
	Fire Control room	BPCL	9979243441	-
IOCL - Vadinar	Shri Vikas Saraswat	CGM	8447749145	saraswatv@indianoil.in
	Shri Sanjeev Jaiswal	DGM(O)	9873034211	skjaiswal@indianoil.in
	Shri Abhas Nagariya	M(HS&E)	8768317775	nagariyaa@indianoil.in
	Shri Ansar M K	AM(HSE)	9645492183	ansarmk@indianoil.in
	Shri Abhinandan Kumar	AM(HSE)	8811095934	-
	Fire Control room	IOCL vadinar	7069047968	-
IOCL - Theba	Lalit Kumar Thakur	COM	8003093075	thakurlalit@indianoil.in
	Debasish Pal	HSE	7600944139	debasishpal@indianoil.in
	Fire Control room	IOCL Theba	8758888242	-

GSFC	Pragnesh R Patel	Chief (Safety & Fire)	8238021992	gunjanKhatra@gscfld.com
	Gunjan Khatra	Fire Dept	9879657258	-
	Fire Control room	GSFC	0288-2349222/243	-
SDCC	Thiyaku Narayanasamy	VP-Plant (Plant Head)	9998012245	thiyaku.narayanasamy@digvijaycement.com
	Gurang Patel	Head (EHS)	9978920662	gaurang.patel@digvijaycement.com
Tata Chemical	Devendra K Thakur	DGM - Safety & Health	9227676113	dthakur@tatachemicals.com
	Paresh Patel	Sr Manager - Safety	9227194092	pgpatel@tatachemicals.com
	Fire Control room	TCL	0288-92675802	-
Essar Power	Debasis Pal	HEAD HSE	9312752317	debasish.pal@essarpower.co.in
	Akhilesh Kumar	Dep (Manager)HSE	6357689822	akhilesh.kumar@essarpower.co.in
	Fire Control room	Essar power	7874900000	-
GSECL TPS - SIKKA	H D Mundhva	Chief Engineer (Plant Head)	9925212948	cegtps.gsecl@gebmil.com
	A J Dharaiya	Safety officer	9909939936	dysosikka.gsecl@gebmil.com
	P M Rathva	Fire Officer	9099959249	-
	Fire Control room	GSECL	9879201553	-
RSPL	Omkar Satarkar	AGM EHS	8308824454	omkar.satarkar@rsplgroup.com
	Dipak Chavda	AM Safety	7573000892	dipak.chavda@rsplgroup.com
	Fire Shift incharge	RSPL	7436002028	-
GAIL	Brijesh Choudari	GM (I/c)	9837786244	brijeshchaudhary@gail.co.in
	Ankur Vishnoi	Manager	6351975179	Ankur.vishnoi@gail.co.in
GSPL	Kunal Vyas	Manager	9978442053	kunalvyas@gspc.in
	Amit Singh	HSE Officer	9099950081	amit.s@gspc.in
	Devang Shah	Base Hase	9825005449	devangshah@gspc.in
Cairn India	Mahesh Goswami	Installation Manager	9662539535	mahesh.goswami@cairnindia.com
	Pranav Patel	HSE HEAD	9099962673	pranav.patel@cairnindia.com
Gujarat Gas Ltd.	Rahul Dutt	Geographical area head	7573018727	rahul.dutt@gujaratgas.com
	Vinay Chotai	Sr. Officer (HSE & AI)	9099950958	vinay.chotai@gujaratgas.com
	Emergency numbers	Gujarat Gas Ltd	9727825555 , 7574950577, 02882720601	

LIST OF FACILITIES WITH MEMBER ORGANISATION OF MUTUAL-AID SCHEME

Name of Facilities	Name Of Organisations																														
	BPCL		VEDANTA		NAYARA		EPGL		GAIL		GSECL		GSFC		GSPL		IOCL(T)		IOCL(V)		RIL		SDCCL		TCL		Gujarat gas		RSPL		
	Av l	Sp r	Avl	Spr	Avl	Spr	Avl	Sp r	Avl	Spr	Avl	Spr	Avl	Spr	Avl	Spr	Avl	Spr	Avl	Spr	Av l	Sp r	Avl	Spr	Avl	Spr	Avl	Spr	Avl	Spr	
Water tankers	-	-	-	-	1	1	-	-	-	-	1	Apr	-	-	-	-	-	-	-	-	24	2	2	1	-	-	-	-	2	-	
Fire water bowser	-	-	-	-	-	-	1	-	1	-	-	-	1	-	-	-	-	-	-	-	1	1	1	1	1	-	-	-	-	2	-
Rescue tenders	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
Foam tenders	3	1	2	-	6	1	1	-	-	-	1	apr	1	-	-	-	-	-	3	1	8	1	-	-	1	-	-	-	-	-	
Earth moving equipments	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	c	-	-	-	8	1	-	-	-	-	-	-	-	-	
Dozer	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	-	-	-	
Payloader	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	c	-	-	-	6	1	1	1	-	-	-	-	-	-	
Mobile crane with capacity 1-05 MT	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	c	-	-	-	45	2	2	1	-	-	-	-	-	-	

Jeep	-	-		-	4	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	1	-	
Bus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
Car	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	10	-	
Truck	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	30	1	-	-	-	-	-	-	-	-	
Ambulance	1	-	1	-	3	1	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	11	2	1	1	2	-	-	-	2	-
Portable generator with Capacity 1 KVA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	
Trailer pump	1	-	-	-	2	1	-	-	-	-	-	-	1	-	-	-	-	-	2	1	-	-	-	-	1	-	-	-	1	-	
Portable pump	1	-	-	-	4	2	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-
SCBA sets	16	6	4	-	72	6	8	-	4	-	8	Apr	23	3	-	-	2	1	5	2	36	4	1	1	30	-	3	1	19	-	
Life saving jackets	-	-	-	-	4	4	10	-	2	-	-		4	1	1	-	1	1	6	2	10	2	5	5	10	-	-	-	14	-	
Public Address System	-	-	-	-	4	2	1	-	2	-	-	-	1	-	-	-	1	1	1	-	-	-	-	0	-	-	4	1	3	-	
Other equipments Safety Harness	10	2	10	-	4	2	8	-	5	-	5	Apr	3	-	1	-	2	1	6	2	-	-	20	5	6	-	-	-	35	-	
	APR = As Per Requirement, AVL = Available, SPR= Spare																														

APPENDIX - XV

Sr. No.	Vehicle	Nos.
1	Mini Tipper	30
2	Small Compactor	8
3	Big Compactor	5
4	Tractor Carrier	2
5	Tractor with Trolley	1
6	Lobed Trailer	1
7	Urinal Rikshow	1
8	Backhoe Loader	2
9	Tractor Loader	1
10	Mobile Toilet Van	12
11	Jetting Machine	2
12	Rod Sweeper	1
13	Dead Animal Recovery Van	2
14	Manuer Lifter	2

APPENDIX - XVI**LIST OF OFFICERS FOR VARIOUS SERVICES**

Sr. No.	Designation	Phones Numbers	
		Office	Residence
1	DISTRICT MAGISTRATE & COLLECTOR	2555869	2554059
2	ADDITIONAL DISTRICT MAGISTRATE	2550284	2672131
3	RESIDENT DEPUTY COLLECTOR	2553183	2556102
4	DISTRICT SUPRITENDENT OF POLICE	2554203, 2550242	2555868
5	DEPUTY SUPRITENDENT OF POLICE (CITY)	2552940	2563956
6	DEPUTY SUPRITENDENT OF POLICE (HEAD QUARTER)	2550317	2550300
7	POLICE INSPECTOR, CITY A-DIVISION	2550243	
8	POLICE INSPECTOR, CITY B-DIVISION	2550244	
9	POLICE EMERGENCY CONTROL ROOM	2550200, 100	
10	HOME GUARD COMMANDANT	2673862	2677793
11	EXECUTIVE ENGINEER, G.E.B.-DIV-1	2550302	2550303
12	EXECUTIVE ENGINEER, G.E.B.-DIV-2	2550314	2671731
13	EXECUTIVE ENGINEER, R & B PWD	2555770	2555798
14	DY. ENGINEER, (R & B) SUB-DIVISION	2550357	
15	DIRECTOR, LIGHT HOUSE	2552892	2672998
16	DY. DIRECTOR, LIGHT HOUSE	2676751	
17	DEEN, M.P. SHAH MEDICAL COLLEGE	2553515	2553076
18	GURU GOBINDSINH HOSPITAL	2554629, 2553257	2553157
19	PORT OFFICER, BEDI PORT	2556106, 2670207	2554942
20	DIVISIONAL ENGINEER, TELECOMMUNICATION	2550077	2552455
21	CITY MAMLATDAR	2674575	2553941
22	S.D.O. I – PHONES	2550251	2554334

APPENDIX - XVII

LIST OF RESOURCES MOBILISATION

Sr. No.	Designation	Phones Numbers	
		Office	Residence
1	DISTRICT MAGISTRATE & CONTROLLER OF CIVIL DEFENCE, JAMNAGAR	2555869	2554059
2	DIST. COMMANDENT, HOME GUARD, JAMNAGAR	2553861	2677793
3	DY.COLLECTOR CIVIL DEFENCE, LAL BUNGALA, JAMNAGAR	2540371	2671828
4	SUPRINTENDENT OF GURU GOBINDSINH HOSPITAL, JAMNAGAR	2553515	2552118
5	AYURVEDIC HOSPITAL, JAMNAGAR	2676864	-
6	MENTAL HOSPITAL, JAMNAGAR	2750218	2540813
7	T.B.HOSPITAL, JAMNAGAR	2976483	2751996
8	CITY DISPENSARIES, JAMNAGAR	2678386	-
11	SAMARPAN HOSPITAL, JAMNAGAR	2712728	2558178
12	JEEVAN JYOT POLY CLINIC, JAMNAGAR	2677964	2558542
13	EXECUTIVE ENGINEER, (R & B) K.V.ROAD, JAMNAGAR	2550362	2555798
14	EXECUTIVE ENGINEER (IRRIGATION) K.V.ROAD, JAMNAGAR	2670688	-
15	EXECUTIVE ENGINEER (G.W.S. & S.B.) JAMNAGAR	2674128	2673602
16	SUPRINTENDENT ENGINEER (G.E.B.) JAMNAGAR	2550301	2554969

APPENDIX - XVIII
JAMNAGAR MUNICIPAL CORPORATION

LIST OF OFFICERS

PBX: - 2550 231 – 32 – 33 – 34 – 35

FAX: - 0288 – 255 44 54

Sr. No.	Name	Designation	Branch	Internal No.	Mobile
1	Sh. D.N. Modi (IAS)	Commissioner	Commissioner	200	9978402983
2	Sh. D. A. ZALA	Dy. Commissioner	Dy. Commissioner	202	7574810409
3	Sh. Bhavesh Jani	City Engr I/C. AMC(A)	Civil/ugd/tpo i/c. AMC(A)	521/217	6353203169 90996 46178
4	Sh. K. K. Bishnoi	Chief Fire Officer	Fire	511	98795 31101
5	Sh. M. B. Varanava	AMC(A)	GAD Branch	207/205	98791 14962
6	Sh. Nirmal Jignesh	Chief Accountant I/C. AMC(T)	Account AMC(T) (H.T.)	224	79909 69127 98791 14920
7	Sh. Komal A. Patel	Chief Auditor	Audit	212/213	79909 69127
8	Sh. Naresh M. Patel	Executive Engr Drange	WW	501	99250 46474
9	Sh. Rajiv B. Jani	Dy. Executive Engr	Project & Planning	541	90996 46178
10	Sh. Gori Haresh	I/C. MOH	Health	206	82380 06510
11	Sh. Brijesh Jani	CPC	Health	206	75748 76600
12	Sh. Viral khira	Finance Officer	Health	206	82380 06432
13	Sh. Joshi Ashok	Dy. Engr	Slum Awas	539	89800 75075
14	Sh. Hiten Budha bhatti	I/C. Secretary PA to Chairman	Secretary	301/302	90339 83033
15	Sh. Vishal Dave	ATO I/C. PA to Commissioner	Comm.	200	98253 10202
16	Sh. Sohil Jani	PA to DMC Contract Based	DMC	230	97376 06143
17	Sh. Ketan kateshiya	Dy. Exe. Engr	Solid – Waste Management & TPDP	405	99095 01500
18	Sh. Hitenbhai Budhbhatti	PA to Mayor	Mayor	300/308	90339 83033
19	Sh. Vijay Ozat	Office Supdt.	SW Esta	503	94274 23001
20	Sh. Bhabhor Vijay	Accountant I/C. Tax Officer	House Tax	209	99252 48409
21	Sh. Hashmukh H. Pandor	ALO I/C. Tax Officer	House Tax	209	9429119647

Sr. No.	Name	Designation	Branch	Internal No.	Mobile
22	Sh. Charaniya Alpesh	Dy. Engr	WW	416	98795 03038
23	Sh. Daudra Darshan	Dy. Engr	WW	406	98791 14872
24	Sh. Desai Urmil	Dy. Engr	TPO	219	99250 27183
25	Sh. Dixit Nitin	Ex. Engineer	UGD / STORE	212	99250 24270
26	Sh. Kirit Kachetiya	Vatarnary Officer	S. W.	405	7567597505
27	Sh. Harshad M. Patel	Accountant I/C. OS	GAD	207	99099 15086
28	Sh. Gosai Mukesh	Dy. Engr	TDDP/Estate	203	93753 90285
29	Sh. Hitesh Pathak	Ex. Engr	CIVIL	412	97243 29058
30	Sh. Anil K. Bhatt	Dy. Engr	TPO	219	9714055006
31	Sh. D. N. Shingala	Dy. Engr	CIVIL	412	98250 60366
32	Sh. Jadeja Rajendrasinh	M.O.V.	Solid West	505	99795 55533
33	Sh. Dashrath Ashodiya	Sr. Food Inspector	FOOD		99746 96446
34	Sh. N. P. Jasoliya	Food Inspector	FOOD		98792 51322
35	Sh. Joshi Abhishek	Contrac based Engr	Light	231	87586 30303
36	Sh. Mukesh Chavda	Deputy Eng.	UGD	518	98251 14209
37	Sh. Nitesh V. Rathod	Dy. Engr	UGD	518	9173801182
38	Sh. Shailendrasinh D. Sodha	Legal Officer	Labour	503	98791 13957
39	Sh. Falguniben Patel	Shashnadhikari	NPSS	403	9106533657
40	Sh. Dharmesh Jethva	OS + I/C. PRO	PRO/TAX	532/209	63516 96996
41	Sh. Rushbh Mehta	Dy. Engr (C.B.)	Light	231	94080 02085
42	Sh. Prasant Punajani	Steno (Eng.)	Slum		81607 26147
43	Sh. Rajendra Ninama	OS & I/c. Store Officer Store	Store	558	98252 35885
44	Sh. Anjanaben Thummar	CDPO-1	ICDS	560	9033531107
45	Sh. Pranav Patel	Project officer	UCD	560	97270 84848
46	Sh. Vashava Ritaben	Dy. Engr	WW	509	9727714694
47	Sh. K. V. Khimsuriya	Office Spuritendent (Tax)	Election	-	78741 27669
48	Sh. Dilip Panchal	Maleriya Officer	Maleriya	405	82380 06470

Sr. No.	Name	Designation	Branch	Internal No.	Mobile
49	Sh. Rathod Manoj	Dy. Engr	Pro. & Planning	502	94269 47041
50	Sh. Anvar Gajan	STO & Daban Nirikshak & I/C. Security Officer	Security/ Fire	-	99783 66656
51	Sh. Singala Deepak	Dy. Engr	Civil	412	98250 60366
52	Sh. Sodha Shailendrasinh	Legal Officer	Labour	515	98791 13957
53	Sh. JHANVI R. THAKER	EDP Manager	Computer	204/208	99790 76762
54	Sh. Vyas Vipul	Contract based Manager	UCD	552	95120 47206
55	Sh. Vahant Bhadra	OS Civil	Civil	412	9099035761
56	Dr. Hareesh Gori	I/C. Moh	Health Branch	405	82380 06510
57	Sh. Pruthviben Patel	Project Officer	UCD	552	97270 84848
58	Sh. Hashmukh Purbiya	I/C. Sub Registrar Sr. clrec	Birth & Death Branch	224	69509 91534
59	Sh. Sajubha B Jadeja	STO	Fire	-	9913136500
60	Sh. Jasmin A Bhensdadia	STO	Fire	-	9925285918
61	Sh. Upendra B Sumad	STO	Fire	-	8141134101
62	Sh. Kamil K Mehta	STO	Fire	-	9998041167
63	Sh. Sandip D pandya	STO	Fire	-	9998514155
64	Sh. Umesh H Gameti	STO	Fire	-	9909271990
65	Sh. Jayantibhai K Damor	STO	Fire	-	9925810706
66	Sh. Rakesh R Gokani	STO	Fire	-	9328632101
67	Sh. Jayveersinh Rana	STO	Fire	-	9879002906
68	Sh. Dharmendrasinh Jadeja	STO	Fire	-	9662435036
69	Sh. Utsav R. Kotadiya	STO Fire Prevetion Wing	Fire	-	84909 91530
70	Sh. Shivam K. Parmar		Fire	-	6356385479
71	Sh. Jatinkumar K. Trivedi		Fire	-	9662434282

INDEX - XIX

LIST OF MUNICIPAL PROPERTY/ COMERCIAL COMPLEXS

NAME OF MUNICIPAL PROPERTY	PROPOSE USED FOR	WHEN LAST MAINTAINED	IF COMMERCIAL NUMBER OF SHOPS	ANNUAL RENT
S. T. SHOPPING CENTER	COMMERCIAL	NEW	36 SHOP/ OFFICES	SOLD
LIMDALINE MARKET	DO	1988-89 MINOR REPAIRING WAS DONE (COURT METTER IN HIGH COURT IS STILL PAINDING)	22 SHOPS 2 LEASE OFFICES	-
SINDHI CLOTH MARKET BARDHAN CHOWK	DO		138 SHOPS	SOLD
KHIJADA MANDIR SHOPS	DO		50 SHOPS	594000/-
NR. SATYANARAYAN MANDIR SHOPS	DO		34 SHOPS	403920/-
OPP.G.G. HOSPITAL	DO		42 SHOPS	2400000/-
SHUBHASH MARKETGALA	DO	OUT OF DEFUNCT/ORDER	289 GALA OPEN	-

NON-GOVERNMENT ORGANIZATION (NGO) LIST OF JAMNAGAR CITY

Sr. No.	Name	Address	Phone Number 0288	Remarks
1.	Shri Gao Seva Maha Abhiyan Trust	Anjariya Chamber, Jamnagar	2677703	
2	Shri Oswal Charitable Trust	Sumair Club Road, Near Minal Niketan, Jamnagar	2564175	
3	Shri Anandabawa Seva Trust (Bhavesh Bhai)	Limda Lane, Jamnagar	2550252 2788829	9924201095
4	Shri Pranami Seva Sanstha	Khambhaliya Gait Jamnagar	2672829 2562930	2565235
5	Shri Gramya Jivan Vikas Mandal	Old Railway Station, Jamnagar	2550227	
6	Shri Manav Kalyan Sangh	C/o. Dr. Dineshbhai Parmar Jamnagar	2553002 2553003	
7	Shri Agakhan Khoja Trust	Khoja Gait Jamnagar	2679472	
8	Shri Vahevariya Madresha	C/o. Taj Auto, Shri Vahabbhai	2670918	
9	Shri Navagar Chamber of Commerce	Grain Market, Jamnagar	2554823	
10	Shri Mahila Sahakari Bank. Ltd.	Ambar Talkies, Manek center Jamnagar	98986 26066	
11	Shri Mahila Chamber of Commerce	Shri Urmilaben maheta Mahila Sahakari Bank, Amber Talkies, Jamnagar	2556678 9824361411	
12	ANGEL (Ashaben Joshi)	Jamnagar	98989 82922	
13	Intek Seva	"Sumeru" Swastik Society, Jamnagar	2553916 98240 50208	

Jamnagar Municipal Corporation**Jamnagar****Local NGO's**

Sr. No.	Name	Address	Contact No. STD CODE 2088
1	Shree Anandabava Seva Sanstha.	Sant shree deviprashadji maharajshree Limda Lane, Jamnagar.	2550252 9825027117
2	Shree Khijda mandir Trust Krushnamaniji Maharaj	Pranami Samudai, Out Of Khambhaliya gate, Jamnagar	2672829 93766 99991
3	Kabir Ashram	Shree Rameshverdasji Maharaj Saheb Kishan Chok, Jamnagar	2558049 9913694020
4	Shri Swaminarayan Mandir	Param pujiya shree Kothari swami Radharamandasji swami Bedi gate, ranjitroad, Jamnagar	2552422
5	Shree Moti Havli	Shri Hariraiji Maharaj Shri Vallabhraiiji Maharaj Setavad Jamnagar	2559138
6	Shirdi Sai baba Seva Trust	Kanaksinh Jadeja Gandhinagar, Jamnagar	99090 21663
7	Shree Geeta Vidhalaya Krushnkumar mehta	Saileshbhai dave Kashi Vishvanath Mandir Road, Jamnagar	2676886 9974964717
Trust sanchalit hospital list			
1	Samarpan hospital	Vastabhai keshwala Khambhaliya road jamnagar	2712728 9824227227
2	Aayush hospital	Digvijay plot, opp old police choki, Jamnagar.	2559192

Sr. No.	Name	Address	Contact No. STD CODE 2088
3	Shree Rangunwala Medical trust	Vahabbhai C/o. Taj Auto, Opp. Nobat Press, Pancheswar Tower, Jamnagar.	99244 63410
4	Sarvoday Mahila Sangh Suchitaben bhadlavalala	Urmilaben Bhagyodaya 1, Div. Plot, outside of khambhaliya gate, Jamnagar	2552274
5	Gadhvi yuva group	Ashvinbhai Gadhvi 401, Indarprasht, bedi gate road Jamnagar	9828400713
6	Jamnagar patrakar mandal	(Girishbhai Ganatra) City aarked Near D.S.P Banglow, jamnagar.	99240 75924
7	Jamnagar Vapari Mahamandal	Sureshbhai Tanna, President City Arketd, 3 rd Floor, Near D.S.P. banglow Jamnagar	94262 04377 99262 04388
8	Shree Chhabilhai Mahila Mandal	opp Ratanbai Masjid, Jamnagar	-
9	Gujarat Biradari	Dr. prafuldave Naagar chakla, nr. sara na kuva Jamnagar	-
10	Jilla panchayat karmchari mandal	(Devandrasinh parmar) Jilla panchayat bhavan, opp. cricket banglow jamnagar	9824897055
Co.Op. Bank list			
1	Navanagar Co. Op. Bank.Ltd. R.K. SHAH (M.D.)	Kiranbhai madhvani (chirman) Opp. Pranami HighSchool, Ranjitnagar Jamnagar.	99252 11801 9924199203 (2540493)
2	Co. Co. Bank.Ltd	Bipinbhai Wadhar (chirman) Grain Market Road, Jamnagar	2510502,503 2555348

Sr. No.	Name	Address	Contact No. STD CODE 2088
			98242 28122
3	Jam. Mahila sah. Bank ltd.	Shetalben Sheth Manek center, Jamnagar	9898626066
4	Jamnagar People Bank	Pramodbhai Kothari (chirman) Rajendra v. Shah (v.chirman) Grain Market Jamnagar	2664006 2570047
Jamnagar club Association			
1	Laions Club of Jamnagar (Main)	M. U. Zaveri 36Jigar, silver society khojagate, Jamnagar	9428074865
2	Laions Club of Jamnagar (West)	Jatinbhai Shah 103/104 kanchanjangha apartment opp cricket banglow, Jamnagar	9428320006
3	Laions Club of Jamnagar (Twins)	Dr. Parimal sharma Gitaben shah Jayshreeben 'kinnari' Rajnagar, paylot banglow Jamnagar	9374670483
4	Laions Club of Jamnagar (Central)	Anjuben S. Sabu	9828400048 9898929219
5	Sumer sports club	Rajubhai sheth Pratap vilash please same Jamnagar	9714861473
6	Sakhi Club-1	Anjnaben Dwarkesh 33, Park Colony, Jamnagar.	9924433433
7	Navanagar youth club (P.D. Raijada)	Shivam hotel, lalbanglow court ni same jamnagar	98242 90138
8	Lakhota nature club	Jagatbhai Raval	94262 08789

Sr. No.	Name	Address	Contact No. STD CODE 2088
9	Sakhi club -2	Hinaben Oza	94291 19291
10	Laions Plaza	Chandrikabaa R. Sodha	9879766833
List of Jamnagar voluntary organizations			
1	Jaints Group (West)	Vijaybhai thakkr Nr Mahalaxmi school chok, Jamnagar	9426988555
2	Jaints Saheli	-	9898982922
3	Red Cross Society	Bipinbhai Zaveri(chermain) National highschol, outside khambhaliya gate Jamnagar	2678961 9824556555
4	Kasturba Stri Vikal Gruha	Lalitaben shah (President) Karshanbhai Dangar Kasturba Marg, T. B. Hospital Road, Jamnagar	2751730 2556477 2752262 2551077
5	Late. J.V. Nariya Education and cheritabel trust	Sojitra vijay j. Jamanbhai 49-morden market, Amber cinema Jamnagar	9979891127 9824135359
6	Dayaram library (Manharbhai Trivedi)	Panchesver tower, shanti vihar apartment, jamnagar	9426209784
7	Arya samaj	Dipakbhai Thakkr Arya samaj, out side khambhaliya gate Jamnagar	8320668125 2540072
8	J.C.I. Jamnagar (Samir Jani)	Hituls Acedamy, 9/3 Patel colony, Jamnagar	9825023382
9	Fedration of Architects & Engineers	Hardikbhai Dave	9712448181
Jamnagar Industries Institutes			
1	Jamnagar chamber of commerce & Industries	Bipendrasinh Jadeja Dhirubhai Aambani Vanijaybhavan hapa road	9824812512

Sr. No.	Name	Address	Contact No. STD CODE 2088
		Jamnagar	
2	Jamnagar Factory Owner's Associations	Lakhabhai keshvala 58-digvijay plot G.I.D.C. Udhyognagar, Jamnagar	2560002 2560003 9328115508
3	Jamnagar Ele. Work Contract Association	Nileshbhai Kagathara Rammandir same bedi gate Jamnagar	9327311111
4	Jamnagar Ele. Work Contract Association	Kiritbhai C. Mehta Mehta light house tanboli market jamnagar	9426714109
5	Jamnagar Bar Association	Bhartbhai Suva Jilla Court, Lal Bunglow, Jamnagar	9909520857
6	Rotary Club International	Kamleshbhai Savla Cretive management services c blok 4 th floor anjariya chember, Jamnagar	2555348
7	Jamnagar Ladies chamber of commerce	Sahara S. Makwana	9824361411
List of various samajwadis in Jamnagar			
1	Braham Samaj vadi Dayashanker Brahampuri	Manharbhai Trivedi K. V. Road, Jamnagar.	9426209784
2	Shree Samsts Satvara Samaj	Jamanbhai Rathod	9099214443
3	Samast Sindhi Samaj	Ghanshyam gangvani Limda Lane, Opp. Anandabava Ashram, Jamnagar.	9662777777

Sr. No.	Name	Address	Contact No. STD CODE 2088
4	Lauhana Samaj	Jitendra H. Lal Lauhana Mahajanwadi, Pancheshwar Tower, Jamnagar	9824244440 2677334
5	Jain Social group	Nileshbhai Toliya, karnikbhai u. Kamdar vadi amber cenima Jamnagar	9375396607
6	Shree Leuva Patel samaj	Odhavjibhai Virani (manager)	98250 66808
7	Shree kadwa patel samaj	Ketanbhai Matliya/ Chandrakantbhai khant	2751717
8	Shree Panchanbhai Samjibhaii Kadwa Patel Pragti Mandal	Ashvinbhai sordiya Dhirajlal C. Patel	9824229919
9	Shree Samast Darji Samaj Charitable Trust	Maganbhai Tankariya	9913557257
10	Shree Ahir Samaj	Parbatbhai Madam	9825699899
11	Shree Rajput seva samaj	Pratapsinh Jadeja	94269 46715
12	Shree Jamnagar Visha Shree Mali Soni Samaj	Pareshbhai soni	2675485
13	Shree Samast Khavas Samaj	Hashmukhbhai Chavda	6355434250
14	Shree Vanand Samaj	Keshubhai Garliya	2712972
15	Shree Jamnagar Bhavsar Samaj	Vallbhadas Rupapara	-
16	Shree Samast Jain Samaj	Nileshbhai Toliya	9375396607
17	Shree Prajapati SamajniVadi	Pravinbhai Mayurnagar vambe aavash pase	9924029269
18	Shree BhoiGyanti Samast Samaj jamnagar	Narendrabhai Maheta	9909033140

Sr. No.	Name	Address	Contact No. STD CODE 2088
19	Shree Pragtishil Yuvak Mandal	Hashmukhbhai Jethva	9824257571
20	Shree Saurashtra Nai Brahman Mandal Gyantini Vadi	Vinubhai chauhan Khodiyar colony B/h. shaakmarket Nilkamal Society Jamnagar	9099950247

ANNEXURE-B
LIST OF NOTIFIED SLUM INFORMATION

Sr. No.	Name of Slum	Land Ownership	AREA	STATUS Unauthorised	No. of HH	POPULATION
1	Cattle Field Ekde Ek Bapu	State Govt.	185694.6	Un	916	5186
2	Bone Mil Na Jopda	State Govt.	62979.66	Un	391	2074
3	Valmikinagar	State govt	2585.37	Un	49	245
4	Kabinagar Navagam	State Govt.	34497.79	Un	214	1480
5	Bavrivias	State Govt. / Railway Authority	143772.41	Un	460	2481
6	Vanja Was	State Govt.	48797.77	Un	290	1629
7	Jalaram Jopad Pati	JMC	63270	Un	370	2040
8	Navanala Gulabnagar	State Govt.	12815.84	Un	117	675
9	Bachunagar	JMC	31122	Un	182	970
10	Chamaravas	JMC	5933.78	Un	153	442
11	Kumbharwado Arya Samaj	JMC	22303.66	Un	433	2180
12	Raval Was	JMC / State Govt.	9357	Un	254	1304
13	Saat Rasta	JMC	18981	Un	111	563
14	Bombay Dava Bazar	State Govt.	97319.44	Un	1206	6558
15	Near Janta Phatak	JMC	18126	Un	106	598
16	Panakhan	State Govt.	99473.18	Un	1001	5236
17	Vishram Wadi	JMC	8467.42	Un	196	1005
18	Purabiya Khadaki	JMC	10245.3	Un	250	1375

Sr. No.	Name of Slum	Land Ownership	AREA	STATUS Unauthorised	No. of HH	POPULATION
19	Tadiya Hanuman Nr. Gulabnagar Police chowki	State Govt.	58803.45	Un	831	4306
20	Kananagar	JMC	19219.16	Un	438	2207
21	Lalkhan, Bai Ni Wadi & Chuna no Bhattho	State Govt.	108953.6	Un	1514	7667
22	Baniya Vistar	JMC	4784.55	Un	98	520
23	Nano Meghwarvas	JMC / State Govt.	34686.41	Un	456	2552
24	Godadiya Was	State Govt.	48797.77	Un	288	1524
25	Ganeshvas	State Govt.	10942.24	Un	198	1024
26	Marvada Was	State Govt.	18726.07	Un	512	2858
27	Dalitwas Navagam Ghed	State Govt.	22496.21	Un	266	1501
	TOTAL				11300	60200

ANNEXURE-A**LIST OF NOTIFIED SLUM INFORMATION**

Sr. no.	Name of Slum	Land Ownership	No. of HH	POPULATION
1	Cattle Field Ekde Ek Bapu	State Govt.	916	5186
2	Bone Mil Na Jopda	State Govt.	391	2074
3	Valmikinagar	State Govt	49	245
4	Kabinagar Navagam	State Govt.	214	1480
5	Bavrivias	State Govt. / Railway Authority	460	2481
6	Vanja Was	State Govt.	290	1629
7	Jalaram Jopad Pati	JMC	370	2040
8	Navanala Gulabnagar	State Govt.	117	675
9	Bachunagar	JMC	182	970
10	Chamaravas	JMC	153	442
11	Kumbharwado Arya Samaj	JMC	433	2180
12	Raval Was	JMC / State Govt.	254	1304
13	Saat Rasta	JMC	111	563
14	Bombay Dava Bazar	State Govt.	1206	6558
15	Near Janta Phatak	JMC	106	598

Sr. no.	Name of Slum	Land Ownership	No. of HH	POPULATION
16	Panakhan	State Govt.	1001	5236
17	Vishram Wadi	JMC	196	1005
18	Purabiya Khadaki	JMC	250	1375
19	Tadiya Hanuman Nr. Gulabnagar Police chowki	State Govt.	831	4306
20	Kananagar	JMC	438	2207
21	Lalkhan, Bai Ni Wadi & Chuna no Bhattho	State Govt.	1514	7667
22	Baniya Vistar	JMC	98	520
23	Nano Meghwarvas	JMC / State Govt.	456	2552
24	Godadiya Was	State Govt.	288	1524
25	Ganeshvas	State Govt.	198	1024
26	Marvada Was	State Govt.	512	2858
27	Dalitwas Navagam Ghed	State Govt.	266	1501
	TOTAL		11300	60200

JMC CENCUS-2011 REPORT

WARD CODE	TOT-P	TOT-M	TOT-F	SC-P	SC-M	SC-F	ST-P	ST-M	ST-F
1	23523	12219	11304	1722	910	812	197	107	90
2	27041	13639	13402	1059	544	505	122	67	55
3	20157	10470	9687	483	239	244	635	330	305
4	25690	13529	12161	6019	3144	2875	839	431	408
5	26903	13872	13031	615	328	287	192	98	94
6	27702	14076	13626	560	285	275	324	155	169
7	34994	18295	16699	5141	2681	2460	653	334	319
8	23602	12051	11551	691	364	327	125	64	61
9	21293	10856	10437	38	21	17	34	15	19
10	22750	11651	11099	161	76	85	105	45	60
11	25980	13473	12507	218	121	97	42	25	17
12	37961	20005	17956	837	482	355	102	48	54
13	45403	23877	21526	3861	1997	1864	171	89	82
14	28057	14543	13514	11286	5856	5430	205	116	89
15	20080	10245	9835	1628	811	817	146	76	70
16	20714	10631	10083	194	113	81	67	37	30
17	20685	10483	10202	567	289	278	140	74	66
18	22103	11585	10518	954	474	480	160	86	74
19	38826	20229	18597	3269	1647	1622	182	98	84
20	67887	35526	32361	3231	1683	1548	449	232	217
ARMY	5282	3447	1835	60	33	27	19	9	10
SSB	269	268	1	12	11	1	4	4	0
NAVY	3211	2183	1028	170	104	66	14	11	3
AIR FORCE	5934	3530	2404	275	146	129	104	52	52
BEDI	178	87	91	14	7	7	0	0	0
VIBHAPAR	3567	1826	1741	414	212	22	2	1	1
HAPA	1151	618	533	123	65	58	81	40	41
TOTAL	600943	313214	287729	43602	22653	20949	5114	2644	2470

New Area -2013

1	Dhichda	5720
2	Gordhanpar	949
3	Nava nagar	254
4	Theba	502
5	Morkanda	81
6	Kansumra	78
7	Khimalia	318
8	Dhuvav	768
9	New Area Total	8670
-	G. Total	609613

JAMNAGAR MUNICIPAL CORPORATION

ZONE	WARD NO.	WARD AREA
West Zone	1	Railway Quarters, Community Hall, Ram Roti Ashram, Hanuman Mandir, Ashutosh Pump – Jodia Bhunga, Port Colony Backside, Dharanagar, Vaishalinagar Road Area, Kapdamil ni Chali, Tanna Agro Industries, Panch ni Chali, JMC Fire Station, Bedeshwar Main Road, Digvijay Salt, Madhapar Bhunga
West Zone	6	Defense Colony, Bhaktinagar, Yadavnagar, Woolen Mill Ring Road, Gayatrinagar, Indira Colony, Rokdia Hanuman Area, Mayurnagar, Vambe Awas, Hanuman Tekri, Siddharthnagar, Mahadevnagar, Purbiya ni Wadi, Komalnagar, Dhichda Seam Area, Gordhanpar, Ambedkaran, Rajivnagar.
West Zone	7	Khodiyar Colony, Pragati Park, Meher Samaj ni Wadi, Gokul Dham, Awas Colony, Mahaveer Park, Oshwal 2, 4, Satyam Road, Krishnanagar King Palace, Amusement Park, Shantinagar, Jakurbanben Soni Kanya Vidhalaya, Sundaram Society, Shivam Society, Naghedi Sub Station, Sohamnagar, Muralidhar Society, Mahalakshmi Bungalow, Arae near Sandhiya Bridge.
East Zone	10	Swaminarayanagar, Nageshwar, Rajpark, Rangamati Park, Radhakrishna Park, Bardanwala Complex, Nadipa Bhoniwado, Subhash Market, Dhanbai Delo, Girdhari Mandir, Mochisar, Devubha no Chowk, Karshanbhai Chowk, Tamboli Market, Grain Market, Kadiawad, Potteriwali Gali, Kashi Vishwanath Road, P.W.D. no Delo, Tranbati Gita Lodge.
East Zone	11	Ravipark, Ramwadi, Gulabnagar, Syndicate Society, Dayanand Society, Mohannagar, Narayanagar, Vibhappar Road, Theba Road, Dhunvav Housing Board Colony, Shantivan, Lalwadi, Annapurna Mata nu Mandir, Kaushalnagar, Nuripark, Hapa Railway Station and Colony, Mahaprabhuji's Bethak, Amanchaman Society, Kishchan Colony.
East Zone	12	Khoja wad, Minara Fali, Maniyar Fali, Pattniwad, Panch Hatdi Chowk, Satwarawad, Ratanbai Kanya Vidhalaya, Lambupir ni Dargah, Purbiani Khadki, Aanji Tarmamad Society, Rangmati Society, Alsafa Park, Morkanda Road.
South Zone	8	Kamdar Colony, Janata Society, Sarvodaya Society, Adarsh Society, Shree Niwas Society, Ranjitnagar, Raghuveera Society, New Hudko, Juno Hudko, Patel Samaj, Dig. Plot no. 49, Radar Road, Heerji Mistry Road, GIDC. Udyognagar, Shyam Nagar, Ramnagar, Behind Haria College, Shiv Nagar.
South Zone	15	Greencity, Lalpur Road, Shankar Tekri, Shastrinagar, Ramnagar 1 to 5, Charanwas, Valmikinagar, Siddharth Colony, Subhaspara, Ganeshwas, Sayona Galli wala Area, Ayodhyanagar, Mayurnagar, Radar Campus, Kansumra
South Zone	16	Saraswati Park, Sadhana Colony, Jamainagar, Siddhi Vinayak Park, Near Sangambagh, Pump House, New Patel Colony, Lalkhan, Hirasar, Ghanchi Colony, Bai ni Wadi, Mayur Township, Subhash Park, Lalpur Road, Area Behind Bhanu Petrol Pump, Nilakathnagar, Behind Sadhana Colony, Sardar Park, Khimaliya.

North Zone	2	Mominagar - 1, 2, 3, 4, Sai Baba Mandir, Gandhinagar, Rameshwarnagar, KP Shah ni Wadi, Reliance Guest House, Bhutio Bungalow, Thomas Church, Dharanagar, Police Head Quarters, Sonalnagar Road, Randalnagar, Vachradada Mandir, Panch Bangla Road, Nandanvan Park, Jalaram Nagar Road
North Zone	3	Patel Colony Street No. 1 to 12, Himmatnagar Main Road, Himmat Nagar Vikas gruh Road, Indradeep Society, Anand Colony, Mahila College Area, Lal Bahadur Shastri Society, Grofed Jayant Society, Dwarkesh Society, Hatkesh Society, Patel Wadi, Nursing Society, Dental Hospital.
North Zone	4	MP Shah College, G.G. Hospital, Amber Cinema Road, Solarium, Bhimwas, Navagam Village Floor, Indira Society, Madhuvan Park, Velnathnagar, Khadkhadnagar, Darbar Pado, Anand Society, Nirmalnagar, Vinayak Park, Raj - Rajeshwari Society, Jalaram Park, Navanagana, Junanagana.
Central Zone	5	Nilakmal Society, Himalaya Society, Ashapura Society, Sardar Patel Society, New Aram Colony, Jai Bhagwan Society, Master Society, Divyam Park, Rajnagar, Chitrakoot Society, Sharu Section Road, Near Custom Office, C.A. House, Park Colony, Commissioner Bungalow, Royal Pushpa Park, Badminton Society.
Central Zone	9	Sodha School, Limda Line, Avantika Complex, Anandabava Ashram, Town Hall, Rajputpara, Bhidbhanjan Mahadev, Pancheswar Tower, Anandabawa Chaklo, Ambali Fali, Kacheri Fali, Vaniyawad, Bardhan Chowk, Ratanbai Masjid, Punatar Fali, Sodha no Delo, Chandi Bazaar, Wariano Delo, Lakhota Lake, Mig Colony.
Central Zone	13	Dig. Plot 23 - 39, Bai ni Wadi, Kishan Chowk, Nagarpara, Khambhaliya Gate, Khojawad, Setawad, Kharwa Chakla, Bhagwansang, Bapu ni Sheri, Mathafali, Khijda Mandir, Bhanushaliwad, Luharsar, Pinjara Wad, Mulla Medi Road, Kabrashtan Area Around.
Central Zone	14	Khambhaliya Naka Area, Dig. Plot, Sumer Club Road, Hanuman Tekri, Dig. Plot 58, Eiffel Tower, Shivnagar, Panakhan, Central Jail Surrounding Area, Gokulnagar Surrounding Area, Ganeshwas, Meghji Pethraj School, Eid Masjid Road, Vishramwadi, Bhanushali gynati ni Wadi, Vallabhnagar.

JAMNAGAR MUNICIPAL CORPORATION EMERGENCY SERVICE CONTRACTOR

Solid West Branch-Garbage contractor

Company	Person	Number
Powerline	Manojbhai Parikh	9227777788
Darbar West	Bipinbhai Pilydadia	9825186545

Water Works Branch –Water Tenker Supplyer

Company	Person	Number
Siddhnath Construction	Dharmeshbhai	9909991111
Jay Construction	Merubhai	9898596945

Light Branch- Street Light Repeiring Nagar Sim Area

Company	Person	Number
EESL	Umangbhai Surani	8866880932

Light Branch -D.G.Set Supply

Company	Person	Number
Sunrise Sales & Service	-	9099256026

ANNEXURE-I
JAMNAGAR MUNICIPAL CORPORATION
JAMNAGAR
RESCUE TEAM ACTIVITY REPORT

Date:

1. Name of the head of the team : Shri K.K.Bishnoi
2. Name of the Ward Engineer :
3. Name of the Ward S.I./S.S.I. :
4. Effectuated Ward No. :

Sr. No.	Type of emergency call received	Total Number of Calls	Number of Calls attended	Pending Calls	Loss of property in Rs.	No. of Deaths	Causality	No. of Person shifted	Remarks
1	Building Collapse								
2	Flood rescue (Water rescue)								
3	Demolition of dangerous structure								
4	Road Clearance by removing trees/debris & other obstruction								
5	Cutting of trees & removal of other dangerous obstruction								
6	Number of fire calls								
7	Rescuing animals and property								
8	Other calls								

Report in Brief:

Other Remarks:

Head of the Rescue Team

ANNEXURE-II

**JAMNAGAR MUNICIPAL CORPORATION
JAMNAGAR**

**ESSENTIAL SERVICE TEAM
WATER WORKS**

Date:

1. Name of the head of the team :
2. Name of the ESR/Pump House :
3. Name of the Engineer in charge of ESR/Pump House:
4. Capacity of the ESR :
5. Total water received by ESR in MCFT :
6. Total water distributed by ESR in MCFT :
7. Ward numbers where water is distributed :
8. Water available in dams :
 - a) Aji : _____ MCFT
 - b) Und : _____ MCFT
 - c) Sasoi : _____ MCFT
 - d) Ranjitsagar : _____ MCFT

Sr. No.	No. of Complain Received	No. of Complain Attended	Pending Complains	Remarks

No. of D.G. Set used & its working Hours :

Report in Brief :

Other Remarks:

Executive Engineer
Water Works Branch

ANNEXURE-III

JAMNAGAR MUNICIPAL CORPORATION
JAMNAGAR
ESSENTIAL SERVICE TEAM ACTIVITY REPORT FOR ZONE 1/2/3
CIVIL DEPARTMENT

Date:

Sr. No.	Particulars	Shri T. R. Purohit, Dy. Engr. Zone-1, Ward No. 3,5,6,7,8,9,10 & 11	Shri R. K. Bhuva, Dy. Engr., Zone-2, Ward No. 1,2,4 & 13	Shri Shailesh Joshi, Dy.Engr., Zone-3, Ward No. 12, 14, 15, 16 & 17	Total	Remarks
1.	Uneven depression - Damage Roads - Trenches					
	No. of Locations					
	Running Metres					
2.	Damage Roads, trenches - No. of repairs with rubbles/ Metals filling					
3.	Patches repaired by Cold colltar Nos.					
4.	- do - with hot mix plant pavers - Nos.					
5.	Dewatering the trenches & providing "Kaccha Road drains" Nos.					

	No. of Locations					
	Running Metres					
6.	Dewatering the area, filled up with water/waste water - Nos. (fire)					
	No of locations					
	No. of Pumps used					
7.	Cleaning no. of road, places by Mud crapping etc.					
	No of locations					
	Quantity					
8.	Storm water screening net cleaning					
	Progressive No.					
	Total No					
9.	U/G manhole cleaning / storm water drain / main hole cleaning.					
	Progressive No.					
	Total No					
10.	Damaged road side trees remove - Nos.					
11.	Streetlight poles -					
	Total					
	Not Working poles					

	Percentage of Damaged poles					
12.	No. of places for removing building materials scrapes					
	Approx. Quantity					
13.	Total no. of Unlicensed "Rakadi/Laris"					
14.	No. of anchrochment removes for "Cabins/Rakadi/ Gallas"					
15.	- Do - Attendant					
16.	No. of leakage in W/S -					
	Total Attendant					
17	No. of Pending					
18	Removal of waste / waste water					

Signature _____

Designation _____

Zone No. _____, **Jamnagar Municipal Corporation**

ANNEXURE-IV

**JAMNAGAR MUNICIPAL CORPORATION
JAMNAGAR**

**ESSENTIAL SERVICE TEAM ACTIVITY REPORT
SOLID WASTE DEPARTMENT**

Date:

1. Name of the head of the team :
2. Ward Number :
3. Name of the Chief Sanitary Inspector of the Areas :
4. Name of the S.I. of the Ward :
5. Name of the S.S.I. of the Ward :
6. Who attended the complain :

Sr. No.	Type of Complain	No. of the complain received	No. of complain attended	Pending	Remarks
1.	Solid Waste Disposal				
2.	Gutter Blockage (Open)				
3.	Gutter Blockage(Underground)				
4.	Removal of debris				
5.	Disposal of undefined dead bodies				
6.	Disposal of dead Animals				
7.	Roaming cattle catching in the city area				
8.	Spraying of D.D.T. and other insatiable.				

Report in Brief:

Remarks :

**Executive Engineer
Solid Waster Department
Jamnagar Municipal Corporation**

ANNEXURE-V.
JAMNAGAR MUNICIPAL CORPORATION
JAMNAGAR

ESSENTIAL SERVICE TEAM ACTIVITY REPORT
LIGHT DEPARTMENT

Date:

1. Name of the head of the team :
2. Name of the Light Department Engineer :
3. Effected Ward Number :
4. Name of the Ward S.I. / S.S.I. :

Total No. of New Fittings Damages :

Sr. No.	Type of Complain	No. of the complain received	No. of complain attended	Pending	Remarks
1.	Street Light				
2.	Other Lights				
3.	Live wire dislocating breaking				
4.	Fix Fittings/Lights Damages				
5.	Poles Damaged				
6.	Others				

Total No. of New Poles Damages :

Total Amount Spend :

Report in Brief:

Remarks :

Executive Engineer
Light Department
Jamnagar Municipal Corporation

ANNEXURE- VI
JAMNAGAR MUNICIPAL CORPORATION
JAMNGAR
CASUALITY TEAM ACTIVITY REPORT

DATE :

- 1) Name of the Doctor :
- 2) Name of the Ward Engineer :
- 3) Name of the Ward S.I./S.S.I. :
- 4) Effected Ward No. :
- 5) Mobile dispensary Van Number :

Sr. No.	Total No. of Calls	No. of death	No. of Serious persons Transferred to the hospital	No. of persons given first-aid

❖ Number of Medicines distributed :
& its type

❖ Action taken in brief to prevent :
spreading of epidemic

❖ No. of Unclaimed dead body disposal :

❖ Disposal of unhygienic food :

❖ Remarks :

Medical Officer
Jamnagar Municipal Corporation

ANNEXURE-VII
JAMNAGAR MUNICIPAL CORPORATION
JAMNAGAR
REHABILITATION TEAM ACTIVITY REPORT

Date:

1. Name of the head of the team :
2. Name of the Ward Engineers :
3. Name of the Ward S.I. / S.S.I. :
4. Affected Ward No. :
5. N.G.O. Name which was assisting the team :

Sr. No.	No. of Houses Effected	No. of People Effected	No. of People Shifted	No. of food packet distributed	Remarks

No. of relief camps with address : 1)

Where effected people are shifted. 2)

3)

4)

Total amounts spend on relief work Rs.:

Report in Brief:

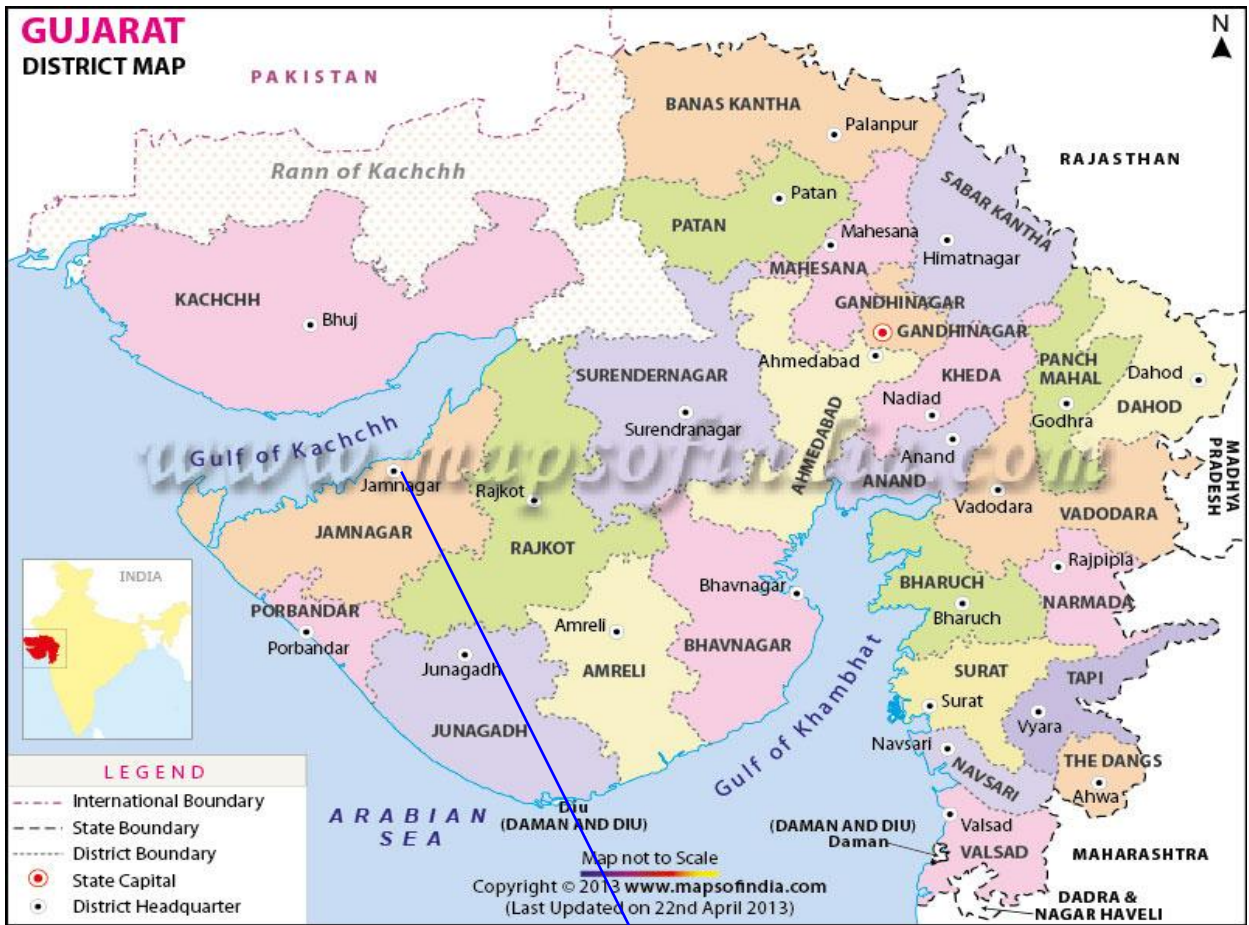
Remarks :

Assistant Commissioner (Admin.)

Jamnagar Municipal Corporation

Annexure –A Map

Gujarat Map

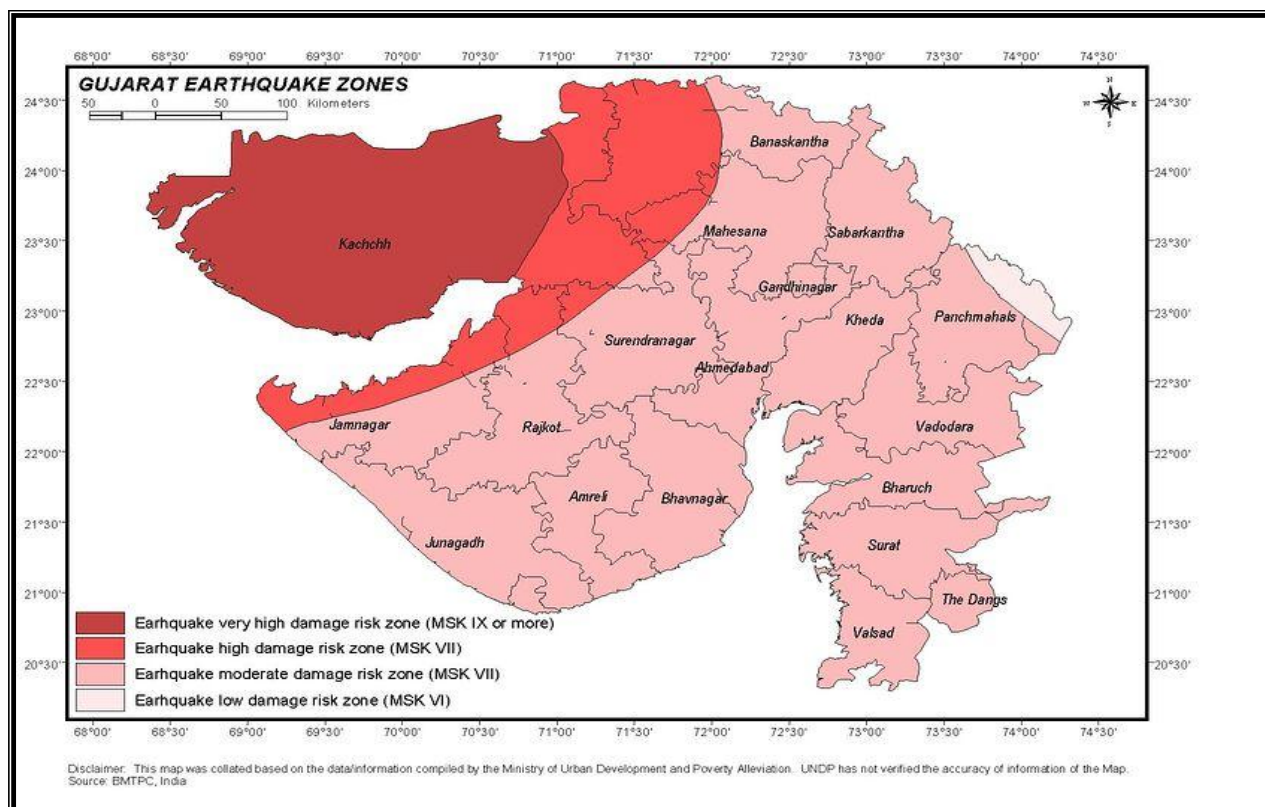


- સમજૂતી
- ▲ જિલ્લાનું મુખ્યમથક
 - તાલુકાનું મુખ્યમથક
 - ▭ જિલ્લાની હદ
 - ▭ તાલુકાની હદ
 - જામનગર
 - દેવભૂમિ દ્વારકા

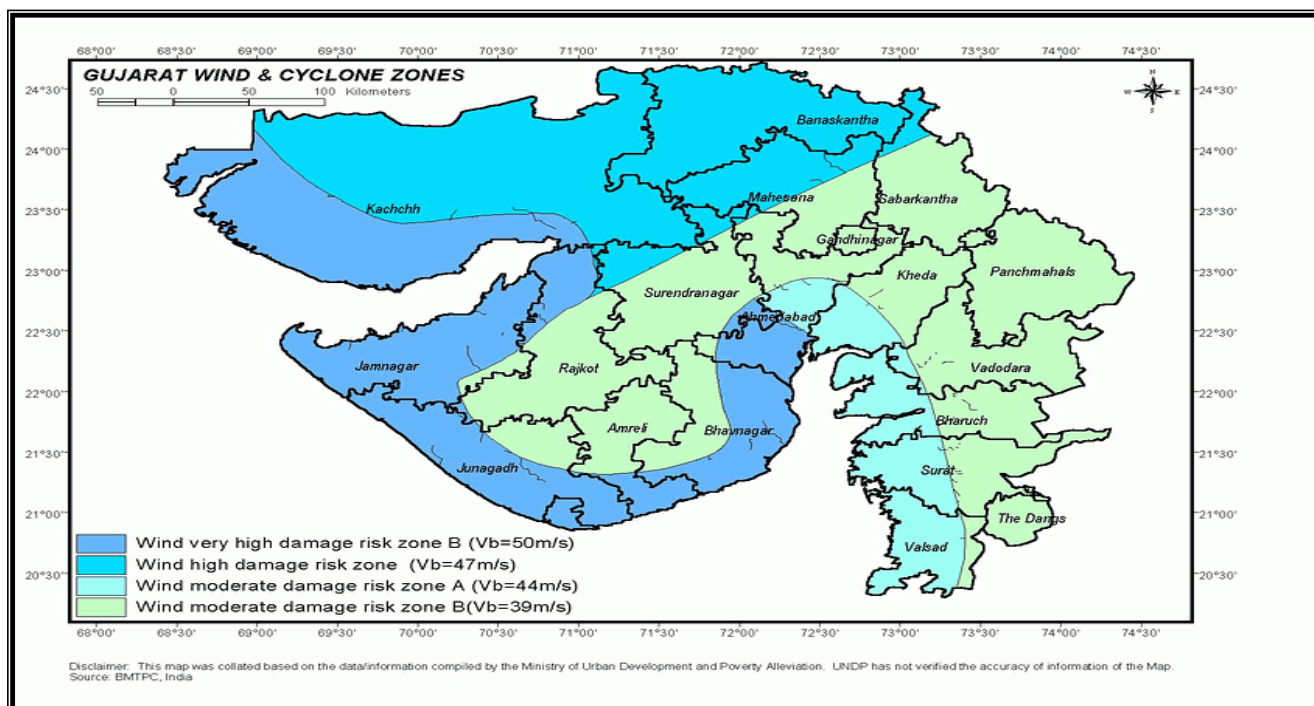


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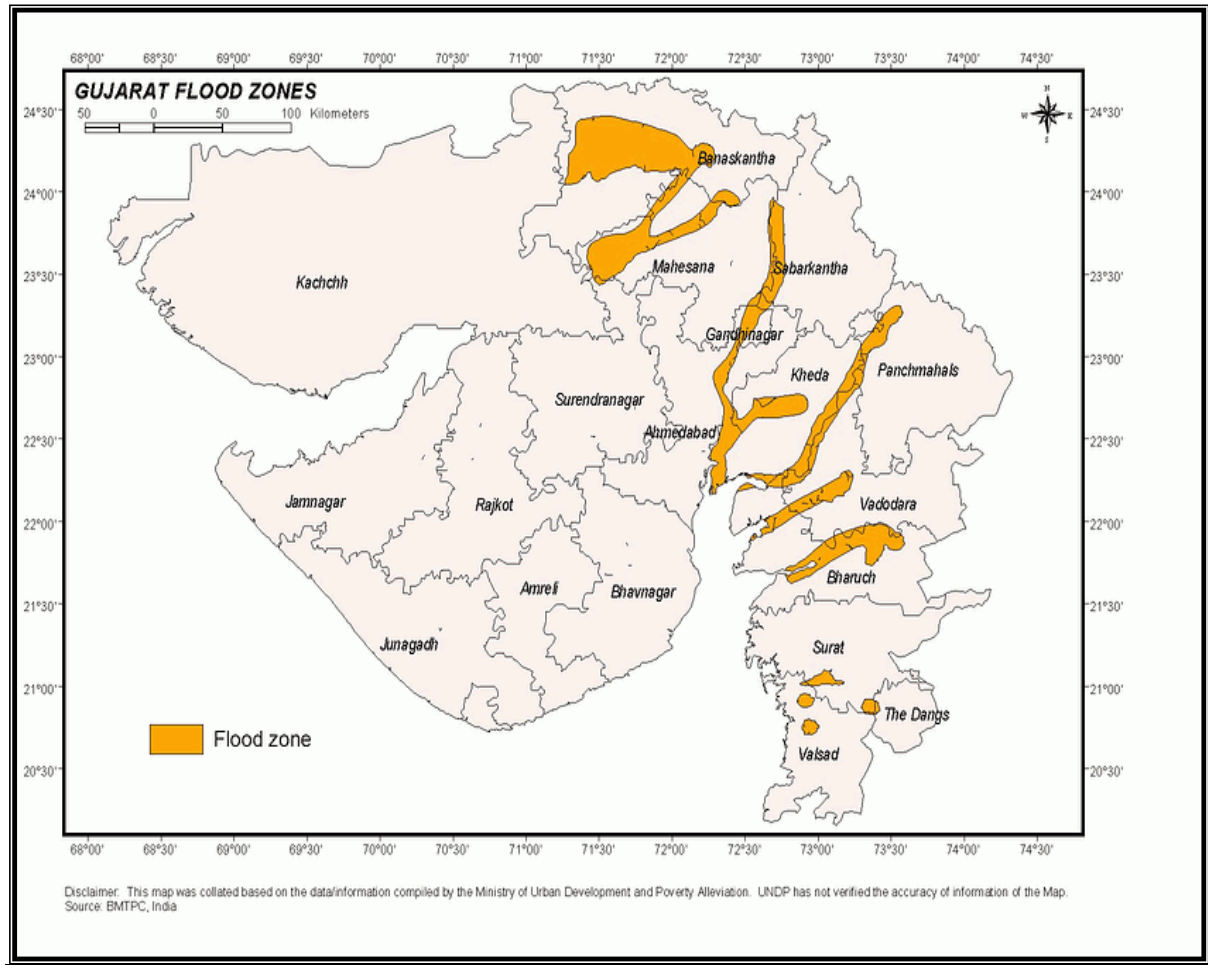
(Earthquake Hazard Map)

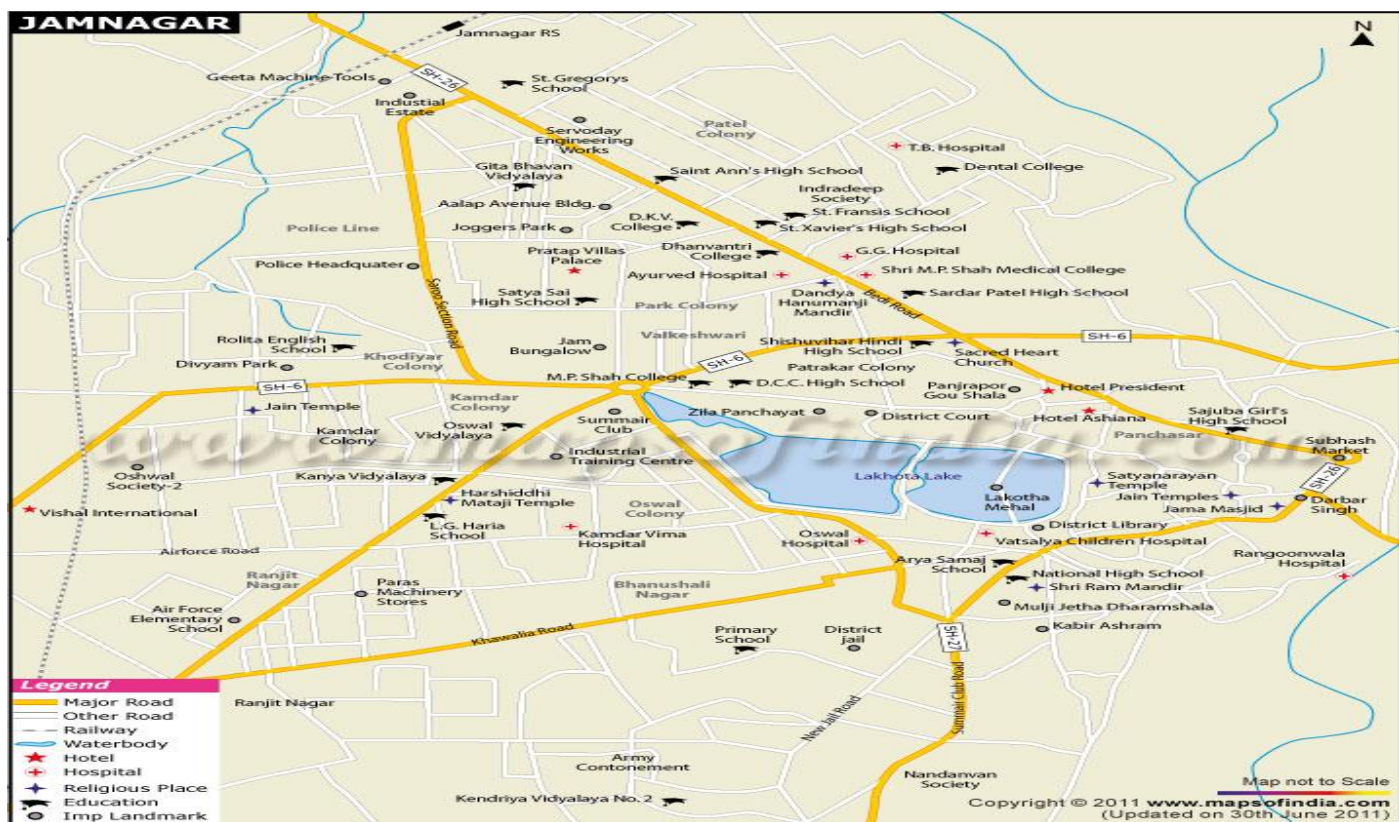


(Cyclone Hazard Prone Map)



Flood Hazard Prone Map





JAMNAGAR MUNICIPAL CORPORATION CITY MAP

